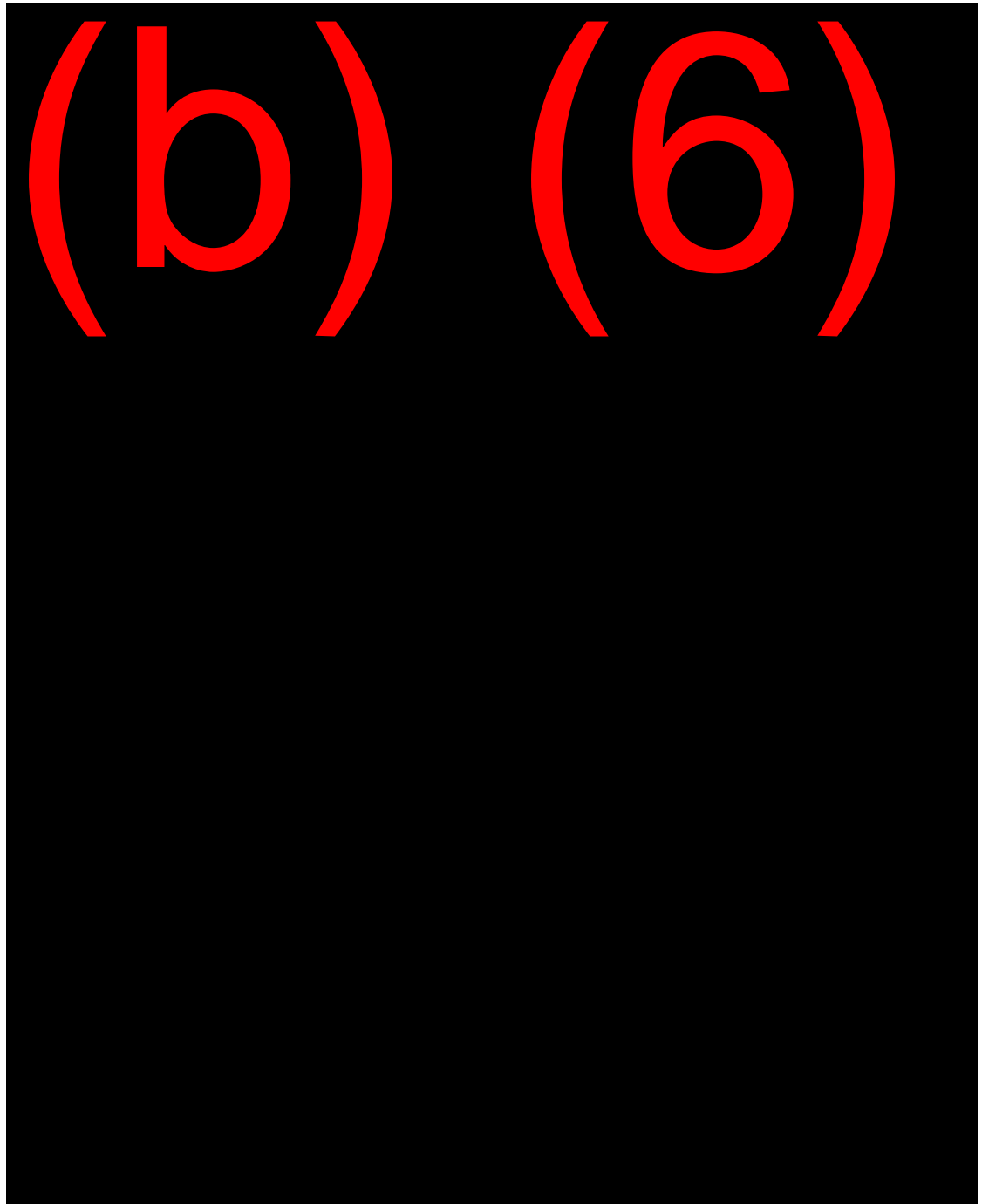


From:
To:



Subject: [Non-DoD Source] FOUO\ FW: HHS Executive Summary 06May20
Date: Wednesday, May 6, 2020 8:25:08 AM
Attachments: [image001.png](#)
[CDC Daily Report 2020-05-05.pdf](#)
[National SITREP 05-06-2020 AM.pdf](#)
[HHS FDA Report for 05-05-2020.pdf](#)

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Good Morning,

Please see HHS Executive Summary for 06 May 20.

Notes: As of 06May20, 0300ET, the CDC confirmed and presumptive positive U.S. cases of COVID-19 have reached 1,190,235 across 50 states and D.C., Guam, PR, CNMI, and USVI; Deaths: 70,652. WHO reported global cases as of 05May20, 0400ET: 3,517,345; global deaths: 243,401; WHO member countries and areas with cases: 215. Testing: 7,323,977 cumulative tests includes samples tested by State/Local Public Health Laboratories, Commercial Laboratories, Hospital Laboratories, CDC, and VA completed as of 05May20.

- FDA issued an Emergency Use Authorization (EUA) for the investigational antiviral drug remdesivir (05/01).
- MD: Hagerstown Vehicle Emissions Inspection Program site opened for drive-through testing on May 5.
- VA: Moving toward 5K tests per day; VA Governor's goal is 10K per day.
- GA: PPE pushes will start going out today to identified nursing homes; each nursing home will receive four shipments that will equal 14 days of PPE for staff.
- LA: Awarded a Crisis Counseling Program Immediate Services Program on May 5; period of performance runs through May 23
- CA: Emergency Medical Services Authority training USNS Mercy crew beginning May 5 to form joint California Medical Assistance Teams and U.S. Navy Medical Strike Teams to support nursing homes in Los Angeles area.
- As states begin phased re-openings, there will likely be an increase in first responder and civilian contacts; this could lead to increased PPE burn rates and exposure for first responders.
- USDA: Meals to You initiative will serve nearly 5 million meals per week to rural children impacted by COVID-19-related school closures; boxes contain 20 nutritious meals to cover meals normally received at school over 2 weeks.
- AZ Public Transportation: Began public messaging campaign that public transit should be used for essential trips; riders required to wear masks, maintain social distancing, and practice safe hygiene.

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From: OS Secretarys Operations Center (b) (6)

Sent: Wednesday, May 6, 2020 7:41 AM

To: OS Secretarys Operations Center (b) (6)

Subject: HHS Executive Summary 06May20

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HHS Executive Summary:Wednesday, 06May20

1. HHS

Today's Noteworthy Topics:

COVID-19 (Novel Coronavirus)

As of 06May20, 0300ET, theCDC confirmed and presumptive positive U.S. cases of COVID-19 have reached 1,190,235 across 50 states and D.C., Guam, PR, CNMI, and USVI; Deaths: 70,652. WHO reported global cases as of 05May20, 0400ET: 3,517,345; global deaths: 243,401; WHO member countries and areas with cases: 215. Testing: 7,323,977 cumulative tests includes samples tested by State/Local Public Health Laboratories, Commercial Laboratories, Hospital Laboratories, CDC, and VA completed as of 05May20.

Daily Operational Schedule:

0830 – FEMA Daily Operations Briefing

1230 – HHS/FEMA Interagency VTC

Public Health Emergency of National Significance:

Opioid Crisis, Nationwide: 02Apr20

Novel Coronavirus (COVID-19): 21Apr20

HHS Response Status Summary:

HHS SOC: Level I (Full Activation)

CDC EOC: Level III (Polio/Ebola)

CDC EOC: COVID-19 (Agency-Wide Response)

FDA EOC: Level II (Vape Product Response, COVID-19)

Emergency Support Function (ESF) Activation:

ESF – 8: Activated

ESF – 6: Activated

Recovery Support Function (RSF) Activation:

H&SS RSF: Activated Region II (2017 Irma/Maria, Puerto Rico projected end date of 30Jun20).

HHS Deployments: (Total = 851)

ASPR: 677 – (8) Earthquake Puerto Rico, (657) COVID-19, (5) Irma/Maria Recovery, (3) Irma, (2) FY Funded Training Q1, (2) FY Non-Funded Training Q1

CDC: 174 – (173) COVID-19, (1) Ebola

New Mission Assignments (MA):NSTR

Active Situations (6):

- Influenza Season
- Irma/Maria, Puerto Rico, & USVI (Recovery)
- Ebola in Eastern Democratic Republic of the Congo
- Novel Coronavirus (COVID-19)
- Bravo Response
- Earthquake, Puerto Rico

U.S. International Health Regulation National Focal Point Status:NSTR

2. FEMA:

Interagency Response Status Summary:

NWC: Monitoring

NRCC: Level I

National IMATs: Red – Fully Mission Capable; Blue – Fully Mission Capable; Gold – IMAT – A Support

Regional IMATs: Region I, RRCC; Region II, NY; Region III, RRCC; Region IV-1, Virtual – MS; Region IV-2, Virtual – SC; Region V, RRCC; Region VII, RRCC; Region VIII, RRCC; Region IX-2, RRCC; Region X, RRCC

Significant National Weather:

The heat continues to build in the West, as a few record high temperatures are possible over the next couple of days from the Southwest into parts of southern California. Excessive heat warnings and heat advisories are in effect across the region, including in the Los Angeles and Phoenix metro areas. Later in the week, this heat will spread into the Great Basin and parts of the Pacific Northwest.

3. OPDIV/STAFFDIV Overnight Reports:

CDC:

- COVID-19 – 215 Locations (including countries, territories, and areas)

FDA:

- Coronavirus Disease 2019 (COVID-19)/ML/2019

Prepared by:

Secretary's Operations Center

U.S. Department of Health and Human Services (HHS)
Assistant Secretary for Preparedness and Response (ASPR)
200 Independence Ave., S.W.
Washington, D.C. 20201

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CDC Daily Report: As of 7:00 a.m. EDT, Tuesday, May 05, 2020

SIGNIFICANT EVENTS:

- Note: Operational updates described within the CDC Daily Report may not be inclusive of all response activities that are occurring.

** = Asterisks denote updates to monitored events/responses*

MONITORED EVENTS: (4)

- Opioid Crisis
- Measles Outbreak
- Hepatitis-A Outbreak
- 2020 Bravo Response (*Heightened Tensions Middle East*)

RESPONSE STATUS:

- CDC EOC: 2019 Novel Coronavirus (Agency-wide Response) *
- CDC EOC: Ebola (Level III)
- CDC EOC: Polio (Level III)

CDC DEPLOYMENTS:

- Domestic
 - Coronavirus (170)
 - International
 - Polio (0)
 - Ebola (1)
 - Coronavirus (3)
- Total Personnel: (174)

PROGRAM UPDATES:

National Center for Immunization and Respiratory Diseases (NCIRD):

- COVID-19 United States

- The CDC COVID-19 website provides the latest resources for the community, healthcare professionals and information on COVID-19 cases in the United States: <https://www.cdc.gov/coronavirus/2019-ncov/index.html>
- Confirmed and probable U.S. cases of COVID-19 (as of 3:00am, May 5, 2020): **1,167,994**.
- U.S. deaths reported to CDC: **68,175** (as of 3:00am, May 5, 2020)
- Per WHO/Global Summary: **3,435,894 (86,108 new)** confirmed cases of COVID-19 worldwide (as of May 4, 2020).
- Health Systems and Worker Safety
 - Addressing comments from the Secretary of Labor on OSHA co-branded guidance regarding use of cloth face coverings by employees in businesses.
 - Office of Personnel Management (OPM) and Office of Management and Budget (OMB) requested consult meeting on guidance for how they advise other Federal agencies on return to work.
 - Developing guidance to assist partners for resuming regular patient care during the reopening phases as defined by the White House's Opening Up America Again document.
 - Guidance Posted:
 - [Responding to Coronavirus \(COVID-19\) in Nursing Homes](#)
 - [Testing for Coronavirus \(COVID-19\) in Nursing Homes](#)
 - [Clinical Tips on COVID-19 for Healthcare Providers Involved in Patient Care](#)
 - [Ten Ways Healthcare Systems Can Operate Effectively during the COVID-19 Pandemic](#)
 - Updated IPC Assessment Tool (Tele-ICAR) for long-term care facilities is cleared and pending posting.
- Global Migration Task Force
 - On May 3, 982 passengers from China, Iran Schengen Countries, UK, and Ireland screened upon arrival at F13 airports.
 - 250,793 passengers screened to-date
 - Developed communication toolkit for airlines with graphics and messaging for air travelers: <https://www.cdc.gov/coronavirus/2019-ncov/travelers/airline-toolkit.html>.
 - Completed initial review of public health plans from seven (7) cruise lines.
 - Following-up with cruise lines with requests for additional information and clarifications.
 - Developing a web-based dashboard for approved cruise ship.
- State, Tribal, Local and Territorial Support
 - Adjudicated and processed approximately 100 inquiries from IMS task forces, national public health partners, and state, local, and territorial public health officials.
 - Fielded 12 inquiries from states and territories related to contact tracing guidance, training materials and tools.
 - Deployed 38 field teams to provide multi-disciplinary technical assistance at request of health departments.

- Epidemiology Studies Task Force
 - Vaccine Effectiveness Team created.
 - Primary focus on planning vaccine effectiveness studies to support Vaccine Task Force.
 - Continuing Cook County Jail in Chicago, IL transmission study:
 - Enrolled second unit: 51 interviews (38 detainees, 13 staff).
 - Collected specimens from 24 detainees and 13 staff.
- Laboratory Task Force
 - As of May 3, tested over 6,117 samples that equate to over 2,702 patients; Public Health Labs (PHL) tested over 613,041 samples.
 - International Reagent Resource (IRR) shipped 756 reagents to 40 laboratories (May 2).
 - Submitted an Emergency Use Authorization (EUA) amendment to the FDA with a focus of reducing the needs for extraction reagents.

GLOBAL DISEASE DETECTION OPERATIONS CENTER (GDDOC):

COVID-19 - 215 Locations (including countries, territories, and areas)

- **Source: CDC; NCIRD/DVD; WHO Headquarters; WHO Regional Offices; Ministries of Health**
- As of 4 May (09:00 GMT/05:00 EDT, accessed 14:30 EDT), WHO has reported a global cumulative count of 3,435,894 cases and 239,604 deaths for an increase of 86,108 cases and 976 deaths over the preceding 24 hours. The cases are distributed in the six regions as follows: Region of the Americas [1,433,756 confirmed (49,115 new cases) / 77,827 deaths (-582 new deaths, due to an adjustment of the death count in the United States)]; European Region [1,544,145 confirmed (25,250) / 143,987 deaths (1,320)]; Eastern Mediterranean Region [206,299 confirmed (5,690) / 7,971 deaths (100)]; South-East Asia Region [67,673 confirmed (3,626) / 2,463 deaths (88)]; Western Pacific Region [152,773 confirmed (1,329) / 6,258 deaths (29)]; and African Region [30,536 confirmed (1,098) / 1,085 deaths (21)]. Among the 215 affected locations, 132 reported new confirmed cases with the highest number of new cases from the United States [1,125,719 confirmed (31,839 new cases) / 60,710 deaths (-1,696 new deaths)]; Russia [145,268 confirmed (10,581) / 1,356 deaths (76)]; Brazil [96,559 confirmed (4,970) / 6,750 deaths (421)]; the United Kingdom [186,603 confirmed (4,339) / 28,446 deaths (315)]; Canada [59,365 confirmed (3,793) / 3,681 deaths (235)]; India [42,533 confirmed (2,553) / 1,373 deaths (72)]; Peru [42,534 confirmed (2,075) / 1,200 deaths (76)]; Ecuador [29,538 confirmed (2,074) / 1,564 deaths (193)]; Turkey [126,045 confirmed (1,670) / 3,397 deaths (61)]; and Belarus [17,489 confirmed (1,661) / 103 deaths (6)]. WHO [COVID-19 Situation Reports](#) present official counts of confirmed COVID-19 cases, which may subsequently be updated. Thus, differences among WHO reports and between WHO reports other sources of COVID-19 data, using different inclusion criteria and different data cutoff times, are to be expected.
- CDC has established a COVID-19 Incident Management System and the CDC Emergency Operations Center is activated to provide ongoing support to the COVID-19 response. CDC COVID-19 [Travel Recommendations](#) for the locations with and without restrictions

on entry to United States are posted and will continue to be updated. The CDC [Health Alert Network \(HAN\)](#) and a dedicated CDC [COVID-19](#) website are maintained. WHO has recently updated the document on [Country Preparedness and Response Status for COVID19](#) and has released the [Statement on the third meeting of the International Health Regulations \(2005\) Emergency Committee](#).

EOC 24 HOUR CALL DATA:

Category	Total Count
12th Floor/Director Phone Calls	1
COVID-19 (DoH)	2
COVID-19 (Other)	70
Administrative	38
Ameba Infections	1
Brucella	1
DGMQ - QPHO - Blood/Tissue Importation	1
DGMQ - QPHO - COVID-19 Screening	2
ITSO	2
Malaria	1
NOC - DHS: Secure Ops Center	2

Total Calls: 121



FEMA

National Situation Report

As of 3:00 a.m. ET, Wednesday, May 6, 2020

This report is published twice daily, 3:00 a.m. and 5:00 p.m. ET

Common Operating Picture

FEMA HQ NWC NRCC Monitoring Level I		Major Disasters (DR): 100 Emergency Disasters (EM): 96 ★ JFOs: 9 / VJFOs: 12 ● Staging Area ■ Distribution Center (DC) ■ Declared County (non-COVID-19 Declarations) ■ Fully Activated ■ Partially Activated ■ Monitoring		Region VIII COVID DRs 4498-DR-CO 4508-DR-MT 4509-DR-ND 4527-DR-SD 4535-DR-WY FCO: Lee K. dePalo JFO: TBD RVIII IMAT (Denver, CO)		4539-DR-WA FCO: Timothy B. Manner VJFO: Camp Murray, WA 4475-DR-ND FCO: Dana C. Reynolds VJFO: Denver, CO 4440/4463/4467/4469-DR-SD FCO: Jon K. Huss JFO: Sioux Falls, SD Region VII COVID DRs 4483-DR-IA 4490-DR-MO 4521-DR-KS 4521-DR-NE FCO: Paul Taylor JFO: TBD RVII IMAT (Kansas City, MO)		4414/4442-DR-MN 4459/4477-DR-WI FCO: John F. Boyle 4424/4447-DR-OH 4461-DR-IL FCO: Steven W. Johnson VJFO: Springfield, IL Region V COVID DRs 4489-DR-IL 4494-DR-MI 4507-DR-OH 4515-DR-IN 4520-DR-WI 4531-DR-MN FCO: James K. Joseph JFO: TBD RV IMAT (Chicago, IL)		4372/4379-DR-MA 4410-DR-CT 4445/4474-DR-VT 4457-DR-NH FCO: James McPherson JFO: Williston, VT Region I COVID DRs 4496-DR-MA 4500-DR-CT 4505-DR-RI 4516-DR-NH 4522-DR-ME 4532-DR-VT FCO: W. Russell Webster JFO: TBD RI IMAT (Boston, MA)		N-IMATs 2 Teams Red Blue Gold IMAT-A Support	
FEMA REGIONS WATCH RRCC		As of 3:00 a.m. ET May 6, 2020 Created by FEMA NWC		Region IX COVID DRs 4519-DR-OR FCO: Dolph A. Diemont VJFO: Salem, OR Region X COVID DRs 4481-DR-WA VJFO: Bothell, WA 4499-DR-OR 4533-DR-AK 4534-DR-ID FCO: Michael F. O'Hare JFO: TBD RX IMAT (Bothell, WA)		Region IX COVID DRs 4488-DR-NJ FCO: Thomas Von Essen JFO: Albany, NY Region II COVID DRs 4480-DR-NY FCO: Thomas Von Essen JFO: Albany, NY 4488-DR-NJ FCO: Thomas Von Essen VJFO: West Trenton, NJ 4493-DR-PR FCO: Thomas Von Essen VJFO: Guaynabo, PR 4513-DR-USVI FCO: Thomas Von Essen VJFO: Christiansted, VI RI IMAT (Albany, NY) MERS (San Juan, PR)		R-IMATs 4-6 Teams Available I RRCC II NY III RRCC IV-1 Virtual - MS IV-2 Virtual - SC V RRCC VI-1 VI-2 VII RRCC VIII RRCC IX-1 IX-2 RRCC X RRCC					
COVID-19 NRCC: (Days) All RRCCs: (Days)		GA: Flooding MS: Flooding PR: Earthquake TN: Tornadoes All State EOCs activated for COVID-19		Region VI COVID DRs 4484-DR-LA 4485-DR-TX 4518-DR-AR 4529-DR-NM 4530-DR-OK FCO: George A. Robinson JFO: TBD 4435/4451-DR-MO FCO: John Brogan JFO: Jefferson City, MO 4538-DR-MS FCO: Terry L. Quarles JFO: TBD 4458/4462-DR-LA FCO: John E. Long VJFO: Baton Rouge, LA 4478/4536-DR-MS FCO: Jose M. Girot JFO: TBD 4399-DR-FL FCO: Brett Howard JFO: Panama City, FL 4473-DR-PR FCO: Alex Amparo JFO: Ponce, PR		Region III COVID DRs 4491-DR-MD 4502-DR-DC 4506-DR-PA 4513-DR-VA 4517-DR-WV 4526-DR-DE FCO: MaryAnn Tierney JFO: TBD RI IMAT (Phila., PA)		Region IV COVID DRs 4486-DR-FL 4487-DR-NC 4492-DR-SC 4497-DR-KY 4501-DR-GA 4503-DR-AL 4514-DR-TN 4528-DR-MS FCO: Gracla B. Szczech JFO: TBD		FMC PMC NMC Deployed			
Team: Status		US&R 33 – 65%		MERS >66%		FCOs ≤1 Type I		FDRCs ≤1		IM Workforce		Incident Management Cadre Availability Summary Cadres with 25% or Less Availability	
Assigned:		28		36		47		11		13,452 ▲		EHP 20% (124/621); ER 18% (14/76); FL 14% (22/161); FM 23% (61/260);	
Unavailable:		10		0		0		0		2,519 ▲		OPS 21% (59/286); PA 22% (673/3,075); PLAN 17% (72/419); SAF 20% (11/54)	
Deployed:		0		1		43		10		5,943 ▲			
Available:		18		35		4		1		4,990/ 37% ▲			

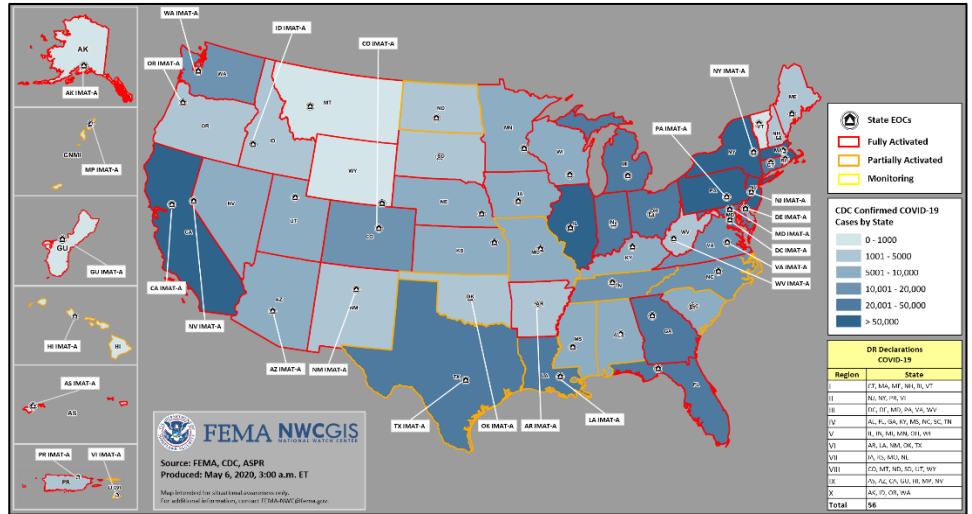
National Current Operations & Monitoring

COVID-19 (For interagency reporting see FEMA NRCC COVID-19 SLB, published daily)

Situation: FEMA, HHS, and federal partners are working with SLTT governments to execute a whole-of-America response to the COVID-19 pandemic. The HHS Secretary issued a renewal of the January 31 COVID-19 Public Health Emergency Declaration; the renewal, effective April 26, extends the Declaration for 90 days.

- FEMA NRCC remains at Level I in unified effort with HHS SOC; all FEMA RRCCs activated
- 56 major disaster declarations approved
- All State / Territory EOCs activated
- Testing: 7,323,977 (+231,821) cumulative as of May 5
- 48,516 (+320) FEMA, DOD, HHS, CDC, and VA personnel deployed/activated in support of COVID-19
 - 3,175 (+8) FEMA employees deployed

COVID-19 Cases	Confirmed/Presumptive	Deaths
United States	1,167,994	68,175
Worldwide	3,435,894	239,604



Health and Medical Lifelines

Public Health

Testing

- MD: Hagerstown Vehicle Emissions Inspection Program site opened for drive-through testing on May 5
- VA: Moving toward 5K tests per day; VA Governor’s goal is 10K per day

Personal Protective Equipment

- GA: PPE pushes will start going out today to identified nursing homes; each nursing home will receive four shipments that will equal 14 days of PPE for staff

Mental Health

- LA: Awarded a Crisis Counseling Program Immediate Services Program on May 5; period of performance runs through May 23

Medical Care

Hospital Capacity

- CA: Emergency Medical Services Authority training USNS Mercy crew beginning May 5 to form joint California Medical Assistance Teams and U.S. Navy Medical Strike Teams to support nursing homes in Los Angeles area

Other Domestic Lifelines

Safety & Security

- As states begin phased re-openings, there will likely be an increase in first responder and civilian contacts; this could lead to increased PPE burn rates and exposure for first responders

Food, Water & Shelter

- USDA: Meals to You initiative will serve nearly 5 million meals per week to rural children impacted by COVID-19-related school closures; boxes contain 20 nutritious meals to cover meals normally received at school over 2 weeks

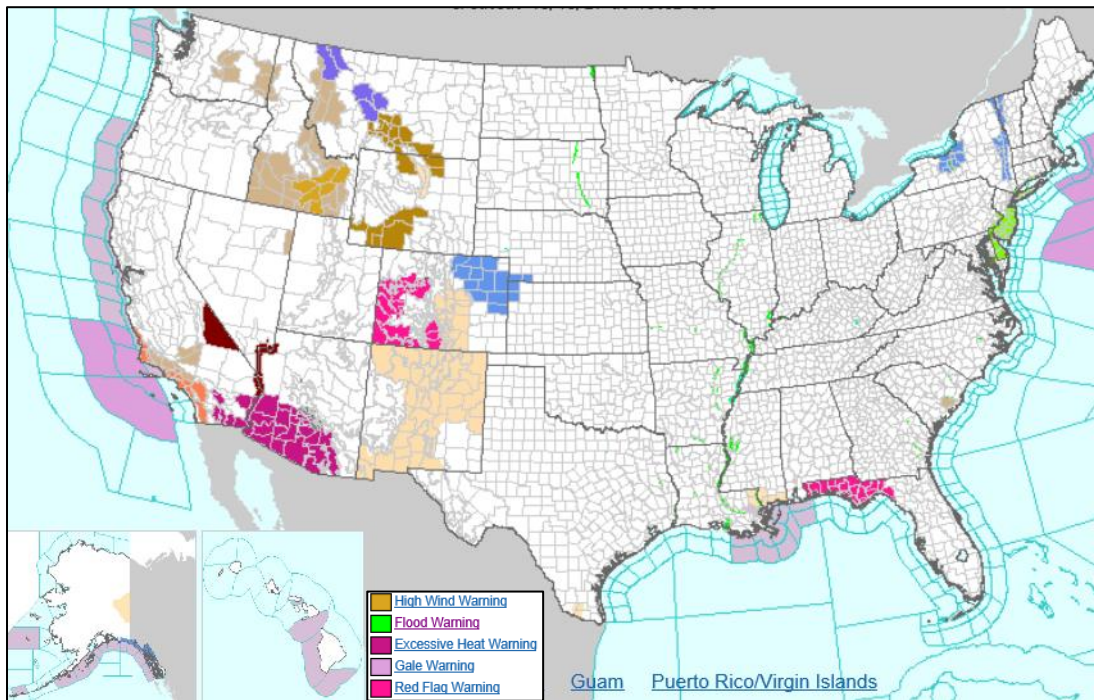
Transportation

- AZ Public Transportation: Began public messaging campaign that public transit should be used for essential trips; riders required to wear masks, maintain social distancing, and practice safe hygiene

(FEMA COVID-19 SLB, 5:00 p.m. May 5)

Weather Threats

- Excessive Heat Warning in effect for portions of southeastern California and Arizona
- Red Flag Warning in effect for southwestern Colorado and the Florida Panhandle
- Flood Warning in effect for the Mid-Atlantic coast to the Northeast



(Latest NOAA Forecasts: [WPC](#) / [SPC](#) / [NHC](#) / [SWPC](#))

Joint Preliminary Damage Assessments

Region	State	Event / Date	Type	Counties		Start – End Dates
				Requested	Completed	
VI	TX	Tornado April 22	IA	5	0	4/30 – TBD
			PA	0	0	N/A
	AR	Severe Storms April 12	IA	8	0	5/1 – TBD
			PA	11	0	5/1 – TBD

Declaration Activity

Declaration Requests in Process: 5 (NC, AR, AL, HI, & TX (Appeal))

COVID-19 Declaration Requests in Process: 1 (STOF)

(Declared Disasters: [fema.gov](#))

Joint Field Office Status Updates

No change over the last operational period

(JFO listing available on [NWC SharePoint Site](#))

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Regional Current Operations & Monitoring

<i>Region I</i>	<i>Region VI</i>
<p>RRCC: Level I (day shift – COVID-19) WATCH – Maynard MOC: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: No significant activity IMAT: Deployed to RRCC (COVID-19) LNOs: RI & ME EOCs: CT, MA, ME, NH, RI & VT: Full Activation (COVID-19)</p>	<p>RRCC: Level II (day shift – COVID-19) WATCH – Denton MOC: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: No significant activity IMAT-1: FMC / Available IMAT-2: FMC / Available IMAT-A: AR, LA, NM, OK, & TX LNOs: AR, LA, NM, OK, & TX EOCs: <ul style="list-style-type: none"> • AR & NM: Full Activation (COVID-19) • LA, OK, & TX: Partial Activation (COVID-19) </p>
<i>Region II</i>	<i>Region VII</i>
<p>RRCC: Level II (day shift – COVID-19) WATCH: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: No significant activity IMAT: Deployed to NY EOC (COVID-19) IMAT-A: NJ, NY, PR, & USVI LNOs: PR, NJ, & NY EOCs: <ul style="list-style-type: none"> • NJ, NY, & PR: Full Activation (COVID-19) • USVI: Partial Activation (COVID-19) </p>	<p>RRCC: Level II (day shift – COVID-19) WATCH: Steady State (24/7): Alternate location <ul style="list-style-type: none"> • Monitoring: No significant activity IMAT: Deployed to RRCC (COVID-19) EOCs: <ul style="list-style-type: none"> • IA, KS, & NE: Full Activation (COVID-19) • MO: Partial Activation (COVID-19) </p>
<i>Region III</i>	<i>Region VIII</i>
<p>RRCC: Level II (day shift – COVID-19) WATCH: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: No significant activity IMAT: Deployed to RRCC (COVID-19) IMAT-A: DC, DE, MD, PA, VA, & WV LNOs: PA & WV EOCs: DC, DE, MD, PA, VA, & WV: Full Activation (COVID-19)</p>	<p>RRCC: Level II (day shift – COVID-19) WATCH – Denver MOC: Steady State (24/7): Alternate location <ul style="list-style-type: none"> • Monitoring: CO: Red Flag Warning IMAT: Deployed to RRCC (COVID-19) IMAT-A: CO LNOs: SD, WY, MT, UT EOCs: <ul style="list-style-type: none"> • CO, MT, SD, UT, & WY: Full Activation (COVID-19) • ND: Partial Activation (COVID-19) </p>
<i>Region IV</i>	<i>Region IX</i>
<p>RRCC: Level II (day shift – COVID-19) WATCH: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: No significant activity IMAT-1: Supporting FEMA-4536-DR-MS (Virtual) IMAT-2: Supporting FEMA-4542-DR-SC (Virtual) LNOs: AL, FL, & TN EOCs: <ul style="list-style-type: none"> • FL: Full Activation (COVID-19) • GA: Full Activation (COVID-19 / Flooding) • MS: Partial Activation (COVID-19 / Flooding) • TN: Partial Activation (COVID-19 / Tornadoes) • AL, KY, NC, & SC: Partial Activation (COVID-19) </p>	<p>RRCC: Level I (day shift – COVID-19) WATCH: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: CA & AZ: Excessive heat warning IMAT-1: PMC / Staffing shortage IMAT-2: Deployed to RRCC (COVID-19) IMAT-A: AZ, CA, HI, NV, GU, CNMI, & AS EOCs: <ul style="list-style-type: none"> • AS, AZ, CA, GU, & NV: Full Activation (COVID-19) • CNMI & HI: Partial Activation (COVID-19) </p>
<i>Region V</i>	<i>Region X</i>
<p>RRCC: Level II (day shift – COVID-19) WATCH: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: No significant activity IMAT: Deployed to RRCC (COVID-19) LNOs: IL, IN, MI, & WI EOCs: IL, IN, OH, MI, MN, & WI: Full Activation (COVID-19)</p>	<p>RRCC: Level II (day shift – COVID-19) WATCH – Bothell MOC: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: No significant activity IMAT: Deployed to RRCC (COVID-19) IMAT-A: AK, ID, OR, & WA LNOs: AK & OR EOCs: AK, ID, OR, & WA: Full Activation (COVID-19)</p>

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FEMA National Situation Report Acronyms & Abbreviations

Front Page – Common Operating Picture

NWC:	National Watch Center	ISB:	Incident Support Base	R-IMAT:	Regional Incident Management Assistance Team
NRCC:	National Response Coordination Center	MERS:	Mobile Emergency Response Support	RRCC:	Regional Response Coordination Center
EX (State):	Exercise (Location)	N-IMAT:	National Incident Management Assistance Team	RWC:	Regional Watch Center
FCO:	Federal Coordinating Officer	NMC:	Non-Mission Capable	US&R:	Urban Search & Rescue
FDRC:	Federal Disaster Recovery Coordinator	PMC:	Partially Mission Capable		
FMC:	Fully Mission Capable				
IM:	Incident Management				

Front Page – Force Laydown Map

CAD:	Caribbean Area Division	DR:	Major Disaster Declaration (Stafford Act)	IST:	Incident Support Team
CNMI:	Commonwealth of the Northern Marianas Islands	EM:	Emergency Declaration (Stafford Act)	JFO:	Joint Field Office
DC:	Distribution Center / District of Columbia	EOC:	Emergency Operations Center	LNO:	Liaison Officer
		FCO:	Federal Coordinating Officer	TF:	Task Force
				VJFO:	Virtual JFO

Front Page – Incident Management Cadres

ACQ:	Acquisitions	DSA:	Disaster Survivor Assistance	HR:	Human Resources
ADR:	Alternative Dispute Resolution	EHP:	Environmental Planning and Historic Preservation	IA:	Individual Assistance
DI:	Disability Integration	ER:	Equal Rights	IT:	Information Technology
DEC:	Disaster Emergency Communications	EA:	External Affairs	OCC:	Office of Chief Counsel
DFTO:	Disaster Field Training Ops	FL:	Field Leadership	LOG:	Logistics
		FM:	Financial Management	HM:	Hazard Mitigation

Other Acronyms & Abbreviations

ARC:	American Red Cross	IPAWS:	Integrated Public Alert & Warning System
CBRN:	Chemical, Biological, Radiological and Nuclear	IST:	Incident Support Team
CDC:	Centers for Disease Control and Prevention	JTWC:	Joint Typhoon Warning Center
CIKR:	Critical Infrastructure / Key Resources	MCOV:	Mobile Communications Operations Vehicle
DCO:	Defense Coordinating Officer	MEOV:	Mobile Emergency Operation Vehicle (MERS)
DFA:	Direct Federal Assistance (Stafford Act program)	MCC:	Movement Coordination Center
DIRS:	Disaster Information Reporting System	MMI:	Modified Mercalli Intensity (Earthquake scale)
DLA:	Defense Logistics Agency	MOC:	MERS Operations Center
DoD:	Department of Defense	NHC:	National Hurricane Center
DOE:	Department of Energy	NOAA:	National Oceanic & Atmospheric Administration
DRC:	Disaster Recovery Center	NWS:	National Weather Service
EAGLE-I:	Environment for Analysis of Geo-Located Energy Information (DOE)	PA:	Public Assistance (Stafford Act program)
EF:	Enhanced Fujita (Tornado scale)	PAGER:	Prompt Assessment of Global Earthquakes for Response
EPA:	Environmental Protection Agency	PDA:	Preliminary Damage Assessment (Joint FEMA/State)
ESF:	Emergency Support Function	PSPS:	Public Safety Power Shutoff
FMAG:	Fire Management Assistance Grant	ROC:	Response Operations Cell (part of the NRCC)
GIS:	Geospatial Information Systems	SEAR:	Special Event Assessment Rating
HHS:	Health & Human Services	SLTT:	State, Local, Tribal, and Territorial (<i>Governments</i>)
HM:	Hazard Mitigation (Stafford Act program)	USACE:	U.S. Army Corps of Engineers
IA:	Individual Assistance (Stafford Act program)	USAID:	U.S. Agency for International Development
IMAAC:	Interagency Modeling & Atmospheric Assessment Center	USCG:	U.S. Coast Guard
IOF:	Initial Operating Facility	USGS:	U.S. Geological Survey

(More FEMA Acronyms: [FAAT Book](#))

**FDA OFFICE OF EMERGENCY MANAGEMENT
HHS FDA REPORT – May 5, 2020**

This document is confidential and is only for internal HHS use for emergency operations purposes. This document contains non-public information and may include information for which public disclosure is prohibited by law (such as confidential commercial information, trade secret, and personal privacy information) and information compiled for enforcement purposes. This document was prepared by FDA's Office of Emergency Management/Office of Emergency Operations (OEM/OEO). Any request to distribute this information outside of HHS must be approved by FDA.

UPDATES

Coronavirus Disease 2019 (COVID-19)/ML/2019

FDA continues to work with the WHO, US government partners (e.g., FEMA, NSC, HHS, ASPR, BARDA, CDC, NIH, DoD), state partners and medical product developers as necessary to support response efforts to the novel coronavirus outbreak/pandemic, COVID-19.

Since FDA's previous report on 5/1/2020, FDA provided the following updates and information to the public and industry:

- FDA issued an [Emergency Use Authorization \(EUA\) for the investigational antiviral drug remdesivir](#). This allows for remdesivir to be distributed in the U.S. and administered by health care providers, as appropriate, to treat suspected or laboratory-confirmed COVID-19 in adults and children hospitalized with severe disease. Severe disease is defined as patients with low blood oxygen levels or needing oxygen therapy or more intensive breathing support such as a mechanical ventilator. Based on evaluation of the emergency use authorization criteria and the scientific evidence available, it was determined that it is reasonable to believe that remdesivir may be effective in treating COVID-19, and that, given there are no adequate, approved, or available alternative treatments, the known and potential benefits to treat this serious or life-threatening virus currently outweigh the known and potential risks of the drug's use.
- FDA updated its [guidance](#) on convalescent plasma and associated [web page](#). The updated guidance provides clarification for investigators on how to submit investigational applications for COVID-19 convalescent plasma. In addition, the guidance includes updated information regarding potential donors. Previously, the FDA's guidance noted that to qualify, individuals should have complete resolution of symptoms for 28 days or resolution for 14 and a negative diagnostic test. The revised guidance recommends that individuals have complete resolution of symptoms for at least 14 days prior to donation. A negative lab test for COVID-19 disease is not necessary to qualify for donation. The revised guidance also clarifies that FDA does not recommend storing a retention sample from the convalescent plasma donation for single patient emergency INDs.

- Considering the many questions people have about grocery shopping safety, the FDA has posted a video, [12 Tips for Grocery Shopping During the Pandemic](#), to advise consumers.
- FDA posted an updated [COVID-19 Response At-A-Glance Summary](#) which contains updates on major agency activities as well as some important facts and figures.
- FDA issued an EUA to [Fresenius Medical Care](#) for emergency use of the multiFiltrate PRO System and multiBic/multiPlus Solutions. The EUA was issued to help address shortages of continuous renal replacement therapy (CRRT) products during the COVID-19 public health emergency. CRRT is a type of dialysis therapy used to filter and clean the blood when the kidneys are damaged or are not functioning normally. The Fresenius multiFiltrate PRO System and multiBic/multiPlus Solutions have been authorized to provide CRRT to treat patients in an acute care environment during the COVID-19 public health emergency.
- FDA [announced](#) important updates to the agency’s 3/16/2020 policy on commercial manufacturers’ serology—or antibody—tests for #COVID19. Under the new policy, FDA expects commercial manufacturers to submit Emergency Use Authorization (EUA) requests, including their validation data, within 10 days of the updated policy publication date, or the date they notify FDA of their test validation, whichever is later.
- FDA issued warning letters to operators of two websites, [www.antroids.com](#) and [www.foxroids.com](#), that market unapproved COVID-19 products, as part of the agency’s effort to protect consumers. There are currently no FDA-approved drugs to prevent or treat COVID-19. Consumers concerned about COVID-19 should consult with their health care provider. Consumers can visit [BeSafeRx](#) to learn about how to safely buy medicine online.
- FDA authorized the first serology, or antibody, [test](#) where the results of a new independent validation effort by the U.S. Government provided the scientific evidence used to support the authorization. The testing was performed at the Frederick National Laboratory for Cancer Research (FNLCR), a Federally Funded Research and Development Center (FFRDC) sponsored by the National Institutes of Health’s (NIH) National Cancer Institute (NCI). The results are among the first to come from a collaborative effort by the FDA, NIH, Centers for Disease Control and Prevention (CDC), and Biomedical Advanced Research and Development Authority (BARDA) to evaluate certain serological tests. Essential samples and materials used in the evaluation were provided by the NIH National Institute of Allergy and Infectious Diseases (NIAID), the Mount Sinai Health System, the Icahn School of Medicine at Mount Sinai, including members of the Departments of Microbiology and Pathology, and the Vitalant Research Institute.
- **Diagnostics update:**
 - During the COVID-19 pandemic, the FDA has worked with more than 380 test developers who have said they will be submitting EUA requests to the FDA for tests that detect the virus.
 - To date, the FDA has issued 58 individual [EUAs](#) for test kit manufacturers and laboratories. In addition, 25 authorized tests have been added to the

EUA letter of authorization for high complexity molecular-based laboratory developed tests (LDTs).

- The FDA has been notified that more than 235 laboratories have begun testing under the policies set forth in our COVID-19 Policy for Diagnostic Tests for Coronavirus Disease-2019 during the Public Health Emergency Guidance.
- The FDA also continues to keep its [COVID-19 Diagnostics FAQ](#) up to date.

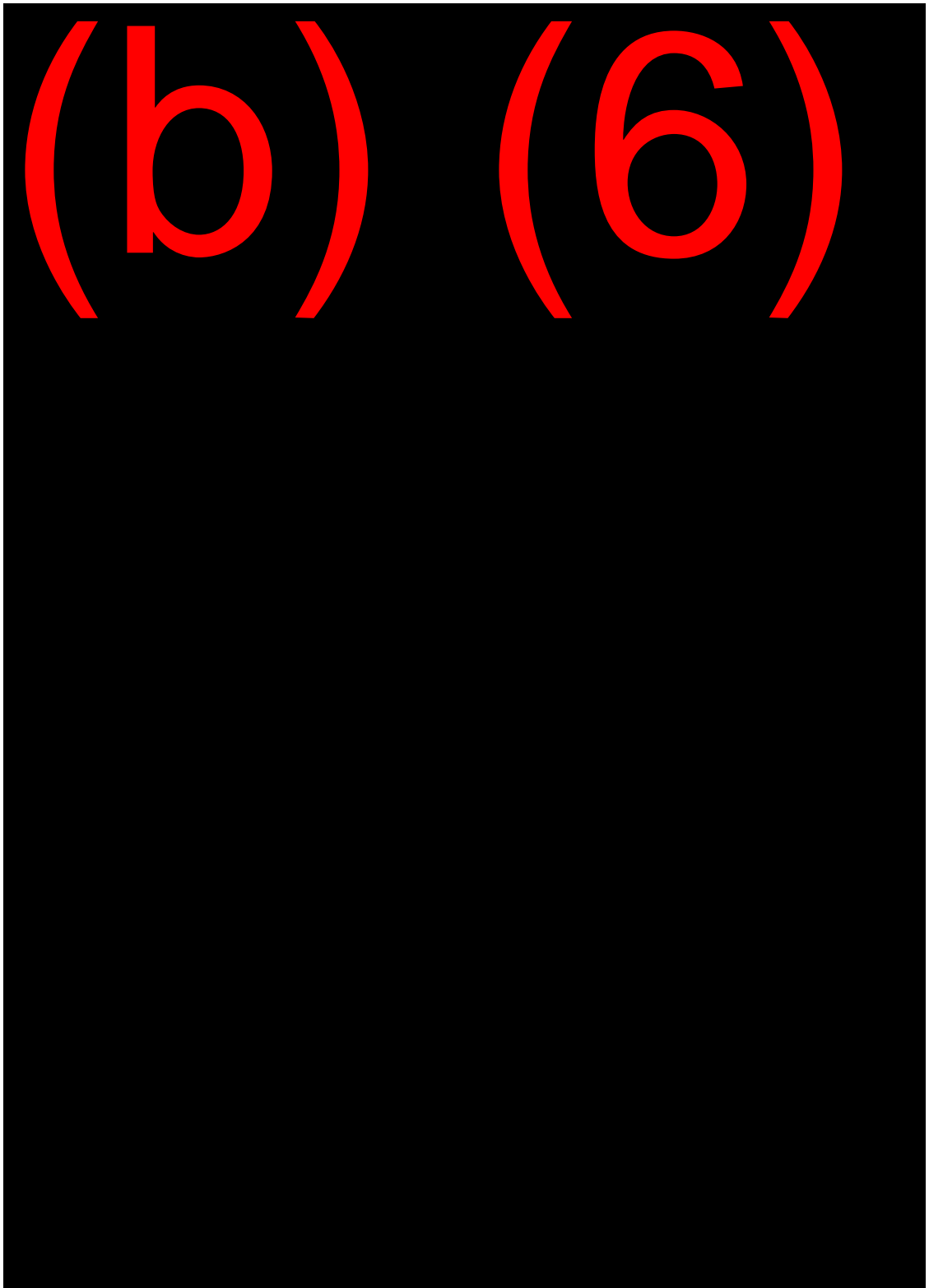
To review FDA's current response activities, click: [FDA's COVID-19 Current Response Activities](#). OEO, via the 2019-nCoV IMG, will continue to monitor and provide updates.

ON THE RADAR

Earthquake, Ponce, Puerto Rico/May 2020

On May 2, 2020, there was a M5.5 earthquake centered approximately 7.3 miles south of Ponce, Puerto Rico. There were reports of minor structural damage and a short power outage in Ponce. No injuries or other issues are known at this time. We have also made outreach to our San Juan District Office to ensure staff safety and for any impact to government property. FDA's GIS team has provided a list of potentially impacted firms to our San Juan Office for their potential follow up. OEO will continue to monitor, but no further reporting is expected.

From:
To:



Subject: [Non-DoD Source] FOUO\ FW: HHS Executive Summary 03Jun20
Date: Wednesday, June 3, 2020 8:21:46 AM
Attachments: [image001.png](#)
[CDC Daily Report 2020-06-02.pdf](#)
[National SITREP 06-03-2020 AM.pdf](#)
[HHS FDA Report for 06-02-2020.pdf](#)

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Good Morning,

Please see HHS Executive Summary for 03 JUN 20.

Note: As of 03Jun20, 0300ET, the CDC confirmed and presumptive positive U.S. cases of COVID-19 have reached 1,816,956 across 50 states and D.C., Guam, PR, CNMI, and USVI; Deaths: 105,846. WHO reported global cases as of 02Jun20, 0600ET: 6,194,533; global deaths: 376,320; WHO member countries and areas with cases: 216. Testing: 18,908,412 cumulative tests includes samples tested by State/Local Public Health Laboratories, Commercial Laboratories, Hospital Laboratories, CDC, and VA completed as of 02Jun20.

State Emergency Operation Centers are at full activation in IA, KS, MN, UT, WA, and WI; partial in AZ, CA, MO, and OK; and monitoring in PA. FEMA Regions II, III and V will continue to work from alternate location UFN (Civil Unrest). Eight USCIS field offices are closed (Philadelphia, Cleveland, Columbus, Des Moines, Milwaukee, Chicago, St Paul and Sacramento). PA requested Emergency Management Assistance Compact (EMAC) from VA, DE, and NJ to support Philadelphia Police Dept. The U.S. National Guard has 20,000 National Guard members that are assisting local law enforcement across 32 states. DoD has directed all military bases within the National Capital Region to elevate from Force Protection Condition (FPCON) Bravo to FPCON Charlie in response to reported civil unrest until further notice. FPCON Charlie refers to potential targeting of personnel and facilities. USNORTHCOM reports an active duty military police battalion of 200-250 personnel will deploy to Washington, DC. The troops are expected to provide security but not law enforcement duties such as the arrest and detention of protesters. USSS reports there are roadway closures around the White House until further notice. Metropolitan Police Department stood up their Joint Operations Center on 02Jun, until further notice. There is currently no requests for federal ESF-8 assistance.

- FDA took additional action to help ensure widespread access to hand sanitizers during the COVID-19 public health emergency. Consumer and health care personnel safety is a top priority for FDA, and an important part of FDA's mission is to protect the public from harm, including as we seek to increase supply of hand sanitizer. As such, FDA updated the agency's guidances to provide additional clarification on the manufacturing and compounding of certain alcohol-based hand sanitizer

products to help ensure that harmful levels of impurities are not present in ethanol used in hand sanitizer.

- 68 private Community Based Testing Sites (CBTS) 2.0 sites in 17 states and the District of Columbia have closed due to civil unrest.
- NJ: Implementation of mobile testing program under CBTS 1.0 is delayed due to planned testing locations experiencing civil unrest; State meeting on June 2 to identify solutions.
- VA: Monitoring food banks/distributors as conditions and needs change; may have supply chain disruptions in the Emergency Food Assistance Program and the Commodity Supplemental Food Program due to lack of volunteers or further closures of distribution sites.

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NORAD and NORTHCOM (b) (6) to Health and Human Services

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From: OS Secretarys Operations Center (b) (6)
Sent: Wednesday, June 3, 2020 8:08 AM
To: OS Secretarys Operations Center (b) (6)
Subject: HHS Executive Summary 03Jun20

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HHS Executive Summary: Wednesday, 03Jun20

1. HHS

Today's Noteworthy Topics:

COVID-19 (Novel Coronavirus)

As of 03Jun20, 0300ET, the CDC confirmed and presumptive positive U.S. cases of COVID-19 have reached 1,816,956 across 50 states and D.C., Guam, PR, CNMI, and USVI; Deaths: 105,846. WHO reported global cases as of 02Jun20, 0600ET: 6,194,533; global deaths: 376,320; WHO member countries and areas with cases: 216. Testing: 18,908,412 cumulative tests includes samples tested by State/Local Public Health Laboratories, Commercial Laboratories, Hospital Laboratories, CDC, and VA completed as of 02Jun20.

Civil Unrest, Nationwide

State Emergency Operation Centers are at full activation in IA, KS, MN, UT, WA, and WI;

partial in AZ, CA, MO, and OK; and monitoring in PA. FEMA Regions II, III and V will continue to work from alternate location UFN (Civil Unrest). Eight USCIS field offices are closed (Philadelphia, Cleveland, Columbus, Des Moines, Milwaukee, Chicago, St Paul and Sacramento). PA requested Emergency Management Assistance Compact (EMAC) from VA, DE, and NJ to support Philadelphia Police Dept. The U.S. National Guard has 20,000 National Guard members that are assisting local law enforcement across 32 states. DoD has directed all military bases within the National Capital Region to elevate from Force Protection Condition (FPCON) Bravo to FPCON Charlie in response to reported civil unrest until further notice. FPCON Charlie refers to potential targeting of personnel and facilities. USNORTHCOM reports an active duty military police battalion of 200-250 personnel will deploy to Washington, DC. The troops are expected to provide security but not law enforcement duties such as the arrest and detention of protesters. USSS reports there are roadway closures around the White House until further notice. Metropolitan Police Department stood up their Joint Operations Center on 02Jun, until further notice. There is currently no requests for federal ESF-8 assistance.

Daily Operational Schedule:

0830 – FEMA Daily Operations Briefing
1230 – HHS/FEMA Interagency VTC

Public Health Emergency of National Significance:

Opioid Crisis, Nationwide: 02Apr20
Novel Coronavirus (COVID-19): 21Apr20

HHS Response Status Summary:

HHS SOC: Level I (Full Activation)
CDC EOC: Level III (Polio/Ebola)
CDC EOC: COVID-19 (Agency-Wide Response)
FDA EOC: Level I (Vape Product Response, COVID-19)

Emergency Support Function (ESF) Activation:

ESF – 8: Activated
ESF – 6: Activated

Recovery Support Function (RSF) Activation:

H&SS RSF: Activated Region II (2017 Irma/Maria, Puerto Rico projected end date of 30Jun20).

HHS Deployments: (Total =692)

ASPR: 586 – (8) Earthquake Puerto Rico, (577) COVID-19, (1) Irma/Maria Recovery
CDC: 106 – (106) COVID-19

New Mission Assignments (MA):NSTR

Active Situations (7):

- Influenza Season
- Irma/Maria, Puerto Rico, & USVI (Recovery)
- Ebola in Eastern Democratic Republic of the Congo
- Novel Coronavirus (COVID-19)
- Bravo Response
- Earthquake, Puerto Rico
- Civil Unrest, Nationwide

U.S. International Health Regulation National Focal Point Status:NSTR

2. FEMA:

Interagency Response Status Summary:

NWC: Monitoring

NRCC: Level I

National IMATs: Red – Fully Mission Capable; Blue – Fully Mission Capable; Gold – IMAT – A Support

Regional IMATs: Region I, RRCC; Region III, RRCC; Region IV-1, Virtual – MS; Region IV-2, Virtual – SC; Region V, RRCC; Region VI-1, Virtual – AR; Region VII, VJFO-COVID; Region VIII, Reconstituting; Region IX-2, RRCC; Region X, RRCC

Significant National Weather:

Clusters of strong to severe thunderstorms are possible Wednesday from parts of the northern and central Plains east into the northern Mid Atlantic. Tropical Storm Cristobal will meander over the Bay of Campeche before lifting north across the Gulf of Mexico on Friday. Excessive heat is forecast Wednesday and Thursday over the Desert Southwest including Phoenix and Las Vegas.

Tropical Activity:

Atlantic:

Tropical Storm Cristobal

At 0500ET Cristobal was Located 25 miles NNW of Ciudad Del Carmen, Mexico with maximum sustained winds of 60 mph. Cristobal is moving toward the southeast near 3 mph, and on the forecast track, the center will move inland over eastern Mexico tonight and Thursday. The center is forecast to move back over the Bay of Campeche Thursday night and Friday. Gradual weakening is forecast while the center remains inland, but re-strengthening is expected after Cristobal moves back over water Thursday night and Friday. Cristobal is forecast to begin moving northward across the Gulf of Mexico on Friday, and there is a risk of storm surge, rainfall, and wind impacts this weekend along portions of the U.S. Gulf Coast.

3. OPDIV/STAFFDIV Overnight Reports:

CDC:

- COVID-19 – 216 Locations (including countries, territories, and areas)
- Ebola – Democratic Republic of the Congo (DRC) - New

FDA:

- Coronavirus Disease 2019 (COVID-19)/ML/2019

Prepared by:

Secretary's Operations Center

U.S. Department of Health and Human Services (HHS)

Assistant Secretary for Preparedness and Response (ASPR)

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CDC Daily Report: As of 7:00 a.m. EDT, Tuesday, June 02, 2020

SIGNIFICANT EVENTS:

- Note: Operational updates described within the CDC Daily Report may not be inclusive of all response activities that are occurring.

** = Asterisks denote updates to monitored events/responses*

MONITORED EVENTS: (3)

- Opioid Crisis
- Hepatitis-A Outbreak
- 2020 Hurricane Season

RESPONSE STATUS:

- CDC EOC: 2019 Novel Coronavirus (Agency-wide Response) *
- CDC EOC: Ebola (Level III) *
- CDC EOC: Polio (Level III)

CDC DEPLOYMENTS:

- Domestic
 - Coronavirus (104)
 - International
 - Polio (0)
 - Ebola (0)
 - Coronavirus (2)
- Total Personnel: (106)

PROGRAM UPDATES:

National Center for Immunization and Respiratory Diseases (NCIRD):

- COVID-19 United States
 - The CDC COVID-19 website provides the latest resources for the community, healthcare professionals and information on COVID-19 cases in the United States: <https://www.cdc.gov/coronavirus/2019-ncov/index.html>.

- Confirmed and presumptive U.S. cases of COVID-19 (as of 3:00am, June 2, 2020): **1,797,716**
- U.S. confirmed and presumptive deaths reported to CDC: **104,839**
- Per WHO/Global Summary: **6,057,853 (122,917 new)** confirmed cases of COVID-19 worldwide (as of 10:00 CEST, June 1, 2020)

- Global Migration Task Force (GMTF)
 - On May 31, 2,253 passengers from China, Iran, Schengen Countries, UK, Ireland, and Brazil were screened upon arrival at F15 airports;
 - A total of 285,551 individuals have been screened to date.
 - San Francisco International Airport (SFO) closed May 31 due to civil unrest.
 - According to data from approved attestations for non-commercial travel from April 15 to May 28, 32 cruise ships from 11 cruise lines have submitted attestations to disembark 7,610 crew, including 282 US residents.
 - Approval of public health response plans required by No Sail Order for one (1) cruise ship line in review.
 - Plan to de-escalate current Global Travel 3 notice has been drafted and under review within GMTF.

- Laboratory Task Force
 - As of May 28, CDC has tested over 7,408 samples which equates to over 4,102 patients by PCR.
 - CDC has also tested 31,132 samples with the CDC serology assay.
 - International Reagent Resource (IRR) shipped 525 reagents to 33 laboratories on Saturday May 30, 2020.
 - No shipments on Sunday May 31, 2020.

- Health Systems & Worker Safety Task Force
 - Infectious Disease Society of America (IDSA) has taken over leading weekly Clinician Teleconference, hosting 74 participants.
 - Worker Safety and Health Team deployed personnel to the following locations:
 - Three (3) to Health Departments in ME, NM, and PR.
 - One (1) to Hopi Nation in AZ.
 - One (1) to Navajo Nation in AZ.
 - One (1) to quarantine station in TX.
 - Six (6) US Public Health Service (USPHS) to FL, NM, PA, and TX
 - Providing technical assistance for healthcare setting infection prevention and control, point prevalence testing in long term care setting, and healthcare worker management.
 - Finalized new decision-trees for online symptom checker Clara bot.
 - Will submit version 59 into clearance this week.
 - Providing field support and technical assistance for healthcare worker investigations, healthcare settings, and non-healthcare settings (e.g., homeless shelters, alternate care sites, etc.).

GLOBAL DISEASE DETECTION OPERATIONS CENTER (GDDOC):

- **COVID-19 - 216 Locations (including countries, territories, and areas)**
 - **Source: CDC; NCIRD/DVD; WHO Headquarters; WHO Regional Offices; Ministries of Health**
 - As of 1 June (09:00 GMT/05:00 EDT, accessed 14:30), WHO has reported a global cumulative count of 6,057,853 cases and 371,166 deaths for an increase of 122,917 cases and 4,000 deaths over the preceding 24 hours. The cases are distributed in the six regions as follows: Region of the Americas [2,817,232 confirmed (73,439 new cases) / 160,514 deaths (2,812 new deaths)]; European Region [2,159,791 confirmed (17,244) / 180,594 deaths (509)]; Eastern Mediterranean Region [520,137 confirmed (15,136) / 12,627 deaths (274)]; South-East Asia Region [272,512 confirmed (11,933) / 7,743 deaths (312)]; African Region [104,242 confirmed (3,632) / 2,638 deaths (84)]; and Western Pacific Region [183,198 confirmed (1,533) / 7,037 deaths (9)]. Among the 216 affected locations, 144 reported new confirmed cases with the highest number of new cases from Brazil [498,440 confirmed (33,274 new cases) / 28,834 deaths (956 new deaths)]; the United States [1,734,040 confirmed (17,962) / 102,640 deaths (1,073)]; Russia [414,878 confirmed (9,035) / 4,855 deaths (162)]; India [190,535 confirmed (8,392) / 5,394 deaths (230)]; Peru [155,671 confirmed (7,386) / 4,371 deaths (141)]; Chile [99,688 confirmed (4,830) / 1,054 deaths (57)]; Pakistan [72,460 confirmed (2,964) / 1,543 deaths (60)]; Mexico [87,512 confirmed (2,885) / 9,779 deaths (364)]; Bangladesh [47,153 confirmed (2,545) / 650 deaths (40)]; and Iran [151,466 confirmed (2,516) / 7,797 deaths (63)]. WHO [COVID-19 Situation Reports](#) present official counts of confirmed COVID-19 cases, which may subsequently be updated. Thus, differences among WHO reports and between WHO reports other sources of COVID-19 data, using different inclusion criteria and different data cutoff times, are to be expected.
 - CDC has established a COVID-19 Incident Management System and the CDC Emergency Operations Center is activated to provide ongoing support to the COVID-19 response. CDC COVID-19 [Travel Recommendations](#) for the locations with and without restrictions on entry to the United States are posted and will continue to be updated. The CDC maintains a dedicated CDC [COVID-19](#) website and [Health Alert Network \(HAN\)](#). WHO has published recommendations for [mass gatherings in the context of the current COVID-19 outbreak](#) and technical guidance on [preventing and managing the COVID-19 pandemic across long-term care services](#).

- **Ebola - Democratic Republic of the Congo (DRC) - NEW**
 - **Source: CDC - DRC; WHO - Democratic Republic of the Congo; WHO Headquarters; WHO - AFRO; Democratic Republic of the Congo Ministry of Health**
 - The Global Disease Detection Operations Center (GDDOC) has been informed of confirmed Ebola virus disease (EVD) cases in Équateur Province in western Democratic Republic of the Congo (DRC), first announced by the DRC Ministry of Health (MoH) today.
 - From 18 to 30 May, four deaths in the same family preceded by fever and bleeding were reported in Mbandaka City, Wangata Health Zone (HZ). Mbandaka is the capital city of Équateur Province on the Congo River, an important river transportation hub and the site of an EVD outbreak in May-July 2018. On 31 May, the nurse, who received

the first patient (died on 18 May), and the nurse's husband arrived at Wangata General Referral Hospital; the nurse and her husband both presented with fever, non-bloody diarrhea, and vomiting. They were placed in isolation following collection of blood samples. The samples from the nurse, her husband, and from one of the deceased family members were tested in the Équateur Provincial Lab and were positive. On 31 May, samples were also sent to Institut National de Recherche Biomédicale (INRB) in Kinshasa for confirmation and sequencing. Sequencing will confirm whether this is the 11th EVD outbreak in DRC or if these new cases are related to a previous outbreak. [WHO](#) staff in Mbandaka are supporting outbreak response activities and contact tracing is underway. As of 1 June, a total of 6 cases (3 confirmed, 3 probable) and 4 deaths have been reported in Wangata HZ in Équateur Province.

EOC 24 HOUR CALL DATA:

Category	Total Count
COVID-19 (DoH)	1
COVID-19 (Other)	67
Administrative	54
Botulism	1
CDC INFO Telephone Call Protocol	1
DGMQ - QPHO - COVID-19 Screening	6
Malaria	1
NCEH - Division of Laboratory Services	1
Rabies	1

Total Calls: 133



FEMA National Situation Report

As of 3:00 a.m. ET Wednesday, June 3, 2020

This report is published twice daily, 3 00 a.m. and 5 00 p.m. ET

Common Operating Picture

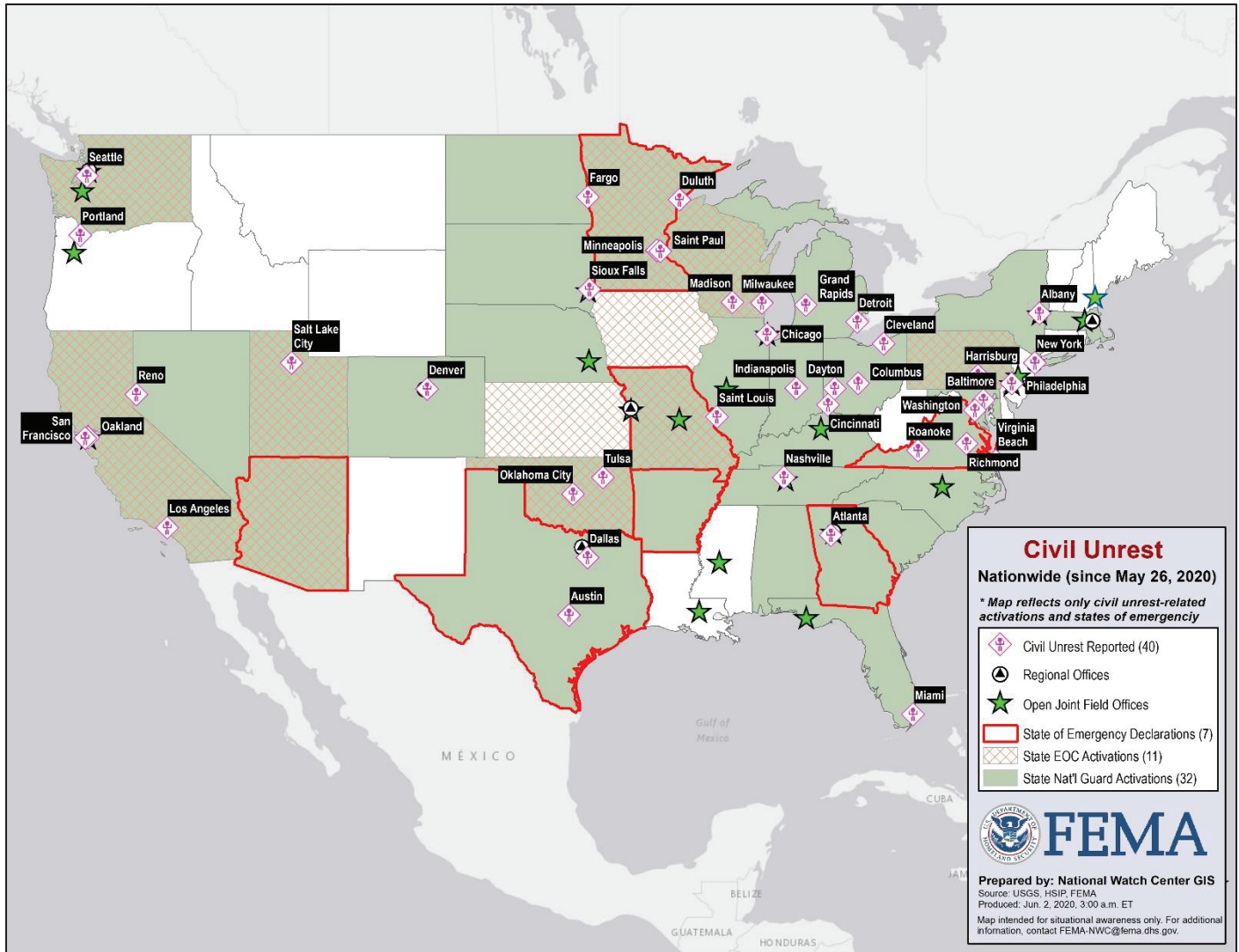
FEMA HQ		Major Disasters (DR): 104		Region X COVID DRs		4475-DR-ND		4440/4463/4467/4469-DR-SD		4414/4442-DR-MN		Region VII COVID DRs		3525-EM-MI		Region V COVID DRs		Region I COVID DRs	
<i>NWC</i>	<i>NRCC</i>	Emergency Disasters (EM): 94		4481-DR-WA		4483-DR-ND		4414/4442-DR-MN		4459/4477-DR-WI		4483-DR-IA		3525-EM-MI		4372/4379-DR-MA		4456-DR-MA	
Monitoring	Level I	JFOs: 11 / VJFOs: 18		4499-DR-OR		4499-DR-OR		4459/4477-DR-WI		4459/4477-DR-WI		4490-DR-MO		3525-EM-MI		4410-DR-CT		4456-DR-MA	
FEMA REGIONS		Staging Area		4533-DR-AK		4533-DR-AK		4424/4447-DR-OH		4424/4447-DR-OH		4504-DR-KS		3525-EM-MI		4494-DR-MI		4500-DR-CT	
<i>WATCH</i>	<i>RRCC</i>	Distribution Center (DC)		4534-DR-ID		4534-DR-ID		4461-DR-IL		4461-DR-IL		4504-DR-KS		3525-EM-MI		4507-DR-OH		4505-DR-RI	
Monitoring	I	Declared County (non-COVID-19 Declarations)		4539-DR-WA		4539-DR-WA		4531-DR-MN		4531-DR-MN		4504-DR-KS		3525-EM-MI		4515-DR-IN		4516-DR-NH	
Alt. Location	II	Fully Activated		4519-DR-OR		4519-DR-OR		4531-DR-MN		4531-DR-MN		4504-DR-KS		3525-EM-MI		4520-DR-WI		4522-DR-ME	
Alt. Location	III	Partially Activated		4498-DR-CO		4498-DR-CO		4531-DR-MN		4531-DR-MN		4504-DR-KS		3525-EM-MI		4532-DR-VT		4532-DR-VT	
Monitoring	IV	Monitoring		4509-DR-ND		4509-DR-ND		4531-DR-MN		4531-DR-MN		4504-DR-KS		3525-EM-MI		4532-DR-VT		4532-DR-VT	
Alt. Location	V	Monitoring		4525-DR-UT		4525-DR-UT		4531-DR-MN		4531-DR-MN		4504-DR-KS		3525-EM-MI		4532-DR-VT		4532-DR-VT	
Monitoring	VI	Monitoring		4527-DR-SD		4527-DR-SD		4531-DR-MN		4531-DR-MN		4504-DR-KS		3525-EM-MI		4532-DR-VT		4532-DR-VT	
Alt. Location	VII	Monitoring		4535-DR-WY		4535-DR-WY		4531-DR-MN		4531-DR-MN		4504-DR-KS		3525-EM-MI		4532-DR-VT		4532-DR-VT	
Monitoring	VIII	Monitoring		4537-DR-AS		4537-DR-AS		4531-DR-MN		4531-DR-MN		4504-DR-KS		3525-EM-MI		4532-DR-VT		4532-DR-VT	
Monitoring	IX	Monitoring		4482-DR-CA		4482-DR-CA		4531-DR-MN		4531-DR-MN		4504-DR-KS		3525-EM-MI		4532-DR-VT		4532-DR-VT	
Monitoring	X	Monitoring		4495-DR-GU		4495-DR-GU		4531-DR-MN		4531-DR-MN		4504-DR-KS		3525-EM-MI		4532-DR-VT		4532-DR-VT	
Notes:		NRCC and RRCCs are activated for COVID-19		4499-DR-OR		4499-DR-OR		4531-DR-MN		4531-DR-MN		4504-DR-KS		3525-EM-MI		4532-DR-VT		4532-DR-VT	
GA: Flooding		MS: Flooding		4511-DR-CNMI		4511-DR-CNMI		4531-DR-MN		4531-DR-MN		4504-DR-KS		3525-EM-MI		4532-DR-VT		4532-DR-VT	
PR: Earthquake		TN: Tornadoes		4523-DR-NV		4523-DR-NV		4531-DR-MN		4531-DR-MN		4504-DR-KS		3525-EM-MI		4532-DR-VT		4532-DR-VT	
Region II, III & V RWCs at Alternate location UFN		All State EOCs activated for COVID-19		4524-DR-AZ		4524-DR-AZ		4531-DR-MN		4531-DR-MN		4504-DR-KS		3525-EM-MI		4532-DR-VT		4532-DR-VT	
States for Civil Unrest: (11) MN, WI, UT, WA, OK, MO, AZ, CA, PA, KS, IA				4537-DR-AS		4537-DR-AS		4531-DR-MN		4531-DR-MN		4504-DR-KS		3525-EM-MI		4532-DR-VT		4532-DR-VT	

N-IMATs	
2 Teams	
Red	
Blue	
Gold	IMAT-A Support
R-IMATs	
4-6 Teams Available	
I	RRCC
II	
III	RRCC
IV-1	Virtual - MS
IV-2	Virtual - SC
V	RRCC
VI-1	Virtual - AR
VI-2	
VII	VJFO-COVID
VIII	Reconstituting
IX-1	
IX-2	RRCC
X	RRCC
FMC	PMC
NMC	Deployed

Team:	US&R	MERS	FCOs	FDRCs	IM Workforce	Incident Management Cadre Availability Summary	
<i>Status</i>	>66%	>66%	≤1 Type 1	=2		<i>Cadres with 25% or Less Availability</i>	
<i>Assigned:</i>	28	36	48	11	13,517	EHP 24% (149/632); ER 16% (12/75); FL 18% (31/173); OPS 24% (70/292);	
<i>Unavailable:</i>	4	0	1	0	2,552	PA 23% (674/2,992); PLAN 21% (87/417); SAF 7% (4/55)	
<i>Deployed:</i>	0	0	39	8	5,633		
<i>Available:</i>	24	36	8	3	5,329 / 39%		

National Current Operations & Monitoring

Civil Unrest and Protests



Situation: Protests, civil disturbances and marches are occurring multiple cities across the nation

State/Local Response:

- State EOCs activated for civil unrest (in addition to COVID-19 activation): (11): Activated: MN, WI, UT, WA, OK, MO, AZ, KS, IA, CA, PA
- Curfew Orders (8): DC, PA, GA, NJ, MO, AZ, CA & NYC
- NG Deployed (32): MA, NY, DC, MD, VA, PA, FL, GA, TN, AL, KY, NC, SC, IL, IN, OH, MI, MN, WI, AR, OK, TX, MO, NE, CO, ND, SD, UT, CA, NV, AZ, WA
- PA requested EMAC from VA, DE, and NJ to support Philadelphia Police Dept.

Federal Response:

- Regions II, III & V: will continue to work from alternate location UFN (Civil Unrest)
- RRCC: Regions III, V, and VIII working remotely (COVID-19)
- Region VIII: JFO in Sioux Falls, SD returned to normal operations on 2 June
- FEMA NRCC and RRCCs are activated (COVID-19)
- NWC and RWCs at normal ops, continue to monitor

COVID-19 (For interagency reporting see FEMA NRCC COVID-19 SLB, published daily)

Situation: FEMA and HHS continue leading the multiagency COVID-19 Response / Recovery efforts. 45,352 (-1,254) FEMA, DoD, HHS, VA, and CDC personnel deployed / activated; 2,854 (-44) FEMA employees deployed.

Nationwide testing: 17,612,125 (+817,943) cumulative as of June 2

Lifeline Impacts:

Health and Medical

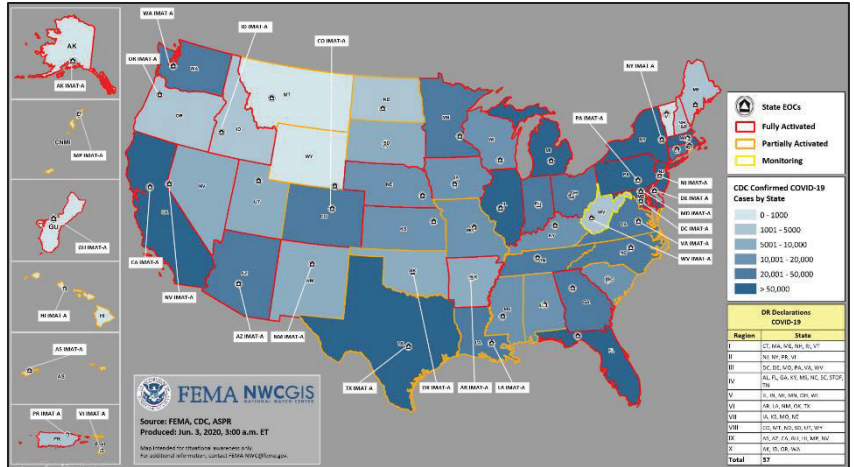
- 68 private Community Based Testing Sites (CBTS) 2.0 sites in 17 states and the District of Columbia have closed due to civil unrest
- NJ: Implementation of mobile testing program under CBTS 1.0 is delayed due to planned testing locations experiencing civil unrest; State meeting on June 2 to identify solutions

Food, Water, & Shelter

- VA: Monitoring food banks/distributors as conditions and needs change; may have supply chain disruptions in the Emergency Food Assistance Program and the Commodity Supplemental Food Program due to lack of volunteers or further closures of distribution sites

Response:

- The NRCC at Level I; Region IX RRCC at Level I; Region III, V, VI, and VIII RRCCs at Level III; Region VII RRCC is rostered and the Region is supporting COVID-19 response from the Virtual JFO in Kansas City, MO; all remaining RRCCs are at Level II
- 28 FEMA IMAT-A teams (24 actual/ 4 virtual) deployed to states/territories/tribal nations; 37 LNOs (21 actual / 16 virtual) deployed to states/territories/tribal nations

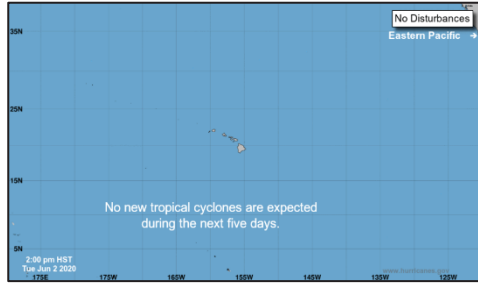


	Confirmed/Presumptive	Deaths
United States	1,797,716	104,839
Worldwide	6,057,853	371,166

(FEMA COVID-19 SLB, 5 00 p.m. ET, June 2)

Tropics

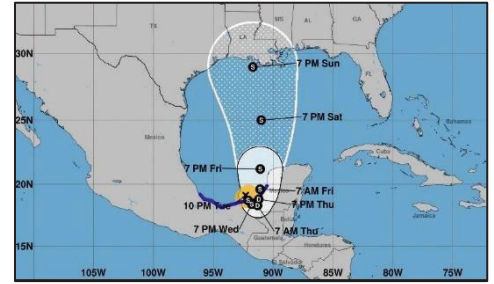
Central Pacific



Eastern Pacific



Atlantic



Atlantic:

Tropical Storm Cristobal (Advisory #6 as of 11 00 p.m. ET)

- Located 50 miles NW of Ciudad Del Carmen, Mexico; moving S at 1 mph
- Tropical-storm-force winds extend outward up to 70 miles
- Maximum sustained winds at 50 mph; gradual weakening expected while the center remains inland, followed by strengthening when the storm moves back over water Thursday night
- Forecast to turn SE and E today, followed by a turn towards NNE and N Thursday and Friday
- Projected Impacts:
 - Heavy rainfall for portions of Mexico and Central America expected
 - There is a risk of storm surge, rainfall, and wind impacts this weekend along portions of the U.S. Gulf Coast

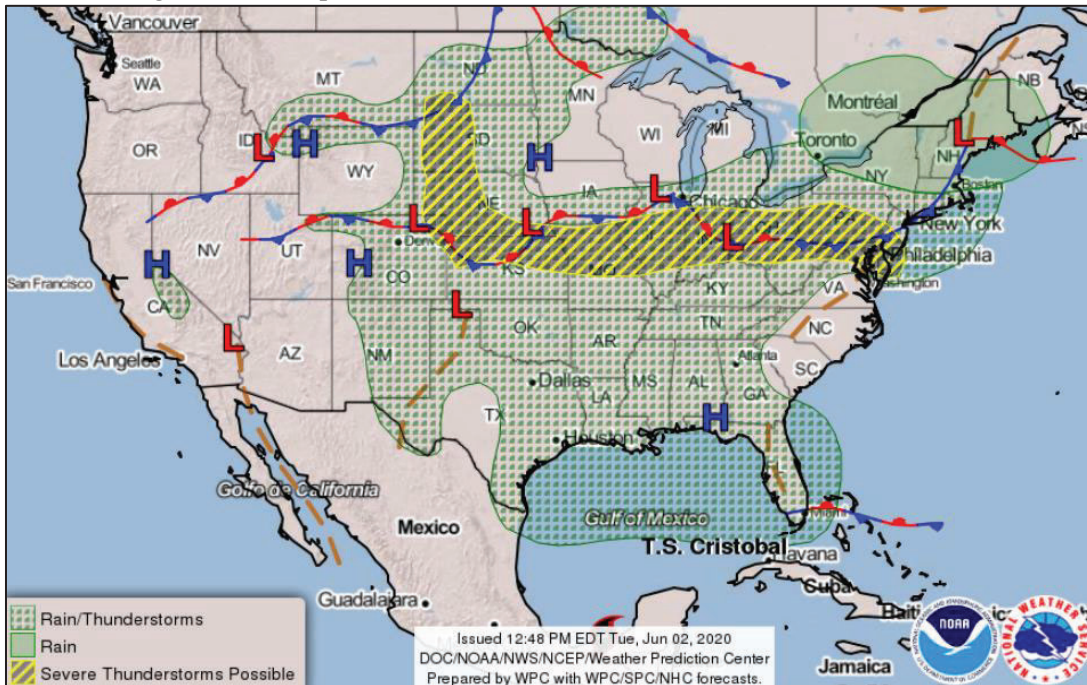
Eastern Pacific: No significant activity

Central Pacific: No significant activity

Western Pacific: No current threat to U.S. interests

Weather Threats

- Slight risk of severe thunderstorms through tonight stretching from the Northern and Central Plains into the Mid-Atlantic region
- Excessive Heat Warning in effect for portions of CA, NV, & AZ



(Latest NOAA Forecasts [WPC](#) | [SPC](#) | [NHC](#) | [SWPC](#))

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Joint Preliminary Damage Assessments

Region	State	Event / Date	Type	Counties		Start – End Dates
				Requested	Completed	
IV	AL	Severe Storms, Strong Winds, Tornadoes, and Hail April 19	IA	0	0	N/A
			PA	10	0	5/15 – TBD
V	MI	Dam Breach, Severe Weather, and Flooding May 16, and continuing	IA	5	0	5/26 – TBD
			PA	5	0	5/26 – TBD
VII	MO	Severe Storms May 3-4	IA	0	0	N/A
			PA	20	18	5/14 – TBD

Declaration Activity

Declaration Requests in Process: 7 (HI, UT, TX (Appeal), AK (Appeal), Poarch Band of Creek Indians, ND, & AL)

(Declared Disasters fema.gov)

Joint Field Office Status Updates

No change over the last operational period

(JFO listing available on [NWC SharePoint Site](#))

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Regional Current Operations & Monitoring

<i>Region I</i>	<i>Region VI</i>
<p>RRCC: Level II (day shift – COVID-19) WATCH – Maynard MOC: Steady State (24/7)</p> <ul style="list-style-type: none"> • Monitoring: Civil unrest (see above) <p>IMAT: Deployed to RRCC (COVID-19) LNOs: RI & ME EOCs:</p> <ul style="list-style-type: none"> • CT, MA, ME, NH, & VT: Full Activation (COVID-19) • RI: Partial Activation (COVID-19) 	<p>RRCC: Level III (day shift with selected ESFs – COVID-19) WATCH – Denton MOC: Steady State (24/7)</p> <ul style="list-style-type: none"> • Monitoring: Civil unrest (see above) <p>IMAT-1: Supporting FEMA-4544-DR-AR (Virtual) IMAT-2: FMC / Available IMAT-A: AR, LA, NM, OK, & TX LNOs: AR, LA, NM, OK, & TX EOCs:</p> <ul style="list-style-type: none"> • AR & NM: Full Activation (COVID-19) • LA, OK, & TX: Partial Activation (COVID-19)
<i>Region II</i>	<i>Region VII</i>
<p>RRCC: Level II (day shift – COVID-19) WATCH: Steady State (24/7), at Alternate location UFN</p> <ul style="list-style-type: none"> • Monitoring: Civil unrest (see above) <p>IMAT: FMC / Available IMAT-A: NY, NYC, NJ, PR, & USVI EOCs:</p> <ul style="list-style-type: none"> • NJ, NY, & PR: Full Activation (COVID-19) • USVI: Partial Activation (COVID-19) 	<p>WATCH: Steady State (24/7): Alternate location</p> <ul style="list-style-type: none"> • Monitoring: <ul style="list-style-type: none"> ○ Civil unrest (see above) ○ Severe Weather (see above) <p>IMAT: Supporting COVID-19 at Region VII HQ (Virtual) EOCs:</p> <ul style="list-style-type: none"> • IA, KS, & NE: Full Activation (COVID-19) • MO: Partial Activation (COVID-19)
<i>Region III</i>	<i>Region VIII</i>
<p>RRCC: Level III (day shift – COVID-19) WATCH: Steady State (24/7); at Alternate location UFN</p> <ul style="list-style-type: none"> • Monitoring: <ul style="list-style-type: none"> ○ Civil unrest (see above) ○ Severe Weather (see above) <p>IMAT: Deployed to RRCC (COVID-19) IMAT-A: DC, DE, MD, PA, VA, & WV LNOs: DE EOCs:</p> <ul style="list-style-type: none"> • DC, DE, MD, PA: Full Activation (COVID-19) • VA: Partial Activation (COVID-19) • WV: Monitoring (COVID-19) 	<p>RRCC: Level III (day shift – COVID-19) WATCH – Denver MOC: Steady State (24/7)</p> <ul style="list-style-type: none"> • Monitoring: <ul style="list-style-type: none"> ○ Civil unrest (see above) ○ Severe Weather (see above) <p>IMAT: Reconstituting; return to FMC on June 5 IMAT-A: CO LNOs: SD, WY, MT, & UT EOCs:</p> <ul style="list-style-type: none"> • SD, & UT: Full Activation (COVID-19) • CO, ND, MT, & WY: Partial Activation (COVID-19)
<i>Region IV</i>	<i>Region IX</i>
<p>RRCC: Level II (day shift – COVID-19) WATCH: Steady State (24/7)</p> <ul style="list-style-type: none"> • Monitoring: Civil unrest (see above) <p>IMAT-1: Supporting FEMA-4536-DR-MS (Virtual) IMAT-2: Supporting FEMA-4542-DR-SC (Virtual) LNOs: AL, FL, & TN EOCs:</p> <ul style="list-style-type: none"> • FL: Full Activation (COVID-19) • GA: Full Activation (COVID-19 / Flooding) • MS: Partial Activation (COVID-19 / Flooding) • TN, AL, KY, NC, & SC: Partial Activation (COVID-19) 	<p>RRCC: Level I (day shift – COVID-19) WATCH: Steady State (24/7)</p> <ul style="list-style-type: none"> • Monitoring: <ul style="list-style-type: none"> ○ Excessive Heat Warnings – AZ, CA, NV ○ Civil unrest (see above) <p>IMAT-1: PMC / Staffing shortage IMAT-2: Deployed to RRCC (COVID-19) IMAT-A: AZ, CA, HI, NV, GU, CNMI, AS, & Navajo Nation EOCs:</p> <ul style="list-style-type: none"> • AZ, CA, GU, & NV: Full Activation (COVID-19) • AS, CNMI & HI: Partial Activation (COVID-19)
<i>Region V</i>	<i>Region X</i>
<p>RRCC: Level III (day shift – COVID-19) WATCH: Steady State (24/7) at Alternate location UFN</p> <ul style="list-style-type: none"> • Monitoring: <ul style="list-style-type: none"> ○ Civil unrest (see above) ○ Severe Weather (see above) <p>IMAT: Deployed to RRCC (COVID-19) LNOs: IN, MI, WI, MN, OH, & WI EOCs: IL, IN, OH, MI, MN, & WI: Full Activation (COVID-19)</p>	<p>RRCC: Level II (day shift – COVID-19) WATCH – Bothell MOC: Steady State (24/7)</p> <ul style="list-style-type: none"> • Monitoring: <ul style="list-style-type: none"> ○ Flood Warning – WA ○ Civil unrest (see above) <p>IMAT: Deployed to RRCC (COVID-19) IMAT-A: AK, ID, OR, & WA LNOs: AK & OR EOCs: AK, ID, OR & WA: Full Activation (COVID-19)</p>

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FEMA National Situation Report Acronyms & Abbreviations

Front Page – Common Operating Picture

NWC:	National Watch Center	ISB:	Incident Support Base	R-IMAT:	Regional Incident Management Assistance Team
NRCC:	National Response Coordination Center	MERS:	Mobile Emergency Response Support	RRCC:	Regional Response Coordination Center
EX (State):	Exercise (Location)	N-IMAT:	National Incident Management Assistance Team	RWC:	Regional Watch Center
FCO:	Federal Coordinating Officer	NMC:	Non-Mission Capable	US&R:	Urban Search & Rescue
FDRC:	Federal Disaster Recovery Coordinator	PMC:	Partially Mission Capable		
FMC:	Fully Mission Capable				
IM:	Incident Management				

Front Page – Force Laydown Map

CAD:	Caribbean Area Division	DR:	Major Disaster Declaration (Stafford Act)	IST:	Incident Support Team
CNMI:	Commonwealth of the Northern Marianas Islands	EM:	Emergency Declaration (Stafford Act)	JFO:	Joint Field Office
DC:	Distribution Center / District of Columbia	EOC:	Emergency Operations Center	LNO:	Liaison Officer
		FCO:	Federal Coordinating Officer	TF:	Task Force
				VJFO:	Virtual JFO

Front Page – Incident Management Cadres

ACQ:	Acquisitions	DSA:	Disaster Survivor Assistance	HR:	Human Resources
ADR:	Alternative Dispute Resolution	EHP:	Environmental Planning and Historic Preservation	IA:	Individual Assistance
DI:	Disability Integration	ER:	Equal Rights	IT:	Information Technology
DEC:	Disaster Emergency Communications	EA:	External Affairs	OCC:	Office of Chief Counsel
DFTO:	Disaster Field Training Ops	FL:	Field Leadership	LOG:	Logistics
		FM:	Financial Management	HM:	Hazard Mitigation

Other Acronyms & Abbreviations

ARC:	American Red Cross	IPAWS:	Integrated Public Alert & Warning System
CBRN:	Chemical, Biological, Radiological and Nuclear	IST:	Incident Support Team
CDC:	Centers for Disease Control and Prevention	JTWC:	Joint Typhoon Warning Center
CIKR:	Critical Infrastructure / Key Resources	MCOV:	Mobile Communications Operations Vehicle
DCO:	Defense Coordinating Officer	MEOV:	Mobile Emergency Operation Vehicle (MERS)
DFA:	Direct Federal Assistance (Stafford Act program)	MCC:	Movement Coordination Center
DIRS:	Disaster Information Reporting System	MMI:	Modified Mercalli Intensity (Earthquake scale)
DLA:	Defense Logistics Agency	MOC:	MERS Operations Center
DoD:	Department of Defense	NHC:	National Hurricane Center
DOE:	Department of Energy	NOAA:	National Oceanic & Atmospheric Administration
DRC:	Disaster Recovery Center	NWS:	National Weather Service
EAGLE-I:	Environment for Analysis of Geo-Located Energy Information (DOE)	PA:	Public Assistance (Stafford Act program)
EF:	Enhanced Fujita (Tornado scale)	PAGER:	Prompt Assessment of Global Earthquakes for Response
EPA:	Environmental Protection Agency	PDA:	Preliminary Damage Assessment (Joint FEMA/State)
ESF:	Emergency Support Function	PSPS:	Public Safety Power Shutoff
FMAG:	Fire Management Assistance Grant	ROC:	Response Operations Cell (part of the NRCC)
GIS:	Geospatial Information Systems	SEAR:	Special Event Assessment Rating
HHS:	Health & Human Services	SLTT:	State, Local, Tribal, and Territorial (<i>Governments</i>)
HM:	Hazard Mitigation (Stafford Act program)	USACE:	U.S. Army Corps of Engineers
IA:	Individual Assistance (Stafford Act program)	USAID:	U.S. Agency for International Development
IMAAC:	Interagency Modeling & Atmospheric Assessment Center	USCG:	U.S. Coast Guard
IOF:	Initial Operating Facility	USGS:	U.S. Geological Survey

(More FEMA Acronyms [FAAT Book](#))

**FDA OFFICE OF EMERGENCY MANAGEMENT
HHS FDA REPORT – June 02, 2020**

This document is confidential and is only for internal HHS use for emergency operations purposes. This document contains non-public information and may include information for which public disclosure is prohibited by law (such as confidential commercial information, trade secret, and personal privacy information) and information compiled for enforcement purposes. This document was prepared by FDA's Office of Emergency Management/Office of Emergency Operations (OEM/OEO). Any request to distribute this information outside of HHS must be approved by FDA.

UPDATES

Coronavirus Disease 2019 (COVID-19)/ML/2019

FDA continues to work with the WHO, US government partners (e.g., FEMA, NSC, HHS, ASPR, BARDA, CDC, NIH, DoD), state partners and medical product developers as necessary to support response efforts to the novel coronavirus outbreak/pandemic, COVID-19. Since FDA's previous report on 5/29/2020, FDA provided the following updates and information to the public and industry:

- FDA is making its previously developed FDA MyStudies app available to investigators as a free platform to securely obtain patients' informed consent for eligible clinical trials when face-to-face contact is not possible or practical due to COVID-19 control measures. FDA MyStudies is now referred to as [COVID MyStudies](#) in the Apple App store and in the Google Play store.
- As part of the FDA's efforts to protect consumers, the agency issued warning letters to two companies for selling fraudulent COVID-19 products. There are currently no FDA-approved products to prevent or treat COVID-19.
 - [Quadrant Sales & Marketing, Inc.](#), offers non-alcohol-based hand sanitizer products for sale in the United States with false or misleading claims including that the products maintain their effectiveness for up to 24 hours. Time-specific extended efficacy claims may give users the false impression that they need not rigorously adhere to interventions such as social distancing and engaging in good hygienic practices that have been demonstrated to curb the spread of COVID-19.
 - [StayWell Copper Products](#), offers copper "Germ Stopper" products for sale in the United States with misleading claims that the products are safe and/or effective for the prevention of COVID-19.
- FDA issued a new FDA Voices, [Bringing a Cancer Doctor's Perspective to FDA's Response to the COVID-19 Pandemic](#). It explains how the agency plays a pivotal role helping to both move new medical products to patients as soon as possible and evaluate the potential benefits and risks of these new products.
- The FDA issued a Consumer Update, [Understanding the Regulatory Terminology of Potential Preventions and Treatments for COVID-19](#). Scientists are working hard to develop a number of potential drugs for the prevention or treatment of coronavirus,

however, none are currently approved by the FDA for these purposes. The language used to describe potential therapies can be confusing, and with public interest around the FDA's work to ensure access to potentially life-saving treatments, this Consumer Update explains some of the regulatory terminology.

- FDA took additional action to help ensure widespread access to hand sanitizers during the COVID-19 public health emergency. Consumer and health care personnel safety is a top priority for FDA, and an important part of FDA's mission is to protect the public from harm, including as we seek to increase supply of hand sanitizer. As such, FDA [updated](#) the agency's guidances to provide additional clarification on the manufacturing and compounding of certain alcohol-based hand sanitizer products to help ensure that harmful levels of impurities are not present in ethanol used in hand sanitizer.
- On 6/1/2020, FDA Commissioner Stephen Hahn provided [remarks](#) to the *Alliance for a Stronger FDA* regarding the COVID-19 Pandemic: *Finding Solutions and Applying Lessons Learned*.
- FDA will release the [New Era of Smarter Food Safety Blueprint](#) in the coming weeks outlining the agency's plans over the next decade to create a more digital, traceable, and safer food system.
- On Wednesday, 6/3/2020, from 12:15 pm - 1:15 pm Eastern Time, FDA will host a [virtual Town Hall meeting](#) for clinical laboratories and commercial manufacturers that are developing or have developed diagnostic tests for SARS-CoV-2. The purpose of this Town Hall is to help answer technical questions about the development and validation of tests for SARS-CoV-2.
- Testing updates:
 - During the COVID-19 pandemic, the FDA has worked with more than 400 test developers who have already submitted, or said they will be submitting, EUA requests to the FDA for tests that detect the virus or antibodies to the virus.
 - To date, the FDA has authorized 117 tests under EUAs, which include 101 molecular tests, 15 antibody tests, and 1 antigen test.
- FDA To review FDA's current response activities, click: [FDA's COVID-19 Current Response Activities](#). OEO, via the 2019-nCoV IMG, will continue to monitor and provide updates.

ON THE RADAR

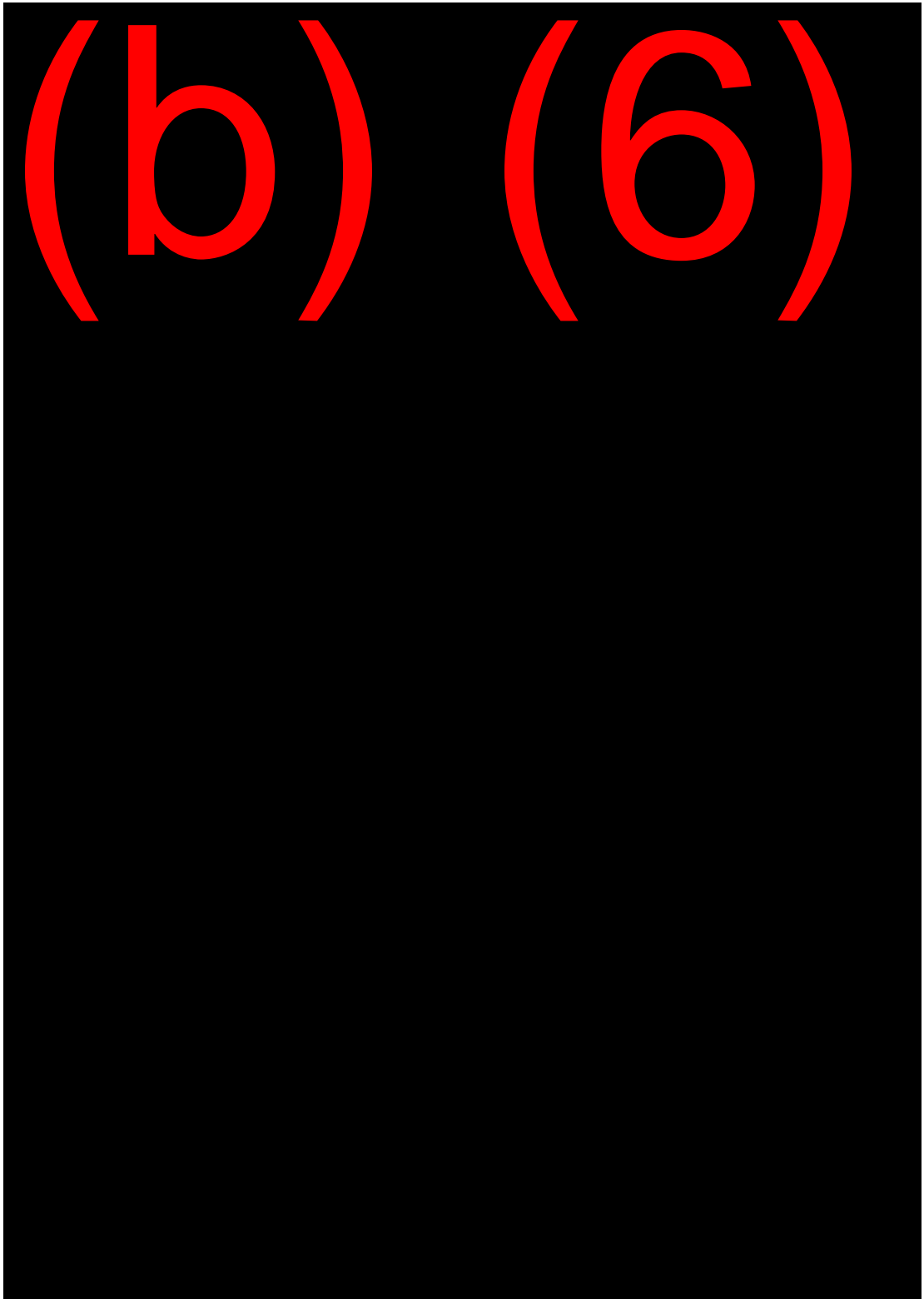
Civil Unrest/May/ML/May 2020

OEO is continuing to monitor reports of ongoing civil unrest in multiple cities across the country, and provide this information to FDA senior security personnel. OEO is also verifying the operating status of the FDA field offices (FDA District Offices, Resident Posts, and laboratories). As of 6/2, two FDA District Offices, and five resident posts have closed with telework capable employees working remotely, out of an abundance of caution. There have been no reports of impacts on FDA employees or impacts to FDA property. OEO will continue to monitor.

Tropical Storm Cristobal (formerly Tropical Depression Three)/Gulf of Mexico/June 2020

As of 1000 AM CDT the center of Tropical Storm Cristobal was located 150 MI W/SW of Campeche Mexico. The depression is moving toward the west near 3 mph. The depression is forecast to move slowly southwestward or southward this afternoon and tonight, and meander over the southern Bay of Campeche through late Wednesday. On the forecast track, the center of the cyclone is forecast to be near the coast of the southern Bay of Campeche tonight through Thursday. FDA's Gulf Coast District Offices have been notified for their awareness. OEO will continue to monitor.

From:
To:



Subject: [Non-DoD Source] FOUO\\ FW: HHS Executive Summary 04Jun20
Date: Thursday, June 4, 2020 8:10:09 AM
Attachments: [image001.png](#)
[CDC Daily Report 2020-06-03.pdf](#)
[HHS FDA Report for 06-03-2020.pdf](#)
[National SITREP 06-04-2020 AM.pdf](#)

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Good Morning,

Please see HHS Executive Summary for 04 JUN 20.

Note: As of 04Jun20, 0300ET, the CDC confirmed and presumptive positive U.S. cases of COVID-19 have reached 1,837,173 across 50 states and D.C., Guam, PR, CNMI, and USVI; Deaths: 106,861. WHO reported global cases as of 03Jun20, 0600ET: 6,287,771; global deaths: 379,941; WHO member countries and areas with cases: 216. Testing: 18,908,412 cumulative tests includes samples tested by State/Local Public Health Laboratories, Commercial Laboratories, Hospital Laboratories, CDC, and VA completed as of 03Jun20.

State Emergency Operation Centers are at full activation in IA, KS, MN, UT, WA, and WI; partial in AZ, CA, MO, and OK; and monitoring in PA. FEMA Regions II, III and V will continue to work from alternate location UFN (Civil Unrest). PA requested Emergency Management Assistance Compact (EMAC) from VA, DE, and NJ to support Philadelphia Police Dept. The U.S. National Guard has 20,000 National Guard members that are assisting local law enforcement across 32 states. USNORTHCOM reports an active duty military police battalion of 200-250 personnel will deploy to Washington, DC. The troops are expected to provide security but not law enforcement duties such as the arrest and detention of protesters. USSS reports there are roadway closures around the White House until further notice. Metropolitan Police Department stood up their Joint Operations Center on 02Jun, until further notice. There are currently no requests for federal ESF-8 assistance.

- FDA published guidance, titled Institutional Review Board (IRB) Review of Individual Patient Expanded Access Requests for Investigational Drugs and Biological Products During the COVID-19 Public Health Emergency Guidance for Institutional Review Boards (IRBs) and Clinical Investigators, including recommendations regarding procedures for single IRB member review. This is in response to physician requests for a waiver from the requirement for full IRB review. The guidance recommendations also address factors to consider when assessing potential benefits and risks for a particular patient being treated under expanded access.

- The FDA added a second ventilator developed by NASA to the list of authorized ventilators, ventilator tubing connectors and ventilator accessories under the ventilator emergency use authorization (EUA) that was issued in response to concerns relating to insufficient supply and

availability of FDA-cleared ventilators for use in health care settings to treat patients during the COVID-19 pandemic. The NASA VITAL (Ventilator Intervention Technology Accessible Locally) is intended to last three to four months and is specifically tailored to provide respiratory support for COVID-19 patients who are experiencing respiratory failure or insufficiency.

- FDA recognizes the vital role of health professionals in the fight against COVID-19. In order to help health professionals quickly and easily access FDA resources, we created a new web page, titled Coronavirus Disease 2019 (COVID-19) Resources for Health Professionals. This page contains links to FDA emergency use authorizations; information about personal protective equipment and other medical products for use during COVID-19.

- MN: Department of Health is working with National Guard (NG) to set up multiple mobile testing sites for NG members and police officers who interacted with protesters during the past week.

- DHS Science and Technology has developed an online calculator for predicting the decay of the virus that causes COVID-19 on surfaces under a range of temperatures and relative humidity.

- IL: Chicago-based food providers suspended services due to civil unrest on June 1 and 2, most notable being the Greater Chicago Food Depository, decreasing the availability of nutritional services; sites may reopen today.

v/r

Andy

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NORAD and NORTHCOM (b) (6) to Health and Human Services

(b) (6)

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From: OS Secretaries Operations Center (b) (6)

Sent: Thursday, June 4, 2020 7:40 AM

To: OS Secretaries Operations Center (b) (6)

Subject: HHS Executive Summary 04Jun20

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HHS Executive Summary: Thursday, 04Jun20

1. HHS

Today's Noteworthy Topics:

COVID-19 (Novel Coronavirus)

As of 04Jun20, 0300ET, the CDC confirmed and presumptive positive U.S. cases of COVID-

19 have reached 1,837,173 across 50 states and D.C., Guam, PR, CNMI, and USVI; Deaths: 106,861. WHO reported global cases as of 03Jun20, 0600ET: 6,287,771; global deaths: 379,941; WHO member countries and areas with cases: 216. Testing: 18,908,412 cumulative tests includes samples tested by State/Local Public Health Laboratories, Commercial Laboratories, Hospital Laboratories, CDC, and VA completed as of 03Jun20.

Civil Unrest, Nationwide

State Emergency Operation Centers are at full activation in IA, KS, MN, UT, WA, and WI; partial in AZ, CA, MO, and OK; and monitoring in PA. FEMA Regions II, III and V will continue to work from alternate location UFN (Civil Unrest). PA requested Emergency Management Assistance Compact (EMAC) from VA, DE, and NJ to support Philadelphia Police Dept. The U.S. National Guard has 20,000 National Guard members that are assisting local law enforcement across 32 states. USNORTHCOM reports an active duty military police battalion of 200-250 personnel will deploy to Washington, DC. The troops are expected to provide security but not law enforcement duties such as the arrest and detention of protesters. USSS reports there are roadway closures around the White House until further notice. Metropolitan Police Department stood up their Joint Operations Center on 02Jun, until further notice. There are currently no requests for federal ESF-8 assistance.

Daily Operational Schedule:

0830 – FEMA Daily Operations Briefing

1230 – HHS/FEMA Interagency VTC

Public Health Emergency of National Significance:

Opioid Crisis, Nationwide: 02Apr20

Novel Coronavirus (COVID-19): 21Apr20

HHS Response Status Summary:

HHS SOC: Level I (Full Activation)

CDC EOC: Level III (Polio/Ebola)

CDC EOC: COVID-19 (Agency-Wide Response)

FDA EOC: Level I (Vape Product Response, COVID-19)

Emergency Support Function (ESF) Activation:

ESF – 8: Activated

ESF – 6: Activated

Recovery Support Function (RSF) Activation:

H&SS RSF: Activated Region II (2017 Irma/Maria, Puerto Rico projected end date of 30Jun20).

HHS Deployments: (Total =705)

ASPR: 603 – (8) Earthquake Puerto Rico, (594) COVID-19, (1) Irma/Maria Recovery

CDC: 102 – (102) COVID-19

New Mission Assignments (MA):NSTR

Active Situations (7):

- Influenza Season
- Irma/Maria, Puerto Rico, & USVI (Recovery)
- Ebola in Eastern Democratic Republic of the Congo
- Novel Coronavirus (COVID-19)
- Bravo Response
- Earthquake, Puerto Rico

- Civil Unrest, Nationwide

U.S. International Health Regulation National Focal Point Status:NSTR

2. FEMA:

Interagency Response Status Summary:

NWC: Monitoring

NRCC: Level I

National IMATs: Red – Fully Mission Capable; Blue – Fully Mission Capable; Gold – IMAT – A Support

Regional IMATs: Region I, RRCC; Region III, RRCC; Region IV-1, Virtual – MS; Region IV-2, Virtual – SC; Region V, RRCC; Region VI-1, Virtual – AR; Region VII, VJFO-COVID; Region VIII, Reconstituting; Region IX-2, RRCC; Region X, RRCC

Significant National Weather:

Excessive Heat will continue through Thursday over central California and parts of the Southwest including Las Vegas and Phoenix. Severe thunderstorms are forecast across parts of the northern Plains and Midwest on Thursday. Tropical Storm Cristobal is forecast to re-emerge over the southern Gulf of Mexico Friday or Friday night and move north across the Gulf of Mexico through the weekend.

Tropical Activity:

Atlantic:

Tropical Storm Cristobal

At 0500ET Tropical Storm Cristobal, was located 60 miles southeast of Ciudad Del Carmen, Mexico with maximum sustained winds of 40 mph. On the forecast track, Cristobal is forecast to move back over the southern Gulf of Mexico on Friday and move northward over the central and northern Gulf of Mexico over the weekend. Cristobal is expected to weaken to a depression during the next several hours. Re-intensification is expected to begin on Friday. There is a risk of storm surge, heavy rainfall, and wind impacts beginning over the weekend along portions of the U.S. Gulf Coast from Texas to the Florida Panhandle.

3. OPDIV/STAFFDIV Overnight Reports:

CDC:

- COVID-19 – 216 Locations (including countries, territories, and areas)
- Ebola – Democratic Republic of the Congo (DRC) - Update

FDA:

- Coronavirus Disease 2019 (COVID-19)/ML/2019

Prepared by:

Secretary's Operations Center

U.S. Department of Health and Human Services (HHS)

Assistant Secretary for Preparedness and Response (ASPR)

200 Independence Ave., S.W.

Washington, D.C. 20201

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CDC Daily Report: As of 7:00 a.m. EDT, Wednesday, June 03, 2020

SIGNIFICANT EVENTS:

- Note: Operational updates described within the CDC Daily Report may not be inclusive of all response activities that are occurring.

** = Asterisks denote updates to monitored events/responses*

MONITORED EVENTS: (3)

- Opioid Crisis
- Hepatitis-A Outbreak
- 2020 Hurricane Season

RESPONSE STATUS:

- CDC EOC: 2019 Novel Coronavirus (Agency-wide Response) *
- CDC EOC: Ebola (Level III) *
- CDC EOC: Polio (Level III)

CDC DEPLOYMENTS:

- Domestic
 - Coronavirus (100)
 - International
 - Polio (0)
 - Ebola (0)
 - Coronavirus (2)
- Total Personnel: (102)

SIGNIFICANT WEATHER:

Atlantic: As of 07:00 am EDT, Tropical Storm Cristobal was located 25 miles NNW of Ciudad Del Carmen, Mexico with maximum sustained winds of 60 mph. TS Cristobal is moving SE near 3 mph. TS Cristobal is forecast to begin moving northward across the Gulf of Mexico on Friday. While it is too soon to determine the exact location, timing, and magnitude of impacts; there is a risk of storm surge, rainfall, and wind impacts this weekend along portions of the U.S. Gulf Coast. CDC is monitoring the situation and will conduct Health and Safety checks of staff in the area, as required.

North Indian Ocean: As of 07:00 am EDT, Tropical Cyclone Nisarga was located 55 miles East of Mumbai, India and was tracking NNW at 16 mph. Maximum sustained winds are at 75 mph. The storm made landfall at approximately 03:30 am EDT. CDC has verified the safety of and is maintaining contact and accountability with two employees in the city of Mumbai.

PROGRAM UPDATES:

National Center for Immunization and Respiratory Diseases (NCIRD):

- **COVID-19 United States**
 - CDC COVID-19 website provides latest resources for community, healthcare professionals and information regarding United States COVID-19 cases: <https://www.cdc.gov/coronavirus/2019-ncov/index.html>.
 - Confirmed and probable U.S. cases of COVID-19: **1,816,956** (as of 3:00am, June 3).
 - U.S. deaths reported to CDC: **105,846** (as of 3:00am, June 3).
 - Worldwide confirmed cases of COVID-19: **6,194,533** (as of June 2).
- Health Systems and Worker Safety Task Force
 - Multisystem Inflammatory Syndrome in Children (MIS-C) long-term communication strategy is in development with the policy and communications team
 - Communications staff optimizing page layout and search result prioritization for task force developed web pages.
 - Providing technical assistance for healthcare setting infection prevention and control, point prevalence testing in long-term care setting, and healthcare worker management.
 - Worker Safety and Health Team investigating a report of an outbreak of 86 confirmed COVID-19 cases among workers on a fishing trawler in Washington state.
 - Providing field support and technical assistance for healthcare worker investigations, healthcare settings, and non-healthcare settings (e.g., homeless shelters, alternate care sites, etc.).
 - Guidance posted to the web:
 - [Using Personal Protective Equipment \(PPE\)](#).
- Epidemiology Task Force
 - Publishing a report regarding the clinical presentation, course of illness, and maternal and infant outcomes from case reports of pregnant women with coronavirus infections in the scientific journal *Obstetrics and Gynecology*.
 - The study found no maternal-to-child transmission among the few case reports of pregnant women with MERS or SARS infection.
 - These findings may guide public health actions and clinical decision-making for COVID-19 in pregnancy until more rigorous and systematically collected data are available.
 - Finalizing protocol regarding prospective cohort studies being conducted at the University of Utah and Columbia University.
 - Studies seek to estimate incidence of SARS-CoV-2 infection including symptomatic and asymptomatic cases along with secondary transmission within household.
 - Will also examine various predictors of susceptibility to and transmission of SARS-CoV-2 infections.

- Global Migration Task Force (GMTF)
 - On June 1, 1,643 passengers from China, Iran, Schengen Countries, UK, Ireland, and Brazil were screened upon arrival at F15 airports;
 - To date, a total of 287,194 individuals have been screened.
 - Working with User Experience team on Travel in the US webpage to optimize user experience.
 - CDC INFO metrics (Feb- May):
 - Over 1,600 escalated inquiries to GMTF.
 - The Prepared Responses have been used 23,536 times.
 - Since February, total number of inquiries answered through the use of Prepared Responses and escalated responses combined is 25,205.
 - Developing responses to Senators Rosen (Nevada), Scott (South Carolina), and Murray (Washington) regarding airport screening policies.
 - Conducted call with NIOSH Worker Safety, CIARTF, and Office of the General Counsel (OGC) to discuss options for testing, education, management of agricultural workers before they report to their workplaces.
- Laboratory Task Force
 - As of May 28, CDC has tested over 7,408 samples which equates to over 4,102 patients by PCR.
 - Tested 31,220 samples using the CDC serology assay.
 - International Reagent Resource (IRR) shipped 82 reagents to five (5) laboratories on Monday, June 1.
- State, Tribal, Local and Territorial Support Section
 - Deployed 30 field teams to provide multi-disciplinary technical assistance at request of health departments.
 - Teams continue to provide support for outbreak response, epidemiologic, surveillance and data analysis, community mitigation, infection prevention and control, laboratory support and technical assistance as needed.
 - Fielded inquiries from states and territories, including:
 - Provided guidance regarding case management of patient meeting symptom-based isolation discontinuation criteria.
 - Clarified White House [Reopening Guidance](#) regarding the difference between strict and moderate social distancing.
 - Responded to an inquiry regarding contact tracing for recovered COVID-19-positive persons.
- Joint Information Center (JIC)
 - CDC Connects (CDC intranet access only) posted new articles on:
 - [Coronavirus Disease Portal.](#)
 - [LAX Deployment Story](#)
 - Posted new web content:
 - [Community-level Seroprevalence Surveys.](#)
 - [A Marathoner's Take on COVID-19.](#)

- Updated websites:
 - [Information for Healthcare Professionals about Coronavirus \(COVID-19\).](#)
 - [Support Services.](#)
 - [Contact Tracing.](#)
 - [COVID-19 Travel Recommendations by Country.](#)
 - [Cruise Ship Crew Member Disembarkations.](#)
 - [Cases in the U.S.](#)
 - [Testing Data in the U.S.](#)
 - [World Map.](#)
- Facilitated Partner Call: Update on Coronavirus Disease (COVID-19) Response:
 - Call highlighted how to lessen the risk of transmission for competitive sports that involve close contact.
 - Total attendees: 558 representing four (4) countries.
- COCA Now distributed Identifying CDC Updates COVID-19 Transmission webpage update to clarify information about Types of Spread.
- Posted COVID-19 content to OADC social media channels:
 - [Hurricane preparedness.](#)
 - [COVIDview.](#)
 - [Face Coverings when Shopping, Managing Anxiety and Stress Video.](#)
 - [Considerations for Youth Sports Organizations, antibody test results](#) (Redfield only).
- COVID-19 messages to Spanish language OADC social media channels:
 - [Clinical care framework](#)
 - [Hurricane preparedness](#)

GLOBAL DISEASE DETECTION OPERATIONS CENTER (GDDOC):

- **COVID-19 - 216 Locations (including countries, territories, and areas)**
 - **Source:** CDC; NCIRD/DVD; WHO Headquarters; WHO Regional Offices; Ministries of Health
 - As of 2 June (09:00 GMT/05:00 EDT, Accessed 15:15), WHO has reported a global cumulative count of 6,194,533 cases and 376,320 deaths for an increase of 113,198 cases and 4,242 deaths over the preceding 24 hours. The cases are distributed in the six regions as follows: Region of the Americas [2,905,432 confirmed (64,718 new cases) / 163,248 deaths (1,820 new deaths)]; European Region [2,175,941 confirmed (16,150) / 182,416 deaths (1,824)]; Eastern Mediterranean Region [536,148 confirmed (16,011) / 12,899 deaths (272)]. South-East Asia Region [283,845 confirmed (11,333) / 8,000 deaths (257)]; African Region [108,121 confirmed (3,879) / 2,700 deaths (62)]; and Western Pacific Region [184,305 confirmed (1,107) / 7,044 deaths (7)]. Among the 216 affected locations, 140 reported new confirmed cases with the highest number of new cases from United States [1,783,638 confirmed (26,116 new cases) / 104,247 deaths (693 new deaths)]; Brazil [514,849 confirmed (16,409) / 29,314 deaths (480)]; Russia [423,741 confirmed (8,863) / 5,037 deaths (182)]; Peru [164,476 confirmed (8,805) / 4,506 deaths (135)]; India [198,706 confirmed (8,171) / 5,598 deaths (204)]; Chile [105,159 confirmed (5,471) / 1,113 deaths (59)]; and Pakistan [76,398 confirmed (3,938) / 1,621 deaths (78)]; Mexico [90,664 confirmed (3,152) / 9,930 deaths (151)]; Iran [154,445 confirmed (2,979) /

7,878 deaths (81)]; and Bangladesh [49,534 confirmed (2,381) / 672 deaths (22)]. WHO [COVID-19 Situation Reports](#) present official counts of confirmed COVID-19 cases, which may subsequently be updated. Thus, differences among WHO reports and between WHO reports and other sources of COVID-19 data, using different inclusion criteria and different data cutoff times, are to be expected.

- CDC has established a COVID-19 Incident Management System and the CDC Emergency Operations Center is activated to provide ongoing support to the COVID-19 response. CDC COVID-19 [Travel Recommendations](#) for the locations with and without restrictions on entry to the United States are posted and will continue to be updated. The CDC maintains a dedicated CDC [COVID-19](#) website and [Health Alert Network \(HAN\)](#). WHO has published a new operational guidance on [maintaining essential health services](#), which provides recommendations for practical actions that countries can take at national, sub-regional and local levels to reorganize and safely maintain access to high-quality, essential health services during the pandemic.
- **Ebola - Democratic Republic of the Congo (DRC) - Update to the GDDOC report dated June 1, 2020**
 - **Source: CDC - DRC; WHO - Democratic Republic of the Congo; WHO Headquarters; WHO - AFRO; Democratic Republic of the Congo Ministry of Health**
 - The samples recently sent to the Institut National de Recherche Biomédicale (INRB) in Kinshasa have been confirmed positive for Ebola virus disease (*Zaire ebolavirus* species). Sequencing is pending which will determine whether this is the 11th EVD outbreak in DRC due to a new introduction from the animal reservoir or if these new cases are related to a previous outbreak.
 - All cases, thus far, have been reported in Mbandaka, Wangata Health Zone (HZ). Mbandaka is the capital city of Équateur Province on the Congo River, an important river transportation hub and the site of an EVD outbreak in May-July 2018. From 18 to 30 May, four individuals from the same family died (1 confirmed case, 3 probable cases). On 31 May, a nurse and spouse arrived at Wangata General Referral Hospital; both have been placed in isolation (2 confirmed cases). On 1 June, two suspected cases were reported, and samples are being tested; the connection of these cases is unknown at this time. DRC and [WHO](#) staff in Mbandaka are supporting outbreak response activities and contact tracing is underway. As of 2 June, a total of 8 cases (3 confirmed, 3 probable, 2 suspected) and 4 deaths have been reported.

EOC 24 HOUR CALL DATA:

Category	Total Count
COVID-19 (Other)	59
Administrative	53
Botulism	1
DGMQ - QPHO - hBAT	1
Import, Export, Permits-Etiologic	1
Malaria	1

NOC - DHS: Secure Ops Center	3
Rabies	1

Total Calls: 120

**FDA OFFICE OF EMERGENCY MANAGEMENT
HHS FDA REPORT – June 03, 2020**

This document is confidential and is only for internal HHS use for emergency operations purposes. This document contains non-public information and may include information for which public disclosure is prohibited by law (such as confidential commercial information, trade secret, and personal privacy information) and information compiled for enforcement purposes. This document was prepared by FDA's Office of Emergency Management/Office of Emergency Operations (OEM/OEO). Any request to distribute this information outside of HHS must be approved by FDA.

UPDATES

Coronavirus Disease 2019 (COVID-19)/ML/2019

FDA continues to work with the WHO, US government partners (e.g., FEMA, NSC, HHS, ASPR, BARDA, CDC, NIH, DoD), state partners and medical product developers as necessary to support response efforts to the novel coronavirus outbreak/pandemic, COVID-19. On 6/2/2020, FDA provided the following updates and information to the public and industry:

- FDA issued a new FDA Voices, titled [*Pandemic Challenges Highlight the Importance of the New Era of Smarter Food Safety*](#), and bylined by Stephen M. Hahn, M.D., Commissioner of Food and Drugs, and Frank Yiannas, Deputy Commissioner for Food Policy and Response. In March, the FDA was a few days away from announcing the release of the New Era of Smarter Food Safety Blueprint when the FDA's focus turned to the COVID-19 pandemic. Plans for the New Era initiative were rightfully put on hold in order to prioritize the agency's COVID-19 response. The FDA will release the blueprint in the coming weeks, outlining plans over the next decade to create a more digital, traceable, and safer food system.
- FDA published guidance, titled [*Institutional Review Board \(IRB\) Review of Individual Patient Expanded Access Requests for Investigational Drugs and Biological Products During the COVID-19 Public Health Emergency*](#) Guidance for Institutional Review Boards (IRBs) and Clinical Investigators, including recommendations regarding procedures for single IRB member review. This is in response to physician requests for a waiver from the requirement for full IRB review. The guidance recommendations also address factors to consider when assessing potential benefits and risks for a particular patient being treated under expanded access.
- The FDA added a second ventilator developed by NASA to the list of [*authorized ventilators, ventilator tubing connectors and ventilator accessories*](#) under the [*ventilator emergency use authorization \(EUA\)*](#) that was issued in response to concerns relating to insufficient supply and availability of FDA-cleared ventilators for use in health care settings to treat patients during the COVID-19 pandemic. The NASA VITAL (Ventilator Intervention Technology Accessible Locally) is intended to last three to four months and is specifically tailored to provide respiratory support for COVID-19 patients who are experiencing respiratory failure or insufficiency. Where the first

NASA ventilator relied on wall gas as the pressure source, the second ventilator uses an internal compressor for its energy source. The device is designed to be built with components outside the current medical device supply chain and therefore does not impact the existing supply chain of currently made ventilators.

- FDA added an emergency resuscitator for the Fitbit Flow to the list of [authorized ventilators, ventilator tubing connectors and ventilator accessories](#) under the [ventilator emergency use authorization \(EUA\)](#). The Fitbit Flow is a continuous respiratory support system that includes an FDA-cleared Manual Resuscitator. The accessory is an AMBU bag with audible and visual alarms that aid the performance of the manual resuscitator for continuous breathing. This design is intended for use in treating patients with COVID-19.
- The FDA, in collaboration with the European Medicines Agency (EMA), provided procedural assistance to sponsors and applicants who anticipate submission of pediatric product development plans for the treatment and prevention of COVID-19. In issuing this [Common Commentary](#), the FDA and EMA aspire to streamline administrative processes and facilitate efficient submission of an initial Pediatric Study Plan (iPSP) and Paediatric Investigation Plan (PIP).
- FDA recognizes the vital role of health professionals in the fight against COVID-19. In order to help health professionals quickly and easily access FDA resources, we created a new web page, titled [Coronavirus Disease 2019 \(COVID-19\) Resources for Health Professionals](#). This page contains links to FDA emergency use authorizations; information about personal protective equipment and other medical products for use during COVID-19.
- Testing updates:
 - During the COVID-19 pandemic, the FDA has worked with more than 400 test developers who have already submitted, or said they will be submitting, EUA requests to the FDA for tests that detect the virus or antibodies to the virus.
 - To date, the FDA has authorized 119 tests under EUAs, which include 103 molecular tests, 15 antibody tests, and 1 antigen test.
- FDA To review FDA's current response activities, click: [FDA's COVID-19 Current Response Activities](#). OEO, via the 2019-nCoV IMG, will continue to monitor and provide updates.

ON THE RADAR

Civil Unrest/May/ML/May 2020

OEO is continuing to monitor reports of ongoing civil unrest in multiple cities across the country and provide this information to FDA senior security personnel. OEO is also verifying the operating status of the FDA field offices (FDA District Offices, Resident Posts, and laboratories). OEO will continue to monitor.

Tropical Storm Cristobal Gulf of Mexico/June 2020

No updates. OEO will continue to monitor.



FEMA National Situation Report

As of 3:00 a.m. ET Thursday, June 4, 2020

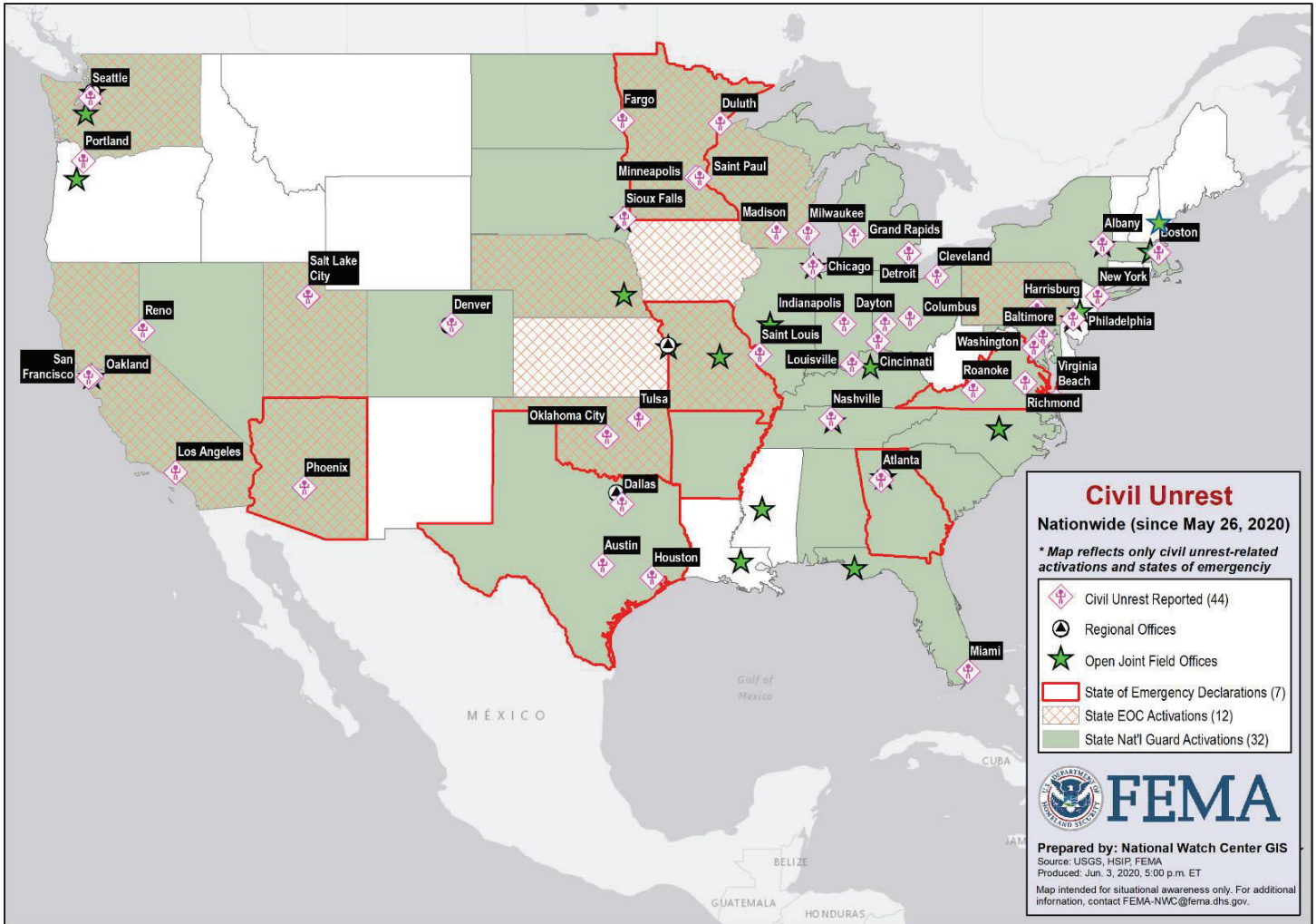
This report is published twice daily, 3 00 a.m. and 5 00 p.m. ET

Common Operating Picture

FEMA HQ <table border="1"> <tr> <td><i>NWC</i></td> <td><i>NRCC</i></td> </tr> <tr> <td>Monitoring</td> <td>Level I</td> </tr> </table>		<i>NWC</i>	<i>NRCC</i>	Monitoring	Level I	FEMA REGIONS <table border="1"> <tr> <td><i>WATCH</i></td> <td><i>RRCC</i></td> </tr> <tr> <td>Monitoring</td> <td>I Level II</td> </tr> <tr> <td>Alt. Location</td> <td>II Level II</td> </tr> <tr> <td>Alt. Location</td> <td>III Level III</td> </tr> <tr> <td>Monitoring</td> <td>IV Level II</td> </tr> <tr> <td>Alt. Location</td> <td>V Level III</td> </tr> <tr> <td>Monitoring</td> <td>VI Level III</td> </tr> <tr> <td>Alt. Location</td> <td>VII Rostered</td> </tr> <tr> <td>Monitoring</td> <td>VIII Level III</td> </tr> <tr> <td>Monitoring</td> <td>IX Level I</td> </tr> <tr> <td>Monitoring</td> <td>X Level II</td> </tr> </table>		<i>WATCH</i>	<i>RRCC</i>	Monitoring	I Level II	Alt. Location	II Level II	Alt. Location	III Level III	Monitoring	IV Level II	Alt. Location	V Level III	Monitoring	VI Level III	Alt. Location	VII Rostered	Monitoring	VIII Level III	Monitoring	IX Level I	Monitoring	X Level II	Notes: NRCC and RRCCs are activated for COVID-19 Region II, III & V RWCs at Alternate location UFN GA: Flooding MS: Flooding PR: Earthquake TN: Tornadoes All State EOCs activated for COVID-19 States for Civil Unrest: (12) MN, WI, UT, WA, OK, MO, AZ, CA, PA, KS, IA, NE	
<i>NWC</i>	<i>NRCC</i>																														
Monitoring	Level I																														
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Alt. Location	VII Rostered																														
Monitoring	VIII Level III																														
Monitoring	IX Level I																														
Monitoring	X Level II																														
Major Disasters (DR): 104 Emergency Disasters (EM): 94 JFOs: 11 / VJFOs: 18 Staging Area Distribution Center (DC) Declared County (non-COVID-19 Declarations) Fully Activated Partially Activated Monitoring As of 3:00 a.m. ET June 4, 2020 Created by FEMA NWC																															
Team: <i>Status</i>		US&R >66%		MERS >66%		FCOs ≤1 Type 1		FDRCs =2		IM Workforce		Incident Management Cadre Availability Summary Cadres with 25% or Less Availability																			
<i>Assigned:</i>		28		36		48		11		13,522 ▲		EHP 24% (150/632); ER 16% (12/75); FL 18% (31/173); OPS 24% (70/292); PA 23% (673/2,994); PLAN 21% (86/417); SAF 7% (4/54)																			
<i>Unavailable:</i>		4		0		1		0		2,593 ▲																					
<i>Deployed:</i>		0		0		40		8		5,597 ▼																					
<i>Available:</i>		24		36		7		3		5,332 / 39% ▼																					

National Current Operations & Monitoring

Civil Unrest and Protests



Situation: Protests, civil disturbances and marches are occurring multiple cities across the nation. Media, reports Curfew Orders in (9) cities

State/Local Response:

- State EOCs activated for civil unrest (in addition to COVID-19 activation): (12): Activated: MN, WI, UT, WA, OK, MO, AZ, KS, IA, CA, PA, NE
- NG Deployed (32): MA, NY, DC, MD, VA, PA, FL, GA, TN, AL, KY, NC, SC, IL, IN, OH, MI, MN, WI, AR, OK, TX, MO, NE, CO, ND, SD, UT, CA, NV, AZ, WA
- PA requested EMAC from VA, DE, and NJ to support Philadelphia Police Dept.

Federal Response:

- Regions II, III, & V: will continue to work from alternate location UFN (Civil Unrest)
- RRCC: Regions III, V, and VIII working remotely (COVID-19)
- FEMA NRCC and RRCCs are activated (COVID-19)
- NWC and RWCs at normal ops, continue to monitor

COVID-19 (For interagency reporting see FEMA NRCC COVID-19 SLB, published daily)

Situation: FEMA and HHS continue leading the multiagency COVID-19 Response / Recovery efforts. 42,315 (-3,037) FEMA, DoD, HHS, VA, and CDC personnel deployed / activated; 2,788 (-66) FEMA employees deployed. Nationwide testing: 18,908,412 (+1,296,287) cumulative as of June 3

Lifeline Impacts:

Health and Medical

- MN: Department of Health is working with National Guard (NG) to set up multiple mobile testing sites for NG members and police officers who interacted with protesters during the past week
- DHS Science and Technology has developed an online calculator for predicting the decay of the virus that causes COVID-19 on surfaces under a range of temperatures and relative humidity

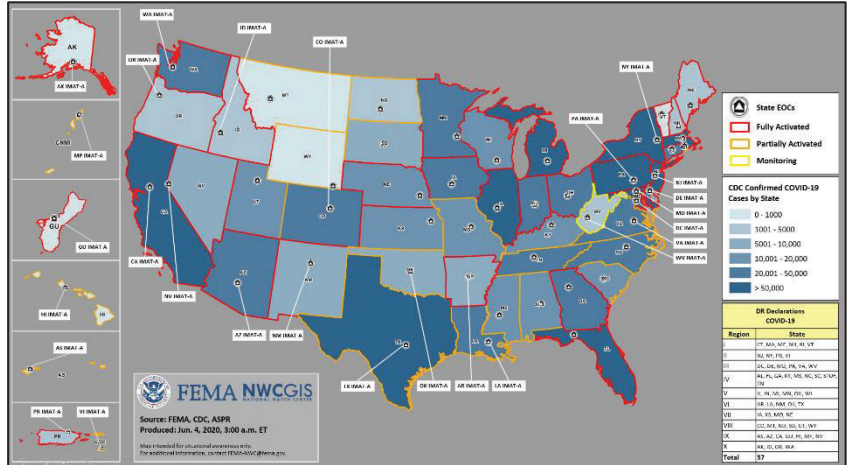
Food, Water, & Shelter

- IL: Chicago-based food providers suspended services due to civil unrest on June 1 and 2, most notable being the Greater Chicago Food Depository, decreasing the availability of nutritional services; sites may reopen today

Response:

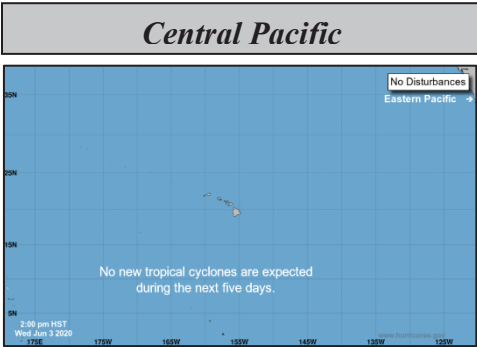
- The NRCC at Level I; Region IX RRCC at Level I; Region III, V, VI, and VIII RRCCs at Level III; Region VII RRCC is rostered and the Region is supporting COVID-19 response from the Virtual JFO in Kansas City, MO; all remaining RRCCs are at Level II
- 28 FEMA IMAT-A teams (24 actual/ 4 virtual) deployed to states/territories/tribal nations; 37 LNOs (21 actual / 16 virtual) deployed to states/territories/tribal nations

(FEMA COVID-19 SLB, 5 00 p.m. ET, June 3)



	Confirmed/Presumptive	Deaths
United States	1,816,956	105,846
Worldwide	6,194,533	376,320

Tropics



Atlantic: Tropical Storm Cristobal (see below)

Eastern Pacific: No significant activity

Central Pacific: No significant activity

Western Pacific: No current threat to U.S. interests

Tropical Storm Cristobal

Situation: Tropical Storm Cristobal forecast to re-emerge over the southern Gulf of Mexico Friday and move northward over the central and northern Gulf over the weekend. States may begin to experience tropical storm force winds and rainfall as early as Saturday night along the Louisiana and Texas coastlines.

- Located 20 miles s of Ciudad Del Carmen, Mexico; currently stationary. A turn NNE and N is expected today and should continue through Saturday
- Maximum sustained winds at 45 mph; gradual weakening expected and will likely become a tropical depression by Thursday evening. Some re-strengthening is expected to begin on Friday
- Tropical-storm-force winds extend outward up to 60 miles
- Tropical Storm Warning is in effect for Campeche to Coatzacoalcos Mexico

Potential Impacts:

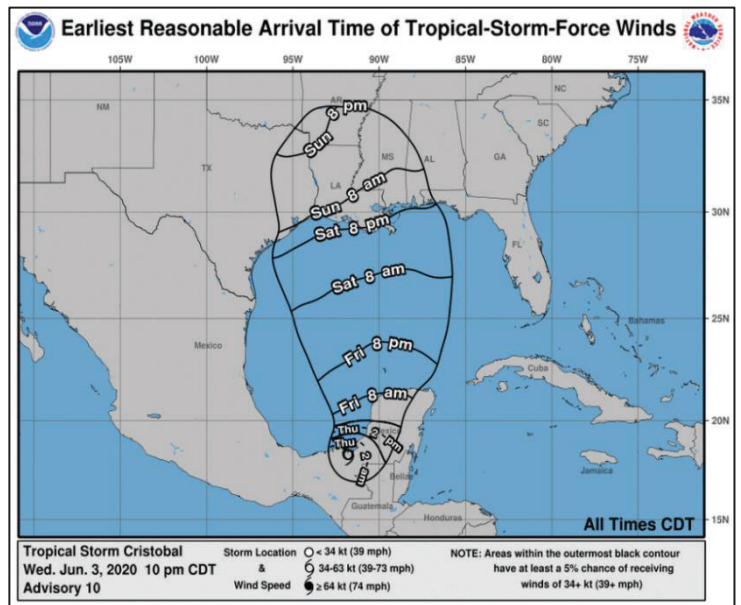
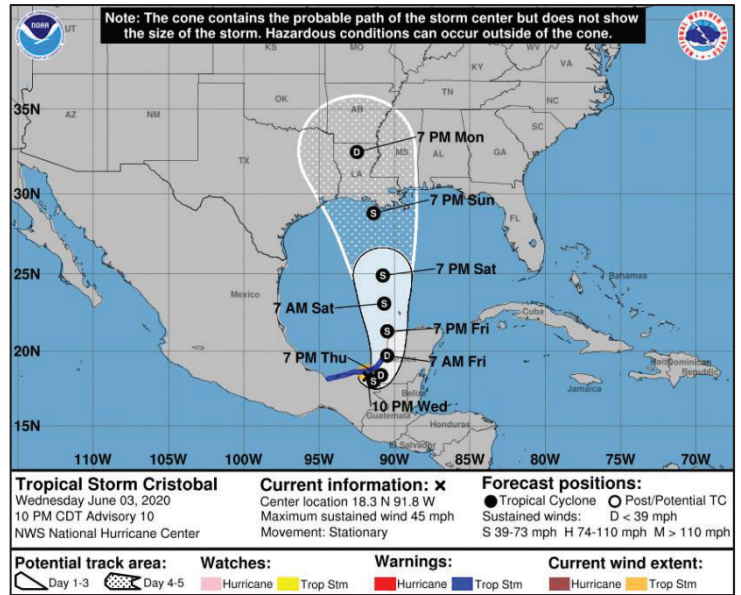
- Risk of storm surge, heavy rainfall, and wind beginning this weekend along portions of the U.S. Gulf Coast from Texas to the Florida Panhandle
- Flood Watch in effect through Tuesday for the southeastern Gulf Coast of LA
- Tropical Storm Wind Probabilities from Mobile, AL to Galveston, TX:
 - Mobile, AL 9%
 - Gulfport, MS 12%
 - New Orleans, LA 19%
 - Morgan City, LA 20%
 - Lafayette, LA 19%
 - Lake Charles, LA 15%
 - Galveston, TX 9%

State/Local Response:

- TX and LA SEOCs at Partial Activation (COVID-19)
- LA GOHSEP hosting Hurricane Task Force teleconference today
- TX EOC hosting TS Cristobal development briefing today
- City of New Orleans reports no concern with pump capacity but concerned with redundant power if turbine 4 is lost
- States are coordinating/planning for non-congregate sheltering options

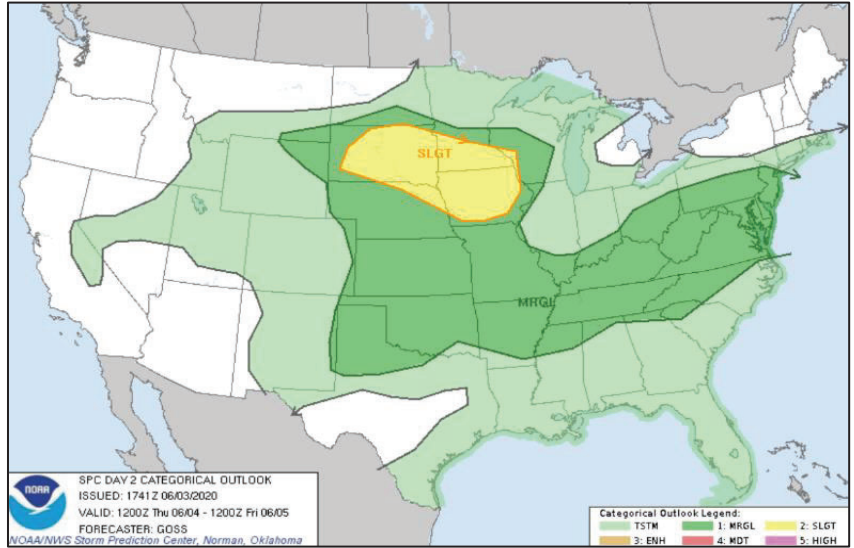
FEMA/Federal Response:

- The NRCC at Level I; Region VI RRCC at Level III for COVID-19
- Region VI IMAT-1 Virtually deployed to AR; remains available to deploy
- Region VI IMAT-2 FMC; Standing by to deploy to LA
- Denton MERS assets prepared to deploy as necessary
- ISB established in Roseland, LA; SMT Team Fort Worth deploying as surge support
- IOF established at LA GOHSEP
- USACE managing Mississippi river flow; messaging to Mariners



Weather Threats

- Slight risk of severe thunderstorms across parks of the Mid Missouri Valley and Upper Midwest tonight



(Latest NOAA Forecasts [WPC](#) | [SPC](#) | [NHC](#) | [SWPC](#))

Joint Preliminary Damage Assessments

Region	State	Event / Date	Type	Counties		Start – End Dates
				Requested	Completed	
IV	AL	Severe Storms, Strong Winds, Tornadoes, and Hail April 19	IA	0	0	N/A
			PA	10	3	5/15 – TBD
V	MI	Dam Breach, Severe Weather, and Flooding May 16, and continuing	IA	5	0	5/26 – TBD
			PA	5	0	5/26 – TBD
VII	MO	Severe Storms May 3-4	IA	0	0	N/A
			PA	20	20 (+2)	5/14 – 6/1

Declaration Activity

Declaration Requests in Process: 8 (TN, HI, UT, TX (Appeal), AK (Appeal), Poarch Band of Creek Indians, ND, & AL)

(Declared Disasters [fema.gov](#))

Joint Field Office Status Updates

No change over the last operational period

(JFO listing available on [NWC SharePoint Site](#))

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Regional Current Operations & Monitoring

<i>Region I</i>	<i>Region VI</i>
<p>RRCC: Level II (day shift – COVID-19) WATCH – Maynard MOC: Steady State (24/7)</p> <ul style="list-style-type: none"> • Monitoring: Civil unrest (see above) <p>IMAT: Deployed to RRCC (COVID-19) LNOs: RI & ME EOCs:</p> <ul style="list-style-type: none"> • CT, MA, ME, NH, & VT: Full Activation (COVID-19) • RI: Partial Activation (COVID-19) 	<p>RRCC: Level III (day shift with selected ESFs – COVID-19) WATCH – Denton MOC: Steady State (24/7)</p> <ul style="list-style-type: none"> • Monitoring: Civil unrest (see above); Tropical Storm Cristobal (see above) <p>IMAT-1: Supporting FEMA-4544-DR-AR (Virtual) IMAT-2: FMC / Available IMAT-A: AR, LA, NM, OK, & TX LNOs: AR, LA, NM, OK, & TX EOCs:</p> <ul style="list-style-type: none"> • AR & NM: Full Activation (COVID-19) • LA, OK, & TX: Partial Activation (COVID-19)
<i>Region II</i>	<i>Region VII</i>
<p>RRCC: Level II (day shift – COVID-19) WATCH: Steady State (24/7), at Alternate location UFN</p> <ul style="list-style-type: none"> • Monitoring: Civil unrest (see above) <p>IMAT: FMC / Available IMAT-A: NY, NYC, NJ, PR, & USVI EOCs:</p> <ul style="list-style-type: none"> • NJ, NY, & PR: Full Activation (COVID-19) • USVI: Partial Activation (COVID-19) 	<p>WATCH: Steady State (24/7): Alternate location</p> <ul style="list-style-type: none"> • Monitoring: Civil unrest (see above); Severe Weather (see above) <p>IMAT: Supporting COVID-19 at Region VII HQ (Virtual) EOCs:</p> <ul style="list-style-type: none"> • IA, KS, & NE: Full Activation (COVID-19) • MO: Partial Activation (COVID-19)
<i>Region III</i>	<i>Region VIII</i>
<p>RRCC: Level III (day shift – COVID-19) WATCH: Steady State (24/7); at Alternate location UFN</p> <ul style="list-style-type: none"> • Monitoring: Civil unrest (see above); Severe Weather (see above) <p>IMAT: Deployed to RRCC (COVID-19) IMAT-A: DC, DE, MD, PA, VA, & WV LNOs: DE EOCs:</p> <ul style="list-style-type: none"> • DC, DE, MD, PA: Full Activation (COVID-19) • VA: Partial Activation (COVID-19) • WV: Monitoring (COVID-19) 	<p>RRCC: Level III (day shift – COVID-19) WATCH – Denver MOC: Steady State (24/7)</p> <ul style="list-style-type: none"> • Monitoring: Civil unrest (see above); Severe Weather (see above) <p>IMAT: Reconstituting; return to FMC on June 5 IMAT-A: CO LNOs: SD, WY, MT, & UT EOCs:</p> <ul style="list-style-type: none"> • SD, & UT: Full Activation (COVID-19) • CO, ND, MT, & WY: Partial Activation (COVID-19)
<i>Region IV</i>	<i>Region IX</i>
<p>RRCC: Level II (day shift – COVID-19) WATCH: Steady State (24/7)</p> <ul style="list-style-type: none"> • Monitoring: Civil unrest (see above); Tropical Storm Cristobal (see above) <p>IMAT-1: Supporting FEMA-4536-DR-MS (Virtual) IMAT-2: Supporting FEMA-4542-DR-SC (Virtual) LNOs: AL, FL, & TN EOCs:</p> <ul style="list-style-type: none"> • FL: Full Activation (COVID-19) • GA: Full Activation (COVID-19 / Flooding) • MS: Partial Activation (COVID-19 / Flooding) • TN, AL, KY, NC, & SC: Partial Activation (COVID-19) 	<p>RRCC: Level I (day shift – COVID-19) WATCH: Steady State (24/7)</p> <ul style="list-style-type: none"> • Monitoring: Excessive Heat Warnings – AZ, CA, NV; Civil unrest (see above) <p>IMAT-1: PMC / Staffing shortage IMAT-2: Deployed to RRCC (COVID-19) IMAT-A: AZ, CA, HI, NV, GU, CNMI, AS, & Navajo Nation EOCs:</p> <ul style="list-style-type: none"> • AZ, CA, GU, & NV: Full Activation (COVID-19) • AS, CNMI & HI: Partial Activation (COVID-19)
<i>Region V</i>	<i>Region X</i>
<p>RRCC: Level III (day shift – COVID-19) WATCH: Steady State (24/7) at Alternate location UFN</p> <ul style="list-style-type: none"> • Monitoring: Civil unrest (see above); Severe Weather (see above) <p>IMAT: Deployed to RRCC (COVID-19) LNOs: IN, MI, WI, MN, OH, & WI EOCs: IL, IN, OH, MI, MN, & WI: Full Activation (COVID-19)</p>	<p>RRCC: Level II (day shift – COVID-19) WATCH – Bothell MOC: Steady State (24/7)</p> <ul style="list-style-type: none"> • Monitoring: Civil unrest (see above) <p>IMAT: Deployed to RRCC (COVID-19) IMAT-A: AK, ID, OR, & WA LNOs: AK & OR EOCs: AK, ID, OR & WA: Full Activation (COVID-19)</p>

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FEMA National Situation Report Acronyms & Abbreviations

Front Page – Common Operating Picture

NWC:	National Watch Center	ISB:	Incident Support Base	R-IMAT:	Regional Incident Management Assistance Team
NRCC:	National Response Coordination Center	MERS:	Mobile Emergency Response Support	RRCC:	Regional Response Coordination Center
EX (State):	Exercise (Location)	N-IMAT:	National Incident Management Assistance Team	RWC:	Regional Watch Center
FCO:	Federal Coordinating Officer	NMC:	Non-Mission Capable	US&R:	Urban Search & Rescue
FDRC:	Federal Disaster Recovery Coordinator	PMC:	Partially Mission Capable		
FMC:	Fully Mission Capable				
IM:	Incident Management				

Front Page – Force Laydown Map

CAD:	Caribbean Area Division	DR:	Major Disaster Declaration (Stafford Act)	IST:	Incident Support Team
CNMI:	Commonwealth of the Northern Marianas Islands	EM:	Emergency Declaration (Stafford Act)	JFO:	Joint Field Office
DC:	Distribution Center / District of Columbia	EOC:	Emergency Operations Center	LNO:	Liaison Officer
		FCO:	Federal Coordinating Officer	TF:	Task Force
				VJFO:	Virtual JFO

Front Page – Incident Management Cadres

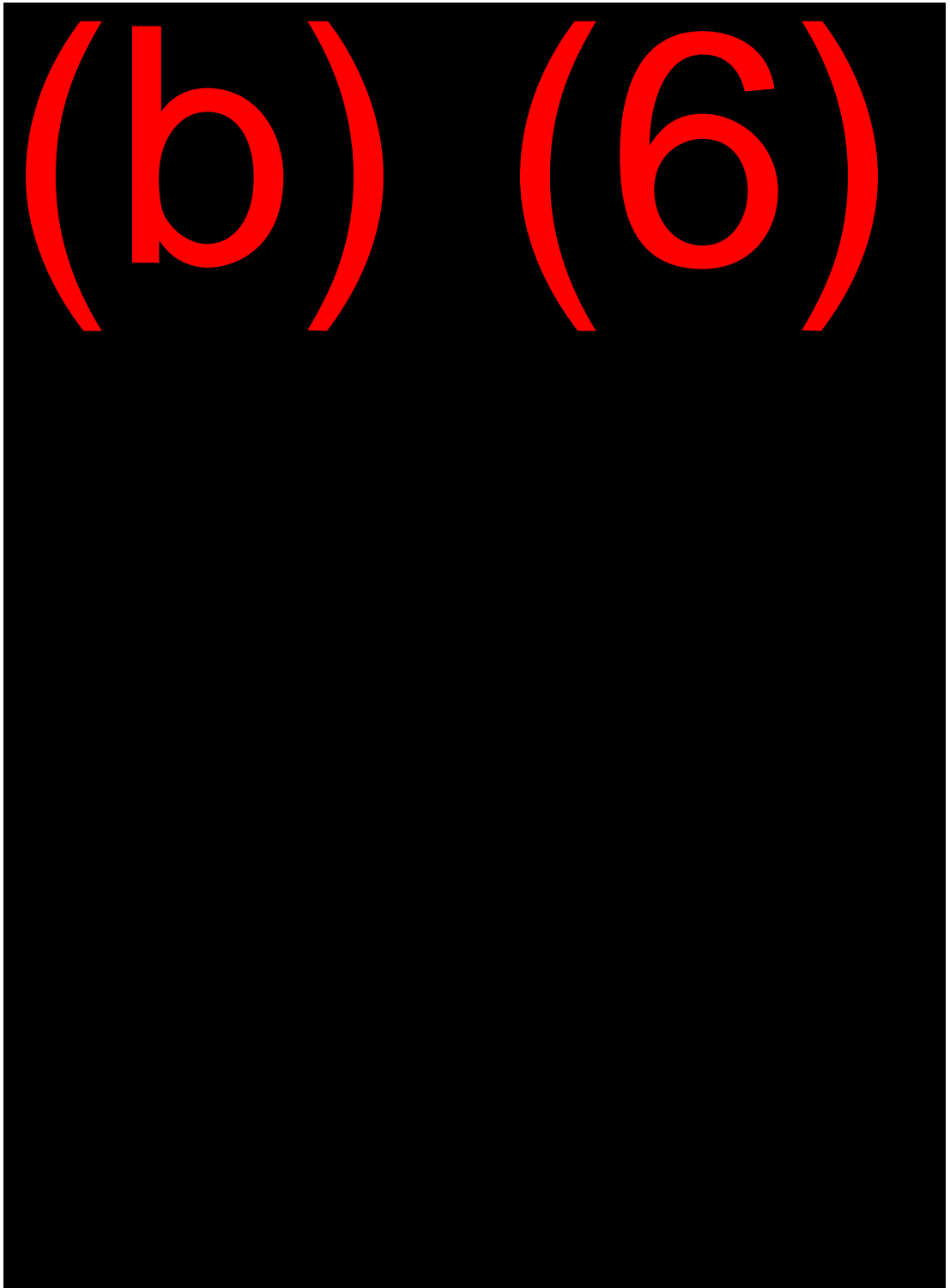
ACQ:	Acquisitions	DSA:	Disaster Survivor Assistance	HR:	Human Resources
ADR:	Alternative Dispute Resolution	EHP:	Environmental Planning and Historic Preservation	IA:	Individual Assistance
DI:	Disability Integration	ER:	Equal Rights	IT:	Information Technology
DEC:	Disaster Emergency Communications	EA:	External Affairs	OCC:	Office of Chief Counsel
DFTO:	Disaster Field Training Ops	FL:	Field Leadership	LOG:	Logistics
		FM:	Financial Management	HM:	Hazard Mitigation

Other Acronyms & Abbreviations

ARC:	American Red Cross	ISB:	Incident Support Base
CBRN:	Chemical, Biological, Radiological and Nuclear	IST:	Incident Support Team
CDC:	Centers for Disease Control and Prevention	JTWC:	Joint Typhoon Warning Center
CIKR:	Critical Infrastructure / Key Resources	MCOV:	Mobile Communications Operations Vehicle
DCO:	Defense Coordinating Officer	MEOV:	Mobile Emergency Operation Vehicle (MERS)
DFA:	Direct Federal Assistance (Stafford Act program)	MCC:	Movement Coordination Center
DIRS:	Disaster Information Reporting System	MMI:	Modified Mercalli Intensity (Earthquake scale)
DLA:	Defense Logistics Agency	MOC:	MERS Operations Center
DoD:	Department of Defense	NHC:	National Hurricane Center
DOE:	Department of Energy	NOAA:	National Oceanic & Atmospheric Administration
DRC:	Disaster Recovery Center	NWS:	National Weather Service
EAGLE-I:	Environment for Analysis of Geo-Located Energy Information (DOE)	PA:	Public Assistance (Stafford Act program)
EF:	Enhanced Fujita (Tornado scale)	PAGER:	Prompt Assessment of Global Earthquakes for Response
EPA:	Environmental Protection Agency	PDA:	Preliminary Damage Assessment (Joint FEMA/State)
ESF:	Emergency Support Function	PSPS:	Public Safety Power Shutoff
FMAG:	Fire Management Assistance Grant	ROC:	Response Operations Cell (part of the NRCC)
GIS:	Geospatial Information Systems	SEAR:	Special Event Assessment Rating
HHS:	Health & Human Services	SLTT:	State, Local, Tribal, and Territorial (<i>Governments</i>)
HM:	Hazard Mitigation (Stafford Act program)	SMT:	Staging Management Team
IA:	Individual Assistance (Stafford Act program)	USACE:	U.S. Army Corps of Engineers
IMAAC:	Interagency Modeling & Atmospheric Assessment Center	USAID:	U.S. Agency for International Development
IOF:	Initial Operating Facility	USCG:	U.S. Coast Guard
IPAWS:	Integrated Public Alert & Warning System	USGS:	U.S. Geological Survey

(More FEMA Acronyms [FAAT Book](#))

From:
To:



Subject: [Non-DoD Source] ~~FOUO~~ FW: HHS Executive Summary 12May20
Date: Tuesday, May 12, 2020 8:13:57 AM
Attachments: [image001.png](#)
[CDC Daily Report 2020-05-11.pdf](#)
[National SITREP 05-12-2020 AM.pdf](#)

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Good Morning,

Please see HHS Executive Summary for 12 May 20.

Note: As of 12May20, 0300ET, the CDC confirmed and presumptive positive U.S. cases of COVID-19 have reached 1,336,938 across 50 states and D.C., Guam, PR, CNMI, and USVI; Deaths: 80,287. WHO reported global cases as of 11May20, 0600ET: 4,006,257; global deaths: 278,892; WHO member countries and areas with cases: 215. Testing: 8,913,697 cumulative tests includes samples tested by State/Local Public Health Laboratories, Commercial Laboratories, Hospital Laboratories, CDC, and VA completed as of 11May20.

- The Department of Veterans Affairs successfully established service agreements with decontamination system company to use the already deployed Critical Care Decontamination Systems; On May 8, 10 hospitals used the systems to sanitize 2,100 N95 masks.
- Developed methodology to identify emerging outbreak locations and areas with sustained community spread; explanation/supporting graphics delivered to White House TF on May 10.
- TX: COVID-19 hotspots have emerged in Amarillo and in an area along LA border due to poultry/meat processing facilities; National Guard assisting with the testing of 4K workers at poultry plant.
- Over 5K reported COVID-19 cases at 115 meat processing facilities nationwide.
- CA: National Guard is assisting Community Action of Napa Valley with food distribution; passed out nearly 75 pounds of food per family.
- U.S. Coast Guard is monitoring 84 cargo vessels with crewmembers that embarked at a coronavirus port of interest within 14 days of the vessels' scheduled arrival at a U.S. port; 24 will arrive in the next 24 hours.

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From: OS Secretarys Operations Center (b) (6)

Sent: Tuesday, May 12, 2020 7:47 AM

To: OS Secretarys Operations Center (b) (6)

Subject: HHS Executive Summary 12May20

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HHS ExecutiveSummary: Tuesday, 12May20

1. HHS

Today's Noteworthy Topics:

COVID-19 (Novel Coronavirus)

As of 12May20, 0300ET, the CDC confirmed and presumptive positive U.S. cases of COVID-19 have reached 1,336,938 across 50 states and D.C., Guam, PR, CNMI, and USVI; Deaths: 80,287. WHO reported global cases as of 11May20, 0600ET: 4,006,257; global deaths: 278,892; WHO member countries and areas with cases: 215. Testing: 8,913,697 cumulative tests includes samples tested by State/Local Public Health Laboratories, Commercial Laboratories, Hospital Laboratories, CDC, and VA completed as of 11May20.

Daily Operational Schedule:

0830 – FEMA Daily Operations Briefing
1230 – HHS/FEMA Interagency VTC

Public Health Emergency of National Significance:

Opioid Crisis, Nationwide: 02Apr20
Novel Coronavirus (COVID-19): 21Apr20

HHS Response Status Summary:

HHS SOC: Level I (Full Activation)
CDC EOC: Level III (Polio/Ebola)
CDC EOC: COVID-19 (Agency-Wide Response)
FDA EOC: Level II (Vape Product Response, COVID-19)

Emergency Support Function (ESF) Activation:

ESF – 8: Activated
ESF – 6: Activated

Recovery Support Function (RSF) Activation:

H&SS RSF: Activated Region II (2017 Irma/Maria, Puerto Rico projected end date of 30Jun20).

HHS Deployments: (Total = 1,069)

ASPR: 882 – (8) Earthquake Puerto Rico, (675) COVID-19, (5) Irma/Maria Recovery, (3) Irma, (2) FY Funded Training Q1, (2) FY Non-Funded Training Q1
CDC: 187 – (186) COVID-19, (1) Ebola

New Mission Assignments (MA):NSTR

Active Situations (6):

- Influenza Season
- Irma/Maria, Puerto Rico, & USVI (Recovery)
- Ebola in Eastern Democratic Republic of the Congo
- Novel Coronavirus (COVID-19)
- Bravo Response
- Earthquake, Puerto Rico

U.S. International Health Regulation National Focal Point Status:NSTR

2. FEMA:

Interagency Response Status Summary:

NWC: Monitoring

NRCC: Level I

National IMATs: Red – Fully Mission Capable; Blue – Fully Mission Capable; Gold – IMAT – A Support

Regional IMATs: Region I, RRCC; Region II, NY; Region III, RRCC; Region IV-1, Virtual – MS; Region IV-2, Virtual – SC; Region V, RRCC; Region VII, RRCC; Region VIII, RRCC; Region IX-2, RRCC; Region X, RRCC

Significant National Weather:

Critical fire weather conditions continue over parts of the Desert Southwest and Central Rockies through midweek, due to the combination of strong winds, low relative humidity, and warm temperatures. Well below normal temperatures, with a potential for record lows, are forecast to continue into Wednesday evening across much of the eastern two-thirds of the country.

3. OPDIV/STAFFDIV Overnight Reports:

CDC:

- COVID-19 – 215 Locations (including countries, territories, and areas)

FDA:NSTR

Prepared by:

Secretary's Operations Center

U.S. Department of Health and Human Services (HHS)
Assistant Secretary for Preparedness and Response (ASPR)
200 Independence Ave., S.W.
Washington, D.C. 20201

(b) (6)



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CDC Daily Report: As of 7:00 a.m. EDT, Monday, May 11, 2020

SIGNIFICANT EVENTS:

- Note: Operational updates described within the CDC Daily Report may not be inclusive of all response activities that are occurring.

** = Asterisks denote updates to monitored events/responses*

MONITORED EVENTS: (4)

- Opioid Crisis
- Measles Outbreak
- Hepatitis-A Outbreak
- 2020 Bravo Response (*Heightened Tensions Middle East*)

RESPONSE STATUS:

- CDC EOC: 2019 Novel Coronavirus (Agency-wide Response) *
- CDC EOC: Ebola (Level III)
- CDC EOC: Polio (Level III)

CDC DEPLOYMENTS:

- Domestic
 - Coronavirus (182)
 - International
 - Polio (0)
 - Ebola (1)
 - Coronavirus (4)
- Total Personnel: (187)

PROGRAM UPDATES:

National Center for Immunization and Respiratory Diseases (NCIRD):

- **COVID-19 United States**
 - The CDC COVID-19 website provides the latest resources for the community, healthcare professionals and information on COVID-19 cases in the United States: <https://www.cdc.gov/coronavirus/2019-ncov/index.html>.
 - Confirmed and probable U.S. cases of COVID-19 (as of 3:00am, May 11, 2020): **1,315,635**
 - U.S. deaths reported to CDC: **79,367** (as of 3:00am, May 11).

- Per WHO/Global Summary: **3,917,366 (61,578 new)** confirmed cases of COVID-19 worldwide (as of **May 10, 2020**)

GLOBAL DISEASE DETECTION OPERATIONS CENTER (GDDOC):

- **COVID-19 - 215 Locations (including countries, territories, and areas)**
- **Source: CDC; NCIRD/DVD; WHO Headquarters; WHO Regional Offices; Ministries of Health**
- As of 10 May (09:00 GMT/05:00 EDT, accessed 11 May 08:30 EDT), WHO has reported a global cumulative count of 3,917,366 cases and 274,361 deaths. The cases reported are distributed in all six WHO regions with the highest numbers of new cases from Brazil, Peru, and Mexico in the Region of the Americas; Russia, the United Kingdom, Belarus, and Turkey in the European Region; India in the South-East Asia region; and Pakistan and Saudi Arabia in the Eastern Mediterranean region. Due to a change in reporting, to align with figures published by the United States (U.S.) CDC, counts for the U.S. were adjusted to 1,245,775 cases (-99 new cases) and 75,364 deaths (5,475 new deaths). WHO [COVID-19 Situation Reports](#) present official counts of confirmed COVID-19 cases, which may subsequently be updated. Thus, differences among WHO reports and between WHO reports other sources of COVID-19 data, using different inclusion criteria and different data cutoff times, are to be expected.
- CDC has established a COVID-19 Incident Management System and the CDC Emergency Operations Center is activated to provide ongoing support to the COVID-19 response. CDC COVID-19 [Travel Recommendations](#) for the locations with and without restrictions on entry to United States are posted and will continue to be updated. The CDC [Health Alert Network \(HAN\)](#) and a dedicated CDC [COVID-19](#) website are maintained. A newly-released WHO scientific brief summarizes the current evidence on the [impact of angiotensin converting enzyme \(ACE\) inhibitors and receptor blockers on severe acute respiratory illness due to COVID-19](#). New interim guidance has been released by the Inter-Agency Standing Committee on how to [adapt COVID-19 prevention and response measures for use in low capacity and humanitarian settings](#).

EOC WEEKEND CALL DATA:

Category	Total Count
COVID-19 (DoH)	3
COVID-19 (Other)	138
Administrative	96
Balamuthia infection (Granulomatous Amebic Encephalitis)	1
Botulinum neurotoxin producing species of Clostridium - Select Agent	1
CEFO Occupational Health	1
DGMQ - QPHO	1
DGMQ Do Not Board Lists	1
Diphtheria	1

ITSO	1
Logistics Assistance - DEO	4
Media Relations Calls	3
Needle Stick	1
NOC - DHS: Secure Ops Center	5
OHSO - Occupational Health and Safety Office	3
Other	5
Rabies	1
Tapeworm Infection (Taenia Infection)	1
Zoster - Shingles	1

Total Calls: 268



FEMA National Situation Report

As of 3:00 a.m. ET Tuesday, May 12, 2020

This report is published twice daily, 3 00 a.m. and 5 00 p.m. ET

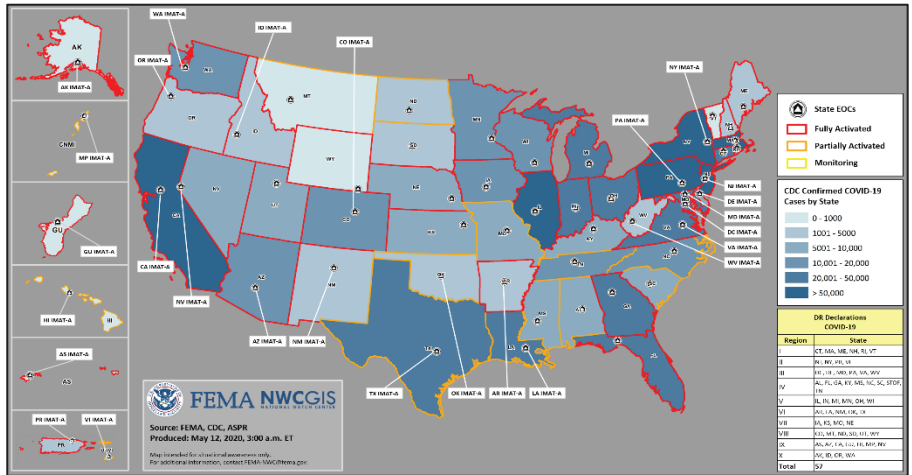
Common Operating Picture

FEMA HQ <i>NWC</i> <i>NRCC</i> Monitoring Level I		Major Disasters (DR): 103 Emergency Disasters (EM): 97 ★ JFOs: 9 / VJFOs: 12 ● Staging Area ■ Distribution Center (DC) ■ Declared County (non-COVID-19 Declarations) ■ Fully Activated ■ Partially Activated ■ Monitoring		Region VIII COVID DRs 4498-DR-CO 4508-DR-MT 4509-DR-ND 4525-DR-UT 4527-DR-SD 4535-DR-WY FCO: Lee K. dePalo JFO: TBD RVIII IMAT (Denver, CO)		4539-DR-WA FCO: Timothy B. Manner VJFO: Camp Murray, WA 4475-DR-ND FCO: Dana C. Reynolds VJFO: Denver, CO 4440/4463/4467/4469-DR-SD FCO: Jon K. Huss JFO: Sioux Falls, SD		Region VII COVID DRs 4483-DR-IA 4490-DR-MO 4504-DR-KS 4521-DR-NE FCO: Paul Taylor JFO: TBD RVII IMAT (Kansas City, MO)		4414/4442-DR-MN 4459/4477-DR-WI FCO: John F. Boyle 4424/4447-DR-OH 4461-DR-IL FCO: Steven W. Johnson VJFO: Springfield, IL Region V COVID DRs 4489-DR-IL 4494-DR-MI 4507-DR-OH 4515-DR-IN 4520-DR-WI 4531-DR-MN FCO: James K. Joseph JFO: TBD RV IMAT (Chicago, IL)		4372/4379-DR-MA 4410-DR-CT 4445/4474-DR-VT FCO: James McPherson JFO: Williston, VT Region I COVID DRs 4496-DR-MA 4500-DR-CT 4505-DR-RI 4516-DR-NH 4522-DR-ME 4532-DR-VT FCO: W. Russell Webster JFO: TBD RI IMAT (Boston, MA)		N-IMATs 2 Teams Red Blue Gold IMAT-A Support	
FEMA REGIONS <i>WATCH</i> <i>RRCC</i>		As of 3:00 a.m. ET May 12, 2020 Created by FEMA NWC		Region X COVID DRs 4481-DR-WA VJFO: Bothell, WA 4499-DR-OR 4533-DR-AK 4534-DR-ID FCO: Michael F. O'Hare JFO: TBD RX IMAT (Bothell, WA)		Region IX COVID DRs 4482-DR-CA 4495-DR-GU 4510-DR-HI 4511-DR-CNMI 4523-DR-NV 4524-DR-AZ 4537-DR-AS FCO: Robert J. Fenton VJFO: Oakland, CA RIX IMAT-2 (Oakland, CA) MERS (Mather, CA); Barrigada, GU; Saipan, MP)		4420-DR-NE FCO: Thomas J. Dargan JFO: Lincoln, NE Region VI COVID DRs 4484-DR-LA 4485-DR-TX 4518-DR-AR 4529-DR-NM 4530-DR-OK FCO: George A. Robinson JFO: TBD		4435/4451-DR-MO FCO: John Brogan JFO: Jefferson City, MO Region IV COVID DRs 4486-DR-FL 4487-DR-NC 4492-DR-SC 4497-DR-KY 4501-DR-GA 4503-DR-AL 4514-DR-TN 4528-DR-MS 4545-DR-STOF FCO: Gracia B. Szczech JFO: TBD		4399/4412/4465/4543-DR-NC FCO: Elizabeth Turner JFO: Durham, NC 4400-DR-GA 4427/4471/4476/4541-DR-TN FCO: Myra M. Shird JFO: Nashville, TN 4464/4479/4542-DR-SC FCO: Allan Jarvis VJFO: Atlanta, GA Region III COVID DRs 4493-DR-PR FCO: Thomas Von Essen VJFO: West Trenton, NJ 4488-DR-NJ FCO: Thomas Von Essen VJFO: Guaynabo, PR 4513-DR-USVI FCO: Thomas Von Essen VJFO: Christiansted, VI RII IMAT (Albany, NY) MERS (San Juan, PR)		R-IMATs 4-6 Teams Available I RRCC II NY III RRCC IV-1 Virtual - MS IV-2 Virtual - SC V RRCC VI-1 VI-2 VII RRCC VIII RRCC IX-1 IX-2 RRCC X RRCC	
Notes: COVID-19 NRCC: (Days) All RRCCs: (Days) GA: Flooding MS: Flooding PR: Earthquake TN: Tornadoes All State EOCs activated for COVID-19		4544-DR-AR FCO: Roland Jackson JFO: TBD 4538-DR-MS FCO: Terry L. Quarles JFO: TBD 4458/4462-DR-LA FCO: John E. Long VJFO: Baton Rouge, LA 4478/4536-DR-MS FCO: Jose M. Girot JFO: TBD 4399-DR-FL FCO: Brett Howard JFO: Panama City, FL 4473-DR-PR FCO: Alex Amparo JFO: Ponce, PR		4493-DR-FL 4502-DR-DC 4506-DR-PA 4512-DR-VA 4517-DR-WV 4526-DR-DE FCO: MaryAnn Tierney JFO: TBD RIII IMAT (Phila., PA)		FMC PMC NMC Deployed									
Team: Status	US&R 33 – 65%	MERS >66%	FCOs <1 Type I	FDRCs <1	IM Workforce	Incident Management Cadre Availability Summary Cadres with 25% or Less Availability									
Assigned:	28	36	47	11	13,452 ▼	EHP 21% (131/628); ER 21% (16/76); FL 14% (23/161); FM 23% (60/259); OPS 19% (56/289); PA 22% (679/3,098); PLAN 19% (80/419); SAF 22% (12/54)									
Unavailable:	10	0	0	0	2,533 ▼										
Deployed:	0	1	44	10	5,944 ▲										
Available:	18	35	3	1	4,975 / 37% ▼										

National Current Operations & Monitoring

COVID-19 (For interagency reporting see FEMA NRCC COVID-19 SLB, published daily)

Situation: FEMA, HHS, and federal partners are working with SLTT governments to execute a Whole-of-America response to the COVID-19 pandemic. While states with stricter COVID-19 countermeasures continue seeing protests, states that have begun easing restrictions are experiencing crowds in parks and other outdoor areas, leading some to worry about additional outbreaks. The spread of COVID-19 in rural areas is also becoming a growing source of concern as prisons and nursing homes account for most of the spread in these areas.



Operational Task Forces:

Community Based Testing Sites:

- 172,547 (+666) samples collected at CBTS locations since March 20
- 182,017 (+8,174) tests processed from Private-Partnership Testing Sites since April 5

Supply Chain Stabilization:

- The Department of Veterans Affairs successfully established service agreements with decontamination system company to use the already deployed Critical Care Decontamination Systems; On May 8, 10 hospitals used the systems to sanitize 2,100 N95 masks

Data and Analysis:

- Developed methodology to identify emerging outbreak locations and areas with sustained community spread; explanation/supporting graphics delivered to White House TF on May 10

Lifeline Impacts:

Health and Medical:

- Nationwide testing: 8,913,697 (+248,129) cumulative as of May 11
- TX: COVID-19 hotspots have emerged in Amarillo and in an area along LA border due to poultry/meat processing facilities; National Guard assisting with the testing of 4K workers at poultry plant

Food, Water, Shelter:

- Over 5K reported COVID-19 cases at 115 meat processing facilities nationwide
- CA: National Guard is assisting Community Action of Napa Valley with food distribution; passed out nearly 75 pounds of food per family

Transportation:

- U.S. Coast Guard is monitoring 84 cargo vessels with crewmembers that embarked at a coronavirus port of interest within 14 days of the vessels' scheduled arrival at a U.S. port; 24 will arrive in the next 24 hours

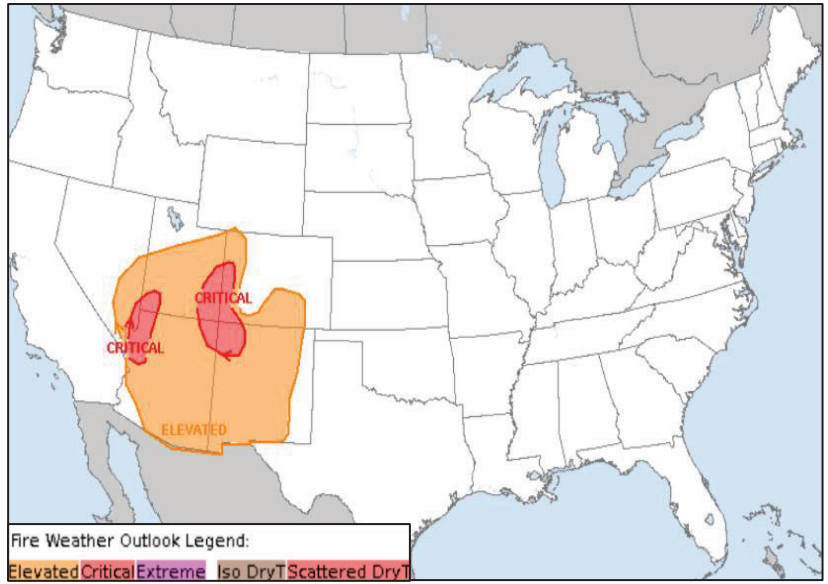
Response:

- FEMA NRCC activated to Level I; all FEMA RRCCs activated
- FEMA IMAT-A teams deployed to 27 states/territories; LNOs deployed to 37 states/territories
- 57 Major Disaster Declarations approved; All State / Territory EOCs activated
- 50,240 (-73) FEMA, DOD, HHS, VA, and CDC personnel deployed / activated; 3,138 (-23) FEMA employees deployed to support COVID-19

(FEMA COVID-19 SLB, 5 00 p.m. ET, May 11)

Weather Threats

- Critical fire weather conditions over parts of Arizona, Nevada, New Mexico, Colorado, and Utah; additionally, elevated fire conditions continue for the Desert Southwest and Central Rockies due to the combination of strong winds, low relative humidity, and warm temperatures
- Red Flag warnings continue for portions of Arizona, Nevada, and Colorado



(Latest NOAA Forecasts [WPC](#) | [SPC](#) | [NHC](#) | [SWPC](#))

Joint Preliminary Damage Assessments

Region	State	Event / Date	Type	Counties		Start – End Dates
				Requested	Completed	
IV	MS	Severe Storms, Flooding, Tornadoes, Straight-line Winds, and Flooding: April 22-23	IA	0	0	N/A
			PA	9	0	5/14 – TBD
	AL	Severe Storms April 12	IA	0	0	N/A
			PA	7	0	5/14 – TBD
VI	TX	Tornado April 22	IA	5	0	4/30 – TBD
			PA	0	0	N/A
	AR	Severe Storms April 12	IA	8	0	5/1 – TBD
			PA	11	0	5/1 – TBD

Declaration Activity

Declaration Requests in Process: 3 (AL, HI, & TX (Appeal))

Amendment No. 1 to FEMA-4522-DR-ME

- Issued May 11, 2020
- Adds Individual Assistance limited to the Crisis Counseling Program Statewide

Amendment No. 7 to FEMA-4473-DR-PR

- Issued May 11, 2020
- Extends the incident period

(Declared Disasters [fema.gov](#))

Joint Field Office Status Updates

No change over the last operational period

(JFO listing available on [NWC SharePoint Site](#))

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Regional Current Operations & Monitoring

<i>Region I</i>	<i>Region VI</i>
<p>RRCC: Level I (day shift – COVID-19) WATCH – Maynard MOC: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: No significant activity IMAT: Deployed to RRCC (COVID-19) LNOs: RI & ME EOCs: CT, MA, ME, NH, RI & VT: Full Activation (COVID-19)</p>	<p>RRCC: Level II (day shift – COVID-19) WATCH – Denton MOC: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: Critical Fire WX (see Above) IMAT-1: FMC / Available IMAT-2: FMC / Available IMAT-A: AR, LA, NM, OK, & TX LNOs: AR, LA, NM, OK, & TX EOCs: <ul style="list-style-type: none"> • AR & NM: Full Activation (COVID-19) • LA, OK, & TX: Partial Activation (COVID-19) </p>
<i>Region II</i>	<i>Region VII</i>
<p>RRCC: Level II (day shift – COVID-19) WATCH: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: No significant activity IMAT: Deployed to NY EOC (COVID-19) IMAT-A: NJ, NY, PR, & USVI LNOs: PR, NJ, & NY EOCs: <ul style="list-style-type: none"> • NJ, NY, & PR: Full Activation (COVID-19) • USVI: Partial Activation (COVID-19) </p>	<p>RRCC: Level II (day shift – COVID-19) WATCH: Steady State (24/7): Alternate location <ul style="list-style-type: none"> • Monitoring: No significant activity IMAT: Deployed to RRCC (COVID-19) EOCs: <ul style="list-style-type: none"> • IA, KS, & NE: Full Activation (COVID-19) • MO: Partial Activation (COVID-19) </p>
<i>Region III</i>	<i>Region VIII</i>
<p>RRCC: Level II (day shift – COVID-19) WATCH: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: No significant activity IMAT: Deployed to RRCC (COVID-19) IMAT-A: DC, DE, MD, PA, VA, & WV LNOs: DE EOCs: DC, DE, MD, PA, VA, & WV: Full Activation (COVID-19)</p>	<p>RRCC: Level II (day shift – COVID-19) WATCH – Denver MOC: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: Critical Fire WX (see Above) IMAT: Deployed to RRCC (COVID-19) IMAT-A: CO LNOs: SD, WY, MT, UT EOCs: <ul style="list-style-type: none"> • CO, SD, UT, & WY: Full Activation (COVID-19) • ND & MT: Partial Activation (COVID-19) </p>
<i>Region IV</i>	<i>Region IX</i>
<p>RRCC: Level II (day shift – COVID-19) WATCH: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: No significant activity IMAT-1: Supporting FEMA-4536-DR-MS (Virtual) IMAT-2: Supporting FEMA-4542-DR-SC (Virtual) LNOs: AL, FL, & TN EOCs: <ul style="list-style-type: none"> • FL: Full Activation (COVID-19) • GA: Full Activation (COVID-19 / Flooding) • MS: Partial Activation (COVID-19 / Flooding) • TN: Partial Activation (COVID-19 / Tornadoes) • AL, KY, NC, & SC: Partial Activation (COVID-19) </p>	<p>RRCC: Level I (day shift – COVID-19) WATCH: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: Critical Fire WX (see Above) IMAT-1: PMC / Staffing shortage IMAT-2: Deployed to RRCC (COVID-19) IMAT-A: AZ, CA, HI, NV, GU, CNMI, & AS EOCs: <ul style="list-style-type: none"> • AS, AZ, CA, GU, & NV: Full Activation (COVID-19) • CNMI & HI: Partial Activation (COVID-19) </p>
<i>Region V</i>	<i>Region X</i>
<p>RRCC: Level II (day shift – COVID-19) WATCH: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: No significant activity IMAT: Deployed to RRCC (COVID-19) LNOs: IL, IN, MI, & WI EOCs: IL, IN, OH, MI, MN, & WI: Full Activation (COVID-19)</p>	<p>RRCC: Level II (day shift – COVID-19) WATCH – Bothell MOC: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: No significant activity IMAT: Deployed to RRCC (COVID-19) IMAT-A: AK, ID, OR, & WA LNOs: AK & OR EOCs: AK, ID, OR, & WA: Full Activation (COVID-19)</p>

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FEMA National Situation Report Acronyms & Abbreviations

Front Page – Common Operating Picture

NWC:	National Watch Center	ISB:	Incident Support Base	R-IMAT:	Regional Incident Management Assistance Team
NRCC:	National Response Coordination Center	MERS:	Mobile Emergency Response Support	RRCC:	Regional Response Coordination Center
EX (State):	Exercise (Location)	N-IMAT:	National Incident Management Assistance Team	RWC:	Regional Watch Center
FCO:	Federal Coordinating Officer	NMC:	Non-Mission Capable	US&R:	Urban Search & Rescue
FDRC:	Federal Disaster Recovery Coordinator	PMC:	Partially Mission Capable		
FMC:	Fully Mission Capable				
IM:	Incident Management				

Front Page – Force Laydown Map

CAD:	Caribbean Area Division	DR:	Major Disaster Declaration (Stafford Act)	IST:	Incident Support Team
CNMI:	Commonwealth of the Northern Marianas Islands	EM:	Emergency Declaration (Stafford Act)	JFO:	Joint Field Office
DC:	Distribution Center / District of Columbia	EOC:	Emergency Operations Center	LNO:	Liaison Officer
		FCO:	Federal Coordinating Officer	TF:	Task Force
				VJFO:	Virtual JFO

Front Page – Incident Management Cadres

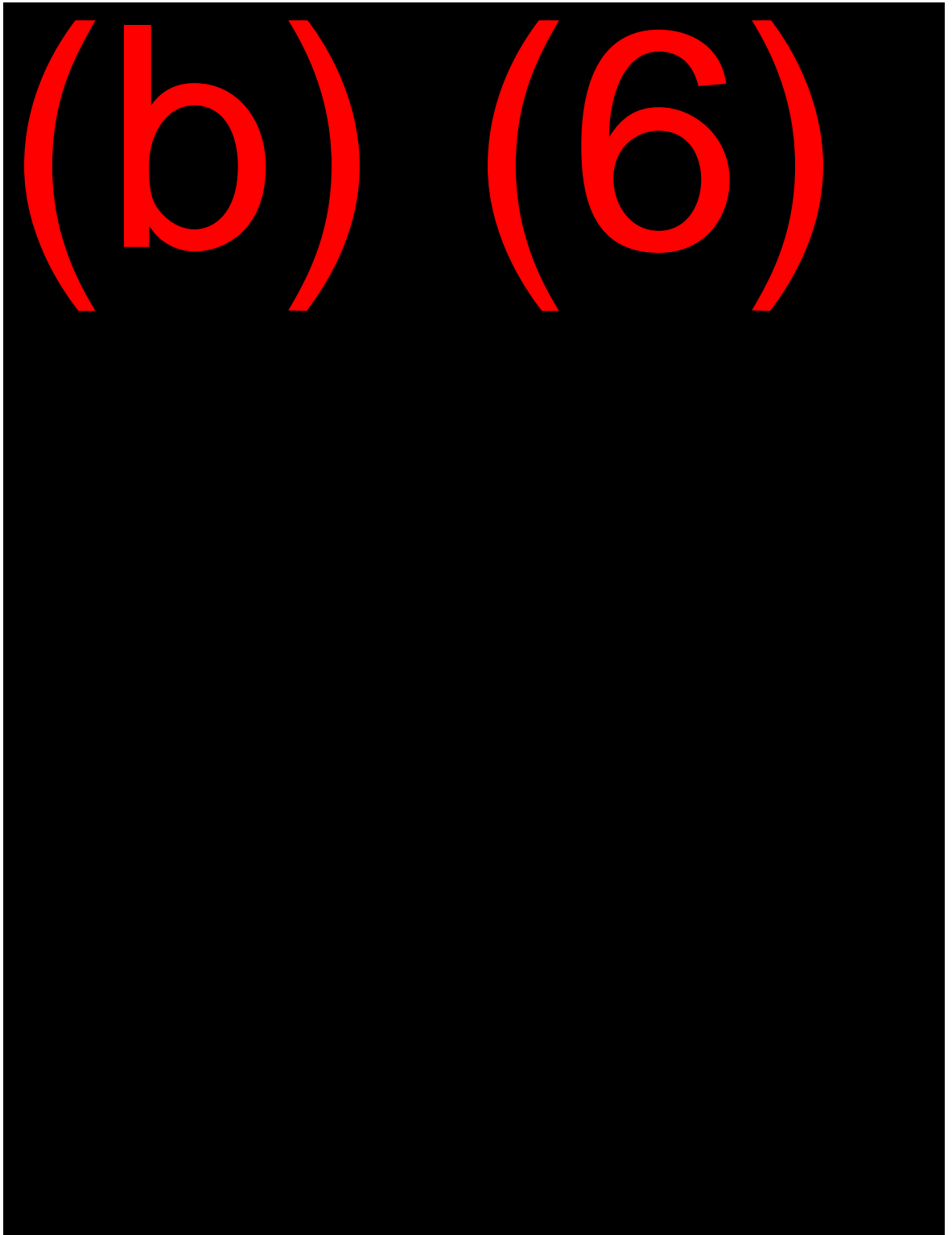
ACQ:	Acquisitions	DSA:	Disaster Survivor Assistance	HR:	Human Resources
ADR:	Alternative Dispute Resolution	EHP:	Environmental Planning and Historic Preservation	IA:	Individual Assistance
DI:	Disability Integration	ER:	Equal Rights	IT:	Information Technology
DEC:	Disaster Emergency Communications	EA:	External Affairs	OCC:	Office of Chief Counsel
DFTO:	Disaster Field Training Ops	FL:	Field Leadership	LOG:	Logistics
		FM:	Financial Management	HM:	Hazard Mitigation

Other Acronyms & Abbreviations

ARC:	American Red Cross	IPAWS:	Integrated Public Alert & Warning System
CBRN:	Chemical, Biological, Radiological and Nuclear	IST:	Incident Support Team
CDC:	Centers for Disease Control and Prevention	JTWC:	Joint Typhoon Warning Center
CIKR:	Critical Infrastructure / Key Resources	MCOV:	Mobile Communications Operations Vehicle
DCO:	Defense Coordinating Officer	MEOV:	Mobile Emergency Operation Vehicle (MERS)
DFA:	Direct Federal Assistance (Stafford Act program)	MCC:	Movement Coordination Center
DIRS:	Disaster Information Reporting System	MMI:	Modified Mercalli Intensity (Earthquake scale)
DLA:	Defense Logistics Agency	MOC:	MERS Operations Center
DoD:	Department of Defense	NHC:	National Hurricane Center
DOE:	Department of Energy	NOAA:	National Oceanic & Atmospheric Administration
DRC:	Disaster Recovery Center	NWS:	National Weather Service
EAGLE-I:	Environment for Analysis of Geo-Located Energy Information (DOE)	PA:	Public Assistance (Stafford Act program)
EF:	Enhanced Fujita (Tornado scale)	PAGER:	Prompt Assessment of Global Earthquakes for Response
EPA:	Environmental Protection Agency	PDA:	Preliminary Damage Assessment (Joint FEMA/State)
ESF:	Emergency Support Function	PSPS:	Public Safety Power Shutoff
FMAG:	Fire Management Assistance Grant	ROC:	Response Operations Cell (part of the NRCC)
GIS:	Geospatial Information Systems	SEAR:	Special Event Assessment Rating
HHS:	Health & Human Services	SLTT:	State, Local, Tribal, and Territorial (<i>Governments</i>)
HM:	Hazard Mitigation (Stafford Act program)	USACE:	U.S. Army Corps of Engineers
IA:	Individual Assistance (Stafford Act program)	USAID:	U.S. Agency for International Development
IMAAC:	Interagency Modeling & Atmospheric Assessment Center	USCG:	U.S. Coast Guard
IOF:	Initial Operating Facility	USGS:	U.S. Geological Survey

(More FEMA Acronyms [FAAT Book](#))

From:
To:



Subject: [Non-DoD Source] ~~FOUO~~ FW: HHS Executive Summary 14May20
Date: Thursday, May 14, 2020 8:15:55 AM
Attachments: [image001.png](#)
[CDC Daily Report 2020-05-13.pdf](#)
[HHS FDA Report for 05-13-2020.pdf](#)
[National SITREP 05-14-2020 AM.pdf](#)

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Good Morning,

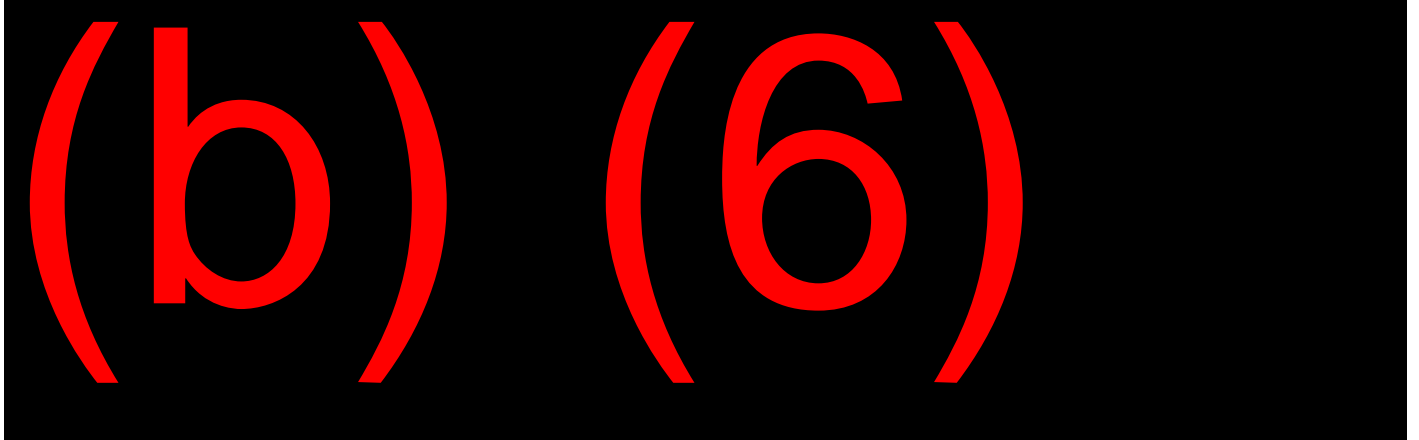
Please see HHS Executive Summary for 14 May 20.

Note: As of 14May20, 0300ET, the CDC confirmed and presumptive positive U.S. cases of COVID-19 have reached 1,378,797 across 50 states and D.C., Guam, PR, CNMI, and USVI; Deaths: 83,642. WHO reported global cases as of 14May20, 0600ET: 4,170,424; global deaths: 287,399; WHO member countries and areas with cases: 215. Testing: 9,301,026 cumulative tests includes samples tested by State/Local Public Health Laboratories, Commercial Laboratories, Hospital Laboratories, CDC, and VA completed as of 13May20.

- As of May 11, 25 cruise ships from 11 cruise lines have submitted attestations to disembark 5,714 crew including 156 US residents.
- As of May 11, there have been 72 outbreaks on cruise ships with 1,823 cases and 28 deaths.
- Carnival Cruise Line reported 39 of their ships have repositioned and will not be returning to the U.S. waters before the No Sail Order is lifted.
- FDA accelerated the development of prevention and treatment options for COVID-19 by providing new guidance with recommendations for innovators and researchers conducting work in this area. These guidance documents aim to make the process for submitting applications to initiate studies for new drugs and biological products more efficient by outlining recommendations for ways to design clinical trials to evaluate safety and effectiveness of these medical products for COVID-19.
- FDA provided an update on surveillance inspections during the COVID-19 pandemic. In the update, the agency stated it will continue to utilize and implement additional alternative inspection tools and approaches while postponing domestic and foreign routine surveillance inspections. This will continue as local, national and international conditions warrant, except for certain mission critical inspections.
- FDA posted updated information for blood establishments regarding COVID-19, which aligns with the agency's guidance on convalescent plasma to allow donation 14 days after complete resolution of symptoms. The posting also provides updated information blood establishments may wish to consider when evaluating prospective blood donors.
- NE: All meat processing plants are now open and operational.
- Shipping 600,000 Thermo Fisher reagents to states; these will primarily go to public health labs.

- One flight carrying approx. 4.8M FEMA procured N95 masks arrived in Baltimore, MD, on May 12.
- Supply Chain TF assisted in providing administrative coordination for 40 deliveries of medical PPE kits to nursing homes; roughly 15,000 nursing homes nationwide will receive PPE packages in May and June.

v/r



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From: OS Secretarys Operations Center (b) (6)
Sent: Thursday, May 14, 2020 7:40 AM
To: OS Secretarys Operations Center (b) (6)
Subject: HHS Executive Summary 14May20

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HHS ExecutiveSummary:Thursday, 14May20

1. HHS

Today's Noteworthy Topics:

COVID-19 (Novel Coronavirus)

As of 14May20, 0300ET, the CDC confirmed and presumptive positive U.S. cases of COVID-19 have reached 1,378,797 across 50 states and D.C., Guam, PR, CNMI, and USVI; Deaths: 83,642. WHO reported global cases as of 14May20, 0600ET: 4,170,424; global deaths: 287,399; WHO member countries and areas with cases: 215. Testing:9,301,026 cumulative tests includes samples tested by State/Local Public Health Laboratories, Commercial Laboratories, Hospital Laboratories, CDC, and VA completed as of 13May20.

Daily Operational Schedule:

0830 – FEMA Daily Operations Briefing
1230 – HHS/FEMA Interagency VTC

Public Health Emergency of National Significance:

Opioid Crisis, Nationwide: 02Apr20
Novel Coronavirus (COVID-19): 21Apr20

HHS Response Status Summary:

HHS SOC: Level I (Full Activation)
CDC EOC: Level III (Polio/Ebola)
CDC EOC: COVID-19 (Agency-Wide Response)
FDA EOC: Level II (Vape Product Response, COVID-19)

Emergency Support Function (ESF) Activation:

ESF – 8: Activated
ESF – 6: Activated

Recovery Support Function (RSF) Activation:

H&SS RSF: Activated Region II (2017 Irma/Maria, Puerto Rico projected end date of 30Jun20).

HHS Deployments: (Total = 858)

ASPR: 688 – (8) Earthquake Puerto Rico, (668) COVID-19, (5) Irma/Maria Recovery, (3) Irma, (2) FY Funded Training Q1, (2) FY Non-Funded Training Q1
CDC: 170 – (169) COVID-19, (1) Ebola

New Mission Assignments (MA):NSTR**Active Situations (6):**

- Influenza Season
- Irma/Maria, Puerto Rico, & USVI (Recovery)
- Ebola in Eastern Democratic Republic of the Congo
- Novel Coronavirus (COVID-19)
- Bravo Response
- Earthquake, Puerto Rico

U.S. International Health Regulation National Focal Point Status:NSTR**2. FEMA:****Interagency Response Status Summary:**

NWC: Monitoring
NRCC: Level I
National IMATs: Red – Fully Mission Capable; Blue – Fully Mission Capable; Gold – IMAT – A Support
Regional IMATs: Region I, RRCC; Region II, NY; Region III, RRCC; Region IV-1, Virtual – MS; Region IV-2, Virtual – SC; Region V, RRCC; Region VI-1, Virtual –AR, VII, RRCC; Region VIII, RRCC; Region IX-2, RRCC; Region X, RRCC

Significant National Weather:

Severe thunderstorms with heavy rain and flash flooding likely over the next several days spanning from the Mississippi Valley into the Ohio Valley and Great Lakes. Elevated and critical fire weather conditions will continue in the Four Corners region and Southern High Plains.

Tropical Activity:**Atlantic:**

Disturbance 1:

Expected to develop late this week or early this weekend near or within a couple of hundred miles north of the Bahamas. Environmental conditions appear conducive for gradual development of this system, and a subtropical depression or storm is likely to form this weekend. Moving northeast over the western Atlantic. Formation chance through 48 hours: Low (10%). Formation chance through 5 days: High (70%).

3. OPDIV/STAFFDIV Overnight Reports:

CDC:

- COVID-19 – 215 Locations (including countries, territories, and areas)

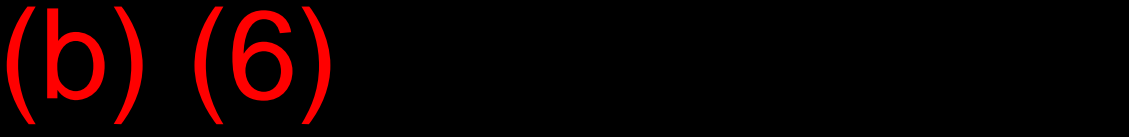
FDA:

- Coronavirus Disease 2019 (COVID-19)/ML/2019

Prepared by:

Secretary's Operations Center

U.S. Department of Health and Human Services (HHS)
Assistant Secretary for Preparedness and Response (ASPR)
200 Independence Ave., S.W.
Washington, D.C. 20201



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CDC Daily Report: As of 7:00 a.m. EDT, Wednesday, May 13, 2020

SIGNIFICANT EVENTS:

- Note: Operational updates described within the CDC Daily Report may not be inclusive of all response activities that are occurring.

** = Asterisks denote updates to monitored events/responses*

MONITORED EVENTS: (4)

- Opioid Crisis
- Measles Outbreak
- Hepatitis-A Outbreak
- 2020 Bravo Response (*Heightened Tensions Middle East*)

RESPONSE STATUS:

- CDC EOC: 2019 Novel Coronavirus (Agency-wide Response) *
- CDC EOC: Ebola (Level III)
- CDC EOC: Polio (Level III)

CDC DEPLOYMENTS:

- Domestic
 - Coronavirus (166)
 - International
 - Polio (0)
 - Ebola (1)
 - Coronavirus (3)
- Total Personnel: (170)

PROGRAM UPDATES:

National Center for Immunization and Respiratory Diseases (NCIRD):

- **COVID-19 United States**
 - CDC COVID-19 website provides latest resources for community, healthcare professionals and information regarding United States COVID-19 cases: <https://www.cdc.gov/coronavirus/2019-ncov/index.html>.
 - Confirmed and probable U.S. cases of COVID-19: **1,358,419** (as of 3:00am, May 13); for complete domestic updates.

- U.S. deaths reported to CDC: **81,958** (as of 3:00am, May 13).
- Worldwide confirmed cases of COVID-19: **4,088,848** (as of May 12)
- Health Systems and Worker Safety Task Force
 - Text-based Illness Monitoring (TIM) system users:
 - Total: over 10,776 users.
 - CDC/HHS: 1,157 active users, State/Local: 2,415 active users (May 11).
 - Continuing to provide IPC field support and technical assistance for healthcare worker investigations, healthcare settings, and non-healthcare settings (e.g., homeless shelters, alternate care sites, etc.).
 - Assisting New York state with field investigation into suspected cases of multisystem inflammatory syndrome in children.
 - Engaging Council of State and Territorial Epidemiologists (CSTE) with development and review of a working case definition for multisystem inflammatory syndrome in children and Health Alert Network (HAN) Update planned for release May 13.
- Epidemiology Studies Task Force
 - Continuing Cook County Jail (Chicago, IL) study:
 - Unit enrollment completed
 - Continuing to retest all units
 - Continuing Franklin County Jail, Louisiana study:
 - Enrolled new cohort May 11
 - Repeat testing of previous cohorts
 - Influenza Transmission Evaluation Study (FluTES-C) study enrolled 11 households in Nashville.
- Global Migration Task Force (GMTF)
 - On May 11, 711 passengers from China, Iran, Schengen Countries, UK, and Ireland were screened upon arrival at F13 airports; 259,616 have been screened to date.
 - Met with HHS Office of General Counsel regarding extension of CDC order regarding persons crossing the US-Canada and US-Mexico land borders (<https://www.cdc.gov/quarantine/order-suspending-introduction-certain-persons.html>).
 - As of May 11, 25 cruise ships from 11 cruise lines have submitted attestations to disembark 5,714 crew including 156 US residents.
 - As of May 11, there have been 72 outbreaks on cruise ships with 1,823 cases and 28 deaths.
 - Carnival Cruise Line reported 39 of their ships have repositioned and will not be returning to the U.S. waters before the No Sail Order is lifted.
- Laboratory Task Force
 - As of May 11, tested over 6,553 samples that equate to over 3,254 patients; Public Health Labs (PHL) tested over 802,035 samples.
 - International Reagent Resource (IRR) shipped 272 reagents to nine (9) laboratories on May 11.

- CDC submitted Emergency Use Authorization (EUA) amendment to FDA with a focus of reducing the needs for extraction reagents.
- State, Tribal, Local and Territorial Support Section
 - Deployed 38 field teams to provide multi-disciplinary technical assistance at request of health departments. Teams continue to provide support for outbreak response, epidemiologic, surveillance and data analysis, community mitigation, infection prevention and control, laboratory support and technical assistance as needed.
- Joint Information Center (JIC)
 - Posted new web content
 - [CDC in Action factsheet](#)
 - [Worker Safety and Support](#)
 - [Funeral Guidance for Individuals and Families](#)
 - Facilitated a call where a CDC subject matter expert provided updates about COVID-19 to private sector organizations.
 - Posted social media content about Ad Council: Lung disease; Face coverings; Cleaning and disinfecting; MMWR early releases; CDC responder featuring Health Communication Specialist; Keeping your distance to slow the spread; and Call for papers.
 - Posted Spanish social media messages about Ad Council: Lung disease; Slow the spread video; and Social distancing.

GLOBAL DISEASE DETECTION OPERATIONS CENTER (GDDOC):

- **COVID-19 - 215 Locations (including countries, territories, and areas)**
 - **Source: CDC; NCIRD/DVD; WHO Headquarters; WHO Regional Offices; Ministries of Health**
 - As of 11 May (09:00 GMT/05:00 EDT, accessed 15:00 EDT), WHO has reported a global cumulative count of 4,088,848 cases and 283,153 deaths for an increase of 82,591 cases and 4,261 deaths over the preceding 24 hours. The cases are distributed in the six regions as follows: Region of the Americas [1,743,717 confirmed (41,266 new cases) / 104,549 deaths (2,675 new deaths)]; European Region [1,755,790 confirmed (24,184) / 157,880 deaths (1,277)]; Eastern Mediterranean Region [274,027 confirmed (8,863) / 9,138 deaths (125)]; South-East Asia Region [105,901 confirmed (5,020) / 3,597 deaths (116)]; African Region [46,829 confirmed (2,296) / 1,449 deaths (34)]; and Western Pacific Region [161,872 confirmed (962) / 6,527 deaths (34)]. Among the 215 affected locations, 134 reported new confirmed cases with the highest number of new cases from United States [1,298,287 confirmed (26,642 new cases) / 78,652 deaths (1,736 new deaths)]; Russia [232,243 confirmed (10,899) / 2,116 deaths (107)]; Brazil [162,699 confirmed (6,760) / 11,123 deaths (496)]; the United Kingdom [223,064 confirmed (3,877) / 32,065 deaths (210)]; India [70,756 confirmed (3,604) / 2,293 deaths (87)]; Spain [227,436 confirmed (3,046) / 26,744 deaths (123)]; Peru [67,307 confirmed (2,292) / 1,889 deaths (75)]; Saudi Arabia [41,014 confirmed (1,966) / 255 deaths (9)]; Iran [109,286 confirmed (1,683) / 6,685 deaths (45)]; and Mexico [35,022 confirmed (1,562) / 3,465 deaths (112)].

- WHO [COVID-19 Situation Reports](#) present official counts of confirmed COVID-19 cases, which may undergo subsequent revisions. Thus, differences among WHO reports and between WHO and other sources of COVID-19 data, using different inclusion criteria and different data cutoff times, are to be expected.
- CDC has established a COVID-19 Incident Management System and the CDC Emergency Operations Center is activated to provide ongoing support to the COVID-19 response. CDC COVID-19 [Travel Recommendations](#) for the locations with and without restrictions on entry to United States are posted and will continue to be updated. The CDC [Health Alert Network \(HAN\)](#) and a dedicated CDC [COVID-19](#) website are maintained. WHO has published a new guidance on [Considerations for school-related public health measures in the context of COVID-19](#) as an annex to earlier guidance on [adjusting public health and social measures](#) published on 15 April 2020.

EOC 24 HOUR CALL DATA:

Category	Total Count
2019 Novel Coronavirus (DoH)	3
2019 Novel Coronavirus (Other)	70
Administrative	66
HPV - Human Papillomavirus	1
ITSO	1
Kawasaki Syndrome	1
Logistics Assistance - DEO	3
Malaria	1
Media Relations Calls	2
NOC - DHS: Secure Ops Center	4
Other	1
Poison Control	1

Total Calls: 154

**FDA OFFICE OF EMERGENCY MANAGEMENT
HHS FDA REPORT – May 13, 2020**

This document is confidential and is only for internal HHS use for emergency operations purposes. This document contains non-public information and may include information for which public disclosure is prohibited by law (such as confidential commercial information, trade secret, and personal privacy information) and information compiled for enforcement purposes. This document was prepared by FDA's Office of Emergency Management/Office of Emergency Operations (OEM/OEO). Any request to distribute this information outside of HHS must be approved by FDA.

UPDATES

Coronavirus Disease 2019 (COVID-19)/ML/2019

FDA continues to work with the WHO, US government partners (e.g., FEMA, NSC, HHS, ASPR, BARDA, CDC, NIH, DoD), state partners and medical product developers as necessary to support response efforts to the novel coronavirus outbreak/pandemic, COVID-19. On 5/12/2020, FDA provided the following updates and information to the public and industry:

- FDA [accelerated the development of prevention and treatment options for COVID-19](#) by providing new guidance with recommendations for innovators and researchers conducting work in this area. These guidance documents aim to make the process for submitting applications to initiate studies for new drugs and biological products more efficient by outlining recommendations for ways to design clinical trials to evaluate safety and effectiveness of these medical products for COVID-19.
- FDA provided an update on [surveillance inspections](#) during the COVID-19 pandemic. In the update, the agency stated it will continue to utilize and implement additional alternative inspection tools and approaches while postponing domestic and foreign routine surveillance inspections. This will continue as local, national and international conditions warrant, except for certain mission critical inspections.
- FDA issued a warning letter to a firm selling fraudulent COVID-19 products, as part of the agency's effort to protect consumers. The seller warned, [Fusion Health and Vitality LLC](#), recently offered products, including "CORE" and "IMMUNE SHOT," for sale in the U.S. with claims that misleadingly represented the products as safe and/or effective for the prevention and treatment of COVID-19. There are currently no FDA-approved products to prevent or treat COVID-19. Consumers concerned about COVID-19 should consult with their health care provider. To date, the FDA has posted [48 COVID-19 related warning letters](#).
- FDA posted [updated information for blood establishments](#) regarding COVID-19, which aligns with the agency's [guidance on convalescent plasma](#) to allow donation 14 days after complete resolution of symptoms. The posting also provides updated information blood establishments may wish to consider when evaluating prospective blood donors.

- FDA issued an [*Emergency Use Authorization \(EUA\) for the Ascom teleCARE IP Nurse Call System*](#) for use by healthcare providers and patients in healthcare environments, including temporary hospital facilities, to facilitate remote communication between patients and healthcare providers. The remote communication and monitoring capabilities of the teleCARE IP Nurse Call System may reduce the amount of contact by healthcare providers with patients who are in isolation rooms, thereby reducing healthcare provider risk of exposure to SARS-CoV-2, the virus that causes COVID-19.
- FDA issued an [*EUA for the emergency use of the Eko electrocardiogram \(ECG\) Low Ejection Fraction Tool \(“ELEFT”\)*](#) to be used by healthcare professionals to provide an assessment of Left Ventricular Ejection Fraction as a diagnostic aid to screen for potential cardiac complications associated with COVID-19 or underlying cardiac conditions that may affect clinical management of COVID-19, in adult patients having or suspected of having COVID-19. The EUA was issued to Manatt, Phelps & Philips.
- On 5/13/2020, FDA hosted a virtual Town Hall for clinical laboratories and commercial manufacturers that are developing or have developed diagnostic tests for SARS-CoV-2. The purpose of the Town Halls (2 additional scheduled for 5/20 and 27/2020) are to help answer technical questions about the development and validation of tests for SARS-CoV-2.
- Diagnostic testing updates:
 - During the COVID-19 pandemic, the FDA has worked with more than 500 test developers who have said they will be submitting EUA requests to the FDA for tests that detect the virus.
 - To date, FDA has authorized 93 tests under EUAs, which includes 12 antibody tests and 1 antigen test.

To review FDA’s current response activities, click: [*FDA’s COVID-19 Current Response Activities*](#). OEO, via the 2019-nCoV IMG, will continue to monitor and provide updates.



FEMA

National Situation Report

As of 3:00 a.m. ET Thursday, May 14, 2020

This report is published twice daily, 3 00 a.m. and 5 00 p.m. ET

Common Operating Picture

FEMA HQ		Major Disasters (DR): 103 Emergency Disasters (EM): 97 JFOs: 9 / VJFOs: 12 Staging Area Distribution Center (DC) Declared County (non-COVID-19 Declarations) Fully Activated Partially Activated Monitoring	As of 3:00 a.m. ET May 14, 2020 Created by FEMA NWC		Region VIII COVID DRs 4539-DR-WA FCO: Timothy B. Manner VJFO: Camp Murray, WA 4475-DR-ND FCO: Dana C. Reynolds VJFO: Denver, CO 4440/4463/4467/4469-DR-SD FCO: Jon K. Huss JFO: Sioux Falls, SD Region VII COVID DRs 4414/4442-DR-MN 4459/4477-DR-WI FCO: John F. Boyle 4490-DR-MO 4504-DR-NE 4521-DR-KS FCO: Paul Taylor JFO: TBD RVII IMAT (Kansas City, MO) Region V COVID DRs 4489-DR-IL 4494-DR-MI 4507-DR-OH 4515-DR-IN 4520-DR-WI 4531-DR-MN FCO: James K. Joseph JFO: TBD RV IMAT (Chicago, IL) Region I COVID DRs 4372/4379-DR-MA 4410-DR-CT 4445/4474-DR-VT 4457-DR-NH FCO: James McPherson JFO: Williston, VT 4532-DR-VT FCO: W. Russell Webster JFO: TBD RI IMAT (Boston, MA) 4472-DR-NY FCO: Seamus K. Leary JFO: Albany, NY 4428/4540-DR-KY FCO: Kevin A. Wallace VJFO: Frankfort, KY Region II COVID DRs 4480-DR-NY FCO: Thomas Von Essen JFO: Albany, NY 4488-DR-NJ FCO: Thomas Von Essen VJFO: West Trenton, NJ 4493-DR-PR FCO: Thomas Von Essen VJFO: Guaynabo, PR 4513-DR-USVI FCO: Thomas Von Essen VJFO: Christiansted, VI RII IMAT (Albany, NY) MERS (San Juan, PR) Region III COVID DRs 4491-DR-MD 4502-DR-DC 4506-DR-PA 4512-DR-VA 4517-DR-WV 4526-DR-DE FCO: MaryAnn Tierney JFO: TBD RIII IMAT (Phila., PA) Region IV COVID DRs 4486-DR-FL 4487-DR-NC 4492-DR-SC 4497-DR-KY 4501-DR-GA 4503-DR-AL 4514-DR-TN 4528-DR-MS 4545-DR-STOF FCO: Gracia B. Szczech JFO: TBD Region IX COVID DRs 4482-DR-CA 4495-DR-GU 4510-DR-HI 4511-DR-CNMI 4523-DR-NV 4524-DR-AZ 4537-DR-AS FCO: Robert J. Fenton VJFO: Oakland, CA RX IMAT-2 (Oakland, CA) MERS (Mather, CA); Barrigada, GU; Saipan, MP) 4420-DR-NE FCO: Thomas J. Dargan JFO: Lincoln, NE Region VI COVID DRs 4484-DR-LA 4485-DR-TX 4518-DR-AR 4529-DR-NM 4530-DR-OK FCO: George A. Robinson JFO: TBD 4425/4451-DR-MO FCO: John Brogan JFO: Jefferson City, MO 4454-DR-AR FCO: Roland Jackson JFO: TBD 4538-DR-MS FCO: Terry L. Quarles JFO: TBD 4458/4462-DR-LA FCO: John E. Long VJFO: Baton Rouge, LA 4478/4536-DR-MS FCO: Jose M. Girod JFO: TBD 4399-DR-FL FCO: Brett Howard JFO: Panama City, FL 4473-DR-PR FCO: Alex Amparo JFO: Ponce, PR	N-IMATs 2 Teams Red Blue Gold IMAT-A Support R-IMATs 4-6 Teams Available I RRCC II NY III RRCC IV-1 Virtual - MS IV-2 Virtual - SC V RRCC VI-1 Virtual - AR VI-2 VII RRCC VIII RRCC IX-1 IX-2 RRCC X RRCC FMC PMC NMC Deployed	
Monitoring	NRCC						Level I
FEMA REGIONS		Notes: COVID-19 NRCC: (Days) All RRCCs: (Days) GA: Flooding MS: Flooding PR: Earthquake TN: Tornadoes All State EOCs activated for COVID-19	I Level I II Level II III Level II IV Level II V Level II VI Level II VII Level II VIII Level II IX Level I X Level II	I RRCC II NY III RRCC IV-1 Virtual - MS IV-2 Virtual - SC V RRCC VI-1 Virtual - AR VI-2 VII RRCC VIII RRCC IX-1 IX-2 RRCC X RRCC			
WATCH	RRCC						
Monitoring	I				Level I	I	RRCC
Monitoring	II				Level II	II	NY
Monitoring	III				Level II	III	RRCC
Monitoring	IV				Level II	IV-1	Virtual - MS
Monitoring	V				Level II	IV-2	Virtual - SC
Alt. Location	VII				Level II	V	RRCC
Monitoring	VIII				Level II	VI-1	Virtual - AR
Monitoring	IX				Level I	VI-2	
Monitoring	X	Level II	VII	RRCC			
Team:		US&R	MERS	FCOs	FDRCS	IM Workforce	Incident Management Cadre Availability Summary
Status		33 – 65%	>66%	<1 Type I	<1		Cadres with 25% or Less Availability
Assigned:	28	36	47	11	13,453	▲	EHP 21% (129/627); ER 22% (17/76); FL 14% (22/161); FM 24% (61/259); OPS 19% (56/289); PA 22% (676/3,100); PLAN 20% (83/419); SAF 19% (10/54)
Unavailable:	10	0	0	0	2,534	▲	
Deployed:	0	1	44	10	5,965	▼	
Available:	18	35	3	1	4,954 / 37%	▼	

National Current Operations & Monitoring

COVID-19 (For interagency reporting see FEMA NRCC COVID-19 SLB, published daily)

Situation: FEMA, HHS, and federal partners are working with SLTT governments to execute a Whole-of-America response to the COVID-19 pandemic. Among the 17 states not presently experiencing a decrease in confirmed cases, 7 have no stay-at-home orders in place, 1 has local or limited stay-at-home orders, and 9 have statewide stay-at-home orders in place.

Lifeline Impacts:

Health and Medical

Public Health:

- Nationwide testing: 9,301,026 (+179,635) cumulative as of May 13

Other Domestic Lifelines

Food, Water, Shelter:

- NE: All meat processing plants are now open and operational

Operational Task Forces:

Lab Diagnostics (LD):

- Shipping 600,000 Thermo Fisher reagents to states; these will primarily go to public health labs

Community Based Testing Sites (CBTS):

- 180,060 (+3,923) samples collected at CBTS locations since March 20
- 210,500 (+21,106) tests processed from Private-Partnership Testing Sites since April 5

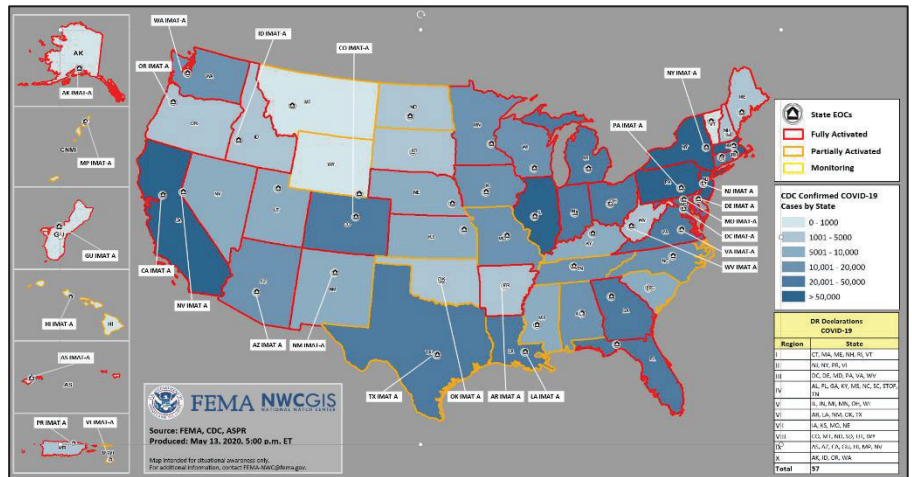
Supply Chain Stabilization (SC):

- One flight carrying approx. 4.8M FEMA procured N95 masks arrived in Baltimore, MD, on May 12
- SCTF assisted in providing administrative coordination for 40 deliveries of medical PPE kits to nursing homes; roughly 15,000 nursing homes nationwide will receive PPE packages in May and June

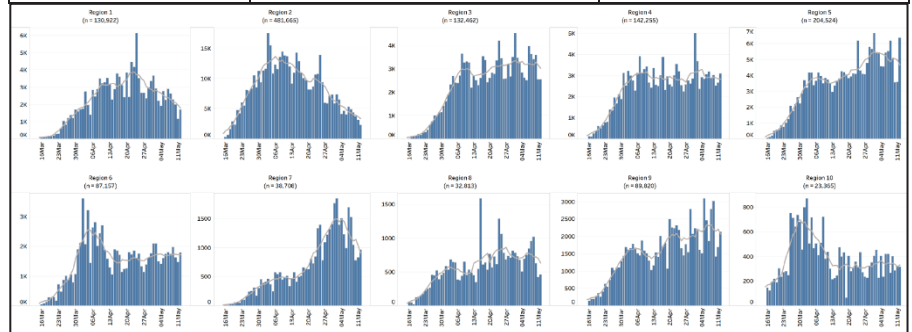
Response:

- FEMA NRCC activated to Level I; all FEMA RRCCs activated
- FEMA IMAT-A teams deployed to 27 states/territories; LNOs deployed to 37 states/territories
- 57 Major Disaster Declarations approved; All State / Territory EOCs activated
- 49,943 (-297) FEMA, DOD, HHS, VA, and CDC personnel deployed; 3,176 (+18) FEMA employees deployed to support COVID-19

(FEMA COVID-19 SLB, 5 00 p.m. ET, May 13)



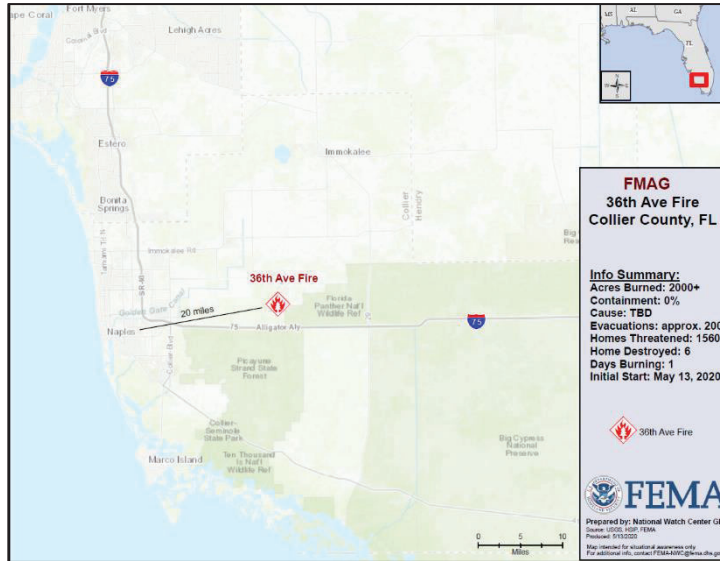
COVID-19 Cases	Confirmed/Presumptive	Deaths
United States	1,358,419 (+21,481)	81,958 (+1,671)
Worldwide	4,088,848 (+82,591)	283,153 (+4,261)



Wildfires – Summary

Fire Name (County)	FMAG	Acres Burned	Percent Contained	Evacuations (Residents)	Structures			Fatalities / Injuries
					Threatened	Damaged	Destroyed	
36 th Ave. Fire (Collier)	XXXX-FM-FL	2,500	5%	M: 2,000 V: 2,000	H: 1,560 O: 0	H: 0 O: 0	H: 0 O: 0	0

Evacuations M=Mandatory / V=Voluntary
Structures H=Homes / O=Other

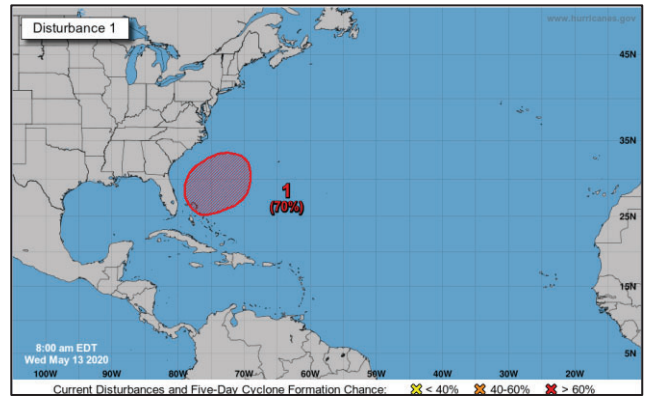


Tropics

Atlantic:

Disturbance 1 (as of 7 25 p.m. ET)

- Expected to develop late this week or early this weekend near or within a couple of hundred miles north of the Bahamas
- Environmental conditions appear conducive for gradual development of this system, and a subtropical depression or storm is likely to form this weekend
- Moving northeast over the western Atlantic
- Formation chance through 48 hours: Low (10%)
- Formation chance through 5 days: High (70%)



Weather Threats

- Severe thunderstorms with heavy rain and flash flooding likely over the next several days spanning from the Mississippi Valley into the Ohio Valley and Great Lakes
- Elevated and critical fire weather conditions will continue in the Four Corners region and Southern High Plains

(Latest NOAA Forecasts [WPC](#) | [SPC](#) | [NHC](#) | [SWPC](#))

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Joint Preliminary Damage Assessments

Region	State	Event / Date	Type	Counties		Start – End Dates
				Requested	Completed	
IV	MS	Severe Storms, Flooding, Tornadoes, Straight-line Winds, and Flooding: April 22-23	IA	0	0	N/A
			PA	9	0	5/14 – TBD
	AL	Severe Storms April 12	IA	0	0	N/A
			PA	7	0	5/14 – TBD
VI	TX	Tornado April 22	IA	5	0	4/30 – TBD
			PA	0	0	N/A
	AR	Severe Storms April 12	IA	8	0	5/1 – TBD
			PA	11	0	5/1 – TBD

Declaration Activity

Declaration Requests in Process: 3 (AL, HI, & TX (Appeal))

FMAG Approved: 36th Ave. Fire (Collier County, FL)

(Declared Disasters [fema.gov](https://www.fema.gov))

Joint Field Office Status Updates

No change over the last operational period

(JFO listing available on [NWC SharePoint Site](#))

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Regional Current Operations & Monitoring

<i>Region I</i>	<i>Region VI</i>
<p>RRCC: Level I (day shift – COVID-19) WATCH – Maynard MOC: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: No significant activity IMAT: Deployed to RRCC (COVID-19) LNOs: RI & ME EOCs: CT, MA, ME, NH, RI & VT: Full Activation (COVID-19)</p>	<p>RRCC: Level II (day shift – COVID-19) WATCH – Denton MOC: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: Elevated to critical fire weather for NM, TX & OK IMAT-1: Supporting FEMA-4544-DR-AR (Virtual) IMAT-2: FMC / Available IMAT-A: AR, LA, NM, OK, & TX LNOs: AR, LA, NM, OK, & TX EOCs: <ul style="list-style-type: none"> • AR & NM: Full Activation (COVID-19) • LA, OK, & TX: Partial Activation (COVID-19) </p>
<i>Region II</i>	<i>Region VII</i>
<p>RRCC: Level II (day shift – COVID-19) WATCH: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: No significant activity IMAT: Deployed to NY EOC (COVID-19) IMAT-A: NJ, NY, PR, & USVI LNOs: PR, NJ, & NY EOCs: <ul style="list-style-type: none"> • NJ, NY, & PR: Full Activation (COVID-19) • USVI: Partial Activation (COVID-19) </p>	<p>RRCC: Level II (day shift – COVID-19) WATCH: Steady State (24/7): Alternate location <ul style="list-style-type: none"> • Monitoring: Red Flag Warnings for KS IMAT: Deployed to RRCC (COVID-19) EOCs: <ul style="list-style-type: none"> • IA, KS, & NE: Full Activation (COVID-19) • MO: Partial Activation (COVID-19) </p>
<i>Region III</i>	<i>Region VIII</i>
<p>RRCC: Level II (day shift – COVID-19) WATCH: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: No significant activity IMAT: Deployed to RRCC (COVID-19) IMAT-A: DC, DE, MD, PA, VA, & WV LNOs: DE EOCs: DC, DE, MD, PA, VA, & WV: Full Activation (COVID-19)</p>	<p>RRCC: Level II (day shift – COVID-19) WATCH – Denver MOC: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: Red Flag Warnings for CO IMAT: Deployed to RRCC (COVID-19) IMAT-A: CO LNOs: SD, WY, MT, UT EOCs: <ul style="list-style-type: none"> • CO, SD, & UT: Full Activation (COVID-19) • ND, MT & WY: Partial Activation (COVID-19) </p>
<i>Region IV</i>	<i>Region IX</i>
<p>RRCC: Level II (day shift – COVID-19) WATCH: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: No significant activity IMAT-1: Supporting FEMA-4536-DR-MS (Virtual) IMAT-2: Supporting FEMA-4542-DR-SC (Virtual) LNOs: AL, FL, & TN EOCs: <ul style="list-style-type: none"> • FL: Full Activation (COVID-19) • GA: Full Activation (COVID-19 / Flooding) • MS: Partial Activation (COVID-19 / Flooding) • TN: Partial Activation (COVID-19 / Tornadoes) • AL, KY, NC, & SC: Partial Activation (COVID-19) </p>	<p>RRCC: Level I (day shift – COVID-19) WATCH: Steady State (24/7) Monitoring: No significant activity IMAT-1: PMC / Staffing shortage IMAT-2: Deployed to RRCC (COVID-19) IMAT-A: AZ, CA, HI, NV, GU, CNMI, & AS EOCs: <ul style="list-style-type: none"> • AS, AZ, CA, GU, & NV: Full Activation (COVID-19) • CNMI & HI: Partial Activation (COVID-19) </p>
<i>Region V</i>	<i>Region X</i>
<p>RRCC: Level II (day shift – COVID-19) WATCH: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: No significant activity IMAT: Deployed to RRCC (COVID-19) LNOs: IN, MI, & WI EOCs: IL, IN, OH, MI, MN, & WI: Full Activation (COVID-19)</p>	<p>RRCC: Level II (day shift – COVID-19) WATCH – Bothell MOC: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: No significant activity IMAT: Deployed to RRCC (COVID-19) IMAT-A: AK, ID, OR, & WA LNOs: AK & OR EOCs: AK, ID, OR, & WA: Full Activation (COVID-19)</p>

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FEMA National Situation Report Acronyms & Abbreviations

Front Page – Common Operating Picture

NWC:	National Watch Center	ISB:	Incident Support Base	R-IMAT:	Regional Incident Management Assistance Team
NRCC:	National Response Coordination Center	MERS:	Mobile Emergency Response Support	RRCC:	Regional Response Coordination Center
EX (State):	Exercise (Location)	N-IMAT:	National Incident Management Assistance Team	RWC:	Regional Watch Center
FCO:	Federal Coordinating Officer	NMC:	Non-Mission Capable	US&R:	Urban Search & Rescue
FDRC:	Federal Disaster Recovery Coordinator	PMC:	Partially Mission Capable		
FMC:	Fully Mission Capable				
IM:	Incident Management				

Front Page – Force Laydown Map

CAD:	Caribbean Area Division	DR:	Major Disaster Declaration (Stafford Act)	IST:	Incident Support Team
CNMI:	Commonwealth of the Northern Marianas Islands	EM:	Emergency Declaration (Stafford Act)	JFO:	Joint Field Office
DC:	Distribution Center / District of Columbia	EOC:	Emergency Operations Center	LNO:	Liaison Officer
		FCO:	Federal Coordinating Officer	TF:	Task Force
				VJFO:	Virtual JFO

Front Page – Incident Management Cadres

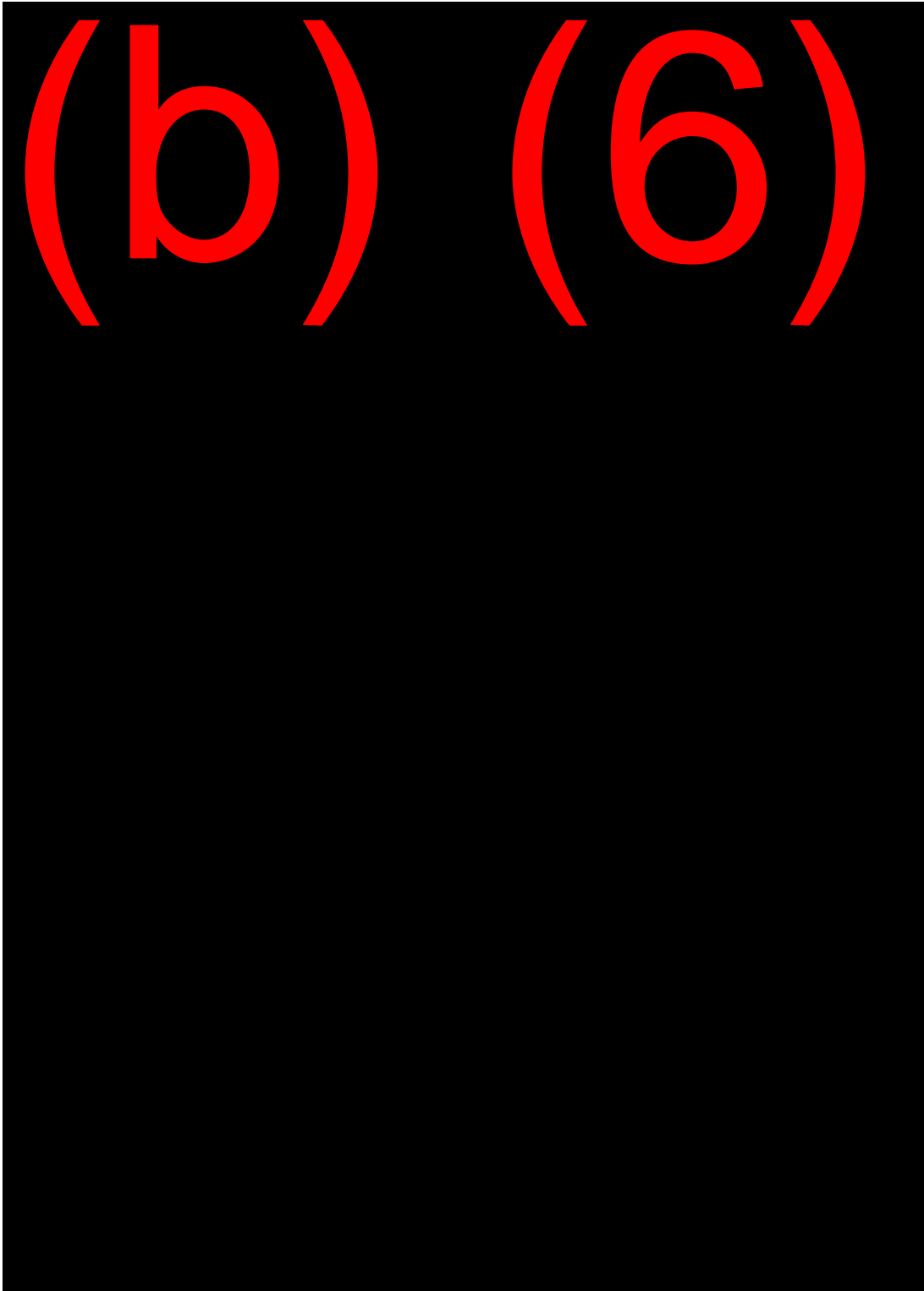
ACQ:	Acquisitions	DSA:	Disaster Survivor Assistance	HR:	Human Resources
ADR:	Alternative Dispute Resolution	EHP:	Environmental Planning and Historic Preservation	IA:	Individual Assistance
DI:	Disability Integration	ER:	Equal Rights	IT:	Information Technology
DEC:	Disaster Emergency Communications	EA:	External Affairs	OCC:	Office of Chief Counsel
DFTO:	Disaster Field Training Ops	FL:	Field Leadership	LOG:	Logistics
		FM:	Financial Management	HM:	Hazard Mitigation

Other Acronyms & Abbreviations

ARC:	American Red Cross	IPAWS:	Integrated Public Alert & Warning System
CBRN:	Chemical, Biological, Radiological and Nuclear	IST:	Incident Support Team
CDC:	Centers for Disease Control and Prevention	JTWC:	Joint Typhoon Warning Center
CIKR:	Critical Infrastructure / Key Resources	MCOV:	Mobile Communications Operations Vehicle
DCO:	Defense Coordinating Officer	MEOV:	Mobile Emergency Operation Vehicle (MERS)
DFA:	Direct Federal Assistance (Stafford Act program)	MCC:	Movement Coordination Center
DIRS:	Disaster Information Reporting System	MMI:	Modified Mercalli Intensity (Earthquake scale)
DLA:	Defense Logistics Agency	MOC:	MERS Operations Center
DoD:	Department of Defense	NHC:	National Hurricane Center
DOE:	Department of Energy	NOAA:	National Oceanic & Atmospheric Administration
DRC:	Disaster Recovery Center	NWS:	National Weather Service
EAGLE-I:	Environment for Analysis of Geo-Located Energy Information (DOE)	PA:	Public Assistance (Stafford Act program)
EF:	Enhanced Fujita (Tornado scale)	PAGER:	Prompt Assessment of Global Earthquakes for Response
EPA:	Environmental Protection Agency	PDA:	Preliminary Damage Assessment (Joint FEMA/State)
ESF:	Emergency Support Function	PSPS:	Public Safety Power Shutoff
FMAG:	Fire Management Assistance Grant	ROC:	Response Operations Cell (part of the NRCC)
GIS:	Geospatial Information Systems	SEAR:	Special Event Assessment Rating
HHS:	Health & Human Services	SLTT:	State, Local, Tribal, and Territorial (<i>Governments</i>)
HM:	Hazard Mitigation (Stafford Act program)	USACE:	U.S. Army Corps of Engineers
IA:	Individual Assistance (Stafford Act program)	USAID:	U.S. Agency for International Development
IMAAC:	Interagency Modeling & Atmospheric Assessment Center	USCG:	U.S. Coast Guard
IOF:	Initial Operating Facility	USGS:	U.S. Geological Survey

(More FEMA Acronyms [FAAT Book](#))

From:
To:



Subject: [Non-DoD Source] FOUO\ FW: HHS Executive Summary 22May20
Date: Friday, May 22, 2020 8:13:11 AM
Attachments: [image001.png](#)
[CDC Daily Report 2020-05-21 \(002\).pdf](#)
[HHS FDA Report for 05-21-2020.pdf](#)
[National SITREP 05-22-2020 AM.pdf](#)

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Good Morning,

Please see HHS Executive Summary for 22 May 20.

Note: As of 22May20, 0300ET, the CDC confirmed and presumptive positive U.S. cases of COVID-19 have reached 1,564,271 across 50 states and D.C., Guam, PR, CNMI, and USVI; Deaths: 94,396. WHO reported global cases as of 22May20, 0600ET: 4,893,186; global deaths: 323,256; WHO member countries and areas with cases: 216. Testing: 12,917,827 cumulative tests includes samples tested by State/Local Public Health Laboratories, Commercial Laboratories, Hospital Laboratories, CDC, and VA completed as of 21May20.

- The White House issued an emergency declaration on 21May20, authorizing federal disaster relief as the Tittabawassee River continues to recede and is expected to drop from Major Flood Stage tomorrow; however, floodwaters are expected to persist through next week. Flooding unleashed by two dam failures on 19May20 plunging parts of the city of Midland under several feet of water and forced the evacuation of approximately 11,000 residents. No deaths or serious injuries were reported. However, a Midland County official said floodwaters must recede further before it's safe for evacuees to return Caution-Caution-home.

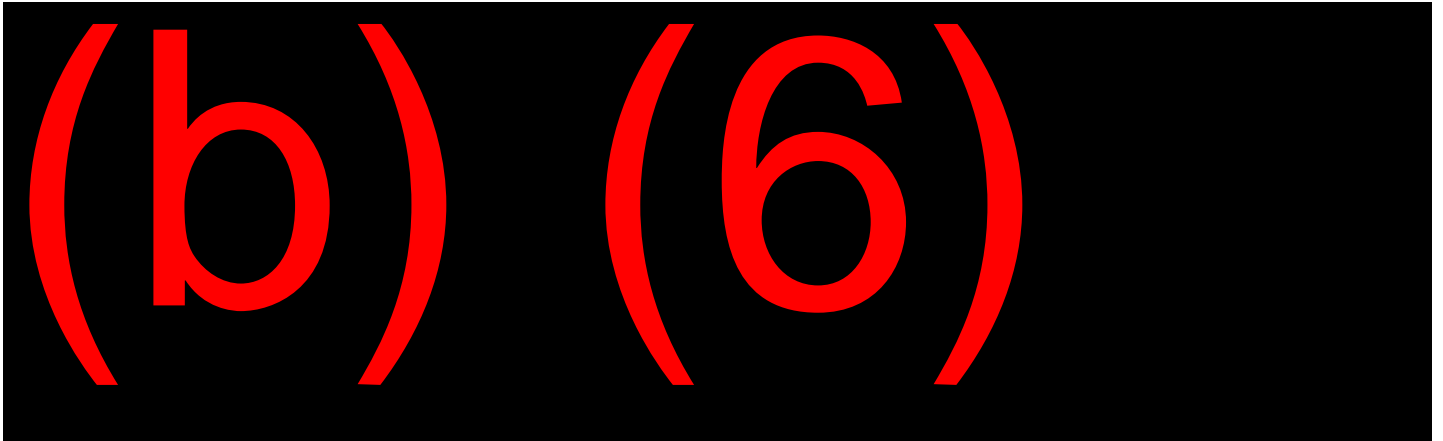
- NOAA predicts an above normal 2020 Atlantic hurricane season, and near or below normal eastern and central Pacific hurricane season. The season extends from 01Jun20 through 30Nov20. NOAA's Atlantic forecast predicts a likely range of 13 to 19 named storms. Six to ten weather disturbances could possibly becoming hurricanes and of those, six could become major hurricanes. NOAA indicates a 75% combined chance of near or below-normal season for the Eastern and Central Pacific. NOAA's Eastern Pacific forecast predicts a likely range of 11 to 18 named storms with five to ten expected to become hurricanes and of those one to five being major hurricanes. NOAA's Central Pacific forecast predicts a likely range of two to six named storms.

- FDA issued an Emergency Use Authorization (EUA) to Walter Reed National Military Medical Center for the COVID-19 Airway Management Isolation Chamber ("CAMIC") to be used by healthcare providers within the U.S. Army and Military Health System as an extra layer of barrier protection, in addition to personal protective equipment, to prevent exposure to pathogenic biological airborne particulates during transport of patients, at the time of definitive airway management, or when performing medical procedures on such patients during the COVID-19 pandemic. The CAMIC system

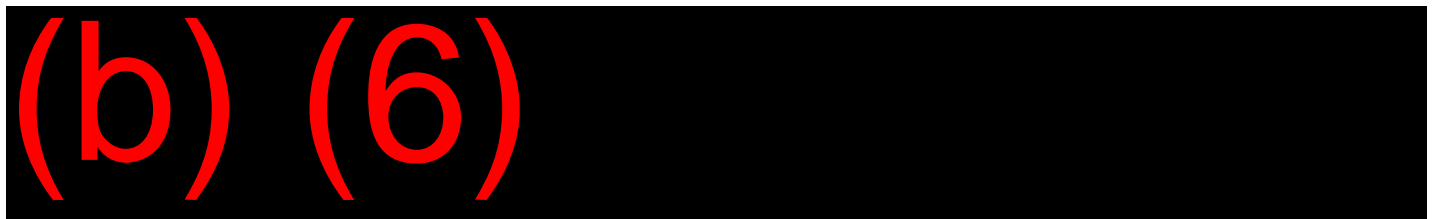
is a barrier device constructed by draping a large clear plastic bag over a box-like frame that is placed over the head, neck, and shoulders of the patient to isolate (i.e., capture and remove) airborne particulates.

- USDA and FDA announced an MOU to carry out the food supply chain resources efforts during this national emergency and prevent interruptions at FDA-regulated food facilities including fruit and vegetable processing.

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HHS Executive Summary: Friday, 22May20

1. HHS

Today's Noteworthy Topics:

COVID-19 (Novel Coronavirus)

As of 22May20, 0300ET, the CDC confirmed and presumptive positive U.S. cases of COVID-19 have reached 1,564,271 across 50 states and D.C., Guam, PR, CNMI, and USVI; Deaths: 94,396. WHO reported global cases as of 22May20, 0600ET: 4,893,186; global deaths: 323,256; WHO member countries and areas with cases: 216. Testing: 12,917,827 cumulativetests includes samples tested by State/Local Public Health Laboratories, Commercial Laboratories, Hospital Laboratories, CDC, and VA completed as of 21May20.

Dam Breach, Midland County, MI

The White House issued an emergency declaration on 21May20, authorizing federal disaster relief as the Tittabawassee River continues to recede and is expected to drop from Major

Flood Stage tomorrow; however, floodwaters are expected to persist through next week. Flooding unleashed by two dam failures on 19May20 plunging parts of the city of Midland under several feet of water and forced the evacuation of approximately 11,000 residents. No deaths or serious injuries were reported. However, a Midland County official said floodwaters must recede further before it's safe for evacuees to return home. HHS SOC continues to monitor the situation and communicate with Region V Regional Emergency Coordinators (RECs).

Hurricane Season

NOAA predicts an above normal 2020 Atlantic hurricane season, and near or below normal eastern and central Pacific hurricane season. The season extends from 01Jun20 through 30Nov20. NOAA's Atlantic forecast predicts a likely range of 13 to 19 named storms. Six to ten weather disturbances could possibly becoming hurricanes and of those, six could become major hurricanes. NOAA indicates a 75% combined chance of near or below-normal season for the Eastern and Central Pacific. NOAA's Eastern Pacific forecast predicts a likely range of 11 to 18 named storms with five to ten expected to become hurricanes and of those one to five being major hurricanes. NOAA's Central Pacific forecast predicts a likely range of two to six named storms.

Daily Operational Schedule:

0830 – FEMA Daily Operations Briefing
1230 – HHS/FEMA Interagency VTC

Public Health Emergency of National Significance:

Opioid Crisis, Nationwide: 02Apr20
Novel Coronavirus (COVID-19): 21Apr20

HHS Response Status Summary:

HHS SOC: Level I (Full Activation)
CDC EOC: Level III (Polio/Ebola)
CDC EOC: COVID-19 (Agency-Wide Response)
FDA EOC: Level II (Vape Product Response, COVID-19)

Emergency Support Function (ESF) Activation:

ESF – 8: Activated
ESF – 6: Activated

Recovery Support Function (RSF) Activation:

H&SS RSF: Activated Region II (2017 Irma/Maria, Puerto Rico projected end date of 30Jun20).

HHS Deployments: (Total =809)

ASPR: 663 – (8) Earthquake Puerto Rico, (647) COVID-19, (4) Irma/Maria Recovery, (2) FY Funded Training Q1, (2) FY Non-Funded Training Q1
CDC: 146 – (145) COVID-19, (1) Ebola

New Mission Assignments (MA):NSTR

Active Situations (6):

- Influenza Season
- Irma/Maria, Puerto Rico, & USVI (Recovery)
- Ebola in Eastern Democratic Republic of the Congo
- Novel Coronavirus (COVID-19)
- Bravo Response

- Earthquake, Puerto Rico

U.S. International Health Regulation National Focal Point Status:NSTR

2. FEMA:

Interagency Response Status Summary:

NWC: Monitoring

NRCC: Level I

National IMATs: Red – Fully Mission Capable; Blue – Fully Mission Capable; Gold – IMAT – A Support

Regional IMATs: Region I, RRCC; Region II, NY; Region III, RRCC; Region IV-1, Virtual – MS; Region IV-2, Virtual – SC; Region V, RRCC; Region VI-1, Virtual – AR; VII, RRCC; Region VIII, RRCC; Region IX-2, RRCC; Region X, RRCC

Significant National Weather:

Severe storms primarily with large hail and gusty winds, and locally heavy rain can be expected in the South and Central Plains. Gusty winds and dry conditions will keep fire weather threats critical in the Southwest, portions of Maine, and in the Yukon Flats of interior Alaska.

Tropical Activity:NSTR

3. OPDIV/STAFFDIV Overnight Reports:

CDC:

- COVID-19 – 216 Locations (including countries, territories, and areas)

FDA:

- Coronavirus Disease 2019 (COVID-19)/ML/2019
- Measles (Rubeola) – Central African Republic – Update

Prepared by:

Secretary's Operations Center

U.S. Department of Health and Human Services (HHS)
Assistant Secretary for Preparedness and Response (ASPR)
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Washington, D.C. 20201

(b) (6)



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CDC Daily Report: As of 7:00 a.m. EDT, Thursday, May 21, 2020

SIGNIFICANT EVENTS:

- Note: Operational updates described within the CDC Daily Report may not be inclusive of all response activities that are occurring.

** = Asterisks denote updates to monitored events/responses*

MONITORED EVENTS: (3)

- Opioid Crisis
- Hepatitis-A Outbreak *
- **2020 Hurricane Season**

RESPONSE STATUS:

- CDC EOC: 2019 Novel Coronavirus (Agency-wide Response) *
- CDC EOC: Ebola (Level III)
- CDC EOC: Polio (Level III)

CDC DEPLOYMENTS:

- Domestic
 - Coronavirus (143)
 - International
 - Polio (0)
 - Ebola (1)
 - Coronavirus (2)
- Total Personnel: (146)

PROGRAM UPDATES:

National Center for Immunization and Respiratory Diseases (NCIRD):

- **COVID-19 United States**
 - CDC COVID-19 website provides latest resources for community, healthcare professionals and information regarding United States COVID-19 cases: <https://www.cdc.gov/coronavirus/2019-ncov/index.html>.
 - Confirmed and probable U.S. cases of COVID-19: **1,539,618** (as of 3:00am, **May 21**).
 - U.S. deaths reported to CDC: **93,102** (as of 3:00am, **May 21**).
 - Worldwide confirmed cases of COVID-19: **4,789,205** (as of **May 20**).

- Global Migration Task Force (GMTF)
 - On May 19, screened 955 passengers upon arrival from China, Iran, Schengen Countries, UK, and Ireland at F13 airports; 267,714 screened to-date.
 - According to data from approved attestations for non-commercial travel from the period of April 15 to May 19, 29 cruise ships from 11 cruise lines have submitted attestations to disembark 6702 crew, including 263 US residents.
 - According to US Coast Guard data as of May 18, there are 84 ships in US jurisdiction with a total of 50,993 crew onboard.
- Laboratory Task Force
 - As of May 18, tested over 7,377 samples that equate to over 4,072 patients by PCR. Tested 26,644 samples with the CDC serology assay.
 - International Reagent Resource (IRR) shipped 72 reagents to 11 laboratories on May 19.
- State, Tribal, Local, and Territorial Support Section
 - Deployed 39 field teams to provide multi-disciplinary technical assistance at request of health departments providing support for outbreak response, epidemiologic, surveillance and data analysis, community mitigation, infection prevention and control, laboratory support and technical assistance as needed.
 - Fielded ten (10) inquiries from states and territories, including:
 - Provided assistance regarding how to classify a death in a cancer patient who had two negative COVID-19 tests.
 - Responded to an inquiry regarding guidance for sampling COVID-19 in wastewater to complement other surveillance activities.

NATIONAL CENTER for HIV/AIDS, VIRAL HEPATITIS, STD, and TB PREVENTION (NCHHSTP/ DVH):

- **Person-to-person Outbreaks of Hepatitis A Infections - Multiple states, 2016-2020**
Note: All parenthetical information reflects change from latest report which contained data as of April 13, 2020. COVID-19 response efforts at the local and state levels may be causing a lag in hepatitis A case reporting.
 - As of **May 16, 2020**, **32,541** outbreak-associated cases of hepatitis A have been reported to CDC (+330) from **33** states (no change) since the outbreaks were first identified in 2016.
 - Of these, **19,885** cases (+201), or 61% (no change), have been hospitalized.
 - **324** deaths (no change) have occurred among cases.
 - These numbers reflect outbreak-associated data publicly reported by states as they continue to classify and report hepatitis A virus infections under investigation. CDC collects state report data as negotiated with each affected state, primarily from the states' outbreak websites (or directly from states for the few states that do not currently maintain outbreak websites).
 - Additional possible cases and deaths remain under state investigation. State investigators have identified close person-to-person contact as the mode of transmission (as no common food or water sources have been identified as causes of these outbreaks).

- Populations most at risk include:
 - People who use drugs (injection or non-injection)
 - People experiencing unstable housing or homelessness
 - Men who have sex with men (MSM)
 - People who are currently or were recently incarcerated
 - People with chronic liver disease, including cirrhosis, hepatitis B, or hepatitis C
- Currently, there are **30** active state or local outbreak declarations (no change) and **2** active state or local public health emergency declarations (no change).
- For more information see: <https://www.cdc.gov/hepatitis/outbreaks/2017March-HepatitisA.htm>

GLOBAL DISEASE DETECTION OPERATIONS CENTER (GDDOC):

- **COVID-19 - 216 Locations (including countries, territories, and areas)**
 - **Source: CDC; NCIRD/DVD; WHO Headquarters; WHO Regional Offices; Ministries of Health**
 - As of 20 May (09:00 GMT/05:00 EDT, accessed 15:30 EDT), WHO has reported a global cumulative count of 4,789,205 cases and 318,789 deaths for an increase of 57,804 cases and 2,621 deaths over the preceding 24 hours. The cases are distributed in the six regions as follows: Region of the Americas [2,105,670 confirmed (22,782 new cases) / 125,843 deaths (1,176 new deaths)]; European Region [1,928,799 confirmed (19,207) / 169,033 deaths (1,035)]; South-East Asia Region [156,211 confirmed (7,450) / 4,971 deaths (191)]; Eastern Mediterranean Region [361,902 confirmed (5,153) / 10,303 deaths (154)]; African Region [65,956 confirmed (2,435) / 1,846 deaths (50)]; and Western Pacific Region [169,955 confirmed (777) / 6,780 deaths (15)]. Among the 216 affected locations, 133 reported new confirmed cases with the highest number of new cases from Brazil [254,220 confirmed (13,140 new cases) / 16,792 deaths (674 new deaths)]; Russia [308,705 confirmed (8,764) / 2,972 deaths (135)]; India [106,750 confirmed (5,611) / 3,303 deaths (140)]; Peru [94,933 confirmed (2,660) / 2,789 deaths (141)]; Mexico [51,633 confirmed (2,414) / 5,332 deaths (155)]; the United Kingdom [248,822 confirmed (2,412) / 35,341 deaths (545)]; Iran [124,603 confirmed (2,111) / 7,119 deaths (62)]; Bangladesh [25,121 confirmed (1,251) / 370 deaths (21)]; Pakistan [45,184 confirmed (1,218) / 985 deaths (46)]; and Canada [78,499 confirmed (1,193) / 5,857 deaths (52)]. WHO [COVID-19 Situation Reports](#) present official counts of confirmed COVID-19 cases, which may subsequently be updated. Thus, differences among WHO reports and between WHO reports other sources of COVID-19 data, using different inclusion criteria and different data cutoff times, are to be expected.
 - CDC has established a COVID-19 Incident Management System and the CDC Emergency Operations Center is activated to provide ongoing support to the COVID-19 response. CDC COVID-19 [Travel Recommendations](#) for the locations with and without restrictions on entry to United States are posted and will continue to be updated. The CDC maintains a dedicated CDC [COVID-19](#) website and [Health Alert Network \(HAN\)](#).
- Measles (Rubeola) – Central African Republic – Update to the GDDOC report dated
 - **Source: CGH/GID; WHO - AFRO; Central African Republic Ministry of Health**
 - The measles outbreak in the Central African Republic (CAR) continues to decline. According to reports from the CAR Ministry of Health (MOH) and WHO, the total

number of cases reported from epidemiologic week (EW) 1 through EW19 has increased to 21,219 including 91 deaths (case fatality proportion 0.43%), with 337 laboratory confirmed IgM positive cases. One hundred ninety-three new cases were recorded in EW1 of 2020; the weekly count progressively increased and reached a peak of 2,595 cases during EW11, after which a descending trend has been observed, reaching 350 cases in EW19. The decrease in measles cases coincides with the outbreak responses carried out in weeks 11 to 15 but also with an extremely low surveillance reporting completeness during COVID-19 pandemic.

- Twenty-one of 35 health districts are in outbreak status in 2020. The measles outbreak in the country is linked to poor immunization coverage; average coverage for the first dose of measles containing vaccine was 51% between 2002 and 2018 (WHO/UNICEF Estimates of National Immunization Coverage). Additionally, the national immunization schedule does not call for a second dose of measles containing vaccine and supplementary immunization activities have not reached 95% coverage.
- The second phase of supplementary immunization activities targeting population under 5 years of age was replaced by a 2-phase nation-wide measles outbreak response aimed at children under 10 years of age. The first phase of the response took place in April 2020 while the second phase is tentatively postponed to 15 June, in part, due to COVID-19. Injection devices for the response were received on 8 May while vaccines are scheduled to arrive on 21 May, also having been delayed due to COVID-19. Challenges remain around surveillance and poor completeness of immunization campaign data, as well as delays in acquisition of the vaccine itself. Surveillance measures need to be strengthened at the health district level. Focus must remain on this preventable disease in the face of increasing pressure around the COVID-19 response.

EOC 24 HOUR CALL DATA:

Category	Total Count
COVID-19 (DoH)	1
COVID-19 (Other)	99
Administrative	78
Opioids - Non-Terrorism	1
Other	1

Total Calls: 180

**FDA OFFICE OF EMERGENCY MANAGEMENT
HHS FDA REPORT – May 21, 2020**

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UPDATES

Coronavirus Disease 2019 (COVID-19)/ML/2019

FDA continues to work with the WHO, US government partners (e.g., FEMA, NSC, HHS, ASPR, BARDA, CDC, NIH, DoD), state partners and medical product developers as necessary to support response efforts to the novel coronavirus outbreak/pandemic, COVID-19. On 5/20/2020, FDA provided the following updates and information to the public and industry:

- FDA issued an [Emergency Use Authorization \(EUA\)](#) to Walter Reed National Military Medical Center for the COVID-19 Airway Management Isolation Chamber (“CAMIC”) to be used by healthcare providers within the U.S. Army and Military Health System as an extra layer of barrier protection, in addition to personal protective equipment, to prevent exposure to pathogenic biological airborne particulates during transport of patients, at the time of definitive airway management, or when performing medical procedures on such patients during the COVID-19 pandemic. The CAMIC system is a barrier device constructed by draping a large clear plastic bag over a box-like frame that is placed over the head, neck, and shoulders of the patient to isolate (i.e., capture and remove) airborne particulates.
- FDA and the Federal Trade Commission (FTC) issued warning letters to two companies for promoting and participating in the sale of fraudulent COVID-19 products, as part of the agency’s effort to protect consumers. There are currently no FDA-approved products to prevent or treat COVID-19. Consumers concerned about COVID-19 should consult with their health care provider.
 - The first company warned, [Life Unlearned, LLC](#), participates in the Amazon Associates program. As an Amazon associate, the company earns commissions by promoting the sale of vitamin D products with misleading claims that the products can mitigate, prevent, treat, diagnose, or cure COVID-19 in people.
 - The second company warned, [SpiceTac](#), participates in the Amazon Associates program. As an Amazon associate, the company earns commissions by promoting the sale of vitamin C products with misleading

claims that the products can mitigate, prevent, treat, diagnose, or cure COVID-19 in people.

- **Testing updates:**
 - **During the COVID-19 pandemic, the FDA has worked with more than 400 test developers who have already submitted or said they will be submitting EUA requests to the FDA for tests that detect the virus or antibodies to the virus.**
 - **To date, the FDA has authorized 105 tests under EUAs, which include 92 molecular tests, 12 antibody tests, and 1 antigen test.**

To review FDA's current response activities, click: [*FDA's COVID-19 Current Response Activities*](#). OEO, via the 2019-nCoV IMG, will continue to monitor and provide updates.



FEMA National Situation Report

As of 3:00 a.m. ET Friday, May 22, 2020

This report is published twice daily, 3 00 a.m. and 5 00 p.m. ET

Common Operating Picture

FEMA HQ NWC NRCC Monitoring Level I		Major Disasters (DR): 103 Emergency Disasters (EM): 99 ★ JFOs: 9 / VJFOs: 12 ● Staging Area ■ Distribution Center (DC) ■ Declared County (non-COVID-19 Declarations) ■ Fully Activated ■ Partially Activated ■ Monitoring		Region VIII COVID DRs 4498-DR-CO 4508-DR-MT 4509-DR-ND 4535-DR-UT 4527-DR-SD 4535-DR-WY FCO: Lee K. dePaolo JFO: TBD RVIII IMAT (Denver, CO)		4539-DR-WA FCO: Timothy B. Manner VJFO: Camp Murray, WA 4475-DR-ND FCO: Dana C. Reynolds VJFO: Denver, CO 4440/4463/4467/4469-DR-SD FCO: Jon K. Huss JFO: Sioux Falls, SD		Region VII COVID DRs 4483-DR-IA 4490-DR-MO 4504-DR-KS 4521-DR-NE FCO: Paul Taylor VJFO: Kansas City, MO RVII IMAT (Kansas City, MO)		4414/4442-DR-MN 4459/4477-DR-WI FCO: John F. Boyle 4424/4447-DR-OH 4461-DR-IL FCO: Steven W. Johnson VJFO: Springfield, IL Region V COVID DRs 4489-DR-IL 4494-DR-MI 4507-DR-OH 4515-DR-IN 4520-DR-WI 4531-DR-MN FCO: James K. Joseph JFO: TBD RV IMAT (Chicago, IL)		4372/4379-DR-MA 4410-DR-CT 4445/4474-DR-VT 4457-DR-NH FCO: James McPherson JFO: Williston, VT Region I COVID DRs 4496-DR-MA 4500-DR-CT 4505-DR-RI 4516-DR-NH 4522-DR-ME 4532-DR-VT FCO: W. Russell Webster JFO: TBD RI IMAT (Boston, MA)		N-IMATs 2 Teams Red Blue Gold IMAT-A Support	
FEMA REGIONS WATCH RRCC		As of 3:00 a.m. ET May 22, 2020 Created by FEMA NWC		Region II COVID DRs 4481-DR-WA VJFO: Bothell, WA 4499-DR-OR 4533-DR-AR 4534-DR-ID FCO: Michael F. O'Hare JFO: TBD RII IMAT (Bothell, WA)		Region III COVID DRs 4482-DR-CA 4495-DR-GU 4510-DR-HI 4511-DR-CNMI 4523-DR-NV 4524-DR-AZ 4537-DR-AS FCO: Robert J. Fenton VJFO: Oakland, CA RIX IMAT-2 (Oakland, CA) MERS (Mather, CA); Barrigada, GU; Honolulu, HI Window Rock, AZ		Region IV COVID DRs 4486-DR-FL 4487-DR-NC 4492-DR-SC 4497-DR-KY 4501-DR-GA 4503-DR-AL 4514-DR-TN 4528-DR-MS 4545-DR-STOF FCO: Gracia B. Szczech JFO: TBD Region IV COVID DRs 4486-DR-FL 4487-DR-NC 4492-DR-SC 4497-DR-KY 4501-DR-GA 4503-DR-AL 4514-DR-TN 4528-DR-MS 4545-DR-STOF FCO: Gracia B. Szczech JFO: TBD		4472-DR-NY FCO: Seamus K. Leary JFO: Albany, NY 4428/4540-DR-KY FCO: Kevin A. Wallace VJFO: Frankfort, KY Region II COVID DRs 4480-DR-NY FCO: Thomas Von Essen JFO: Albany, NY 4488-DR-NJ FCO: Thomas Von Essen VJFO: West Trenton, NJ 4493-DR-PR VJFO: Thomas Von Essen VJFO: Guaynabo, PR 4513-DR-USVI FCO: Thomas Von Essen VJFO: Christiansted, VI RII IMAT (Albany, NY) MERS (San Juan, PR)		R-IMATs 4-6 Teams Available I RRCC II NY III RRCC IV-1 Virtual - MS IV-2 Virtual - SC V RRCC VI-1 Virtual - AR VI-2 VII VJFO-COVID VIII RRCC IX-1 IX-2 RRCC X RRCC			
Notes: COVID-19 NRCC: (Days) All RRCCs: (Days)		GA: Flooding MS: Flooding PR: Earthquake TN: Tornadoes All State EOCs activated for COVID-19		Region IX COVID DRs 4482-DR-CA 4495-DR-GU 4510-DR-HI 4511-DR-CNMI 4523-DR-NV 4524-DR-AZ 4537-DR-AS FCO: Robert J. Fenton VJFO: Oakland, CA RIX IMAT-2 (Oakland, CA) MERS (Mather, CA); Barrigada, GU; Honolulu, HI Window Rock, AZ		4435/4451-DR-MO FCO: John Brogan JFO: Jefferson City, MO Region VI COVID DRs 4484-DR-LA 4485-DR-TX 4518-DR-AR 4529-DR-NM 4530-DR-OK FCO: George A. Robinson JFO: TBD 4544-DR-AR FCO: Roland Jackson JFO: TBD 4539-DR-MS FCO: Terry L. Quarles JFO: TBD 4458/4462-DR-LA FCO: John E. Long VJFO: Baton Rouge, LA 4478/4536-DR-MS FCO: Jose M. Girod JFO: TBD 4399-DR-FL FCO: Brett Howard JFO: Panama City, FL 4473-DR-PR FCO: Alex Amparo JFO: Ponce, PR		4400-DR-GA 4427/4471/4476/4541-DR-TN FCO: Myra M. Shird JFO: Nashville, TN 4464/4479/4542-DR-SC FCO: Allan Jarvis VJFO: Atlanta, GA Region III COVID DRs 4481-DR-WA VJFO: Bothell, WA 4499-DR-OR 4533-DR-AR 4534-DR-ID FCO: Michael F. O'Hare JFO: TBD RII IMAT (Bothell, WA)		4486-DR-FL 4487-DR-NC 4492-DR-SC 4497-DR-KY 4501-DR-GA 4503-DR-AL 4514-DR-TN 4528-DR-MS 4545-DR-STOF FCO: Gracia B. Szczech JFO: TBD Region IV COVID DRs 4486-DR-FL 4487-DR-NC 4492-DR-SC 4497-DR-KY 4501-DR-GA 4503-DR-AL 4514-DR-TN 4528-DR-MS 4545-DR-STOF FCO: Gracia B. Szczech JFO: TBD		FMC PMC NMC Deployed			
Team: Status	US&R >66%	MERS >66%	FCOs ≤1 Type I	FDRCs =2	IM Workforce	Incident Management Cadre Availability Summary Cadres with 25% or Less Availability									
Assigned:	28	36	47	11	13,494 ▲	EHP 21% (130/632); ER 14% (11/76); FL 16% (25/159); FM 24% (61/258); OPS 20% (58/291); PA 22% (677/3,090); PLAN 21% (87/414); SAF 18% (10/55)									
Unavailable:	8	0	0	0	2,400 ▼										
Deployed:	0	1	42	9	5,930 ▲										
Available:	20	35	5	2	5,164 / 38% ▲										

National Current Operations & Monitoring

COVID-19 (For interagency reporting see FEMA NRCC COVID-19 SLB, published daily)

Situation: On May 18, HHS announced \$11 billion in funding to states, territories, and tribes to support testing for COVID-19. This ensures that states, territories, and tribes have the resources necessary to meet testing goals as they begin to re-open.

Testing: 12,917,827 cumulative as of May 21

Lifeline Impacts:

Health and Medical Lifeline

Public Health:

- **Testing:** To date, FEMA has delivered 7.1 million swabs and 4.0 million media across all states and territories

Other Domestic Lifelines

Food, Water, & Shelter

- **USDA and FDA announced an MOU to carry out the food supply chain resources efforts during this national emergency and prevent interruptions at FDA FDA-regulated food facilities including fruit and vegetable processing**

Operational Task Forces:

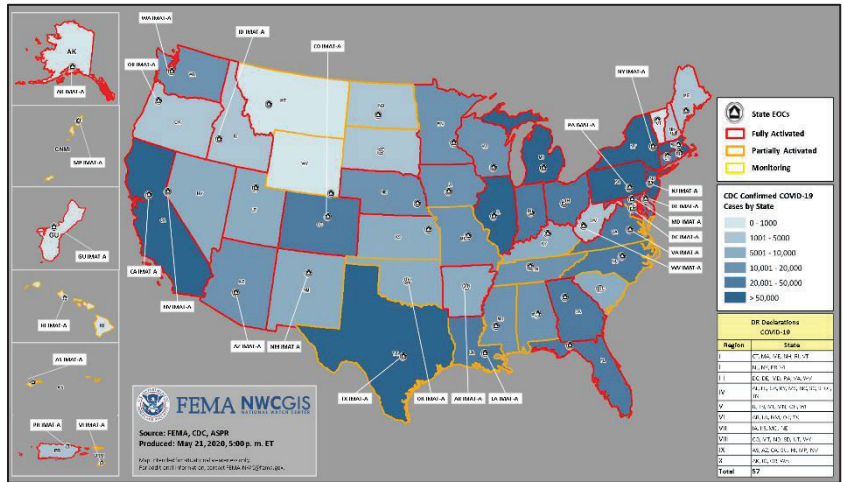
Community Based Testing Sites (CBTS):

- 205,882 samples collected at CBTS locations since Mar 20
- 309,989 tests processed from Private-Partnership Testing Sites since Apr 5

Response:

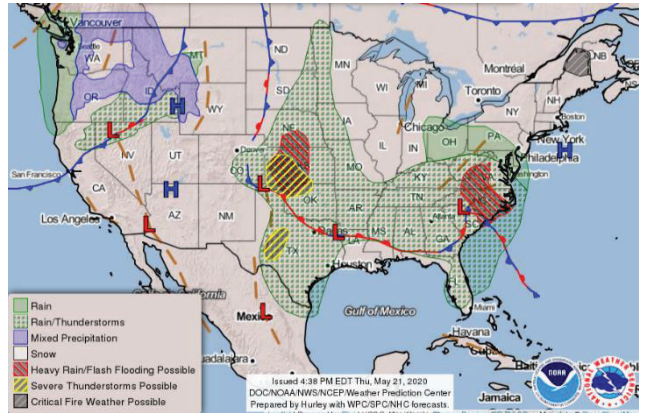
- FEMA NRCC activated to Level I; all FEMA RRCCs activated
- 28 FEMA IMAT-A teams deployed (24 actual/ 4 virtual) to states/territories/tribal nations; LNOs deployed to 37 states/territories/tribal nations
- 57 Major Disaster Declarations approved; All State / Territory EOCs activated
- 47,598 FEMA, DOD, HHS, VA, and CDC personnel deployed; 3,092 FEMA employees

(FEMA COVID-19 SLB, 5 00 p.m. ET, May 20)



Weather Threats

- Heavy rain and flooding for portions of the Mid-Atlantic region
- Unsettled weather across portions of the central to southern Plains with scattered strong to severe thunderstorms
- Showers, mountain snow, and below average temperatures from the Northwest into the northern Great Basin



Latest NOAA Forecasts [WPC](#) | [SPC](#) | [NHC](#) | [SWPC](#)

Joint Preliminary Damage Assessments

Region	State	Event / Date	Type	Counties		Start – End Dates
				Requested	Completed	
IV	MS	Severe Storms, Tornadoes, Straight-line Winds, and Flooding: April 22-23	IA	0	0	N/A
			PA	11	10	5/14 – TBD
	AL	Severe Storms, Strong Winds, Tornadoes, and Hail: April 19	IA	0	0	N/A
			PA	10	0	5/15 – TBD
TN	Severe Storms May 3-4	IA	0	0	N/A	
		PA	22	2	5/14 – TBD	
VII	MO	Severe Storms May 3-4	IA	0	0	N/A
			PA	19	0	5/14 – TBD

Declaration Activity

Declaration Requests in Process: 5 (AL, HI, UT, TX (Appeal), & PBCI*)

*Poarch Band of Creek Indians
(Declared Disasters [fema.gov](#))

Joint Field Office Status Updates

No change over the last operational period

(JFO listing available on [NWC SharePoint Site](#))

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Regional Current Operations & Monitoring

<i>Region I</i>	<i>Region VI</i>
<p>RRCC: Level I (day shift – COVID-19) WATCH – Maynard MOC: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: No significant activity IMAT: Deployed to RRCC (COVID-19) LNOs: RI & ME EOCs: CT, MA, ME, NH, RI & VT: Full Activation (COVID-19)</p>	<p>RRCC: Level II (day shift – COVID-19) WATCH – Denton MOC: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: • Strong to severe storms in TX & OK; primary threats are large hail, damaging winds, and possible tornadoes • Elevated to critical fire weather in NM IMAT-1: Supporting FEMA-4544-DR-AR (Virtual) IMAT-2: FMC / Available IMAT-A: AR, LA, NM, OK, & TX LNOs: AR, LA, NM, OK, & TX EOCs: <ul style="list-style-type: none"> • AR & NM: Full Activation (COVID-19) • LA, OK, & TX: Partial Activation (COVID-19) </p>
<i>Region II</i>	<i>Region VII</i>
<p>RRCC: Level II (day shift – COVID-19) WATCH: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: No significant activity IMAT: Deployed to NY EOC (COVID-19) LNOs: PR, NJ, & NY EOCs: <ul style="list-style-type: none"> • NJ, NY, & PR: Full Activation (COVID-19) • USVI: Partial Activation (COVID-19) </p>	<p>WATCH: Steady State (24/7): Alternate location <ul style="list-style-type: none"> • Monitoring: Strong to severe storms in KS; primary threats are large hail, damaging winds, and possible tornadoes IMAT: Supporting COVID-19 at RVII HQ (Virtual) EOCs: <ul style="list-style-type: none"> • IA, KS, & NE: Full Activation (COVID-19) • MO: Partial Activation (COVID-19) </p>
<i>Region III</i>	<i>Region VIII</i>
<p>RRCC: Level II (day shift – COVID-19) WATCH: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: Rain throughout the region IMAT: Deployed to RRCC (COVID-19) IMAT-A: DC, DE, MD, PA, VA, & WV LNOs: DE EOCs: <ul style="list-style-type: none"> • DC, DE, MD, PA, VA, & WV: Full Activation (COVID-19) • VA: Partial Activation (COVID-19) </p>	<p>RRCC: Level II (day shift – COVID-19) WATCH – Denver MOC: Steady State (24/7) Monitoring: High wind warnings in MT through this evening IMAT: Deployed to RRCC (COVID-19) IMAT-A: CO LNOs: SD, WY, MT, UT EOCs: <ul style="list-style-type: none"> • CO, SD, & UT: Full Activation (COVID-19) • ND, MT & WY: Partial Activation (COVID-19) </p>
<i>Region IV</i>	<i>Region IX</i>
<p>RRCC: Level II (day shift – COVID-19) WATCH: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: <ul style="list-style-type: none"> ○ Heavy rain and flash flooding in NC ○ Strong to severe thunderstorms in FL, SC and NC IMAT-1: Supporting FEMA-4536-DR-MS (Virtual) IMAT-2: Supporting FEMA-4542-DR-SC (Virtual) LNOs: AL, FL, & TN EOCs: <ul style="list-style-type: none"> • FL: Full Activation (COVID-19) • GA: Full Activation (COVID-19 / Flooding) • MS: Partial Activation (COVID-19 / Flooding) • TN: Partial Activation (COVID-19 / Tornadoes) • AL, KY, NC, & SC: Partial Activation (COVID-19) </p>	<p>RRCC: Level I (day shift – COVID-19) WATCH: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: No significant activity IMAT-1: PMC / Staffing shortage IMAT-2: Deployed to RRCC (COVID-19) IMAT-A: AZ, CA, HI, NV, GU, CNMI, AS & Navajo Nation EOCs: <ul style="list-style-type: none"> • AZ, CA, GU, & NV: Full Activation (COVID-19) • AS, CNMI & HI: Partial Activation (COVID-19) </p>
<i>Region V</i>	<i>Region X</i>
<p>RRCC: Level II (day shift – COVID-19) WATCH: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: Flood Warnings for portions of OH, MI, IL, & IN IMAT: Deployed to RRCC (COVID-19) LNOs: IN, MI, & WI EOCs: IL, IN, OH, MI, MN, & WI: Full Activation (COVID-19)</p>	<p>RRCC: Level II (day shift – COVID-19) WATCH – Bothell MOC: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: Flood Warnings for portions of WA and OR IMAT: Deployed to RRCC (COVID-19) IMAT-A: AK, ID, OR, & WA LNOs: AK & OR EOCs: AK, ID, OR, & WA: Full Activation (COVID-19)</p>

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FEMA National Situation Report Acronyms & Abbreviations

Front Page – Common Operating Picture

NWC:	National Watch Center	ISB:	Incident Support Base	R-IMAT:	Regional Incident Management Assistance Team
NRCC:	National Response Coordination Center	MERS:	Mobile Emergency Response Support	RRCC:	Regional Response Coordination Center
EX (State):	Exercise (Location)	N-IMAT:	National Incident Management Assistance Team	RWC:	Regional Watch Center
FCO:	Federal Coordinating Officer	NMC:	Non-Mission Capable	US&R:	Urban Search & Rescue
FDRC:	Federal Disaster Recovery Coordinator	PMC:	Partially Mission Capable		
FMC:	Fully Mission Capable				
IM:	Incident Management				

Front Page – Force Laydown Map

CAD:	Caribbean Area Division	DR:	Major Disaster Declaration (Stafford Act)	IST:	Incident Support Team
CNMI:	Commonwealth of the Northern Marianas Islands	EM:	Emergency Declaration (Stafford Act)	JFO:	Joint Field Office
DC:	Distribution Center / District of Columbia	EOC:	Emergency Operations Center	LNO:	Liaison Officer
		FCO:	Federal Coordinating Officer	TF:	Task Force
				VJFO:	Virtual JFO

Front Page – Incident Management Cadres

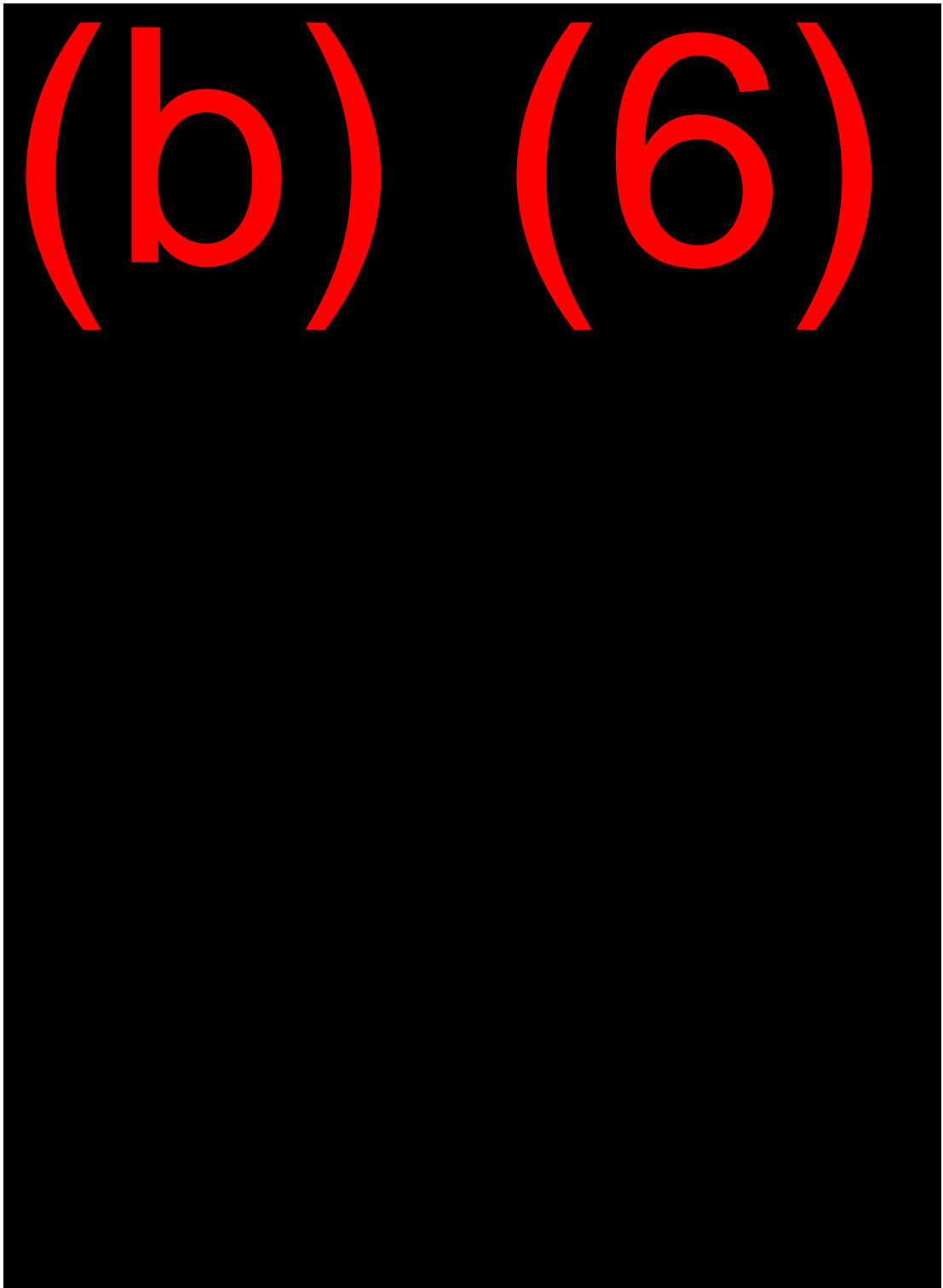
ACQ:	Acquisitions	DSA:	Disaster Survivor Assistance	HR:	Human Resources
ADR:	Alternative Dispute Resolution	EHP:	Environmental Planning and Historic Preservation	IA:	Individual Assistance
DI:	Disability Integration	ER:	Equal Rights	IT:	Information Technology
DEC:	Disaster Emergency Communications	EA:	External Affairs	OCC:	Office of Chief Counsel
DFTO:	Disaster Field Training Ops	FL:	Field Leadership	LOG:	Logistics
		FM:	Financial Management	HM:	Hazard Mitigation

Other Acronyms & Abbreviations

ARC:	American Red Cross	IPAWS:	Integrated Public Alert & Warning System
CBRN:	Chemical, Biological, Radiological and Nuclear	IST:	Incident Support Team
CDC:	Centers for Disease Control and Prevention	JTWC:	Joint Typhoon Warning Center
CIKR:	Critical Infrastructure / Key Resources	MCOV:	Mobile Communications Operations Vehicle
DCO:	Defense Coordinating Officer	MEOV:	Mobile Emergency Operation Vehicle (MERS)
DFA:	Direct Federal Assistance (Stafford Act program)	MCC:	Movement Coordination Center
DIRS:	Disaster Information Reporting System	MMI:	Modified Mercalli Intensity (Earthquake scale)
DLA:	Defense Logistics Agency	MOC:	MERS Operations Center
DoD:	Department of Defense	NHC:	National Hurricane Center
DOE:	Department of Energy	NOAA:	National Oceanic & Atmospheric Administration
DRC:	Disaster Recovery Center	NWS:	National Weather Service
EAGLE-I:	Environment for Analysis of Geo-Located Energy Information (DOE)	PA:	Public Assistance (Stafford Act program)
EF:	Enhanced Fujita (Tornado scale)	PAGER:	Prompt Assessment of Global Earthquakes for Response
EPA:	Environmental Protection Agency	PDA:	Preliminary Damage Assessment (Joint FEMA/State)
ESF:	Emergency Support Function	PSPS:	Public Safety Power Shutoff
FMAG:	Fire Management Assistance Grant	ROC:	Response Operations Cell (part of the NRCC)
GIS:	Geospatial Information Systems	SEAR:	Special Event Assessment Rating
HHS:	Health & Human Services	SLTT:	State, Local, Tribal, and Territorial (<i>Governments</i>)
HM:	Hazard Mitigation (Stafford Act program)	USACE:	U.S. Army Corps of Engineers
IA:	Individual Assistance (Stafford Act program)	USAID:	U.S. Agency for International Development
IMAAC:	Interagency Modeling & Atmospheric Assessment Center	USCG:	U.S. Coast Guard
IOF:	Initial Operating Facility	USGS:	U.S. Geological Survey

(More FEMA Acronyms [FAAT Book](#))

From:
To:



Subject: [Non-DoD Source] ~~FOUO~~ FW: HHS Executive Summary 23May20
Date: Saturday, May 23, 2020 9:09:30 AM
Attachments: [image001.png](#)
[CDC Daily Report 2020-05-22.pdf](#)
[May 22, 2020 Weekly Report for Briefing Book.pdf](#)
[National SITREP 05-23-2020 AM.pdf](#)

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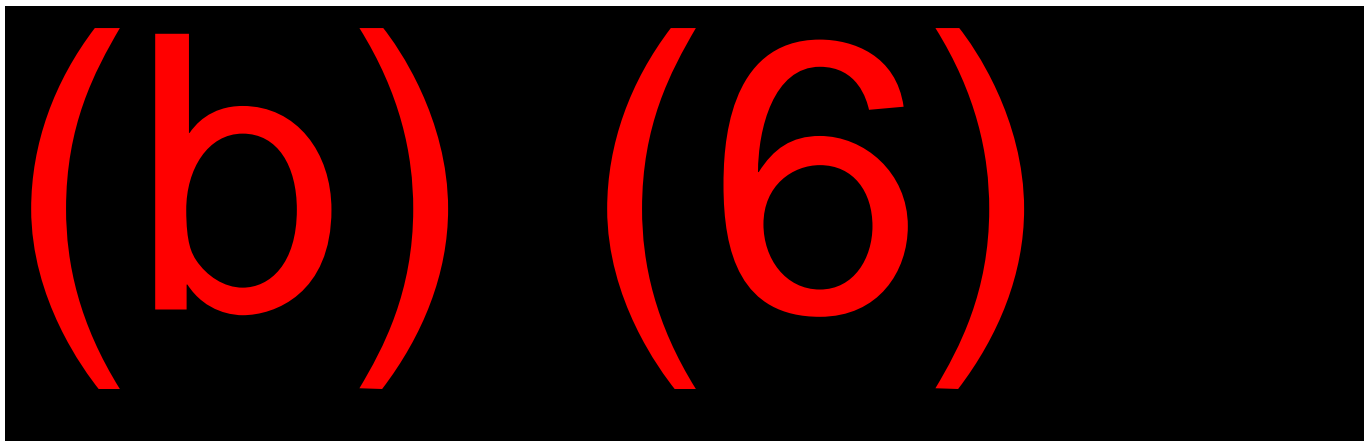
Good Morning,

Please see HHS Executive Summary for 23 May 20.

Note: As of 23May20, 0300ET, the CDC confirmed and presumptive positive U.S. cases of COVID-19 have reached 1,588,416 across 50 states and D.C., Guam, PR, CNMI, and USVI; Deaths: 95,694. WHO reported global cases as of 23May20, 0600ET: 4,993,470; global deaths: 327,738; WHO member countries and areas with cases: 216. Testing: 13,560,600 cumulative tests includes samples tested by State/Local Public Health Laboratories, Commercial Laboratories, Hospital Laboratories, CDC, and VA completed as of 22May20.

- TX: Customs and Border Protection officers seized 1,000 counterfeit COVID-19 test kits and other non-compliant items in El Paso.
- The electric industry has taken steps to help ensure a reliable power supply: taking measures to protect essential employees, addressing supply chain challenges, establishing plans for safely operating infrastructure, and developing best practices for the use of mutual assistance.

v/r



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From: OS Secretarys Operations Center (b) (6)

Sent: Saturday, May 23, 2020 8:04 AM

To: OS Secretaries Operations Center (b) (6)

Subject: HHS Executive Summary 23May20

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HHS Executive Summary: Saturday, 23May20

1. HHS

Today's Noteworthy Topics:

COVID-19 (Novel Coronavirus)

As of 23May20, 0300ET, the CDC confirmed and presumptive positive U.S. cases of COVID-19 have reached 1,588,416 across 50 states and D.C., Guam, PR, CNMI, and USVI; Deaths: 95,694. WHO reported global cases as of 23May20, 0600ET: 4,993,470; global deaths: 327,738; WHO member countries and areas with cases: 216. Testing: 13,560,600 cumulative tests includes samples tested by State/Local Public Health Laboratories, Commercial Laboratories, Hospital Laboratories, CDC, and VA completed as of 22May20.

Daily Operational Schedule:

1230 – HHS/FEMA Interagency VTC

Public Health Emergency of National Significance:

Opioid Crisis, Nationwide: 02Apr20

Novel Coronavirus (COVID-19): 21Apr20

HHS Response Status Summary:

HHS SOC: Level I (Full Activation)

CDC EOC: Level III (Polio/Ebola)

CDC EOC: COVID-19 (Agency-Wide Response)

FDA EOC: Level I (Vape Product Response, COVID-19)

Emergency Support Function (ESF) Activation:

ESF – 8: Activated

ESF – 6: Activated

Recovery Support Function (RSF) Activation:

H&SS RSF: Activated Region II (2017 Irma/Maria, Puerto Rico projected end date of 30Jun20).

HHS Deployments: (Total =802)

ASPR: 652 – (8) Earthquake Puerto Rico, (636) COVID-19, (4) Irma/Maria Recovery, (2) FY Funded Training Q1, (2) FY Non-Funded Training Q1

CDC: 150 – (149) COVID-19, (1) Ebola

New Mission Assignments (MA):NSTR

Active Situations (6):

- Influenza Season
- Irma/Maria, Puerto Rico, & USVI (Recovery)
- Ebola in Eastern Democratic Republic of the Congo

- Novel Coronavirus (COVID-19)
- Bravo Response
- Earthquake, Puerto Rico

U.S. International Health Regulation National Focal Point Status:NSTR

2. FEMA:

Interagency Response Status Summary:

NWC: Monitoring

NRCC: Level I

National IMATs: Red – Fully Mission Capable; Blue – Fully Mission Capable; Gold – IMAT – A Support

Regional IMATs: Region I, RRCC; Region II, NY; Region III, RRCC; Region IV-1, Virtual – MS; Region IV-2, Virtual – SC; Region V, RRCC; Region VI-1, Virtual – AR; Region VII, VJFO-COVID; Region VIII, RRCC; Region IX-2, RRCC; Region X, RRCC

Significant National Weather:

A strong cold front will produce strong to severe storms in the Plains and Great Lakes. Primary threats will be large hail and damaging winds. Very large hail will be possible in the western portions of the North/Central Plains. Gusty winds will continue producing critical fire weather threats across portions of the Desert Southwest.

Tropical Activity:NSTR

3. OPDIV/STAFFDIV Overnight Reports:

CDC:

- COVID-19 – 216 Locations (including countries, territories, and areas)
- Polio (Vaccine-derived) – Afghanistan – Update
- Polio (Vaccine-derived) – Pakistan – Update

FDA:

- Coronavirus Disease 2019 (COVID-19)/ML/2019

Prepared by:

Secretary's Operations Center

U.S. Department of Health and Human Services (HHS)
Assistant Secretary for Preparedness and Response (ASPR)
200 Independence Ave., S.W.
Washington, D.C. 20201

(b) (6)



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CDC Daily Report: As of 7:00 a.m. EDT, Friday, May 22, 2020

SIGNIFICANT EVENTS:

- Note: Operational updates described within the CDC Daily Report may not be inclusive of all response activities that are occurring.

** = Asterisks denote updates to monitored events/responses*

MONITORED EVENTS: (3)

- Opioid Crisis
- **2020 Hurricane Season**

RESPONSE STATUS:

- CDC EOC: 2019 Novel Coronavirus (Agency-wide Response) *
- CDC EOC: Ebola (Level III)
- CDC EOC: Polio (Level III)

CDC DEPLOYMENTS:

- Domestic
 - Coronavirus (**147**)
 - International
 - Polio (0)
 - Ebola (1)
 - Coronavirus (2)
- Total Personnel: (**150**)

PROGRAM UPDATES:

National Center for Immunization and Respiratory Diseases (NCIRD):

- **COVID-19 United States**
 - CDC COVID-19 website provides latest resources for community, healthcare professionals and information regarding United States COVID-19 cases: <https://www.cdc.gov/coronavirus/2019-ncov/index.html>.
 - Confirmed and probable U.S. cases of COVID-19: **1,564,271** (as of 3:00am, **May 22**).
 - U.S. deaths reported to CDC: **94,396**(as of 3:00am, **May 22**).
 - Worldwide confirmed cases of COVID-19: **4,893,186** (as of **May 21**).
- Global Migration Task Force (GMTF)

- On May 19, On May 20, screened 1,005 passengers upon arrival from China, Iran, Schengen Countries, UK, and Ireland at F13 airports; 268,719 screened to-date.
 - Posted updated webpage on travel within the United States: <https://www.cdc.gov/coronavirus/2019-ncov/travelers/travel-in-the-us.html>
 - Running Facebook ads, beginning May 21, on travel during Memorial Day weekend that emphasize safety during travel.
 - Completed reviews of quarantine and isolation plans in 65 Crisis Cooperative Agreements.
 - Preparing for briefing with Senators Rosen and Scott scheduled for May 22.
 - Working on response to questions from Representative Peters regarding medical screenings and data collected at the US-Mexico Border.
 - Eleven cruise lines have submitted attestations to disembark 6,726 crew, including 263 US residents.
- Laboratory Task Force
 - As of May 19, tested over 7,378 samples that equate to over 4,072 patients by PCR. Tested 26,834 samples with the CDC serology assay.
 - International Reagent Resource (IRR) shipped 618 reagents to 18 laboratories on May 20.
- State, Tribal, Local, and Territorial Support Section
 - Fielded twenty-two (22) inquiries from states and territories, including:
 - Disseminated guidance for Institutes of Higher Education (IHE) from Community Intervention & At-Risk Task Force to Health Department Liaisons.
 - Provided guidance on how to classify high risk for exposure within a household during quarantine.

GLOBAL DISEASE DETECTION OPERATIONS CENTER (GDDOC):

- **COVID-19 - 216 Locations (including countries, territories, and areas)**
 - **Source: CDC; NCIRD/DVD; WHO Headquarters; WHO Regional Offices; Ministries of Health**
 - As of 21 May (09:00 GMT/05:00 EDT, accessed 20:40 EDT), WHO has reported a global cumulative count of 4,893,186 cases and 323,256 deaths for an increase of 103,981 cases and 4,467 deaths over the preceding 24 hours. The cases are distributed in the six regions as follows: Region of the Americas [2,166,003 confirmed (60,333 new cases) / 128,649 deaths (2,806 new deaths)]; European Region [1,946,610 confirmed (17,811) / 170,283 deaths (1,250)]; Eastern Mediterranean Region [376,379 confirmed (14,477) / 10,468 deaths (165)]; South-East Asia Region [164,225 confirmed (8,014) / 5,140 deaths (169)]; African Region [68,347 confirmed (2,391) / 1,910 deaths (64)]; and Western Pacific Region [170,910 confirmed (955) / 6,793 deaths (13)]. Among the 216 affected locations, 145 reported new confirmed cases with the highest number of new cases from the United States [1,501,876 confirmed (24,417 new cases) / 90,203 deaths (932 new deaths)]; Brazil [271,628 confirmed (17,408) / 17,971 deaths (1,179)]; Russia [317,554 confirmed (8,849) / 3,099 deaths (127)]; Chile [53,617 confirmed (7,558) / 544 deaths (66)]; India [112,359 confirmed (5,609) / 3,435 deaths (132)]; Peru [99,483 confirmed (4,550) / 2,914 deaths (125)]; Pakistan [48,091 confirmed (2,907) / 1,017 deaths (32)]; Mexico [54,346 confirmed (2,713) / 5,666 deaths (334)]; Saudi Arabia

[62,545 confirmed (2,691) / 339 deaths (10)]; and Iran [126,949 confirmed (2,346) / 7,183 deaths (64)]. WHO [COVID-19 Situation Reports](#) present official counts of confirmed COVID-19 cases, which may undergo subsequent revisions. Thus, differences among WHO reports and between WHO and other sources of COVID-19 data, using different inclusion criteria and different data cutoff times, are to be expected.

- CDC has established a COVID-19 Incident Management System and the CDC Emergency Operations Center is activated to provide ongoing support to the COVID-19 response. CDC COVID-19 [Travel Recommendations](#) for the locations with and without restrictions on entry to United States are posted and will continue to be updated. The CDC maintains a dedicated CDC [COVID-19](#) website and [Health Alert Network \(HAN\)](#). [The WHO World Health Assembly has ended with a global commitment to the COVID-19 response. Delegates adopted a resolution](#) to bring the world together to fight the COVID-19 pandemic.
- **Polio (Vaccine-derived) – Afghanistan – Update to the GDDOC report dated May 14, 2020**
 - **Source: Global Polio Eradication Initiative**
 - Five circulating vaccine-derived poliovirus type 2 (cVDPV2) cases were reported: one in Kunar and four in Nangarhar provinces. The number of cVDPV2 cases reported in Afghanistan in 2020 now stands at seven.
- **Polio (Vaccine-derived) – Pakistan – Update to the GDDOC report dated May 07, 2020**
 - **Source: Global Polio Eradication Initiative**
 - One circulating vaccine-derived poliovirus type 2 (cVDPV2) case was reported in Khyber Pakhtunkhwa province. Forty-five cVDPV2 cases have been reported in 2020 and the number reported in 2019 remains at 22.

EOC 24 HOUR CALL DATA:

Category	Total Count
2019 Novel Coronavirus (DoH)	4
2019 Novel Coronavirus (Other)	86
Administrative	62
DGMQ - QPHO	1
Logistics Assistance - DEO	1
NOC - DHS: Secure Ops Center	3
Non-Malarial Parasitic Diseases	1
Other	1
Other Human Diseases	1

Total Calls: 160

**FDA OFFICE OF EMERGENCY MANAGEMENT
HHS FDA REPORT – May 22, 2020**

This document is confidential and is only for internal HHS use for emergency operations purposes. This document contains non-public information and may include information for which public disclosure is prohibited by law (such as confidential commercial information, trade secret, and personal privacy information) and information compiled for enforcement purposes. This document was prepared by FDA's Office of Emergency Management/Office of Emergency Operations (OEM/OEO). Any request to distribute this information outside of HHS must be approved by FDA.

UPDATES

Coronavirus Disease 2019 (COVID-19)/ML/2019

FDA continues to work with WHO, US government partners (e.g., FEMA, NSC, HHS, ASPR, BARDA, CDC, NIH, DoD), state partners and medical product developers as necessary to support response efforts to the novel coronavirus outbreak/pandemic, COVID-19. The significant updates for the past week include:

- FDA issued an updated [*At-A-Glance*](#) that provides a quick look at facts, figures and highlights of agency's response efforts.
- FDA issued a [*Consumer Update, Coronavirus Testing Basics*](#), to provide information about the different types of tests available and the steps involved in obtaining results.
- FDA and the Federal Trade Commission (FTC) issued warning letters to six companies for selling fraudulent COVID-19 products, as part of the agency's effort to protect consumers. There are currently no FDA-approved products to prevent or treat COVID-19. Consumers concerned about COVID-19 should consult with their health care provider.
 - [*Benjamin McEvoy*](#), participates in the Amazon Associates program. As an Amazon associate, the company earns commissions by promoting the sale of products, including dietary supplements, on the company's website, with misleading claims that the products can mitigate, prevent, treat, diagnose or cure COVID-19 in people.
 - [*White Eagle Native Herbs*](#), offers herbal products for sale in the U.S. with misleading claims that the products are safe and/or effective for the treatment and prevention of COVID-19.
 - [*Noetic Nutraceuticals*](#), offers CBD products for sale in the U.S. with misleading claims that the products are safe and/or effective for the prevention and treatment of COVID-19.
 - [*The Golden Road Kratom*](#), offers kratom products for sale in the U.S. with misleading claims that the products are safe and/or effective for the prevention and treatment of COVID-19.
 - [*Life Unlearned, LLC*](#), participates in the Amazon Associates program. As an Amazon associate, the company earns commissions by promoting the sale of

vitamin D products with misleading claims that the products can mitigate, prevent, treat, diagnose, or cure COVID-19 in people.

- [SpiceTac](#), participates in the Amazon Associates program. As an Amazon associate, the company earns commissions by promoting the sale of vitamin C products with misleading claims that the products can mitigate, prevent, treat, diagnose, or cure COVID-19 in people.
- FDA announced a change of hours for the COVID-19 Industry Hotline (1-888-INFO-FDA, press *). FDA began this 24/7 Hotline on 3/12/2020 to address the questions that the agency was receiving on topics such as diagnostic testing and personal protective equipment (PPE). Since that time, the agency has responded to over 12,000 inquiries. To best meet current needs, starting on Monday, 5/18/2020, the Hotline will be operating from 8:00 a.m. to midnight Eastern Time Monday-Friday and 8:00 a.m. to 8:00 p.m. Eastern Time on weekends and holidays. For urgent inquiries, the FDA Emergency Line (1-866-300-4374) remains available after-hours.
- FDA published and continues to update [extensive resources on COVID-19 and medical devices](#) to help answer questions. FDA also published [Contacts for Medical Devices During the COVID-19 Pandemic](#), a detailed list of email addresses that may be used to ask questions about COVID-19 related to specific devices, Emergency Use Authorizations (EUAs) or guidance documents.
- FDA added more content to the question-and-answer appendix in its guidance titled [“Conduct of Clinical Trials of Medical Products during COVID-19 Public Health Emergency.”](#) The new content includes information on reporting serious adverse events (SAEs) among patients with COVID-19 in certain clinical trials that are not focused on developing COVID-19 therapeutics.
- FDA issued three Emergency Use Authorizations (EUAs):
 - [G Medical VSMS ECG Patch](#) intended to be used by health care professionals in the hospital setting for remote monitoring of the QT interval of an electrocardiogram (ECG) in general care patients who are 18 years of age or older and are undergoing treatment for COVID-19 with drugs that can prolong QT intervals (measurements used to evaluate some of the electrical properties of the heart) and may cause life-threatening arrhythmias (such as, hydroxychloroquine or chloroquine, especially when used in combination with azithromycin). The VSMS Patch is not intended for use on critical care patients. Such remote monitoring may reduce health care professional exposure to SARS-CoV-2, the virus that causes COVID-19.
 - [Everlywell, Inc.](#) for the Everlywell COVID-19 Test Home Collection Kit, the [first standalone at-home sample collection kit](#) that can be used with certain authorized tests. Everlywell’s kit is authorized to be used by individuals at home who have been screened using an online questionnaire that is reviewed by a health care provider. This allows an individual to self-collect a nasal sample at home using Everlywell’s authorized kit. The FDA has also authorized two COVID-19 diagnostic tests, performed at specific laboratories, for use with samples collected using the Everlywell COVID-19 Test Home Collection Kit.
 - [Walter Reed National Military Medical Center](#) for the COVID-19 Airway Management Isolation Chamber (“CAMIC”) to be used by healthcare

providers within the U.S. Army and Military Health System as an extra layer of barrier protection, in addition to personal protective equipment, to prevent exposure to pathogenic biological airborne particulates during transport of patients, at the time of definitive airway management, or when performing medical procedures on such patients during the COVID-19 pandemic. The CAMIC system is a barrier device constructed by draping a large clear plastic bag over a box-like frame that is placed over the head, neck, and shoulders of the patient to isolate (i.e., capture and remove) airborne particulates.

- FDA approved three Abbreviated New Drug Applications (ANDAs):
 - [Dexmedetomidine hydrochloride](#) in 0.9% sodium chloride injection, is indicated for sedation of initially intubated and mechanically ventilated patients during treatment in an intensive care setting and sedation of non-intubated patients prior to and/or during surgical and other procedures. The most common side effects of dexmedetomidine hydrochloride injection are hypotension, bradycardia, and dry mouth. This drug is listed in the FDA Drug Shortage Database.
 - [Succinylcholine chloride injection](#) USP 200 mg/10 mL, which is indicated to facilitate tracheal intubation and to provide skeletal muscle relaxation during surgery or mechanical ventilation. Side effects of succinylcholine chloride injection include anaphylaxis, hyperkalemia, and malignant hyperthermia.
 - [Hydroxychloroquine Sulfate](#) Tablets USP, 200 mg for the treatment of: (1) Uncomplicated malaria due to *P. falciparum*, *P. malariae*, *P. ovale*, and *P. vivax*. (2) Chronic discoid lupus erythematosus and systemic lupus erythematosus in adults and (3) Treatment of acute and chronic rheumatoid arthritis in adults. Side effects of hydroxychloroquine include irreversible retinal damage, cardiac effects (including cardiomyopathy and QT prolongation), worsening of psoriasis and porphyria, proximal myopathy and neuropathy, neuropsychiatric events, and hypoglycemia. The FDA recently posted information regarding shortages of hydroxychloroquine and chloroquine to its drug shortages webpage due to a significant surge in demand. The agency is working with manufacturers to assess their supplies and is actively evaluating market demand for patients dependent on hydroxychloroquine and chloroquine for treatment of malaria, lupus and rheumatoid arthritis.
- The Agency issued a new FDA Voices titled, [COVID-19 Supply Chain Update: Importation of Vital Food and Medical Products](#). It provides details on the FDA's work to ensure the safety and security of the U.S. supply of food and medical products. Many of the medical products our health care workers and hospitals need to battle COVID-19 come from overseas, which makes the [FDA's Office of Regulatory Affairs](#) (ORA) work imperative to ensure legitimate products are moving as quickly as possible through the ports of entry. At the same time, ORA imports staff also screens for, and blocks the entry of, unproven products that falsely claim to prevent, diagnose, treat or cure COVID-19.
- On 5/20/2020, FDA hosted a virtual Town Hall for clinical laboratories and commercial manufacturers that are developing or have developed diagnostic tests

for SARS-CoV-2. The purpose of the Town Hall is to help answer technical questions about the development and validation of tests for SARS-CoV-2. FDA also plans to hold a virtual Town Hall for clinical laboratories and commercial manufacturers to help answer questions on 5/27/2020.

- As the COVID-19 pandemic response continues, the U.S. Department of Agriculture (USDA) and FDA have been working to support the U.S. food and agriculture sector so that Americans continue to have access to a safe and robust food supply. As a next step in carrying out [Executive Order 13917](#), the USDA and FDA today announced a [Memorandum of Understanding \(MOU\)](#) to help prevent interruptions at FDA-regulated food facilities, including fruit and vegetable processing.
- FDA [posted](#) a [list of antibody tests](#) that are being removed from the “notification list” of tests being offered under the [Policy for Coronavirus Disease-2019 Tests During the Public Health Emergency](#). Antibody tests on this new removal list include those voluntarily withdrawn from the notification list by the test’s commercial manufacturer and those for which there is not a pending EUA request or issued EUA. FDA expects the tests on the removal list will not be marketed or distributed. Antibody tests offered by commercial manufacturers as outlined under the policy, which was issued on 3/16/2020 and updated on 5/4/2020, continue to be located on the notification list pending review of their EUA request.
- The FDA issued the guidance [“Supplements for Approved Premarket Approval \(PMA\) or Humanitarian Device Exemption \(HDE\) Submissions During the Coronavirus Disease 2019 \(COVID-19\) Public Health Emergency”](#) to help foster the continued availability of medical devices during the COVID-19 public health emergency. As described in the guidance, the FDA does not intend to object to limited modifications to the design and manufacturing of devices approved through either a PMA or HDE without prior submission of a PMA or HDE supplement or 30-day notice for the duration of the public health emergency. The policy set forth in the guidance does not apply to design or manufacturing changes made for reasons other than addressing manufacturing limitations or supply chain issues resulting from the COVID-19 public health emergency or to any proposed changes described in a regulatory submission already received by FDA.
- Due to the COVID-19 pandemic and its impacts, earlier this month the U.S. District Court for the Eastern District of Texas granted a joint motion in the case of R.J. Reynolds Tobacco Co. et al. v. U.S. Food and Drug Administration et al. to govern proceedings in that case and postpone the effective date of the [“Required Warnings for Cigarette Packages and Advertisements” final rule](#) by 120 days. The new effective date of the final rule is Oct. 16, 2021. The FDA intends to update its relevant guidances related to the rule’s effective date and the timing for submission of cigarette plans.
- FDA and the USDA released [recommendations](#) to help address shortages of personal protective equipment (PPE), cloth face coverings, disinfectants, and sanitation supplies in the food and agriculture industry during the COVID-19 pandemic. The current constraints on these supplies are causing concerns about the potential for interruptions in the food supply chain. These supplies are critical for worker safety, the continuity of the food supply, food safety, and employee/consumer confidence. The recommendations call for the prioritization of supplies, first to the Healthcare and Public Health as well as the Emergency Services sectors, and then to the Food

and Agriculture sector (as well as other Critical Infrastructures). The recommendations provide information on potential sourcing of supplies, including through private sector suppliers and state emergency management agencies. The recommendations also include information that Food and Agriculture stakeholders should provide when ordering or requesting these supplies.

- Testing updates:
 - During the COVID-19 pandemic, the FDA has worked with more than 400 test developers who have already submitted or said they will be submitting EUA requests to the FDA for tests that detect the virus or antibodies to the virus.
 - To date, the FDA has authorized 105 tests under EUAs, which include 92 molecular tests, 12 antibody tests, and 1 antigen test.

To review FDA's current response activities, click: [FDA's COVID-19 Current Response Activities](#). OEO, via the 2019-nCoV IMG, will continue to monitor and provide updates.

ON THE RADAR

Expected Protest, Washington, DC/May 2020

On 5/20/2020, OEO was notified of an expected protest at the HHS headquarters building between 9 am and 5 pm ET. OEO informed FDA Security and senior management for their awareness. OEO will continue to monitor, but no longer report unless warranted.

Dam Breach/MI/ May 2020

Overnight of 5/19-20, 2020 open source media reported a breach and failure of Edenville and Sanford dams in Midland County (MI), due to heavy rainfall in the area. The Governor of Michigan has declared a State of Emergency for Midland (MI) County. OEM's GIS team has determined there are no FDA-regulated industries within the anticipated affected areas. This information was provided to FDA's local District Office; OEO will continue to monitor, but no longer report unless warranted.



FEMA National Situation Report

As of 3:00 a.m. ET Saturday, May 23, 2020

This report is published twice daily, 3 00 a.m. and 5 00 p.m. ET

Common Operating Picture

FEMA HQ <table border="1"> <tr> <td><i>NWC</i></td> <td><i>NRCC</i></td> </tr> <tr> <td>Monitoring</td> <td>Level I</td> </tr> </table>		<i>NWC</i>	<i>NRCC</i>	Monitoring	Level I	FEMA REGIONS <table border="1"> <tr> <td><i>WATCH</i></td> <td><i>RRCC</i></td> </tr> <tr> <td>Monitoring</td> <td>I Level I</td> </tr> <tr> <td>Monitoring</td> <td>II Level II</td> </tr> <tr> <td>Monitoring</td> <td>III Level II</td> </tr> <tr> <td>Monitoring</td> <td>IV Level II</td> </tr> <tr> <td>Monitoring</td> <td>V Level II</td> </tr> <tr> <td>Alt. Location</td> <td>VII Rostered</td> </tr> <tr> <td>Monitoring</td> <td>VIII Level II</td> </tr> <tr> <td>Monitoring</td> <td>IX Level I</td> </tr> <tr> <td>Monitoring</td> <td>X Level II</td> </tr> </table>		<i>WATCH</i>	<i>RRCC</i>	Monitoring	I Level I	Monitoring	II Level II	Monitoring	III Level II	Monitoring	IV Level II	Monitoring	V Level II	Alt. Location	VII Rostered	Monitoring	VIII Level II	Monitoring	IX Level I	Monitoring	X Level II	Major Disasters (DR): 104 Emergency Disasters (EM): 98 JFOs: 9 / VJFOs: 13 <ul style="list-style-type: none"> Staging Area Distribution Center (DC) Declared County (non-COVID-19 Declarations) Fully Activated Partially Activated Monitoring 		Region X COVID DRs 4481-DR-WA JFO: Bothell, WA 4499-DR-OR 4533-DR-AK 4534-DR-ID FCO: Michael F. O'Hare JFO: TBD RX IMAT (Bothell, WA) 4539-DR-WA FCO: Timothy B. Manner JFO: Camp Murray, WA 4519-DR-OR FCO: Dolph A. Diemont JFO: Salem, OR As of 3:00 a.m. ET May 23, 2020 Created by FEMA NWC		Region VII COVID DRs 4483-DR-IA 4490-DR-MO 4504-DR-KS 4521-DR-NE FCO: Paul Taylor JFO: Kansas City, MO RVII IMAT 3525-EM-MI FCO: James K. Joseph JFO: TBD		Region V COVID DRs 4372/4379-DR-MA 4410-DR-CT 4445/4474-DR-VT 4457-DR-NH FCO: James McPherson JFO: Williston, VT 4472-DR-NY FCO: Seamus K. Leary JFO: Albany, NY 4428/4540-DR-KY FCO: Kevin A. Wallace JFO: Frankfort, KY Region II COVID DRs 4480-DR-NY FCO: Thomas Von Essen JFO: Albany, NY 4488-DR-NJ FCO: Thomas Von Essen JFO: West Trenton, NJ 4493-DR-PR FCO: Thomas Von Essen JFO: Guaynabo, PR 4513-DR-USVI FCO: Thomas Von Essen JFO: Christiansted, VI MERS (San Juan, PR)		Region I COVID DRs 4496-DR-MA 4500-DR-CT 4505-DR-RI 4516-DR-NH 4522-DR-ME 4532-DR-VT FCO: W. Russell Webster JFO: TBD RI IMAT (Boston, MA)		N-IMATs 2 Teams <table border="1"> <tr> <td>Red</td> <td></td> </tr> <tr> <td>Blue</td> <td></td> </tr> <tr> <td>Gold</td> <td>IMAT-A Support</td> </tr> </table>		Red		Blue		Gold	IMAT-A Support
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Notes: COVID-19 NRCC: (Days) GA: Flooding MS: Flooding PR: Earthquake TN: Tornadoes RVII RRCC returned to Normal Ops: All remaining RRCC's (Days) All State EOCs activated for COVID-19		Region IX COVID DRs 4482-DR-CA 4495-DR-GU 4510-DR-HI 4511-DR-CNMI 4523-DR-NV 4524-DR-AZ 4537-DR-AS FCO: Robert J. Fenton JFO: Oakland, CA RIX IMAT-2 MERS (Window Rock, AZ; Mather, CA; Barrigada, GU; Honolulu, HI)		Region VIII COVID DRs 4498-DR-CO 4508-DR-MT 4509-DR-ND 4525-DR-UT 4527-DR-SD 4535-DR-WY FCO: Lee K. dePalo JFO: TBD		Region VI COVID DRs 4484-DR-LA 4485-DR-TX 4518-DR-AR 4529-DR-NM 4530-DR-OK FCO: George A. Robinson JFO: TBD 4420-DR-NE FCO: Thomas J. Dargan JFO: Lincoln, NE 4435/4451-DR-MO FCO: John Brogan JFO: Jefferson City, MO		Region IV COVID DRs 4491-DR-MD 4502-DR-DC 4506-DR-PA 4512-DR-VA 4517-DR-WV 4526-DR-DE FCO: MaryAnn Tierney JFO: TBD RIII IMAT (Phila., PA)		R-IMATs 4-6 Teams Available <table border="1"> <tr> <td>I</td> <td>RRCC</td> </tr> <tr> <td>II</td> <td>FMC on 5/29</td> </tr> <tr> <td>III</td> <td>RRCC</td> </tr> <tr> <td>IV-1</td> <td>Virtual - MS</td> </tr> <tr> <td>IV-2</td> <td>Virtual - SC</td> </tr> <tr> <td>V</td> <td>RRCC</td> </tr> <tr> <td>VI-1</td> <td>Virtual - AR</td> </tr> <tr> <td>VI-2</td> <td></td> </tr> <tr> <td>VII</td> <td>VJFO-COVID</td> </tr> <tr> <td>VIII</td> <td>FMC on 6/5</td> </tr> <tr> <td>IX-1</td> <td></td> </tr> <tr> <td>IX-2</td> <td>RRCC</td> </tr> <tr> <td>X</td> <td>RRCC</td> </tr> </table>		I	RRCC	II	FMC on 5/29	III	RRCC	IV-1	Virtual - MS	IV-2	Virtual - SC	V	RRCC	VI-1	Virtual - AR	VI-2		VII	VJFO-COVID	VIII	FMC on 6/5	IX-1		IX-2	RRCC	X	RRCC								
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Team: Status Assigned: 28 Unavailable: 8 Deployed: 0 Available: 20		US&R >66% 36 0 1 35		MERS >66% 47 0 41 6		FCOs <=1 Type 1 11 0 9 2		FDRCs =2 13,497 2,416 5,885 5,196 / 38%		IM Workforce Incident Management Cadre Availability Summary Cadres with 25% or Less Availability EHP 21% (132/632); ER 16% (12/76); FL 16% (25/159); FM 24% (61/258); OPS 21% (62/291); PA 22% (681/3,090); PLAN 20% (85/415); SAF 13% (7/55)																																			

National Current Operations & Monitoring

COVID-19 (For interagency reporting see FEMA NRCC COVID-19 SLB, published daily)

Situation: FEMA and HHS continue leading the multiagency COVID-19 Response / Recovery efforts. 47,223 (-39) FEMA, DoD, HHS, VA, and CDC personnel deployed / activated; 3,087 (-12) FEMA employees deployed.

Nationwide testing: 13,560,600 (+642,773) cumulative as of May 22

Lifeline Impacts:

Health and Medical Lifeline

- Testing: To date, FEMA has delivered 7.5 (+.4) million swabs and 4.1 (+.1) million media across all states and territories

Safety & Security

- TX: Customs and Border Protection officers seized 1,000 counterfeit COVID-19 test kits and other non-compliant items in El Paso

Energy

- The electric industry has taken steps to help ensure a reliable power supply: taking measures to protect essential employees, addressing supply chain challenges, establishing plans for safely operating infrastructure, and developing best practices for the use of mutual assistance

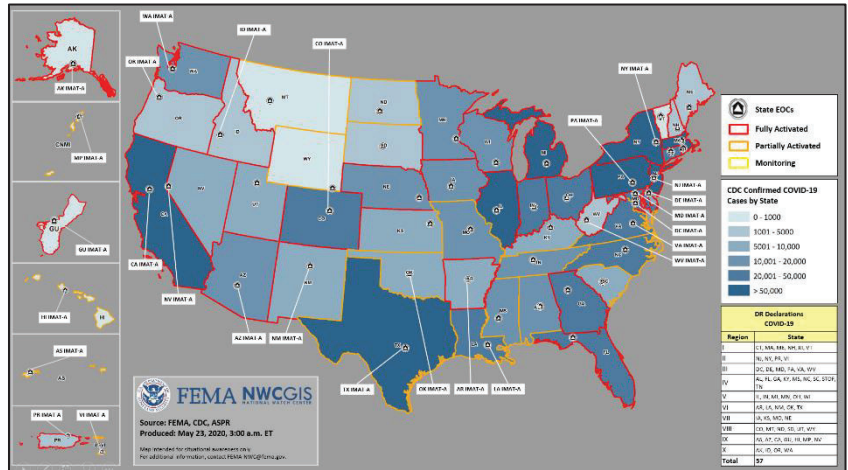
Operational Task Forces:

Community Based Testing Sites (CBTS):

- 209,167 (+3,285) samples collected at CBTS locations since Mar 20
- 317,424 (+7,435) tests processed from Private-Partnership Testing Sites since Apr 5

Response:

- FEMA RVII RRCC at Normal Operations; the NRCC and all remaining RRCCs remain activated
- 28 FEMA IMAT-A teams deployed (24 actual/ 4 virtual) to states/territories/tribal nations; LNOs deployed to 37 states/territories/tribal nations
- 57 Major Disaster Declarations approved; All State / Territory EOCs activated

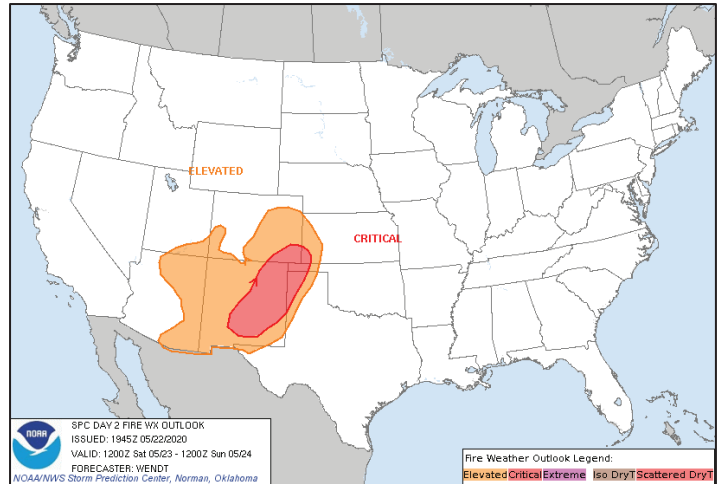
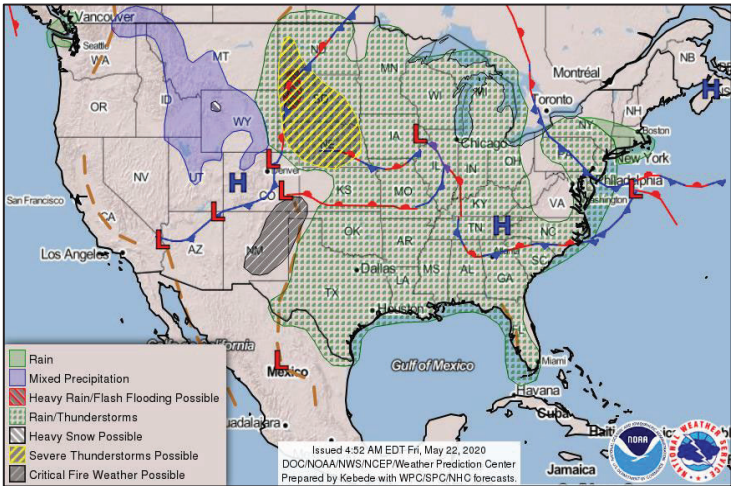


	Confirmed/Presumptive	Deaths
United States	1,564,271	94,396
Worldwide	4,893,186	323,256

(FEMA COVID-19 SLB, 5 00 p.m. ET, May 22)

Weather Threats

- Slight risk of severe thunderstorms over much of the Dakotas and Nebraska, as well as west Texas into southwest Oklahoma through this evening
- Critical fire weather for portions of the Southern High Plains



Latest NOAA Forecasts [WPC](#) | [SPC](#) | [NHC](#) | [SWPC](#)

Joint Preliminary Damage Assessments

Region	State	Event / Date	Type	Counties		Start – End Dates
				Requested	Completed	
IV	MS	Severe Storms, Tornadoes, Straight-line Winds, and Flooding: April 22-23	IA	0	0	N/A
			PA	11	10	5/14 – TBD
	AL	Severe Storms, Strong Winds, Tornadoes, and Hail: April 19	IA	0	0	N/A
			PA	10	0	5/15 – TBD
TN	Severe Storms May 3-4	IA	0	0	N/A	
		PA	22	2	5/14 – TBD	
V	MI	Dam Breach, Severe Weather, and Flooding May 16 and continuing	IA	1	0	5/26 – TBD
			PA	1	0	5/26 – TBD
VII	MO	Severe Storms May 3-4	IA	0	0	N/A
			PA	19	0	5/14 – TBD

Declaration Activity

Declaration Requests in Process: 4 (HI, UT, TX (Appeal), & PBCI*)

(Declared Disasters [fema.gov](#))

Joint Field Office Status Updates

No change over the last operational period

(JFO listing available on [NWC SharePoint Site](#))

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Regional Current Operations & Monitoring

<i>Region I</i>	<i>Region VI</i>
<p>RRCC: Level I (day shift – COVID-19) WATCH – Maynard MOC: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: No significant activity IMAT: Deployed to RRCC (COVID-19) LNOs: RI & ME EOCs: CT, MA, ME, NH, RI & VT: Full Activation (COVID-19)</p>	<p>RRCC: Level II (day shift – COVID-19) WATCH – Denton MOC: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: Fire weather (See Above) IMAT-1: Supporting FEMA-4544-DR-AR (Virtual) IMAT-2: FMC / Available IMAT-A: AR, LA, NM, OK, & TX LNOs: AR, LA, NM, OK, & TX EOCs: <ul style="list-style-type: none"> • AR & NM: Full Activation (COVID-19) • LA, OK, & TX: Partial Activation (COVID-19) </p>
<i>Region II</i>	<i>Region VII</i>
<p>RRCC: Level II (day shift – COVID-19) WATCH: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: No significant activity IMAT: Reconstituting; expected to return to FMC on May 29 LNOs: PR, NJ, & NY EOCs: <ul style="list-style-type: none"> • NJ, NY, & PR: Full Activation (COVID-19) • USVI: Partial Activation (COVID-19) </p>	<p>WATCH: Steady State (24/7): Alternate location <ul style="list-style-type: none"> • Monitoring: NE: Severe weather (See Above) IMAT: Supporting COVID-19 at RVII HQ (Virtual) EOCs: <ul style="list-style-type: none"> • IA, KS, & NE: Full Activation (COVID-19) • MO: Partial Activation (COVID-19) </p>
<i>Region III</i>	<i>Region VIII</i>
<p>RRCC: Level II (day shift – COVID-19) WATCH: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: No significant activity IMAT: Deployed to RRCC (COVID-19) IMAT-A: DC, DE, MD, PA, VA, & WV LNOs: DE EOCs: <ul style="list-style-type: none"> • DC, DE, MD, PA, VA, & WV: Full Activation (COVID-19) • VA: Partial Activation (COVID-19) </p>	<p>RRCC: Level II (day shift – COVID-19) WATCH – Denver MOC: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: <ul style="list-style-type: none"> ○ ND / SD: Severe weather (See Above) ○ SD: Flood Warnings IMAT: Reconstituting; expected to return to FMC on June 5 IMAT-A: CO LNOs: SD, WY, MT, & UT EOCs: <ul style="list-style-type: none"> • CO, SD, & UT: Full Activation (COVID-19) • ND, MT & WY: Partial Activation (COVID-19) </p>
<i>Region IV</i>	<i>Region IX</i>
<p>RRCC: Level II (day shift – COVID-19) WATCH: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: No significant activity IMAT-1: Supporting FEMA-4536-DR-MS (Virtual) IMAT-2: Supporting FEMA-4542-DR-SC (Virtual) LNOs: AL, FL, & TN EOCs: <ul style="list-style-type: none"> • FL: Full Activation (COVID-19) • GA: Full Activation (COVID-19 / Flooding) • MS: Partial Activation (COVID-19 / Flooding) • TN, AL, KY, NC, & SC: Partial Activation (COVID-19) </p>	<p>RRCC: Level I (day shift – COVID-19) WATCH: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: CA / NV/ AZ: Flash Flood Warnings IMAT-1: PMC / Staffing shortage IMAT-2: Deployed to RRCC (COVID-19) IMAT-A: AZ, CA, HI, NV, GU, CNMI, AS & Navajo Nation EOCs: <ul style="list-style-type: none"> • AZ, CA, GU, & NV: Full Activation (COVID-19) • AS, CNMI & HI: Partial Activation (COVID-19) </p>
<i>Region V</i>	<i>Region X</i>
<p>RRCC: Level II (day shift – COVID-19) WATCH: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: OH / MI / IL / IN: Flood Warnings IMAT: Deployed to RRCC (COVID-19) LNOs: IN, MI, & WI EOCs: IL, IN, OH, MI, MN, & WI: Full Activation (COVID-19)</p>	<p>RRCC: Level II (day shift – COVID-19) WATCH – Bothell MOC: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: No significant activity IMAT: Deployed to RRCC (COVID-19) IMAT-A: AK, ID, OR, & WA LNOs: AK & OR EOCs: AK, ID, OR, & WA: Full Activation (COVID-19)</p>

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FEMA National Situation Report Acronyms & Abbreviations

Front Page – Common Operating Picture

NWC:	National Watch Center	ISB:	Incident Support Base	R-IMAT:	Regional Incident Management Assistance Team
NRCC:	National Response Coordination Center	MERS:	Mobile Emergency Response Support	RRCC:	Regional Response Coordination Center
EX (State):	Exercise (Location)	N-IMAT:	National Incident Management Assistance Team	RWC:	Regional Watch Center
FCO:	Federal Coordinating Officer	NMC:	Non-Mission Capable	US&R:	Urban Search & Rescue
FDRC:	Federal Disaster Recovery Coordinator	PMC:	Partially Mission Capable		
FMC:	Fully Mission Capable				
IM:	Incident Management				

Front Page – Force Laydown Map

CAD:	Caribbean Area Division	DR:	Major Disaster Declaration (Stafford Act)	IST:	Incident Support Team
CNMI:	Commonwealth of the Northern Marianas Islands	EM:	Emergency Declaration (Stafford Act)	JFO:	Joint Field Office
DC:	Distribution Center / District of Columbia	EOC:	Emergency Operations Center	LNO:	Liaison Officer
		FCO:	Federal Coordinating Officer	TF:	Task Force
				VJFO:	Virtual JFO

Front Page – Incident Management Cadres

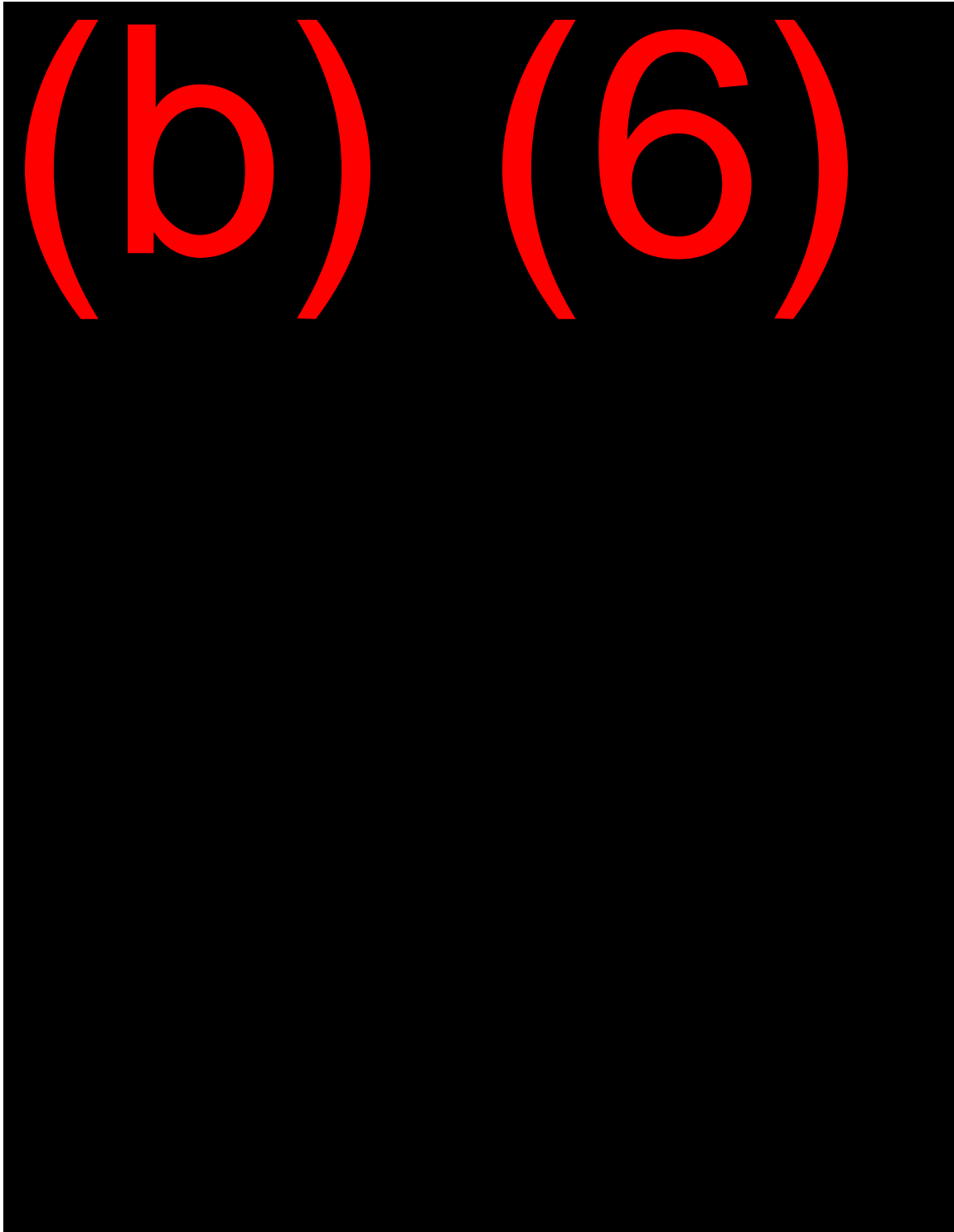
ACQ:	Acquisitions	DSA:	Disaster Survivor Assistance	HR:	Human Resources
ADR:	Alternative Dispute Resolution	EHP:	Environmental Planning and Historic Preservation	IA:	Individual Assistance
DI:	Disability Integration	ER:	Equal Rights	IT:	Information Technology
DEC:	Disaster Emergency Communications	EA:	External Affairs	OCC:	Office of Chief Counsel
DFTO:	Disaster Field Training Ops	FL:	Field Leadership	LOG:	Logistics
		FM:	Financial Management	HM:	Hazard Mitigation

Other Acronyms & Abbreviations

ARC:	American Red Cross	IPAWS:	Integrated Public Alert & Warning System
CBRN:	Chemical, Biological, Radiological and Nuclear	IST:	Incident Support Team
CDC:	Centers for Disease Control and Prevention	JTWC:	Joint Typhoon Warning Center
CIKR:	Critical Infrastructure / Key Resources	MCOV:	Mobile Communications Operations Vehicle
DCO:	Defense Coordinating Officer	MEOV:	Mobile Emergency Operation Vehicle (MERS)
DFA:	Direct Federal Assistance (Stafford Act program)	MCC:	Movement Coordination Center
DIRS:	Disaster Information Reporting System	MMI:	Modified Mercalli Intensity (Earthquake scale)
DLA:	Defense Logistics Agency	MOC:	MERS Operations Center
DoD:	Department of Defense	NHC:	National Hurricane Center
DOE:	Department of Energy	NOAA:	National Oceanic & Atmospheric Administration
DRC:	Disaster Recovery Center	NWS:	National Weather Service
EAGLE-I:	Environment for Analysis of Geo-Located Energy Information (DOE)	PA:	Public Assistance (Stafford Act program)
EF:	Enhanced Fujita (Tornado scale)	PAGER:	Prompt Assessment of Global Earthquakes for Response
EPA:	Environmental Protection Agency	PDA:	Preliminary Damage Assessment (Joint FEMA/State)
ESF:	Emergency Support Function	PSPS:	Public Safety Power Shutoff
FMAG:	Fire Management Assistance Grant	ROC:	Response Operations Cell (part of the NRCC)
GIS:	Geospatial Information Systems	SEAR:	Special Event Assessment Rating
HHS:	Health & Human Services	SLTT:	State, Local, Tribal, and Territorial (<i>Governments</i>)
HM:	Hazard Mitigation (Stafford Act program)	USACE:	U.S. Army Corps of Engineers
IA:	Individual Assistance (Stafford Act program)	USAID:	U.S. Agency for International Development
IMAAC:	Interagency Modeling & Atmospheric Assessment Center	USCG:	U.S. Coast Guard
IOF:	Initial Operating Facility	USGS:	U.S. Geological Survey

(More FEMA Acronyms [FAAT Book](#))

From:
To:



Subject: [Non-DoD Source] FOUO\\ FW: HHS Executive Summary 24Apr20
Date: Friday, April 24, 2020 8:54:37 AM
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[CDC Daily Report 2020-04-23.pdf](#)
[HHS FDA Report for 04-23-2020.pdf](#)
[National SITREP 04-24-2020 AM.pdf](#)

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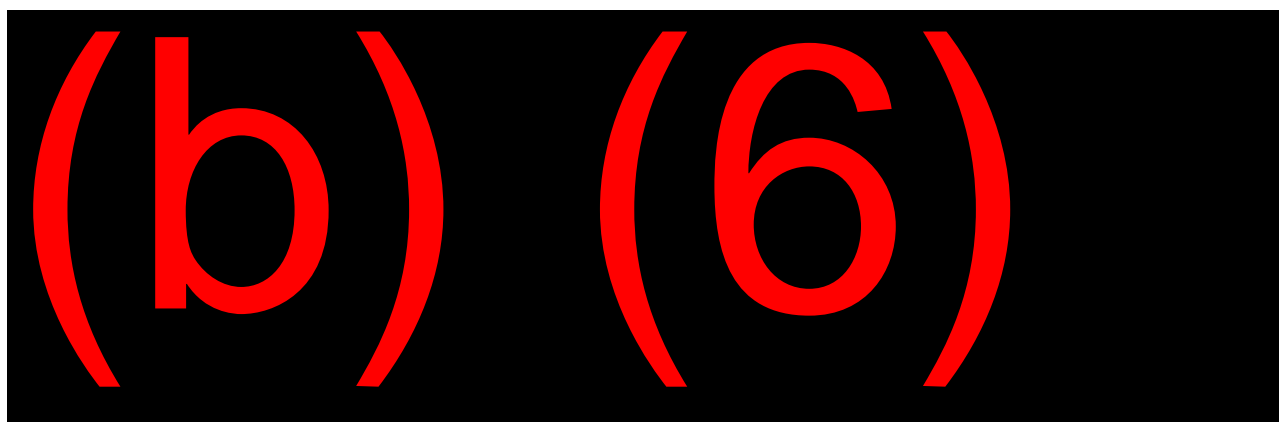
Good Morning,

Please see HHS Executive Summary for 24 APR 20.

Note: As of 24Apr20, 0300ET, the CDC confirmed and presumptive positive U.S. cases of COVID-19 have reached 857,820 across 50 states and D.C. Guam, PR, CNMI, and USVI; Deaths: 48,185. WHO reported global cases as of 21Apr20, 0400ET: 2,544,792; global deaths: 175,694; WHO member countries and areas with cases: 213. Testing: 4,934,686 cumulative tests includes samples tested by State/Local Public Health Laboratories, Commercial Laboratories, Hospital Laboratories, CDC, and VA completed as of 23Apr20.

- Finalized guidance on opening childcare, summer camps, communities of faith, employers with vulnerable populations, bars and restaurants, mass transit, and amusement parks; at White House for approval.
- Developing Vulnerable Population data dashboard in the HHS COP to aid decision-makers with metro, county, and state statistical data.
- NY: Coordinating White House request for NYC to be the “Restore America” pilot city for the serology/phlebotom screening.
- CA became the first State to recommend testing for asymptomatic people in high-risk settings, adding 86 additional testing sites.
- USCG facilitated the safe discharge of over 275k passengers from over 125 cruise ships following cruise industry shutdown.

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HHS Executive Summary: Friday, 24Apr20

1. HHS

Today's Noteworthy Topics:

COVID-19 (Novel Coronavirus)

As of 24Apr20, 0300ET, the CDC confirmed and presumptive positive U.S. cases of COVID-19 have reached 857,820 across 50 states and D.C. Guam, PR, CNMI, and USVI; Deaths: 48,185. WHO reported global cases as of 21Apr20, 0400ET: 2,544,792; global deaths: 175,694; WHO member countries and areas with cases: 213. Testing: 4,934,686 cumulative tests includes samples tested by State/Local Public Health Laboratories, Commercial Laboratories, Hospital Laboratories, CDC, and VA completed as of 23Apr20.

Daily Operational Schedule:

0830 – FEMA Daily Operations Briefing
1230 – HHS/FEMA Interagency VTC

Public Health Emergency of National Significance:

Opioid Crisis, Nationwide: 02Apr20
Novel Coronavirus (COVID-19): 31Jan20

HHS Response Status Summary:

HHS SOC: Level I (Full Activation)
CDC EOC: Level III (Polio/Ebola)
CDC EOC: COVID-19 (Agency-Wide Response)
FDA EOC: Level II (Vape Product Response, COVID-19)

Emergency Support Function (ESF) Activation:

ESF – 8: Activated
ESF – 6: Activated

Recovery Support Function (RSF) Activation:

H&SS RSF: Activated Region II (2017 Irma/Maria, Puerto Rico projected end date of 30Jun20).

HHS Deployments: (Total = 937)

ASPR: 802 – (8) Earthquake Puerto Rico, (781) COVID-19, (5) Irma/Maria Recovery, (3) Irma, (2) FY Funded Training Q1, (2) FY Non-Funded Training Q1, (1) California Wildfires
CDC: 135 – (134) COVID-19, (1) Ebola

New Mission Assignments (MA):NSTR

Active Situations (7):

- Influenza Season
- Irma/Maria, Puerto Rico, & USVI (Recovery)
- Ebola in Eastern Democratic Republic of the Congo
- California Wildfires (Recovery)
- Novel Coronavirus (COVID-19)
- Bravo Response
- Earthquake, Puerto Rico

U.S. International Health Regulation National Focal Point Status:NSTR

2. FEMA:

Interagency Response Status Summary:

NWC: Monitoring

NRCC: Level I

National IMATs: Red – Fully Mission Capable; Blue – Fully Mission Capable; Gold – IMAT – A Support

Regional IMATs: Region I, RRCC; Region II, NY; Region III, RRCC; Region IV-1, Virtual - MS; Region V, RRCC; Region VII, RRCC; Region VIII, RRCC; Region IX-2, RRCC; Region X, RRCC

Significant National Weather:

Additional severe weather threats will be possible on Friday over portions of the lower Mississippi Valley and into the Southeast U.S. Some of the storms will be capable of producing damaging winds, large hail, and a few tornadoes. Heavy rainfall could also lead to localized flooding.

3. OPDIV/STAFFDIV Overnight Reports:

CDC:

- COVID-19 – 213 Locations (including countries, territories, and areas) - Update

FDA:

- Coronavirus Disease 2019 (COVID-19)/ML/2019
- *Listeria monocytogenes*/Produce (Suspect)/Feb 2020
- E. coli O103:H2/Produce (Suspect)/Feb 2020

Prepared by:

Secretary's Operations Center

U.S. Department of Health and Human Services (HHS)
Assistant Secretary for Preparedness and Response (ASPR)
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Washington, D.C. 20201

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CDC Daily Report: As of 7:00 a.m. EDT, Thursday, April 23, 2020

SIGNIFICANT EVENTS:

- Note: Operational updates described within the CDC Daily Report may not be inclusive of all response activities that are occurring.

** = Asterisks denotes updates to monitored events/responses*

MONITORED EVENTS: (4)

- Opioid Crisis
- Measles Outbreak
- Hepatitis-A Outbreak
- 2020 Bravo Response (*Heightened Tensions Middle East*)

RESPONSE STATUS:

- CDC EOC: 2019 Novel Coronavirus (Agency-wide Response) *
- CDC EOC: Ebola (Level III)
- CDC EOC: Polio (Level III)

CDC DEPLOYMENTS:

- Domestic
 - Coronavirus (129)
 - International
 - Polio (0)
 - Ebola (1)
 - Coronavirus (5)
- Total Personnel: (135)

PROGRAM UPDATES:

National Center for Immunization and Respiratory Diseases (NCIRD):

- **COVID-19 United States**
- **Significant Activities**

- As of April 18, all commercial and reference laboratory data received by CDC is being uploaded into HHS Protect. HHS Protect integrates data from 300-400 hospital labs daily and will now host the consolidated commercial/reference, public health, and hospital laboratory test results.
 - Confirmed and probable U.S. cases of COVID-19 (as of 3:00am, **April 23**): **825,909 (+29,459)**
 - U.S. deaths reported to CDC: **46,234 (+2,367)** (as of 3:00am, **April 23**)
 - The CDC COVID-19 website provides the latest resources for the community, healthcare professionals and information on COVID-19 cases in the United States: <https://www.cdc.gov/coronavirus/2019-ncov/index.html>.
 - Global confirmed cases of COVID-19: **2,471,136 (73,920 new)** (as of **April 22**).
- **Cruise Team**
 - Tracking **four (-1)** cruise ships that are disembarking passengers domestically or internationally with American citizens on board and crew-only ships at port or anchorage in and around the U.S. with known or suspected COVID-19 (~24).
- **Health Systems and Worker Safety**
 - CDC Coronavirus Symptom Self-Checker (Clara bot): **18.7 M** visits since Mar 19.
 - Text-based Illness Monitoring (TIM) system: Over **10,928** total users (CDC/HHS: **1,057** active users, State/Local: **3,453** active users) as of **April 21**.
 - Finalizing an award to develop novel surveillance strategies for unexplained respiratory deaths to the Council for State and Territorial Epidemiologists, an initiative to be funded through the CSTLTS Cooperative Agreement (CoAg).
- **Global Migration**
 - As of **April 21**, CDC has screened **61,389 (+26)** air travelers arriving from China and Iran; Department of Homeland Security (DHS) has screened an additional **206,622 (+417)** air travelers arriving from Schengen Countries, United Kingdom, and Ireland).
 - Supporting STLT efforts to address outbreaks in meat-packing plants. One staff member is scheduled to deploy to Kansas today.
 - Road travel tool kit scheduled to be posted today; kit provides transportation departments with messages to be used on highway signs, alert systems, social media, PSAs, etc. to persons traveling by road.
- **State, Tribal, Local and Territorial Support (STLT) Support**
 - Continue to deploy field teams (19 currently deployed) to support health department requests:
 - Deployed field teams to seven jurisdictions with low incidence of COVID-19 as part of a Community Protection Initiative to provide epidemiologic, community mitigation, IPC, and lab support.
 - Deployed to Tennessee, Nebraska, and North Dakota, to support a new initiative to ascertain barriers and needs to enhancing testing capacity, contact tracing, and surveillance for vulnerable populations. An additional unit will engage remotely with New Mexico.

- Deployed nine field teams to provide multi-disciplinary technical assistance at request of health departments.
- **Laboratory**
 - Ninety-seven (97) (+1) public-health labs are now testing for SARS-CoV-2 (50 states plus DC, Guam, Puerto Rico and U.S. Virgin Islands).
 - As of April 21, CDC tested over 5,358 samples from 2,109 patients; public health labs have tested over 388,877 samples.
 - International Reagent Resource (IRR) shipped 123 reagents to 23 laboratories on Tuesday, April 21.

GLOBAL DISEASE DETECTION OPERATIONS CENTER (GDDOC):

- **COVID-19 - 213 Locations (including countries, territories, and areas)**
 - **Source: CDC; NCIRD/DVD; WHO Headquarters; WHO Regional Offices; Ministries of Health**
 - No new locations first COVID-19 cases in past 24 hours.
 - As of 22 April (09:00 GMT/05:00 EDT), WHO has reported a global cumulative count of 2,471,136 cases and 169,006 deaths for an increase of 73,920 cases and 6,058 deaths over the preceding 24 hours. The cases are distributed in the six regions as follows: European Region [1,219,486 confirmed (32,302 new cases) / 109,952 deaths (3,618 new deaths)]; Region of the Americas [952,291 confirmed (32,172) / 44,775 deaths (2,089)]; Eastern Mediterranean Region [139,349 confirmed (4,879) / 6,326 deaths (141)]; South-East Asia Region [33,912 confirmed (2,242) / 1,427 deaths (86)]; Western Pacific Region [136,271 confirmed (1,765) / 5,793 deaths (108)]; and African Region [16,115 confirmed (560) / 720 deaths (16)]. Among the 213 affected locations, 148 reported new confirmed cases with the highest number of new cases from United States [776,907 confirmed (25,634 new cases) / 37,602 deaths (1,718 new deaths)]; Russia [57,999 confirmed (5,236) / 513 deaths (57)]; Turkey [95,591 confirmed (4,611) / 2,259 deaths (119)]; the United Kingdom [129,048 confirmed (4,301) / 17,337 deaths (828)]; Spain [204,178 confirmed (3,968) / 21,282 deaths (430)]; Italy [183,957 confirmed (2,729) / 24,648 deaths (534)]; France [116,151 confirmed (2,638) / 20,763 deaths (530)]; Germany [145,694 confirmed (2,237) / 4,879 deaths (281)]; Canada [37,374 confirmed (1,991) / 1,728 deaths (117)]; and Brazil [40,581 confirmed (1,927) / 2,575 deaths (113)].
 - WHO [COVID-19 Situation Reports](#) present official counts of confirmed COVID-19 cases, thus differences between WHO reports and other sources of COVID-19 data using different inclusion criteria and different data cutoff times are to be expected.
 - CDC has established a COVID-19 Incident Management System and the CDC Emergency Operations Center is activated to provide ongoing support to the COVID-19 response. CDC COVID-19 [Travel Recommendations](#) for the locations with and without restrictions on entry to United States are posted and will continue to be updated. The CDC [Health Alert Network \(HAN\)](#) and a dedicated CDC [COVID-19](#) website is maintained.

EOC 24 HOUR CALL DATA:

Category	Total Count
2019 Novel Coronavirus (DoH)	1
2019 Novel Coronavirus (Clinical)	45
2019 Novel Coronavirus (Public)	64
Administrative	63
Ameba Infections	1
DGMQ - QPHO	1
Gardasil - HPV Vaccine	1
Hookworm Infection	1
Influenza	1
ITSO	1
Leptospirosis	1
Logistics Assistance - DEO	2
Media Relations Calls	2
NOC - DHS: Secure Ops Center	3
Other	2

Total Calls: 189

**FDA OFFICE OF EMERGENCY MANAGEMENT
HHS FDA REPORT – April 23, 2020**

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UPDATES

Coronavirus Disease 2019 (COVID-19)/ML/2019

FDA continues to work with the WHO, US government partners (e.g., FEMA, NSC, HHS, ASPR, BARDA, CDC, NIH, DoD), state partners and medical product developers as necessary to support response efforts to the novel coronavirus outbreak/pandemic, COVID-19.

On 4/22/2020, FDA provided the following updates and information to the public and industry:

- FDA issued an [*emergency use authorization \(EUA\)*](#) for the Philips Medizin Systeme Boeblingen GmbH's IntelliVue Patient Monitors MX750/MX850, IntelliVue 4-Slot Module Rack FMX-4 and IntelliVue Active Displays AD75/AD85, intended to be used by healthcare professionals in the hospital environment for remote monitoring of adult, pediatric and neonate patients having or suspected of having COVID-19 to reduce healthcare provider exposure. The IntelliVue Patient Monitors are not intended for home use. The remote monitoring capabilities of the Philips IntelliVue Patient Monitors reduce the amount of contact by healthcare providers with patients during the COVID-19 pandemic who are in isolation rooms, thereby reducing the healthcare providers' risk of exposure to the virus.
- FDA and the Federal Trade Commission issued a warning letter to a seller of fraudulent COVID-19 products, as part of the agency's effort to protect consumers. The seller warned, [*Copper Touch, LLC*](#), offers unapproved and misbranded products including "Sani-Bar GK95" and "Sani-Disc GK95D" for sale in the U.S. with misleading claims that the products are safe and/or effective for the prevention and treatment of COVID-19.
- FDA issued [*guidance*](#) explaining a temporary policy regarding the repackaging or combining of FDA-approved propofol injectable emulsion, 10 mg/ mL (propofol) products, for the treatment or management of hospitalized patients during the COVID-19 public health emergency. This guidance provides regulatory flexibility for state-licensed pharmacies (including hospital pharmacies), federal facilities and outsourcing facilities that repackage or combine FDA-approved propofol products for hospitals that are having difficulty obtaining adequate supplies of the FDA-approved version in the sizes they use to support or treat patients with COVID-19.

- **Diagnostics update:**
 - During the COVID-19 pandemic, the FDA has worked with more than 360 test developers who have said they will be submitting emergency use authorizations (EUA) requests to FDA for tests that detect the virus.
 - To date, the FDA has issued 43 individual [emergency use authorizations](#) for test kit manufacturers and laboratories. In addition, 17 authorized tests have been added to the EUA letter of authorization for high complexity molecular-based laboratory developed tests (LDTs).
 - The FDA has been notified that more than 215 laboratories have begun testing under the policies set forth in our COVID-19 Policy for Diagnostic Tests for Coronavirus Disease-2019 during the Public Health Emergency Guidance.

To review FDA's current response activities, click: [FDA's COVID-19 Current Response Activities](#). OEO, via the 2019-nCoV IMG, will continue to monitor and provide updates.

E. coli O103:H2/Produce (Suspect)/Feb 2020

CDC and FDA updated their advisories yesterday. Hotwash call is scheduled for April 27, 2020. FDA's Coordinated Outbreak Response and Evaluation Network (CORE) will continue to coordinate.

Listeria monocytogenes/Produce (Suspect)/Feb 2020

One sample came back as Cannot Rule Out (CRO). Confirmation analysis is pending. CORE will continue to coordinate.

On the Radar

Tornadoes, TX and LA/Apr 2020

Overnight on 4/22-23/2020, there were reports of several tornadoes across TX and LA. Specifically, tornadoes were spotted in Polk and Lamar counties in Texas and Rapides Parish in Louisiana and damages have been reported. FDA's Office of Emergency of Management's GIS team is reviewing the available data and working to prepare mapping products to highlight potentially impacted FDA employees and FDA-regulated industry. Mapping products will be provided to impacted FDA districts for follow-up determination once available. OEO will continue to monitor and report as necessary.



FEMA National Situation Report

As of 3:00 a.m. ET, Friday, April 24, 2020

This report is published twice daily, 3 00 a.m. and 5 00 p.m. ET

Common Operating Picture

FEMA HQ <i>NWC</i> <i>NRCC</i> Monitoring Level I		FEMA REGIONS <i>WATCH</i> <i>RRCC</i> Monitoring I Level I Monitoring II Level II Monitoring III Level II Monitoring IV Level II Monitoring V Level II Alt. Location VII Level II Monitoring VIII Level II Monitoring IX Level I Monitoring X Level II		Notes: COVID-19 NRCC: (Days) All RRCCs: (Days) GA: Flooding MS: Flooding PR: Earthquake TN: Tornadoes All State EOCs activated for COVID-19		Major Disasters (DR): 97 Emergency Disasters (EM): 93 JFOs: 10 / VJFOs: 11 Staging Area Distribution Center (DC) Declared County (non-COVID-19 Declarations) Fully Activated Partially Activated Monitoring		Region VIII COVID DRs 4519-DR-OR FCO: Dolph A. Diemont VJFO: Salem, OR 4599-DR-CO FCO: Timothy B. Manner VJFO: Salem, OR 4598-DR-MT FCO: Timothy B. Manner VJFO: Salem, OR 4599-DR-ND FCO: Timothy B. Manner VJFO: Salem, OR 4525-DR-UT FCO: Timothy B. Manner VJFO: Salem, OR 4527-DR-SD FCO: Timothy B. Manner VJFO: Salem, OR 4535-DR-WY FCO: Lee K. dePalo VJFO: TBD Region IX COVID DRs 4482-DR-CA FCO: Robert J. Fenton VJFO: Oakland, CA 4495-DR-GU FCO: Robert J. Fenton VJFO: Oakland, CA 4510-DR-HI FCO: Robert J. Fenton VJFO: Oakland, CA 4511-DR-CNMI FCO: Robert J. Fenton VJFO: Oakland, CA 4523-DR-NV FCO: Robert J. Fenton VJFO: Oakland, CA 4524-DR-AZ FCO: Robert J. Fenton VJFO: Oakland, CA 4537-DR-AS FCO: Robert J. Fenton VJFO: Oakland, CA Region X COVID DRs 4481-DR-WA FCO: Michael F. O'Hare VJFO: Bothell, WA 4499-DR-OR FCO: Michael F. O'Hare VJFO: Bothell, WA 4533-DR-AK FCO: Michael F. O'Hare VJFO: Bothell, WA 4534-DR-ID FCO: Michael F. O'Hare VJFO: Bothell, WA Region I COVID DRs 4496-DR-MA FCO: James McPherson VJFO: Williston, VT 4500-DR-CT FCO: James McPherson VJFO: Williston, VT 4505-DR-NH FCO: James McPherson VJFO: Williston, VT 4516-DR-NH FCO: James McPherson VJFO: Williston, VT 4522-DR-ME FCO: James McPherson VJFO: Williston, VT 4532-DR-VT FCO: James McPherson VJFO: Williston, VT Region II COVID DRs 4480-DR-NY FCO: Seamus K. Leary VJFO: Albany, NY 4488-DR-NJ FCO: West Trenton, NJ 4493-DR-PR FCO: Myra Shird VJFO: Nashville, TN Region III COVID DRs 4491-DR-MD FCO: Myra Shird VJFO: Nashville, TN 4502-DR-DC FCO: Myra Shird VJFO: Nashville, TN 4506-DR-PA FCO: Myra Shird VJFO: Nashville, TN 4512-DR-VA FCO: Myra Shird VJFO: Nashville, TN 4517-DR-WV FCO: Myra Shird VJFO: Nashville, TN 4526-DR-DE FCO: Myra Shird VJFO: Nashville, TN Region IV COVID DRs 4486-DR-FL FCO: Brett Howard VJFO: Panama City, FL 4487-DR-NC FCO: Brett Howard VJFO: Panama City, FL 4492-DR-SC FCO: Brett Howard VJFO: Panama City, FL 4497-DR-KY FCO: Brett Howard VJFO: Panama City, FL 4501-DR-GA FCO: Brett Howard VJFO: Panama City, FL 4503-DR-AL FCO: Brett Howard VJFO: Panama City, FL 4514-DR-TN FCO: Brett Howard VJFO: Panama City, FL 4528-DR-MS FCO: Brett Howard VJFO: Panama City, FL Region V COVID DRs 4489-DR-IL FCO: James K. Joseph VJFO: TBD 4494-DR-MI FCO: James K. Joseph VJFO: TBD 4507-DR-OH FCO: James K. Joseph VJFO: TBD 4515-DR-IN FCO: James K. Joseph VJFO: TBD 4520-DR-WI FCO: James K. Joseph VJFO: TBD 4531-DR-MN FCO: James K. Joseph VJFO: TBD Region VI COVID DRs 4484-DR-LA FCO: George A. Robinson VJFO: Jefferson City, MO 4485-DR-TX FCO: George A. Robinson VJFO: Jefferson City, MO 4529-DR-NM FCO: George A. Robinson VJFO: Jefferson City, MO 4530-DR-OK FCO: George A. Robinson VJFO: Jefferson City, MO Region VII COVID DRs 4483-DR-IA FCO: Jon K. Huss VJFO: Sioux Falls, SD 4490-DR-MO FCO: Jon K. Huss VJFO: Sioux Falls, SD 4504-DR-KS FCO: Jon K. Huss VJFO: Sioux Falls, SD 4521-DR-NE FCO: Jon K. Huss VJFO: Sioux Falls, SD Region VIII COVID DRs 4414/4442-DR-MN FCO: Steven W. Johnson VJFO: Springfield, IL 4459/4477-DR-WI FCO: Steven W. Johnson VJFO: Springfield, IL 4424/4447-DR-OH FCO: Steven W. Johnson VJFO: Springfield, IL 4461-DR-IL FCO: Steven W. Johnson VJFO: Springfield, IL Region IX COVID DRs 4372/4379-DR-MA FCO: W. Russell Webb VJFO: TBD 4410-DR-CT FCO: W. Russell Webb VJFO: TBD 4445/4474-DR-VT FCO: W. Russell Webb VJFO: TBD 4457-DR-NH FCO: W. Russell Webb VJFO: TBD 4532-DR-ME FCO: W. Russell Webb VJFO: TBD 4532-DR-VT FCO: W. Russell Webb VJFO: TBD Region X COVID DRs 4472-DR-NY FCO: Seamus K. Leary VJFO: Albany, NY 4428-DR-KY FCO: Allan Jarvis VJFO: Frankfort, KY 4480-DR-NY FCO: Seamus K. Leary VJFO: Albany, NY 4488-DR-NJ FCO: West Trenton, NJ 4493-DR-PR FCO: Myra Shird VJFO: Nashville, TN 4393/4412/4465-DR-NC FCO: Elizabeth Turner VJFO: Durham, NC 4427/4471/4476-DR-TN FCO: Myra Shird VJFO: Nashville, TN 4464/4479-DR-SC FCO: Allan Jarvis VJFO: Atlanta, GA 4591-DR-MS FCO: Jose M. Girot VJFO: TBD 4598-DR-MS FCO: Jose M. Girot VJFO: TBD 4435/4451-DR-MO FCO: John Brogan VJFO: Jefferson City, MO 4478-DR-MS FCO: Terry L. Quarles VJFO: TBD 4458/4462-DR-LA FCO: John E. Long VJFO: Baton Rouge, LA 4536-DR-MS FCO: Jose M. Girot VJFO: TBD 4399-DR-FL FCO: Brett Howard VJFO: Panama City, FL 4473-DR-PR FCO: Alex Amparo VJFO: Ponce, PR		N-IMATs 2 Teams Red Blue Gold IMAT-A Support		R-IMATs 4-6 Teams Available I RRCC II NY III RRCC IV-1 Virtual - MS IV-2 V RRCC VI-1 VI-2 VII RRCC VIII RRCC IX-1 IX-2 RRCC X RRCC FMC PMC NMC Deployed	
Team: Status		US&R 33 - 65%	MERS >66%	FCOs <1 Type I	FDRCS <1	IM Workforce	Incident Management Cadre Availability Summary Cadres with 25% or Less Availability						
Assigned:		28	36	47	11	13,441 ▲	EHP 21% (128/623); FL 12% (19/160); FM 23% (61/264); HM 23% (281/1,221);						
Unavailable:		17	0	1	0	2,776 ▼	OPS 20% (56/284); PA 24% (750/3,069); PLAN 23% (98/423); SAF 22% (12/55)						
Deployed:		0	1	43	10	5,881 ▲							
Available:		11	35	3	1	4,784 / 36% ▲							

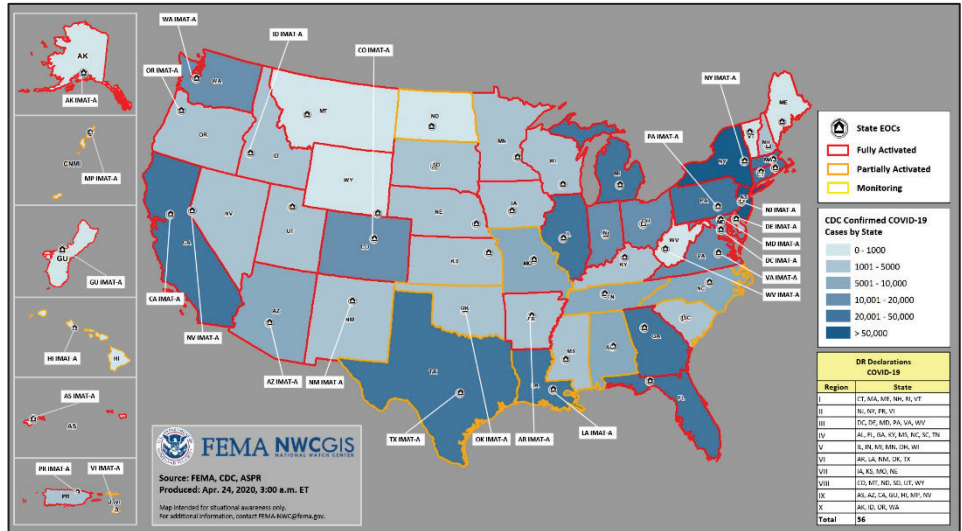
National Current Operations & Monitoring

COVID-19 (For interagency reporting see FEMA NRCC COVID-19 SLB, published daily)

Situation: FEMA, HHS, and federal partners are working with SLTT governments to execute a whole-of-America response to the COVID-19 pandemic. The President released *Guidelines for Opening America Up Again* and the federal government is continuing to work with SLTT leaders across the country to ensure that they have the equipment, supplies, and testing resources that they need to reopen safely and responsibly.

- FEMA NRCC remains at Level I in unified effort with HHS SOC; all FEMA RRCCs activated
- FEMA IMAT-A teams deployed to 27 states; LNOs deployed to 37 states, territories, & tribes
- 56 major disaster declarations approved
- All State / Territory EOCs activated
- Testing: 4,934,686 cumulative as of April 23
- 44,375 FEMA, DOD, HHS, and CDC personnel deployed/activated in support of COVID-19

COVID-19 Cases	Confirmed/Presumptive	Deaths
United States	825,909	46,234
Worldwide	2,471,136	169,006



Operational Task Forces

Community Mitigation Measures

- Finalized guidance on opening childcare, summer camps, communities of faith, employers with vulnerable populations, bars and restaurants, mass transit, and amusement parks; at White House for approval

Data and Analysis

- Developing Vulnerable Population data dashboard in the HHS COP to aid decision-makers with metro, county, and state statistical data

Health and Medical Lifeline

Public Health - Screening

- NY: Coordinating White House request for NYC to be the “Restore America” pilot city for the serology/phlebotomy screening
- CA became the first State to recommend testing for asymptomatic people in high-risk settings, adding 86 additional testing sites

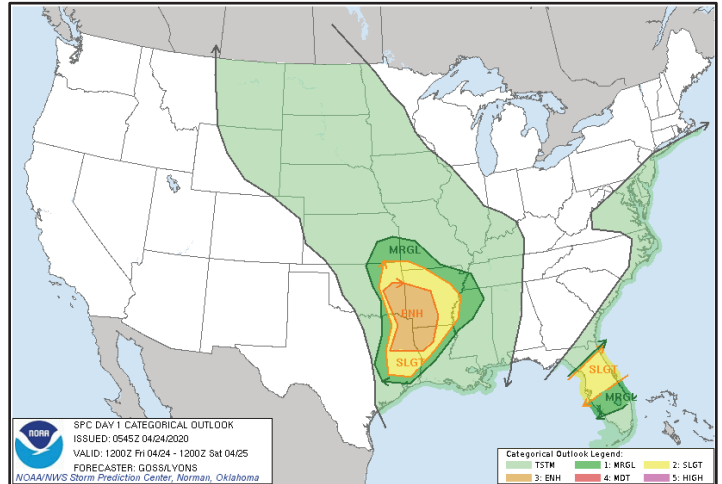
Safety and Security Lifeline

- USCG facilitated the safe discharge of over 275k passengers from over 125 cruise ships following cruise industry shutdown

(FEMA COVID-19 SLB, 5 00 p.m. ET April 23, 2020)

Weather Threats

- There is a slight risk of severe thunderstorms across the Florida peninsula and an enhanced risk across parts of the Southeastern Plains into the Ark-La-Tex area. Damaging winds and large hail are the primary threats, but excessive rainfall and flash flooding are also possible from Ark-La-Tex into the Middle Mississippi Valley.



(Latest NOAA Forecasts [WPC](#) | [SPC](#) | [NHC](#) | [SWPC](#))

Joint Preliminary Damage Assessments

Region	State	Event / Date	Type	Counties		Start – End Dates
				Requested	Completed	
IV	AL	Severe Storms, Tornadoes, Straight-line Winds, Flooding, & Mudslides Feb 6 – Mar 6	IA	0	0	N/A
			PA	20	10	4/20 – TBD
	SC	Severe Storms, Tornadoes and Straight-line Winds April 12-13	IA	9	3	4/21 – TBD
			PA	8	0	4/23 – TBD
VI	AR	Severe Storms & Tornado Mar 29	IA	1	0	4/15 – TBD
			PA	1	0	4/15 – TBD

Declaration Activity

Declaration Requests in Process: 8: AR (Appeal), KY, AK, NC, SC, TN, GA, **STOF**)

Major Disaster Declaration Request – Seminole Tribe of Florida

- On April 22, 2020, the Chairman requested a Major Disaster Declaration for the Seminole Tribe of Florida due to COVID-19 pandemic beginning on January 20, 2020 and continuing
- Requesting:
 - Individual Assistance: Crisis Counseling and Disaster Unemployment Assistance
 - Public Assistance: Emergency protective measures (Category B), including direct Federal assistance
 - Hazard Mitigation

Major Disaster Declaration Approved – Mississippi

- On April 23, 2020, Major Disaster Declaration FEMA-4538-DR-MS was approved for the State of Mississippi for severe storms, flooding and mudslides during the period of February 10-18, 2020
- Provides:
 - Public Assistance: 11 counties
 - Hazard Mitigation: statewide
- FCO is Terry L. Quarles

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Major Disaster Declaration Approved – Washington

- On April 23, 2020, Major Disaster Declaration FEMA-4539-DR-WA was approved for the State of Washington for severe storms, flooding, landslides and mudslides during the period of January 20 to February 10, 2020
- Provides:
 - Public Assistance: 15 counties
 - Hazard Mitigation: statewide
- FCO is Timothy B. Manner

(Declared Disasters [fema.gov](https://www.fema.gov))

Joint Field Office Status Updates

No change over the last operational period

(JFO listing available on [NWC SharePoint Site](#))

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Regional Current Operations & Monitoring

<i>Region I</i>	<i>Region VI</i>
<p>RRCC: Level I (day shift – COVID-19) WATCH – Maynard MOC: Steady State (24/7)</p> <ul style="list-style-type: none"> • Monitoring: No significant activity <p>IMAT: Deployed to RRCC (COVID-19) LNOs: CT, MA, ME, NH, RI, & VT EOCs: CT, MA, ME, NH, RI, & VT: Full Activation (COVID-19)</p>	<p>RRCC: Level II (day shift – COVID-19) WATCH – Denton MOC: Steady State (24/7)</p> <ul style="list-style-type: none"> • Monitoring: Severe storms and isolated heavy rain possible over OK, TX and AR <p>IMAT-1: FMC / Available IMAT-2: FMC / Available IMAT-A: AR, LA, NM, OK, & TX LNOs: AR, LA, NM, OK, & TX EOCs:</p> <ul style="list-style-type: none"> • AR & NM: Full Activation (COVID-19) • LA, OK, & TX: Partial Activation (COVID-19)
<i>Region II</i>	<i>Region VII</i>
<p>RRCC: Level II (day shift – COVID-19) WATCH: Steady State (24/7)</p> <ul style="list-style-type: none"> • Monitoring: No significant activity <p>IMAT: Deployed to NY EOC (COVID-19) IMAT-A: NJ, NY, PR & USVI LNOs: PR, NJ & NY EOCs:</p> <ul style="list-style-type: none"> • NJ, NY, & PR: Full Activation (COVID-19) • USVI: Partial Activation (COVID-19) 	<p>RRCC: Level II (day shift – COVID-19)</p> <ul style="list-style-type: none"> • WATCH: Steady State (24/7): Alternate location <p>Monitoring: Excessive rainfall and flash flooding possible in MO IMAT: Deployed to RRCC (COVID-19) EOCs:</p> <ul style="list-style-type: none"> • IA, KS, & NE: Full Activation (COVID-19) • MO: Partial Activation (COVID-19)
<i>Region III</i>	<i>Region VIII</i>
<p>RRCC: Level II (day shift – COVID-19) WATCH: Steady State (24/7)</p> <ul style="list-style-type: none"> • Monitoring: No significant activity <p>IMAT: Deployed to RRCC (COVID-19) IMAT-A: DC, DE, MD, PA, VA, & WV LNOs: PA & WV EOCs: DC, DE, MD, PA, VA & WV: Full Activation (COVID-19)</p>	<p>RRCC: Level II (day shift – COVID-19) WATCH – Denver MOC: Steady State (24/7)</p> <ul style="list-style-type: none"> • Monitoring: Winter Storm Warning for southern WY; snow accumulations of 10-15” and wind gusts to 55 mph possible; could cause hazardous travel conditions <p>IMAT: Deployed to RRCC (COVID-19) IMAT-A: CO LNOs: CO, SD, & WY EOCs:</p> <ul style="list-style-type: none"> • CO, MT, SD, UT, & WY: Full Activation (COVID-19) • ND: Partial Activation (COVID-19)
<i>Region IV</i>	<i>Region IX</i>
<p>RRCC: Level II (day shift – COVID-19) WATCH: Steady State (24/7)</p> <ul style="list-style-type: none"> • Monitoring: Severe storms possible over northern FL; damaging winds are the main threat, hail and a few tornadoes also possible <p>IMAT-1: Supporting FEMA-4536-DR-MS (Virtual) IMAT-2: FMC / Available LNOs: AL, FL, & TN EOCs:</p> <ul style="list-style-type: none"> • FL: Full Activation (COVID-19) • GA: Full Activation (COVID-19 / Flooding) • MS: Partial Activation (COVID-19 / Flooding) • TN: Partial Activation (COVID-19 / Tornadoes) • AL, KY, NC, SC: Partial Activation (COVID-19) 	<p>RRCC: Level I (day shift – COVID-19) WATCH: Steady State (24/7)</p> <ul style="list-style-type: none"> • Monitoring: No significant activity <p>IMAT-1: PMC / Staffing shortage IMAT-2: Deployed to RRCC (COVID-19) IMAT-A: AZ, CA, HI, NV, GU, CNMI & AS EOCs:</p> <ul style="list-style-type: none"> • AS, AZ, CA, GU, & NV: Full Activation (COVID-19) • CNMI & HI: Partial Activation (COVID-19)
<i>Region V</i>	<i>Region X</i>
<p>RRCC: Level II (day shift – COVID-19) WATCH: Steady State (24/7)</p> <ul style="list-style-type: none"> • Monitoring: Marginal risk of flash flooding for IL <p>IMAT: Deployed to RRCC (COVID-19) LNOs: IN, MI, & WI EOCs: IL, IN, OH, MI, MN, & WI: Full Activation (COVID-19)</p>	<p>RRCC: Level II (day shift – COVID-19) WATCH – Bothell MOC: Steady State (24/7)</p> <ul style="list-style-type: none"> • Monitoring: No significant activity <p>IMAT: Deployed to RRCC (COVID-19) IMAT-A: AK, ID, OR, & WA LNOs: AK & OR EOCs: AK, ID, OR & WA: Full Activation (COVID-19)</p>

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FEMA National Situation Report Acronyms & Abbreviations

Front Page – Common Operating Picture

NWC:	National Watch Center	ISB:	Incident Support Base	R-IMAT:	Regional Incident Management Assistance Team
NRCC:	National Response Coordination Center	MERS:	Mobile Emergency Response Support	RRCC:	Regional Response Coordination Center
EX (State):	Exercise (Location)	N-IMAT:	National Incident Management Assistance Team	RWC:	Regional Watch Center
FCO:	Federal Coordinating Officer	NMC:	Non-Mission Capable	US&R:	Urban Search & Rescue
FDRC:	Federal Disaster Recovery Coordinator	PMC:	Partially Mission Capable		
FMC:	Fully Mission Capable				
IM:	Incident Management				

Front Page – Force Laydown Map

CAD:	Caribbean Area Division	DR:	Major Disaster Declaration (Stafford Act)	IST:	Incident Support Team
CNMI:	Commonwealth of the Northern Marianas Islands	EM:	Emergency Declaration (Stafford Act)	JFO:	Joint Field Office
DC:	Distribution Center / District of Columbia	EOC:	Emergency Operations Center	LNO:	Liaison Officer
		FCO:	Federal Coordinating Officer	TF:	Task Force
				VJFO:	Virtual JFO

Front Page – Incident Management Cadres

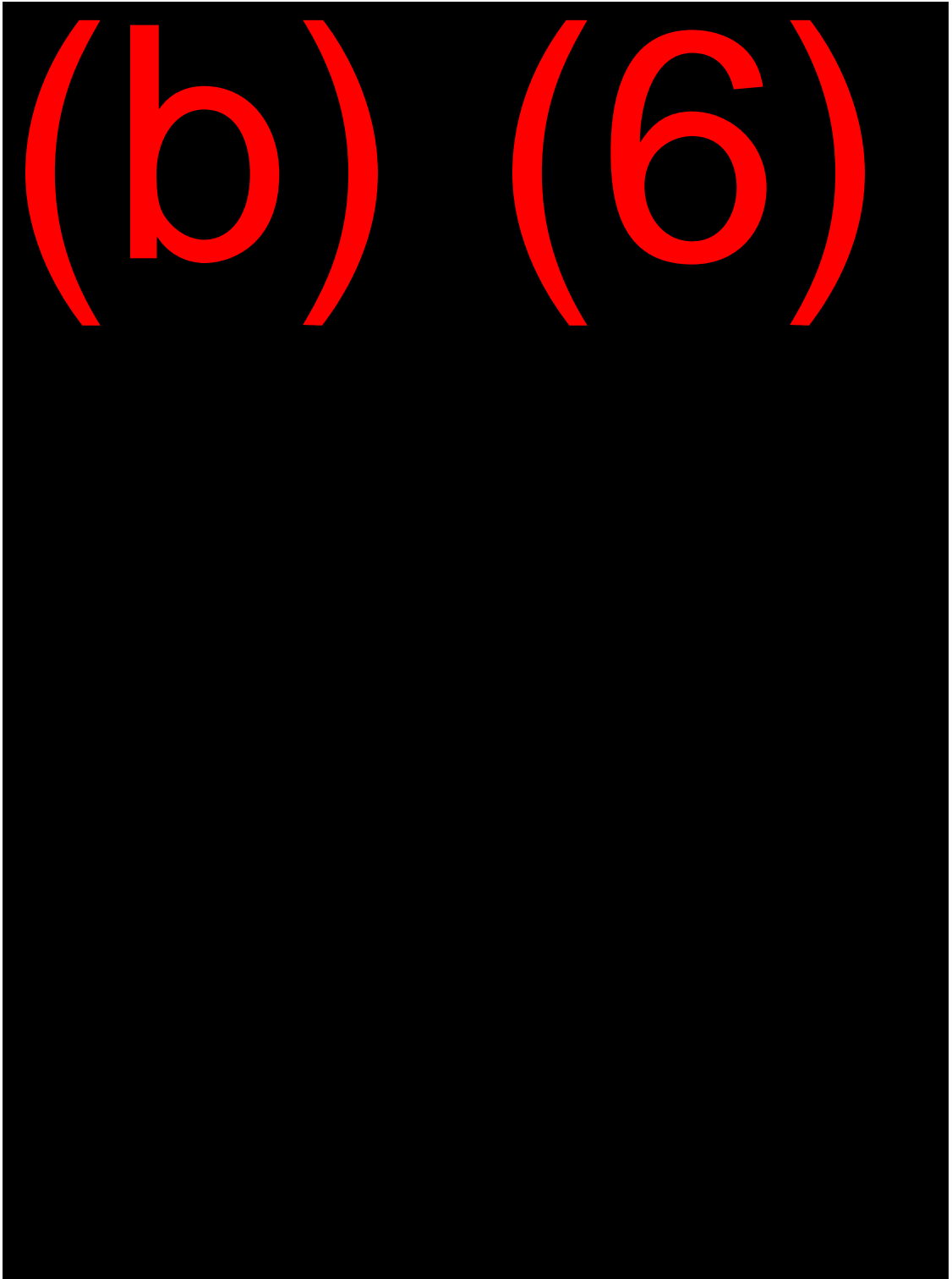
ACQ:	Acquisitions	DSA:	Disaster Survivor Assistance	HR:	Human Resources
ADR:	Alternative Dispute Resolution	EHP:	Environmental Planning and Historic Preservation	IA:	Individual Assistance
DI:	Disability Integration	ER:	Equal Rights	IT:	Information Technology
DEC:	Disaster Emergency Communications	EA:	External Affairs	OCC:	Office of Chief Counsel
DFTO:	Disaster Field Training Ops	FL:	Field Leadership	LOG:	Logistics
		FM:	Financial Management	HM:	Hazard Mitigation

Other Acronyms & Abbreviations

ARC:	American Red Cross	IPAWS:	Integrated Public Alert & Warning System
CBRN:	Chemical, Biological, Radiological and Nuclear	IST:	Incident Support Team
CDC:	Centers for Disease Control and Prevention	JTWC:	Joint Typhoon Warning Center
CIKR:	Critical Infrastructure / Key Resources	MCOV:	Mobile Communications Operations Vehicle
DCO:	Defense Coordinating Officer	MEOV:	Mobile Emergency Operation Vehicle (MERS)
DFA:	Direct Federal Assistance (Stafford Act program)	MCC:	Movement Coordination Center
DIRS:	Disaster Information Reporting System	MMI:	Modified Mercalli Intensity (Earthquake scale)
DLA:	Defense Logistics Agency	MOC:	MERS Operations Center
DoD:	Department of Defense	NHC:	National Hurricane Center
DOE:	Department of Energy	NOAA:	National Oceanic & Atmospheric Administration
DRC:	Disaster Recovery Center	NWS:	National Weather Service
EAGLE-I:	Environment for Analysis of Geo-Located Energy Information (DOE)	PA:	Public Assistance (Stafford Act program)
EF:	Enhanced Fujita (Tornado scale)	PAGER:	Prompt Assessment of Global Earthquakes for Response
EPA:	Environmental Protection Agency	PDA:	Preliminary Damage Assessment (Joint FEMA/State)
ESF:	Emergency Support Function	PSPS:	Public Safety Power Shutoff
FMAG:	Fire Management Assistance Grant	ROC:	Response Operations Cell (part of the NRCC)
GIS:	Geospatial Information Systems	SEAR:	Special Event Assessment Rating
HHS:	Health & Human Services	SLTT:	State, Local, Tribal, and Territorial (<i>Governments</i>)
HM:	Hazard Mitigation (Stafford Act program)	USACE:	U.S. Army Corps of Engineers
IA:	Individual Assistance (Stafford Act program)	USAID:	U.S. Agency for International Development
IMAAC:	Interagency Modeling & Atmospheric Assessment Center	USCG:	U.S. Coast Guard
IOF:	Initial Operating Facility	USGS:	U.S. Geological Survey

(More FEMA Acronyms [FAAT Book](#))

From:
To:



Subject: [Non-DoD Source] ~~FOUO~~ FW: HHS Executive Summary 29May20
Date: Friday, May 29, 2020 8:56:42 AM
Attachments: [image001.png](#)
[CDC Daily Report 2020-05-28.pdf](#)
[HHS FDA Report for 05-28-2020.pdf](#)
[National SITREP 05-29-2020 AM.pdf](#)

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Good Morning,

Please see HHS Executive Sumamry for 29 May 20.

Note: As of 29May20, 0300ET, the CDC confirmed and presumptive positive U.S. cases of COVID-19 have reached 1,707,393 across 50 states and D.C., Guam, PR, CNMI, and USVI; Deaths: 101,311. WHO reported global cases as of 28May20, 0600ET: 5,593,631; global deaths: 353,334; WHO member countries and areas with cases: 215. Testing: 15,766,144 cumulative tests includes samples tested by State/Local Public Health Laboratories, Commercial Laboratories, Hospital Laboratories, CDC, and VA completed as of 28May20.

Potential Protest, Washington, DC: The Office of Security, Intelligence, and Information Management notified the SOC of a Potential protests in the NCR. The protest are being organized via social media in response to Minneapolis shooting. Potential locations are Target stores in the Prince Georges County, MD and Washington D.C. No time frame has been provided at this time.

- FDA issued a guidance entitled "Reporting a Temporary Closure or Significantly Reduced Production by a Human Food Establishment and Requesting FDA Assistance During the COVID-19 Public Health Emergency." The guidance provides a mechanism for FDA-regulated establishments (human food facilities and farms) to voluntarily notify the agency of temporary closures and significant reductions in operations and to request assistance from FDA on issues that might affect continuity of their operations during the pandemic.
- FDA issued a guidance document entitled "Effects of the COVID-19 Public Health Emergency on Formal Meetings and User Fee Applications" to provide answers to frequently asked questions. The agency is providing answers concerning certain aspects of sponsor requests for formal meetings with industry, user fee applications goals and timelines, and prioritization of drug and biological application reviews during the public health emergency.
- MD: Governor announced a new free testing site at a major amusement park will begin on May 29; in total, there will be 11 drive-through testing sites operating in cooperation with the MD Department of Health.
- FL: National Guard (FLNG) is supporting COVID-19 antibody testing at two testing sites; FLNG is assisting state/local partners that are conducting antibody testing for first responders at both facilities.
- MI: Major vehicle manufacturer will produce 12,000 filtering facepiece respirators per day for the

next six months to fill the state's PPE needs.

- HI: The primary inter-island cargo shipper has experienced a 30% drop in cargo since the pandemic began; the shipper supplies food and livestock to all inter-islands and is the only ocean cargo carrier serving Molokai and Lanai.

- ESF-6 Mass Care Unit is identifying requirements for partition barriers to be utilized in a congregate shelter environment

- Customs and Border Protection (CBP) extended the temporary closure of the Trusted Traveler Program enrollment centers until July 6 to minimize the exposure of the public and CBP personnel to COVID-19.

v/r



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From: OS Secretarys Operations Center (b) (6)

Sent: Friday, May 29, 2020 7:57 AM

To: OS Secretarys Operations Center (b) (6)

Subject: HHS Executive Summary 29May20

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HHS Executive Summary: Friday, 29May20

1. HHS

Today's Noteworthy Topics:

COVID-19 (Novel Coronavirus)

As of 29May20, 0300ET, the CDC confirmed and presumptive positive U.S. cases of COVID-19 have reached 1,707,393 across 50 states and D.C., Guam, PR, CNMI, and USVI; Deaths: 101,311. WHO reported global cases as of 28May20, 0600ET: 5,593,631; global deaths: 353,334; WHO member countries and areas with cases: 215. Testing: 15,766,144 cumulative tests includes samples tested by State/Local Public Health Laboratories, Commercial Laboratories, Hospital Laboratories, CDC, and VA completed as of 28May20.

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Daily Operational Schedule:

0830 – FEMA Daily Operations Briefing

1230 – HHS/FEMA Interagency VTC

Public Health Emergency of National Significance:

Opioid Crisis, Nationwide: 02Apr20

Novel Coronavirus (COVID-19): 21Apr20

HHS Response Status Summary:

HHS SOC: Level I (Full Activation)

CDC EOC: Level III (Polio/Ebola)

CDC EOC: COVID-19 (Agency-Wide Response)

FDA EOC: Level I (Vape Product Response, COVID-19)

Emergency Support Function (ESF) Activation:

ESF – 8: Activated

ESF – 6: Activated

Recovery Support Function (RSF) Activation:

H&SS RSF: Activated Region II (2017 Irma/Maria, Puerto Rico projected end date of 30Jun20).

HHS Deployments: (Total =754)

ASPR: 624 – (8) Earthquake Puerto Rico, (615) COVID-19, (1) Irma/Maria Recovery

CDC: 130 – (130) COVID-19

New Mission Assignments (MA):NSTR

Active Situations (6):

- Influenza Season
- Irma/Maria, Puerto Rico, & USVI (Recovery)
- Ebola in Eastern Democratic Republic of the Congo
- Novel Coronavirus (COVID-19)
- Bravo Response
- Earthquake, Puerto Rico

U.S. International Health Regulation National Focal Point Status:NSTR

2. FEMA:

Interagency Response Status Summary:

NWC: Monitoring

NRCC: Level I

National IMATs: Red – Fully Mission Capable; Blue – Fully Mission Capable; Gold – IMAT – A Support

Regional IMATs: Region I, RRCC; Region II, Reconstituting; Region III, RRCC; Region IV-1, Virtual – MS; Region IV-2, Virtual – SC; Region V, RRCC; Region VI-1, Virtual – AR; Region VII, VJFO-COVID; Region VIII, Reconstituting; Region IX-2, RRCC; Region X, RRCC

Significant National Weather:

A strong cold front will likely trigger severe thunderstorms and locally heavy rain on Friday from the Interior Northeast into the eastern Ohio Valley and northern Mid-Atlantic region, especially in New York state and Pennsylvania. Meanwhile, in addition to the ongoing heat wave in the West, fire weather concerns are increasing across the Great Basin into the Four Corners region.

Tropical Activity:

Atlantic:

Disturbance 1

Located several hundred miles east southeast of Bermuda. Gradual development possible; could acquire some subtropical characteristics this weekend. Formation chance through 48 hours Low 30%. Formation chance through 5 days Low 30%.

Eastern Pacific:

Disturbance 1

Located a few hundred miles south of the coasts of Central America and Southern Mexico. Environmental conditions appear conducive for gradual development; a tropical depression could form late this week. Formation chance through 48 hours Low 30%. Formation chance through 5 days High 80%

3. OPDIV/STAFFDIV Overnight Reports:

CDC:

- COVID-19 – 216 Locations (including countries, territories, and areas)
- Ebola – Democratic Republic of Congo – Update

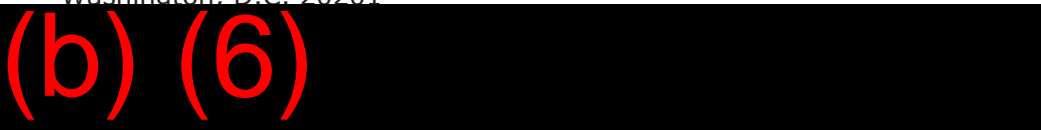
FDA:

- Coronavirus Disease 2019 (COVID-19)/ML/2019

Prepared by:

Secretary’s Operations Center

U.S. Department of Health and Human Services (HHS)
Assistant Secretary for Preparedness and Response (ASPR)
200 Independence Ave., S.W.
Washington, D.C. 20201



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CDC Daily Report: As of 7:00 a.m. EDT, Thursday, May 28, 2020

SIGNIFICANT EVENTS:

- Note: Operational updates described within the CDC Daily Report may not be inclusive of all response activities that are occurring.

** = Asterisks denote updates to monitored events/responses*

MONITORED EVENTS: (3)

- Opioid Crisis
- 2020 Hurricane Season
- 2019 Novel Coronavirus

RESPONSE STATUS:

- CDC EOC: 2019 Novel Coronavirus (Agency-wide Response) *
- CDC EOC: Ebola (Level III)*
- CDC EOC: Polio (Level III)

CDC DEPLOYMENTS:

- Domestic
 - Coronavirus (128)
 - International
 - Polio (0)
 - Ebola (0)
 - Coronavirus (2)
- Total Personnel: (130)

PROGRAM UPDATES:

National Center for Immunization and Respiratory Diseases (NCIRD):

- **COVID-19 United States**
 - The CDC COVID-19 website provides the latest resources for the community, healthcare professionals and information on COVID-19 cases in the United States: <https://www.cdc.gov/coronavirus/2019-ncov/index.html>.
 - Confirmed and presumptive U.S. cases of COVID-19 (as of 3:00am, May 28, 2020): **1,685,384**

- U.S. confirmed and presumptive deaths reported to CDC: **100,073**
- Per WHO/Global Summary: **5,488,825 (84,314 new)** confirmed cases of COVID-19 worldwide (as of 10:00 CEST, May 27, 2020)
- Global Migration Task Force (GMTF)
 - On May 25, 1,146 passengers from China, Iran, Schengen Countries, UK, and Ireland were screened upon arrival at F13 airports;
 - To date 275,384 travelers have been screened.
 - Travel restrictions for Brazil went into effect at 11:59 pm May 26.
 - Preparing for briefing with HHS Secretary Azar and Deputy Secretary Hargan regarding collection of information from arriving international air passengers for contact tracing purposes.
 - Conducted call with Federal Aviation Authority (FAA) to discuss CDC plans to allow commercial air travel of cruise ship crew members after approval of their ship's COVID public health response plan.
- Laboratory Task Force
 - Continue providing updates regarding testing platforms and testing capacity used in public health labs along with deploying staff to provide technical support/assistance to states.
 - As of May 26, CDC has tested over 7,398 samples that equate to over 4,092 patients by PCR and tested 29,509 samples with the CDC serology assay.
 - International Reagent Resource (IRR) shipped 490 reagents to 22 laboratories on Tuesday, May 26.
- State, Tribal, Local, and Territorial Support Section
 - Fielded three (3) inquiries from states and territories, including:
 - Guidance regarding community use of KN95 masks.
 - Assistance on how to interpret guidance for reopening schools.
 - COVID-19 testing strategy guidance regarding expanding testing in the community.

GLOBAL DISEASE DETECTION OPERATIONS CENTER (GDDOC):

- **COVID-19 - 216 Locations (including countries, territories, and areas)**
 - **Source: CDC; NCIRD/DVD; WHO Headquarters; WHO Regional Offices; Ministries of Health**
 - As of 27 May (09:00 GMT/05:00 EDT), WHO has reported a global cumulative of 5,488,825 cases and 349,095 deaths for an increase of 84,314 cases and 5,581 deaths over the preceding 24 hours. The cases are distributed in the six regions as follows: Region of the Americas [2,495,924 confirmed (41,472 new cases) / 145,810 deaths (2,071 new deaths)]; European Region [2,061,828 confirmed (20,124) / 176,226 deaths (3,013)]; Eastern Mediterranean Region [449,590 confirmed (10,690) / 11,452 deaths (159)]; South-East Asia Region [218,523 confirmed (8,250) / 6,359 deaths (219)]; African Region [85,815 confirmed (2,771) / 2,308 deaths (94)]; and Western Pacific Region [176,404 confirmed (1,007) / 6,927 deaths (25)]. Among the 216 affected locations, 141 reported new confirmed cases with the highest number of new cases from the United States

[1,634,010 confirmed (15,243 new cases) / 97,529 deaths (620 new deaths)]; Brazil [374,898 confirmed (11,687) / 23,473 deaths (807)]; Russia [370,680 confirmed (8,338) / 3,968 deaths (161)]; India [151,767 confirmed (6,387) / 4,337 deaths (170)]; the United Kingdom [265,231 confirmed (4,043) / 37,048 deaths (134)]; Peru [123,979 confirmed (4,020) / 3,629 deaths (173)]; Chile [77,961 confirmed (3,964) / 806 deaths (45)]; Mexico [71,105 confirmed (2,485) / 7,633 deaths (239)]; Saudi Arabia [76,726 confirmed (1,931) / 411 deaths (12)]; and Iran [139,511 confirmed (1,787) / 7,508 deaths (57)]. WHO [COVID-19 Situation Reports](#) present official counts of confirmed COVID-19 cases, which may undergo subsequent revisions. Thus, differences among WHO reports and between WHO and other sources of COVID-19 data, using different inclusion criteria and different data cutoff times, are to be expected.

- CDC has established a COVID-19 Incident Management System and the CDC Emergency Operations Center is activated to provide ongoing support to the COVID-19 response. CDC COVID-19 [Travel Recommendations](#) for the locations with and without restrictions on entry to United States are posted and will continue to be updated. The CDC maintains a dedicated CDC [COVID-19](#) website and [Health Alert Network \(HAN\)](#).
- **Ebola - Democratic Republic of Congo - Update to the GDDOC report dated May 18, 2020**
 - **Source: WHO Headquarters; WHO - AFRO; WHO - Democratic Republic of the Congo; Democratic Republic of the Congo Ministry of Health; CDC - DRC**
 - No new confirmed cases of EVD have been reported since 27 April in Beni Health Zone (HZ). On 24 May, two new historical probable cases were validated in Mabalako and Lubero HZs, with symptom onset and death in March and July 2019, respectively (please note that one previously validated probable case has now been removed from the total probable case count due to erroneous inclusion). The one confirmed case, reported on 16 April, remains in the community within Beni HZ; investigations are ongoing to locate the individual.
 - It is now anticipated that the DRC MOH will officially declare on 25 June that the outbreak has ended if no new cases are diagnosed. This represents two incubation periods (42 days) since the last confirmed patient's second negative test for EVD on 13 May, not since the patient's release from the Beni Ebola treatment unit on 14 May.
 - Since the outbreak began and as of 26 May 2020, a total of 3,463 cases (3,317 lab confirmed, 146 probable), 2,280 deaths (case fatality proportion 66%), and 1,171 survivors have been reported in 29 HZs (0 HZ in the past 21 days) in Nord-Kivu, Ituri, and Sud-Kivu provinces in DRC and Kasese district, Uganda.

EOC 24 HOUR CALL DATA:

Category	Total Count
12th Floor/Director Phone Calls	1
COVID-19 (Other)	80
Administrative	52
Adverse Reaction to Vaccine	1

Animal Bite	1
DGMQ - QPHO	2
NOC - DHS: Secure Ops Center	3
NRC	1
Other	4
Vaccine Safety Questions	1

Total Calls: 146

**FDA OFFICE OF EMERGENCY MANAGEMENT
HHS FDA REPORT – May 28, 2020**

This document is confidential and is only for internal HHS use for emergency operations purposes. This document contains non-public information, and may include information for which public disclosure is prohibited by law (such as confidential commercial information, trade secret, and personal privacy information) and information compiled for enforcement purposes. This document was prepared by FDA's Office of Emergency Management/Office of Emergency Operations (OEM/OEO). Any request to distribute this information outside of HHS must be approved by FDA.

UPDATES

Coronavirus Disease 2019 (COVID-19)/ML/2019

FDA continues to work with the WHO, US government partners (e.g., FEMA, NSC, HHS, ASPR, BARDA, CDC, NIH, DoD), state partners and medical product developers as necessary to support response efforts to the novel coronavirus outbreak/pandemic, COVID-19.

- FDA issued a guidance entitled “[Reporting a Temporary Closure or Significantly Reduced Production by a Human Food Establishment and Requesting FDA Assistance During the COVID-19 Public Health Emergency.](#)” The guidance provides a mechanism for FDA-regulated establishments (human food facilities and farms) to voluntarily notify the agency of temporary closures and significant reductions in operations and to request assistance from FDA on issues that might affect continuity of their operations during the pandemic.
- FDA issued a guidance document entitled “[Effects of the COVID-19 Public Health Emergency on Formal Meetings and User Fee Applications](#)” to provide answers to frequently asked questions. The agency is providing answers concerning certain aspects of sponsor requests for formal meetings with industry, user fee applications goals and timelines, and prioritization of drug and biological application reviews during the public health emergency.
- FDA and the Federal Trade Commission (FTC) issued warning letters to four companies for promoting and participating in the sale of fraudulent COVID-19 products, as part of the agency’s effort to protect consumers. There are currently no FDA-approved products to prevent or treat COVID-19. Consumers concerned about COVID-19 should consult with their health care provider.
 - The first company warned, [CBD Gaze](#), participates in the Amazon Associates program. As an Amazon associate, the company earns commissions by promoting the sale of CBD products with misleading claims that the products can mitigate, prevent, treat, diagnose or cure COVID-19 in people.
 - The second company warned, [Alternavita](#), participates in the Amazon Associates program. As an Amazon associate, the company earns commissions by promoting the sale of grapefruit seed extract, colostrum, and

- cod liver oil products with misleading claims that the products can mitigate, prevent, treat, diagnose or cure COVID-19 in people.
- The third company warned, Musthavemom.com, participates in the Amazon Associates program. As an Amazon associate, the company earns commissions by promoting the sale of products including colloidal silver, vitamins, minerals, herb oils and a homeopathic drug product with misleading claims that the products can mitigate, prevent, treat, diagnose or cure COVID-19 in people.
 - The fourth company warned, [Careful Cents, LLC](http://CarefulCents.com), participates in the Amazon Associates program. As an Amazon associate, the company earns commissions by promoting the sale of essential oil products with misleading claims that the products can mitigate, prevent, treat, diagnose or cure COVID-19 in people.
- A judge in the U.S. District Court for the Eastern District of Oklahoma entered a preliminary injunction against Xephyr LLC, doing business as N-Ergetics, and individual defendants Brad Brand, Derill J. Fussell and Linda Fussell. The injunction requires Xephyr and the associated individuals to, among other things, immediately stop distributing colloidal silver products. It was issued on the same basis as a [*temporary restraining order*](#) entered by the court on May 14, 2020. As noted then, defendants offered their colloidal silver products for sale to treat coronavirus, which includes COVID-19 and many other diseases, and, which FDA alleges violates the Federal Food, Drug, and Cosmetic Act (FD&C) because the products are unapproved new drugs and misbranded drugs. The preliminary injunction governs throughout the course of the legal proceeding, thereby disrupting the supply chain for defendants' fraudulent colloidal silver products until the court rules on permanent relief. The complaint was filed by the U.S. Department of Justice at FDA's request. The claims made in the complaint are allegations that, if the case were to proceed to trial, the government must prove to receive a permanent injunction.
 - FDA issued a [*letter to health care providers*](#) to remind reprocessing staff in health care facilities to use the correct sterilization cycle associated with certain models of the Advanced Sterilization Products (ASP) STERRAD Sterilization Systems and to only decontaminate compatible N95 or N95-equivalent respirators for reuse during the COVID-19 pandemic. These sterilization systems help increase the availability of respirators by allowing decontaminated compatible respirators to be reused so health care workers on the front lines can be better protected when providing care to patients with COVID-19.
 - FDA issued two guidance documents (one new guidance and one revised guidance) for industry to help address potential shortages of face masks, surgical masks, respirators, and face shields for use during the COVID-19 public health emergency: [*Recommendations for Sponsors Requesting EUAs for Decontamination and Bioburden Reduction Systems for Face Masks and Respirators During the Coronavirus Disease 2019 \(COVID-19\) Public Health Emergency and Enforcement Policy for Face Masks and Respirators During the Coronavirus Disease \(COVID-19\) Public Health Emergency \(Revised\)*](#). These guidances help to address potential shortages by facilitating the safe reuse and conservation of surgical masks and

respirators for medical purposes through the use of decontamination and bioburden reduction systems and providing recommendations of alternatives and updated options for when FDA-cleared or NIOSH-approved N95 respirators are not available.

- FDA issued an [*Emergency Use Authorization \(EUA\)*](#) for emergency use of the CLEWICU System of CLEW Medical Ltd for use by healthcare providers in the intensive care unit (ICU) as a diagnostic aid to assist with the early identification of adult patients who are likely to be diagnosed with respiratory failure or hemodynamic instability which are common complications associated with COVID-19. The CLEWICU system utilizes the full range of available patient data to provide continuous predictions based on data driven algorithms and machine learning models. The CLEWICU system delivers workflow improvements and dynamic worklist prioritization, enabling healthcare providers to spend less time on administration and more time on patient treatment. In this way, CLEWICU may reduce the contact between ICU personnel and patients by providing the ICU clinician the ability to view the patient risk status from a remote location.
- Testing updates:
 - During the COVID-19 pandemic, the FDA has worked with more than 400 test developers who have already submitted or said they will be submitting EUA requests to the FDA for tests that detect the virus or antibodies to the virus.
 - To date, the FDA has authorized 113 tests under EUAs, which include 100 molecular tests, 12 antibody tests, and 1 antigen test.

To review FDA's current response activities, click: [*FDA's COVID-19 Current Response Activities*](#). OEO, via the 2019-nCoV IMG, will continue to monitor and provide updates.



FEMA National Situation Report

As of 3:00 a.m. ET Friday, May 29, 2020

This report is published twice daily, 3 00 a.m. and 5 00 p.m. ET

Common Operating Picture

FEMA HQ <i>NWC</i> <i>NRCC</i> Monitoring Level I		FEMA REGIONS <i>WATCH</i> <i>RRCC</i> Monitoring I Level II Monitoring II Level II Monitoring III Level III Monitoring IV Level II Monitoring V Level II Alt. Location VII Rostered Monitoring VIII Level II Monitoring IX Level I Monitoring X Level II		Notes: COVID-19 NRCC: (Days) RVII RRCC: Rostered; All remaining RRCC's (Days) GA: Flooding MS: Flooding PR: Earthquake TN: Tornadoes All State EOCs activated for COVID-19		Major Disasters (DR): 104 Emergency Disasters (EM): 98 JFOs: 12 / VJFOs: 14 Staging Area Distribution Center (DC) Declared County (non-COVID-19 Declarations) Fully Activated Partially Activated Monitoring As of 3:00 a.m. ET May 29, 2020 Created by FEMA NWC				N-IMATs 2 Teams Red Blue Gold IMAT-A Support		R-IMATs 4-6 Teams Available I RRCC II Reconstituting III RRCC IV-1 Virtual - MS IV-2 Virtual - SC V RRCC VI-1 Virtual - AR VI-2 VII VJFO-COVID VIII Reconstituting IX-1 IX-2 RRCC X RRCC		FMC PMC NMC Deployed	
Team:	US&R	MERS	FCOs	FDRCs	IM Workforce	Incident Management Cadre Availability Summary									
<i>Status</i>	>66%	>66%	≤1 Type 1	=2		<i>Cadres with 25% or Less Availability</i>									
<i>Assigned:</i>	28	36	47	11	13,504 ▲	EHP 22% (189/631); ER 15% (11/75); FL 19% (30/159); FM 25% (65/260); OPS									
<i>Unavailable:</i>	6	0	0	0	2,489 ▼	23% (66/293); PA 20% (686/3,093); PLAN 20% (85/419); SAF 11% (6/54)									
<i>Deployed:</i>	0	0	39	8	5,756 ○										
<i>Available:</i>	22	36	8	3	5,260/ 39% ▲										

National Current Operations & Monitoring

COVID-19 (For interagency reporting see FEMA NRCC COVID-19 SLB, published daily)

Situation: FEMA and HHS continue leading the multiagency COVID-19 Response / Recovery efforts. 46,615 (+77) FEMA, DoD, HHS, VA, and CDC personnel deployed / activated; 2,968 FEMA employees deployed. Federal, state, tribal, and territorial partners continue to focus on expanded access to testing as COVID-19 infection remains prevalent throughout the country.

Nationwide testing: 15,766,114 (+582,226) cumulative as of May 28

Lifeline Impacts:

Health and Medical Lifeline

- MD: Governor announced a new free testing site at a major amusement park will begin on May 29; in total, there will be 11 drive-through testing sites operating in cooperation with the MD Department of Health
- FL: National Guard (FLNG) is supporting COVID-19 antibody testing at two testing sites; FLNG is assisting state/local partners that are conducting antibody testing for first responders at both facilities
- MI: Major vehicle manufacturer will produce 12,000 filtering facepiece respirators per day for the next six months to fill the state’s PPE needs

Food, Water, & Shelter

- HI: The primary inter-island cargo shipper has experienced a 30% drop in cargo since the pandemic began; the shipper supplies food and livestock to all inter-islands and is the only ocean cargo carrier serving Molokai and Lanai
- ESF-6 Mass Care Unit is identifying requirements for partition barriers to be utilized in a congregate shelter environment
- ESF-6 Voluntary Agency Liaisons Donation Management identified the following regional/state unmet needs and priority trends: food and volunteers for food banks and feeding operations/distribution, covers/equipment to protect outdoor COVID-19 testing operations in rain/storms, and food bank support and delivery assistance for food and prescriptions

Transportation

- Customs and Border Protection (CBP) extended the temporary closure of the Trusted Traveler Program enrollment centers until July 6 to minimize the exposure of the public and CBP personnel to COVID-19

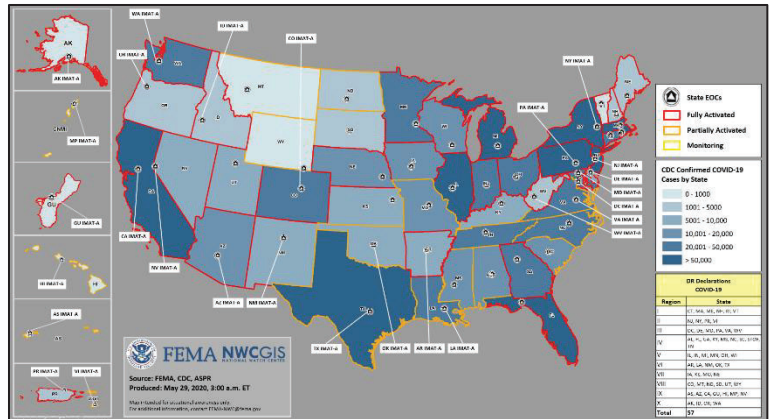
Operational Task Forces

Community Based Testing Sites (CBTS):

- 222,678 (+3,339) samples collected at CBTS locations since Mar 20
- 404,408 (+15,843) tests processed from Private-Partnership Testing Sites since Apr 5

Response:

- FEMA Region VII RRCC is rostered and supporting COVID-19 response form JFO in Kansas City, MO; the NRCC and all remaining RRCCs remain activated
- 28 FEMA IMAT-A teams deployed (24 actual/ 4 virtual) to states/territories/tribal nations; LNOs deployed to 37 (21 actual / 16 virtual) states/territories/tribal nations
- 57 Major Disaster Declarations approved; All State / Territory EOCs activated



	Confirmed/Presumptive	Deaths
United States	1,685,384	100,073
Worldwide	5,488,825	349,095

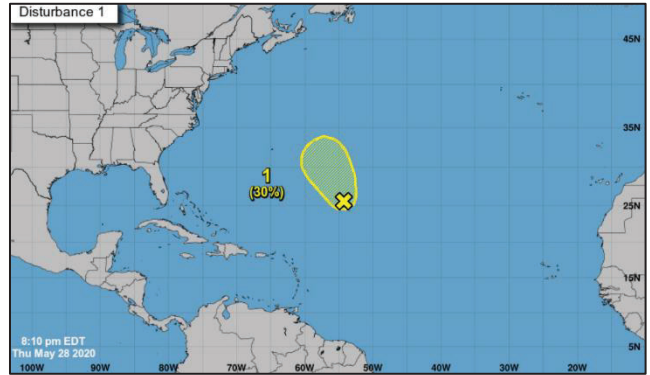
(FEMA COVID-19 SLB, 5 00 p.m. ET, May 28)

Tropics

Atlantic:

Disturbance 1 (As of 8 00 p.m. ET, May 28)

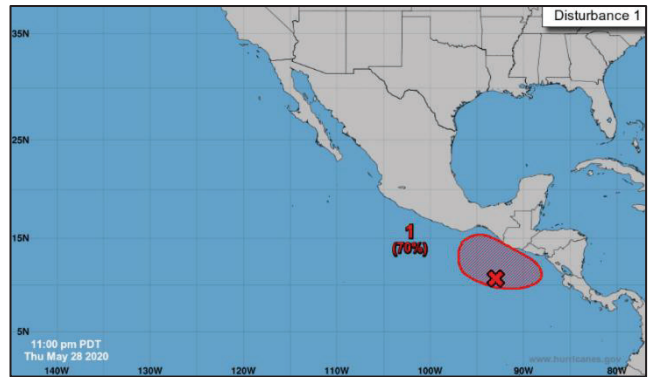
- Several hundred miles east southeast of Bermuda
- Gradual development possible; could acquire some subtropical characteristics this weekend
- Formation chance through 48 hours: Low (30%)
- Formation chance through 5 days: Low (30%)



Eastern Pacific:

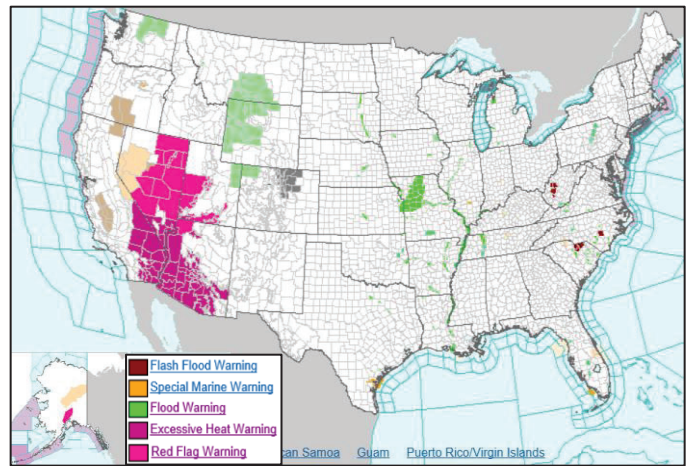
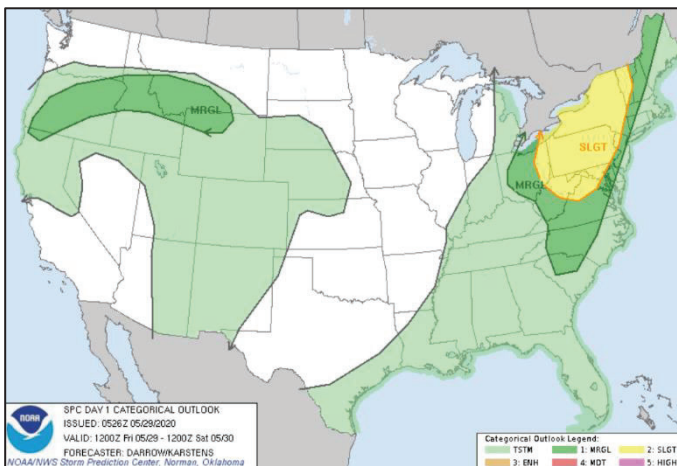
Disturbance 1 (As of 2 00 a.m. ET)

- A few hundred miles south of the coasts of Central America and southern Mexico
- Environmental conditions appear conducive for gradual development; a tropical depression could form this weekend
- Formation chance through 48 hours: Medium (40%)
- Formation chance through 5 days: High (70%)



Weather Threats

- Slight risk of severe thunderstorms possible for portions of the Mid-Atlantic, Central Appalachians, and Northeast
- Flash Flood Warnings in effect for portions of the Carolinas, and West Virginia
- Red Flag and Excessive Heat Warnings remain in effect for portions Arizona, California, Nevada, Utah, and Alaska



(Latest NOAA Forecasts [WPC](#) | [SPC](#) | [NHC](#) | [SWPC](#))

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Joint Preliminary Damage Assessments

Region	State	Event / Date	Type	Counties		Start – End Dates
				Requested	Completed	
IV	AL	Severe Storms, Strong Winds, Tornadoes, and Hail April 19	IA	0	0	N/A
			PA	10	0	5/15 – TBD
V	MI	Dam Breach, Severe Weather, and Flooding May 16, 2020 and continuing	IA	5	0	5/26 – TBD
			PA	5	0	5/26 – TBD
VII	MO	Severe Storms May 3-4	IA	0	0	N/A
			PA	18	2	5/14 – TBD

Declaration Activity

Declaration Requests in Process: 6 (HI, UT, TX (Appeal), Poarch Band of Creek Indians, ND, & AL)

Amendment No. 1 to FEMA-4495-DR-GU

- Issued May 28, 2020
- Amended to include Individual Assistance limited to the Crisis Counseling Program for areas in the territory of Guam (already designated for emergency protective measures [Category B] not authorized under other Federal statutes, including direct Federal assistance)

(Declared Disasters [fema.gov](https://www.fema.gov))

Joint Field Office Status Updates

No change over the last operational period

(JFO listing available on [NWC SharePoint Site](#))

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Regional Current Operations & Monitoring

<i>Region I</i>	<i>Region VI</i>
<p>RRCC: Level II (day shift – COVID-19) WATCH – Maynard MOC: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: Severe weather (see above) IMAT: Deployed to RRCC (COVID-19) LNOs: RI & ME EOCs: CT, MA, ME, NH, RI & VT: Full Activation (COVID-19)</p>	<p>RRCC: Level II (day shift – COVID-19) WATCH – Denton MOC: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: No significant activity IMAT-1: Supporting FEMA-4544-DR-AR (Virtual) IMAT-2: FMC / Available IMAT-A: AR, LA, NM, OK, & TX LNOs: AR, LA, NM, OK, & TX EOCs: <ul style="list-style-type: none"> • AR & NM: Full Activation (COVID-19) • LA, OK, & TX: Partial Activation (COVID-19) </p>
<i>Region II</i>	<i>Region VII</i>
<p>RRCC: Level II (day shift – COVID-19) WATCH: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: Severe weather (see above) IMAT: Reconstituting; thru today; FMC May 30 LNOs: PR, NJ, & NY EOCs: <ul style="list-style-type: none"> • NJ, NY, & PR: Full Activation (COVID-19) • USVI: Partial Activation (COVID-19) </p>	<p>WATCH: Steady State (24/7): Alternate location <ul style="list-style-type: none"> • Monitoring: No significant activity IMAT: Supporting COVID-19 at Region VII HQ (Virtual) EOCs: <ul style="list-style-type: none"> • IA, KS, & NE: Full Activation (COVID-19) • MO: Partial Activation (COVID-19) </p>
<i>Region III</i>	<i>Region VIII</i>
<p>RRCC: Level III (day shift – COVID-19) WATCH: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: Severe weather (see above) IMAT: Deployed to RRCC (COVID-19) IMAT-A: DC, DE, MD, PA, VA, & WV LNOs: DE EOCs: <ul style="list-style-type: none"> • DC, DE, MD, PA, VA, & WV: Full Activation (COVID-19) • VA: Partial Activation (COVID-19) </p>	<p>RRCC: Level II (day shift – COVID-19) WATCH – Denver MOC: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: Excessive heat warning remains in effect for UT IMAT: Reconstituting; return to FMC on June 5 IMAT-A: CO LNOs: SD, WY, MT, & UT EOCs: <ul style="list-style-type: none"> • CO, SD, & UT: Full Activation (COVID-19) • ND, MT & WY: Partial Activation (COVID-19) </p>
<i>Region IV</i>	<i>Region IX</i>
<p>RRCC: Level II (day shift – COVID-19) WATCH: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: Severe weather (see above) IMAT-1: Supporting FEMA-4536-DR-MS (Virtual) IMAT-2: Supporting FEMA-4542-DR-SC (Virtual) LNOs: AL, FL, & TN EOCs: <ul style="list-style-type: none"> • FL: Full Activation (COVID-19) • GA: Full Activation (COVID-19 / Flooding) • MS: Partial Activation (COVID-19 / Flooding) • TN, AL, KY, NC, & SC: Partial Activation (COVID-19) </p>	<p>RRCC: Level I (day shift – COVID-19) WATCH: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: Excessive heat warnings remain in effect for AZ, CA, & NV IMAT-1: PMC / Staffing shortage IMAT-2: Deployed to RRCC (COVID-19) IMAT-A: AZ, CA, HI, NV, GU, CNMI, AS, & Navajo Nation EOCs: <ul style="list-style-type: none"> • AZ, CA, GU, & NV: Full Activation (COVID-19) • AS, CNMI & HI: Partial Activation (COVID-19) </p>
<i>Region V</i>	<i>Region X</i>
<p>RRCC: Level II (day shift – COVID-19) WATCH: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: No significant activity IMAT: Deployed to RRCC (COVID-19) LNOs: IN, MI, & WI EOCs: IL, IN, OH, MI, MN, & WI: Full Activation (COVID-19)</p>	<p>RRCC: Level II (day shift – COVID-19) WATCH – Bothell MOC: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: Red Flag warning remains in effect for portions of AK IMAT: Deployed to RRCC (COVID-19) IMAT-A: AK, ID, OR, & WA LNOs: AK & OR EOCs: AK, ID, OR, & WA: Full Activation (COVID-19)</p>

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FEMA National Situation Report Acronyms & Abbreviations

Front Page – Common Operating Picture

NWC:	National Watch Center	ISB:	Incident Support Base	R-IMAT:	Regional Incident Management Assistance Team
NRCC:	National Response Coordination Center	MERS:	Mobile Emergency Response Support	RRCC:	Regional Response Coordination Center
EX (State):	Exercise (Location)	N-IMAT:	National Incident Management Assistance Team	RWC:	Regional Watch Center
FCO:	Federal Coordinating Officer	NMC:	Non-Mission Capable	US&R:	Urban Search & Rescue
FDRC:	Federal Disaster Recovery Coordinator	PMC:	Partially Mission Capable		
FMC:	Fully Mission Capable				
IM:	Incident Management				

Front Page – Force Laydown Map

CAD:	Caribbean Area Division	DR:	Major Disaster Declaration (Stafford Act)	IST:	Incident Support Team
CNMI:	Commonwealth of the Northern Marianas Islands	EM:	Emergency Declaration (Stafford Act)	JFO:	Joint Field Office
DC:	Distribution Center / District of Columbia	EOC:	Emergency Operations Center	LNO:	Liaison Officer
		FCO:	Federal Coordinating Officer	TF:	Task Force
				VJFO:	Virtual JFO

Front Page – Incident Management Cadres

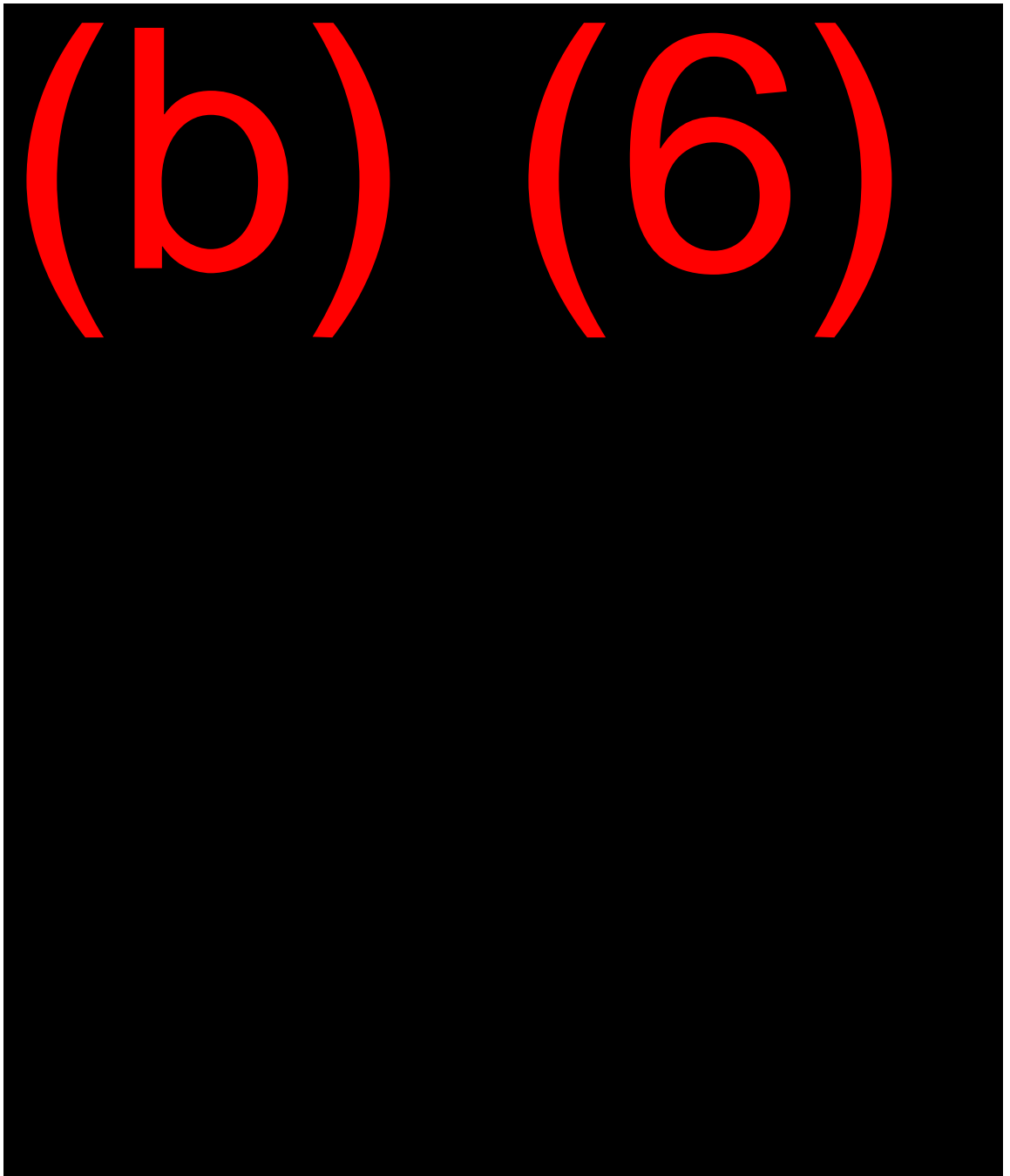
ACQ:	Acquisitions	DSA:	Disaster Survivor Assistance	HR:	Human Resources
ADR:	Alternative Dispute Resolution	EHP:	Environmental Planning and Historic Preservation	IA:	Individual Assistance
DI:	Disability Integration	ER:	Equal Rights	IT:	Information Technology
DEC:	Disaster Emergency Communications	EA:	External Affairs	OCC:	Office of Chief Counsel
DFTO:	Disaster Field Training Ops	FL:	Field Leadership	LOG:	Logistics
		FM:	Financial Management	HM:	Hazard Mitigation

Other Acronyms & Abbreviations

ARC:	American Red Cross	IPAWS:	Integrated Public Alert & Warning System
CBRN:	Chemical, Biological, Radiological and Nuclear	IST:	Incident Support Team
CDC:	Centers for Disease Control and Prevention	JTWC:	Joint Typhoon Warning Center
CIKR:	Critical Infrastructure / Key Resources	MCOV:	Mobile Communications Operations Vehicle
DCO:	Defense Coordinating Officer	MEOV:	Mobile Emergency Operation Vehicle (MERS)
DFA:	Direct Federal Assistance (Stafford Act program)	MCC:	Movement Coordination Center
DIRS:	Disaster Information Reporting System	MMI:	Modified Mercalli Intensity (Earthquake scale)
DLA:	Defense Logistics Agency	MOC:	MERS Operations Center
DoD:	Department of Defense	NHC:	National Hurricane Center
DOE:	Department of Energy	NOAA:	National Oceanic & Atmospheric Administration
DRC:	Disaster Recovery Center	NWS:	National Weather Service
EAGLE-I:	Environment for Analysis of Geo-Located Energy Information (DOE)	PA:	Public Assistance (Stafford Act program)
EF:	Enhanced Fujita (Tornado scale)	PAGER:	Prompt Assessment of Global Earthquakes for Response
EPA:	Environmental Protection Agency	PDA:	Preliminary Damage Assessment (Joint FEMA/State)
ESF:	Emergency Support Function	PSPS:	Public Safety Power Shutoff
FMAG:	Fire Management Assistance Grant	ROC:	Response Operations Cell (part of the NRCC)
GIS:	Geospatial Information Systems	SEAR:	Special Event Assessment Rating
HHS:	Health & Human Services	SLTT:	State, Local, Tribal, and Territorial (<i>Governments</i>)
HM:	Hazard Mitigation (Stafford Act program)	USACE:	U.S. Army Corps of Engineers
IA:	Individual Assistance (Stafford Act program)	USAID:	U.S. Agency for International Development
IMAAC:	Interagency Modeling & Atmospheric Assessment Center	USCG:	U.S. Coast Guard
IOF:	Initial Operating Facility	USGS:	U.S. Geological Survey

(More FEMA Acronyms [FAAT Book](#))

From:
To:



Subject: [Non-DoD Source] FW: HHS Executive Summary 18Apr20
Date: Saturday, April 18, 2020 9:02:35 AM
Attachments: [image001.png](#)
[CDC Daily Report 2020-04-17.pdf](#)
[April 17 2020 Weekly Report for Briefing Book.pdf](#)
[National SITREP 04-18-2020 AM.pdf](#)

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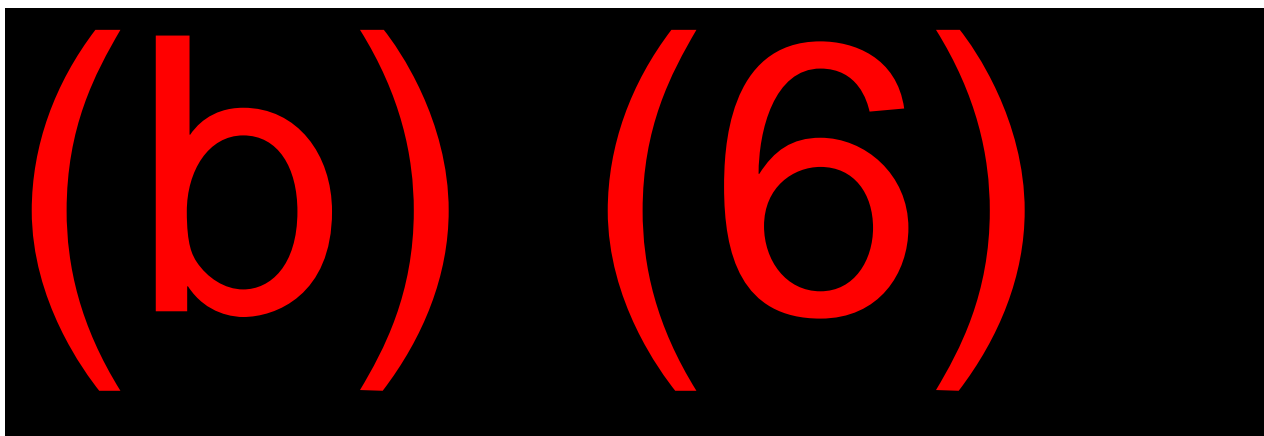
Good Morning,

Please see HHS Executive Summary for 18 APR 20.

Note: As of 18Apr20, 0300ET, the CDC confirmed and presumptive positive U.S. cases of COVID-19 have reached 691,987 across 50 states and D.C. Guam, PR, CNMI, and USVI; Deaths: 35,136. WHO reported global cases as of 15Apr20, 0600ET: 2,074,529; global deaths: 139,378; WHO member countries and areas with cases: 211. Testing: 3,789,053 cumulative tests includes samples tested by State/Local Public Health Laboratories, Commercial Laboratories, Hospital Laboratories, CDC, and VA completed as of 16Apr20.

- The FDA document provides a good roll-up summary for the week in review.
- GA: CDC assisting with screening and testing in 6 Atlanta shelters; collecting data on shelter processes, number of symptomatic people experiencing homelessness, and total COVID-19; 1,074 individuals tested; 15 positive (14 clients, 1 staff) and 742 negative.
- IL: Cook County Jail: 405 inmates tested positive for COVID-19, 57 negative, 30 hospitalized, and 3 inmates deceased; 83 staff tested positive; CDC is assessing risk factors for transmission in detainees/staff and prevalence/comparisons in different density models.
- Phase 1 safety trial for mRNA vaccine: 49 healthy volunteers enrolled (target: 105).
- The International Reagent Resource is sending 30,000 Abbot ID Now tests to 57 public health labs and 15,000 tests to Indian Health Services.
- 7th and 8th Battelle Critical Care Decontamination System (CCDS) units arrived April 15 to Secaucus, NJ and April 16 to New Haven, CT; 9th system will arrive April 20 in Burbank, CA.

v/r

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(b) (6)

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HHS Executive Summary: Saturday, 18Apr20

1. HHS

Today's Noteworthy Topics:

COVID-19 (Novel Coronavirus)

As of 18Apr20, 0300ET, the CDC confirmed and presumptive positive U.S. cases of COVID-19 have reached 691,987 across 50 states and D.C. Guam, PR, CNMI, and USVI; Deaths: 35,136. WHO reported global cases as of 15Apr20, 0600ET: 2,074,529; global deaths: 139,378; WHO member countries and areas with cases: 211. Testing: 3,789,053 cumulative tests includes samples tested by State/Local Public Health Laboratories, Commercial Laboratories, Hospital Laboratories, CDC, and VA completed as of 16Apr20.

Daily Operational Schedule:

0830 – FEMA Daily Operations Briefing
1230 – HHS/FEMA Interagency VTC

Public Health Emergency of National Significance:

Opioid Crisis, Nationwide: 02Apr20
Novel Coronavirus (COVID-19): 31Jan20

HHS Response Status Summary:

HHS SOC: Level I (Full Activation)
CDC EOC: Level III (Polio/Ebola)
CDC EOC: COVID-19 (Agency-Wide Response)
FDA EOC: Level II (Vape Product Response, COVID-19)

Emergency Support Function (ESF) Activation:

ESF – 8: Activated
ESF – 6: Not Activated

Recovery Support Function (RSF) Activation:

H&SS RSF: Activated Region II (2017 Irma/Maria, Puerto Rico projected end date of 30Jun20).

HHS Deployments:(Total = 745)

ASPR: 635 – (8) Earthquake Puerto Rico, (614) COVID-19, (5) Irma/Maria Recovery, (3) Irma, (2) FY Funded Training Q1, (2) FY Non-Funded Training Q1, (1) California Wildfires
CDC: 110 – (109) COVID-19, (1) Ebola

New Mission Assignments (MA):NSTR

Active Situations (7):

- Influenza Season
- Irma/Maria, Puerto Rico, & USVI (Recovery)

- Ebola in Eastern Democratic Republic of the Congo
- California Wildfires (Recovery)
- Novel Coronavirus (COVID-19)
- Bravo Response
- Earthquake, Puerto Rico

U.S. International Health Regulation National Focal Point Status:NSTR

2. FEMA:

Interagency Response Status Summary:

NWC: Monitoring

NRCC: Level I

National IMATs: Red – Fully Mission Capable; Blue – Fully Mission Capable; Gold – IMAT – A Support

Regional IMATs: Region I, RRCC; Region II, NY; Region III, RRCC; Region V, RRCC; Region VII, RRCC; Region VIII, RRCC; Region IX-2, RRCC; Region X, RRCC

Significant National Weather:

Slight risk of severe thunderstorms across northern and central Florida. Marginal risk of thunderstorms in central Texas to the lower Mississippi Valley. Critical Fire weather possible over southern and eastern New Mexico.

3. OPDIV/STAFFDIV Overnight Reports:

CDC:

- COVID-19 – 213 Locations (including countries, territories, and areas) – Update
- Dengue – Singapore – Update
- Guillain Barré Syndrome – Peru – Update
- Polio (Wild Type) – Pakistan – Update
- Polio (Vaccine-derived) – Niger – Update

FDA:

- Coronavirus Disease 2019 (COVID-19)/ML/2019
- E. coli O103:H2/Produce (Suspect)/Feb 2020
- Listeria monocytogenes/Produce (Suspect)/Feb 2020

Prepared by:

Secretary's Operations Center

U.S. Department of Health and Human Services (HHS)

Assistant Secretary for Preparedness and Response (ASPR)

200 Independence Ave., S.W.

Washington, D.C. 20201

(b) (6)



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From: [FEMA-NRCC-sasc](#)
Subject: [Non-DoD Source] FYSA: Daily Briefing Points April 26
Date: Sunday, April 26, 2020 11:14:45 AM
Attachments: [ESF15_DailyBriefingPoints_20200426_FINAL.pdf](#)
[ESF15_DailyBriefingPoints_20200426_Regional_Supplemental_FINAL.pdf](#)

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Coronavirus (COVID-19) Pandemic Whole-of-America Response

Sunday, April 26, 2020

“AS STATES PREPARE TO BEGIN REOPENING THEIR ECONOMIES, WE NOW HAVE BILLIONS IN NEW RESOURCES TO SUPPLEMENT THE EXPERTISE, STAFF, AND FUNDING WE’VE ALREADY SENT TO STATES TO TRACK AND EVENTUALLY CONTAIN THE SPREAD OF THE VIRUS.”
- HHS SECRETARY ALEX AZAR

Topline Briefing Points and Messages

On April 16, President Trump released [Guidelines for Opening Up America Again](#) < Caution-Caution-<https://www.whitehouse.gov/openingamerica/> > , providing a plan for rolling back social distancing measures and reopening the country’s economy in several phases, depending on location.

- Vice President Pence spoke with the Nation’s governors on April 24, reinforcing the partnership between the federal and state governments and the continued progress to expand and implement testing to be able to reopen safely and responsibly under the phased approach.
- The federal government will continue to work with governors across the country to ensure they have the equipment, supplies and testing resources.

On April 25, FEMA announced that more than \$5.1 million dollars in crisis counseling service grants have been made available to five states.

The grants, made to Massachusetts, Michigan, New Jersey, New York and Washington, will support programs providing free, confidential counseling to assist individuals through community-based outreach and educational services.

Due to the COVID-19 nationwide emergency and the need to protect the safety and health of all Americans, the crisis counseling will be delivered by phone, internet and the media (including social media).

As of April 25, FEMA, HHS, and the private sector combined have coordinated the delivery of or are currently shipping: 70.7 million N95 respirators, 104.5 million surgical masks, 7 million face shields, 14.7 million surgical gowns, 793.8 million gloves, 10,603 ventilators and 8,450 federal medical station beds.

The U.S. has now processed 5.1 million samples, which is more total tests than the following nations combined: Australia, Austria, Canada, France, India, Japan, Singapore, Sweden, South Korea, and the United Kingdom.

- States should be making full use of the testing resources available to them, to include leveraging the full capacity available through commercial laboratories in addition to the capability provided through state laboratories.
- HHS and FEMA have expanded items supplied by the [International Reagent Resource \(IRR\)](http://www.internationalreagentresource.org/) < Caution-Caution-http://www.internationalreagentresource.org/ > to help public health labs access free diagnostics supplies and reagents.



CDC Daily Report: As of 7:00 a.m. EDT, Friday, April 17, 2020

SIGNIFICANT EVENTS:

- Note: Operational updates described within the CDC Daily Report may not be inclusive of all response activities that are occurring.

** = Asterisks denotes updates to monitored events/responses*

MONITORED EVENTS: (4)

- Opioid Crisis
- Measles Outbreak
- Hepatitis-A Outbreak
- 2020 Bravo Response (*Heightened Tensions Middle East*)

RESPONSE STATUS:

- CDC EOC: 2019 Novel Coronavirus (Agency-wide Response) *
- CDC EOC: Ebola (Level III)
- CDC EOC: Polio (Level III) *

CDC DEPLOYMENTS:

- Domestic
 - Coronavirus (103)
 - International
 - Polio (0)
 - Ebola (1)
 - Coronavirus (6)
- Total Personnel: (110)

PROGRAM UPDATES:

National Center for Immunization and Respiratory Diseases (NCIRD):

- **COVID-19 United States**
 - Confirmed and probable U.S. cases of COVID-19 (as of 3:00am, Apr 17): **658,875**.
 - U.S. deaths reported to CDC: **32,970** (as of 3:00am, Apr 17)
 - The CDC COVID-19 website provides the latest resources for the community, healthcare professionals and information on COVID-19 cases in the United States: <https://www.cdc.gov/coronavirus/2019-ncov/index.html>.
- **Health Systems and Worker Safety**
 - CDC Coronavirus Symptom-Checker (Clara bot): 16.5 M visits since Mar 19.

- Text-based Illness Monitoring (TIM) system: Over 10,356 total users (CDC/HHS: 1,341 active users, State/Local: 3,618 active users) as of Apr 14.
- Data abstraction ongoing for rapid assessment of COVID-19 deaths.
- Improving understanding of overall patient impact and hospital capacity issues through continued analysis of data from the National Healthcare Safety Network (NHSN), National Syndromic Surveillance Program (NSSP), and Health Pulse.
- Continuing to provide onsite and remote support to state departments conducting outbreak investigations at meat packing plants.
- Providing onsite support to Arkansas State Health Department for ongoing outbreaks in correctional facilities.
- Providing field support and IPC technical assistance for healthcare worker investigations, healthcare settings, and non-healthcare settings (e.g., homeless shelters, alternate care sites, etc.).
- **Epidemiology Studies Task Force**
 - Continue to conduct hot spot analyses with a focus on community transmission.
 - Pregnancy and Infant Team:
 - Developing a specimen testing study to understand vertical transmission.
 - Developing an abstraction guide to accompany the Data Collation and Integration for Public Health Event Response (DCIPHER) module.
 - Coordination efforts continue to unify serology study activities across the response.
 - Collecting data for adult and pediatric Intensive Care Unit (ICU) study.
- **Global Migration Task Force**
 - As of Apr 15, CDC has screened 61,061 air travelers arriving from China and Iran; Department of Homeland Security (DHS) has screened an additional 203,418 air travelers arriving from Schengen Countries, UK, and Ireland.
 - Developing strategies for entry screening to be used during the next phase of the pandemic.
 - Developing a “Road Trip” toolkit which will include electronic messages on billboards, messages in rest areas, and a webpage.
 - Working with Maritime Activity of Cruise Ship Task Force to implement a No Sail order.
 - Reviewing advice developed for US Embassy Medical Units at the request of the International Task Force (ITF).
- **Cruise Ship Team**
 - Tracking cruise ships (~5) that are disembarking passengers domestically or disembarking internationally with American Citizens on board and crew-only ships at port or anchorage in and around the U.S. with known or suspected COVID-19 (~24).
 - Collaborate with other U.S. federal agencies to ensure public health recommendations are followed upon the disembarkation and return travel of passengers and crew.
- **Laboratory Task Force**
 - Ninety-six (96) (1 new) public-health labs are now running the CDC RT-PCR virus detection assay.
 - As of Apr 14, CDC tested over 5,299 samples that equate to over 2,031 patients; public health labs tested over 316,889 samples.
 - International Reagent Resource (IRR) shipped 207 reagents to 27 laboratories on Wednesday, Apr 15, 2020.

- **STLT Support Section**

- Deploying field teams to states with low incidence of COVID-19 as part of a Community Protection Initiative, providing epidemiologic, community mitigation, IPC, and lab support.
- Adjudicated and processed approximately 135 inquiries from IMS task forces, national public health partners, and state, local, and territorial public health officials.
- Deployed teams to Colorado and South Dakota to support state health agency outbreak investigations at meat processing plants.
- Responding to calls from healthcare providers and health departments to provide guidance on pressing clinical issues.

GLOBAL DISEASE DETECTION OPERATIONS CENTER (GDDOC):

- **COVID-19 - 213 Locations (including countries, territories, and areas) - Update to the GDDOC report dated April 15, 2020**

- **Source: CDC; NCIRD/DVD; WHO Headquarters; WHO Regional Offices; Ministries of Health**
- As of April 16 (09:00 GMT/05:00 EDT), WHO has reported a global cumulative number of 1,991,562 cases and 130,885 deaths for an increase of 76,647 cases and 7,875 deaths over the preceding 24 hours. The cases are distributed in the six regions as follows: European Region [1,013,093 confirmed (35,497 new cases) / 89,317 deaths (4,710 new deaths)]; Region of the Americas [707,121 confirmed (33,760) / 30,245 deaths (2,909)]; Eastern Mediterranean Region [111,432 confirmed (4,043) / 5,532 deaths (137)]; South-East Asia Region [21,790 confirmed (1,503) / 990 deaths (54)]; Western Pacific Region [125,571 confirmed (1,367) / 4,239 deaths (38)]; and African Region [11,843 confirmed (477) / 550 deaths (27)]. Among the 213 affected locations, 145 reported new confirmed cases with the highest number of new cases from the United States [604,070 confirmed (25,802 new cases) / 25,871 deaths (2,395 new deaths)]; Spain [177,633 confirmed (5,092) / 18,579 deaths (523)]; United Kingdom [98,480 confirmed (4,603) / 12,868 deaths (761)]; Turkey [69,392 confirmed (4,281) / 1,518 deaths (115)]; Russia [27,938 confirmed (3,448) / 232 deaths (34)]; Germany [130,450 confirmed (2,866) / 3,569 deaths (315)]; Peru [10,303 confirmed (2,784) / 230 deaths (37)]; Italy [165,155 confirmed (2,667) / 21,647 deaths (578)]; France [105,155 confirmed (2,622) / 17,146 deaths (1,438)]; and Belgium [33,573 confirmed (2,454) / 4,440 deaths (283)]. WHO [COVID-19 Situation Reports](#) present official counts of confirmed COVID-19 cases, thus differences between WHO reports and other sources of COVID-19 data using different inclusion criteria and different data cutoff times are to be expected.
- CDC has established a COVID-19 Incident Management System and the CDC Emergency Operations Center is activated to provide ongoing support to the COVID-19 response. CDC COVID-19 [Travel Recommendations](#) for the locations with and without restrictions on entry to United States are posted and will continue to be updated. The CDC [Health Alert Network \(HAN\)](#) and a dedicated CDC [COVID-19](#) website is maintained.

- **Dengue - Singapore - Update to the GDDOC report dated April 02, 2020**

- **Source: Singapore Ministry of Health; Singapore National Environment Agency**
- As of April 16, Singapore has reported 5,422 cases of dengue through epidemiological week 15 (EW 15), and 11 cases of dengue hemorrhagic fever. This represents an increase of 657 cases since our last report. This also represents a significant increase through the same reporting period last year, during which time Singapore reported 2,431 cases of dengue and 25 cases of dengue hemorrhagic fever.

- Dengue is endemic to Singapore, and in 2019 the country reported 16,003 cases for the year. However, the peak season for cases is usually between June and October. In response, on March 22, the Singapore National Environment Agency (NEA) launched its annual National Dengue Prevention Campaign ahead of schedule. The campaign is island-wide and will focus on raising residents' awareness about stagnant water, and its ability to serve as a potential breeding habitat for *Aedes aegypti* mosquitos, the vector of dengue fever.
 - Like many countries, Singapore is concurrently dealing with the COVID-19 pandemic. Given the similarity in symptoms between COVID-19 and dengue, this may complicate diagnosis of patients with acute febrile illness.
- **Guillain Barré Syndrome – Peru – Update to the GDDOC report dated March 23, 2020**
 - **Source: Peru Ministry of Health; NCEZID/DHCPP**
 - An outbreak of Guillain Barré Syndrome (GBS) began in Peru in 2018 when 258 cases were reported. In 2019, a total of 1,059 cases of a GBS-like syndrome, including at least 38 deaths were reported. Thus far in 2020, as of epidemiologic week (EW) 15, a total of 429 cases of GBS-like syndrome and 11 deaths have been reported nationwide. This represents an increase of 20 cases in four weeks. The most recent outbreak has now returned to baseline.
 - Peru is administratively divided into 25 regions and Lima Province. In 2020 cases are concentrated in the coastal regions, with the largest numbers reported from Lima (123 cases), Piura (71 cases), La Libertad (61), Junin (53 cases), and Cajamarca (29 cases).
 - GBS is an immune-mediated disorder, and has been linked to several potentially causative agents, including *Campylobacter jejuni*, influenza viruses, *Mycoplasma pneumoniae*, human immunodeficiency virus, Epstein-Barr virus, cytomegalovirus, and possibly others.
 - GDDOC supported the deployment of six epidemiologists and subject matter experts to Peru in November 2019 to provide technical assistance to the MoH of Peru to assist in investigating potential etiologies for the most recent increase in cases.
 - **Polio (Wild Type) – Pakistan – Update to the GDDOC report dated April 09, 2020**
 - **Source: CGH/GID; Global Polio Eradication Initiative**
 - Three cases of wild poliovirus type 1 (WPV1) were reported in Pakistan this week: one each in Khyber Pakhtunkhwa Tribal District (KPTD), and Khyber Pakhtoon and Sindh provinces bringing the number of 2020 cases to 39 and the total number of 2019 cases to 147.
 - Five WPV1 positive environmental samples were also reported: one in Khyber Pakhtoon and two each in Punjab and Sindh provinces.
 - **Polio (Vaccine-derived) – Niger – Update to the GDDOC report dated June 09, 2019**
 - **Source: Global Polio Eradication Initiative**
 - One case of circulating vaccine-derived poliovirus type 2 (cVDPV2) acute flaccid paralysis, onset date 15 February 2020, has been reported in Niamey province, Niger. This is the first case of 2020. One case was reported in 2019.

EOC 24 HOUR CALL DATA:

Category	Total Count
Administrative	34
COVID-19 (DoH)	2
OSJI-Covid / 20cv5096 (DoD 20-L-1014) / 3751	

COVID-19 (Other)	106
Balamuthia infection (Granulomatous Amebic Encephalitis)	1
Botulism	1
DGMQ - QPHO - COVID-19 Screening	4
Logistics Assistance - DEO	1
Media Relations Calls	2
NOC - DHS: Secure Ops Center	2
Other Human Diseases	1

Total Calls: 154

**FDA OFFICE OF EMERGENCY MANAGEMENT
HHS FDA REPORT – April 17, 2020**

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UPDATES

Coronavirus Disease 2019 (COVID-19)/ML/2019

FDA continues to work with WHO, US government partners (e.g., FEMA, NSC, HHS, ASPR, BARDA, CDC, NIH, DoD), state partners and medical product developers as necessary to support response efforts to the novel coronavirus outbreak/pandemic, COVID-19.

The following significant updates for the past week include:

- FDA issued a Consumer Update: [*How You Can Make a Difference During the Coronavirus Pandemic*](#). It explains ways to help, such as donating blood, protecting yourself and others, saving protective equipment for front line workers and reporting fraudulent products to the agency.
- FDA added new questions and answers to the webpage [*O&A for Consumers: Hand Sanitizers and COVID-19*](#). These new questions focus on unintentional ingestion of hand sanitizer by children, as there has been an increase in calls to Poison Control for unintentional ingestion of hand sanitizer during the COVID-19 pandemic.
- FDA issued an [*Emergency Use Authorization \(EUA\)*](#) for the emergency use of the Perfusor Space Syringe Infusion Pump System, Infusomat Space Volumetric Infusion Pump System, and Outlook ES (“B. Braun Space and Outlook Pumps”) for use in the tracheal delivery of continuous nebulized medications into a nebulizer to treat patients of all ages with or suspected of having COVID-19 and decrease the exposure of healthcare providers to such patients during the COVID-19 pandemic. The EUA was also issued for ground medical transport use of the Infusomat Space Volumetric Infusion Pump System.
- FDA issued an [*Emergency Use Authorization \(EUA\)*](#) to Advanced Sterilization Products, Inc. (ASP) for the ASP STERRAD Sterilization Systems that has the potential to [*decontaminate approximately 4 million compatible N95 or N95-equivalent respirators*](#) per day in the U.S. for single-user reuse by health care workers in hospital settings. This authorization is intended to help increase the availability of respirators so health care workers on the front lines can be better protected and provide the best care to patients with COVID-19.
- Considering the anticipated increase in demand for chloroquine phosphate and hydroxychloroquine sulfate, FDA is taking steps to ensure that adequate supply of these drug products is available for patients:

- FDA [published product-specific guidances](#) (PSGs) to support generic drug development for these drugs. The new PSG for chloroquine phosphate clarifies that the product is AA rated in the Approved Drug Products with Therapeutic Equivalence Evaluations publication (Orange Book), meaning that there are no known or suspected bioequivalence problems, and no in vivo studies are necessary. The revised PSG for hydroxychloroquine sulfate adds advice about a Biopharmaceutics Classification System-based biowaiver option.
- The FDA is currently prioritizing review of any newly submitted Abbreviated New Drug Applications (ANDAs) for chloroquine phosphate and hydroxychloroquine sulfate under [MAPP 5240.3: Prioritization of the Review of Original ANDAs, Amendments, and Supplements](#).
- FDA and the Federal Trade Commission (FTC) issued warning letters to five sellers of fraudulent COVID-19 products, as part of the agency’s effort to protect both people and pets. With these warning letters, the FDA is exercising its authority to protect consumers from companies selling unapproved products with false or misleading claims during the COVID-19 pandemic. There are currently no FDA-approved products to prevent or treat COVID-19. Consumers concerned about COVID-19 should consult with their health care provider:
 - [Herbs of Kedem](#), sells unapproved and misbranded herbal products for the prevention and treatment of COVID-19.
 - [The GBS dba Alpha Arogya India Pvt Ltd](#), offers unapproved and misbranded ayurvedic products including “Alpha 11” and “Alpha 21” for sale in the U.S. with misleading claims about the prevention or treatment of COVID-19.
 - [Gaia Arise Farms Apothecary](#), offers unapproved and misbranded products including “True Viral Defense” also referred to as “Viral Defense Tincture.” The company makes misleading claims the products are safe and/or effective for the treatment or prevention of COVID-19 in people.
 - [Earth Angel Oils](#), offers essential oil products that are unapproved and misbranded drugs for the prevention and treatment of COVID-19. There are currently no FDA-approved products to prevent or treat COVID-19. Consumers concerned about COVID-19 should consult with their health care provider.
 - [The Art of Cure](#), offers homeopathic drug products for sale in the U.S. that are unapproved and misbranded with misleading claims the products are safe and/or effective for the prevention and treatment of COVID-19.
- Additionally, FDA [issued](#) two warning letters to [Fishman Chemical of North Carolina, LLC.](#), and [Dr. G’s Marine Aquaculture](#), which distribute chloroquine phosphate products intended to treat disease in aquarium fish. Chloroquine phosphate intended to treat disease in aquarium fish has not been approved, conditionally approved, or indexed. Although neither product identified in today’s warning letters made claims about use in people, the agency is [concerned](#) that consumers may mistake unapproved chloroquine phosphate animal drugs for the human drug chloroquine phosphate, which is currently under study as a potential treatment for COVID-19.
- FDA issued two new [emergency use authorizations](#) (EUAs) for serology tests to detect for the presence of coronavirus antibodies. The EUAs were issued to [Ortho-Clinical](#)

[Diagnostics, Inc.](#) for its VITROS Immunodiagnostic Products Anti-SARS-CoV-2 Total Reagent Pack and [Chembio Diagnostic Systems, Inc.](#) for its DPP COVID-19 IgM/IgG System.

- FDA issued an [emergency use authorization](#) (EUA) for the emergency use of Stryker Instrument’s Sterizone VP4 Sterilizer1 N95 Respirator Decontamination Cycle for use in decontaminating compatible N95 and N95-equivalent respirators for single-user reuse by healthcare personnel.
- FDA posted a new “[At-a-Glance Summary](#)” that captures the agency’s major activities in the fight against COVID-19. The agency intends to regularly update this resource on efforts related to medical products and equipment, vaccines and therapeutics, food supply and more.
- FDA issued [guidance on digital health devices for treating psychiatric disorders](#) to help expand the availability of these devices while reducing user and health care provider contact and potential exposure to COVID-19 during this pandemic. The enforcement policy described in the guidance applies to computerized behavioral therapy devices and other digital health therapeutic devices for psychiatric disorders as well as low-risk general wellness and digital health products for mental health or psychiatric conditions.
- FDA issued a statement [Encouraging Recovered Patients to Donate Plasma for Development of Blood-Related Therapies.](#)
- FDA announced a further expansion of COVID-19 testing options through the recognition that spun synthetic swabs – with a design similar to Q-tips – could be used to test patients by collecting a sample from the front of the nose: [FDA, Gates Foundation, UnitedHealth Group, Quantigen, and U.S. Cotton Collaborate to Address Testing Supply Needs](#)
- FDA posted tips on [Shopping for Food During the COVID-19 Pandemic - Information for Consumers](#) and a downloadable [PDF](#). These materials reassure consumers that there is currently no evidence of human or animal food or food packaging being associated with transmission of the coronavirus that causes COVID-19.
- In an [interview](#) posted on the FDA’s webpage, Deputy Commissioner for Food Policy and Response Frank Yiannas talks about the state of the U.S. food supply, both now and beyond this public health crisis. The topics he covers include food safety and food availability, as well as an update on implementation of the FDA Food Safety Modernization Act and plans to release a blueprint for the New Era of Smarter Food Safety initiative.
- FDA issued a [guidance](#) for immediate implementation setting forth a temporary policy for outsourcing facilities to compound certain human drugs for hospitalized patients during the COVID-19 public health emergency. This guidance is being issued to provide patient access to treatment options for COVID-19 when hospitals experience difficulties accessing certain FDA-approved drugs. FDA does not intend to take action against outsourcing facilities that prepare certain compounded drugs, as described in the guidance, for hospitals that treat patients with COVID-19.
- FDA added content to the question-and-answer appendix in its guidance titled “[Conduct of Clinical Trials of Medical Products during COVID-19 Public Health Emergency.](#)” The updated guidance includes new content on conducting remote clinician-reported outcome or performance outcome assessments; remote site

monitoring; [electronic common technical document](#) requirements; investigational product administration by a local health care provider who is not a sub-investigator; and information for sponsors on who they should contact at the FDA regarding certain changes to ongoing trials. There is also updated information about obtaining informed consent from a patient who is unable to travel to the clinical trial site due to COVID-19 illness or travel restrictions, in situations where electronic informed consent is not an option.

- FDA issued [guidance](#) to help expand the availability of telethermographic systems used for body temperature measurements for triage use for the duration of the public health emergency. The advantage of these systems for initial temperature assessment for triage use is the potential use in high throughput areas (such as airports, businesses, warehouses, and factories) and in settings where other temperature assessment products may be in short supply.
- Diagnostics update:
 - During the COVID-19 pandemic, the FDA has worked with more than 315 test developers who have said they will be submitting emergency use authorization (EUA) requests to FDA for COVID-19 tests.
 - To date, 37 [emergency use authorizations](#) have been issued for COVID-19 tests.
 - The FDA has been notified that more than 190 laboratories have begun testing under the policies set forth in our COVID-19 Policy for Diagnostic Tests for Coronavirus Disease-2019 during the Public Health Emergency Guidance.

To review FDA's current response activities, click: [FDA's COVID-19 Current Response Activities](#). OEO, via the 2019-nCoV IMG, will continue to monitor and provide updates.

E. coli O103:H2/Produce (Suspect)/Feb 2020

On 4/14/2020 two new cases were added, extending the isolation date. CDC announced that they will be closing this outbreak, the closeout date is TBD. FDA's Coordinated Outbreak Response and Evaluation Network (CORE) will continue to coordinate.

Listeria monocytogenes/Produce (Suspect)/Feb 2020

Additional FDA samples have tested positive for *Listeria monocytogenes* and have been confirmed to match the outbreak strain by whole genome sequencing analysis. Communications with foreign counterparts are ongoing. On 4/15/2020, Green Co. Ltd (Republic of Korea) was added to [Import Alert 99-35](#) and FDA updated the [web post](#) to include the Import Alert update. ORA has conducted and closed out an FSVP inspection at one the domestic firms. CORE will continue to coordinate this investigation.

ON THE RADAR

Tornado Outbreak, Southeastern Central States/Apr 2020

Overnight on 4/12-13/2020, a severe weather outbreak occurred across TX, LA, MS, AL, GA and TN. The National Weather Service reported a total of 39 tornadoes and at least 30 fatalities. States of Emergency were declared in LA, MS and AL. ASPR Regions 6 and 4

have been in contact with their State counterparts with no requests for Federal assistance at this time. FDA's Office of Emergency Management's GIS team prepared mapping products highlighting FDA-regulated industry potentially impacted by the tornadoes. As of 4/15/2020, FDA district offices reported no damage to FDA facilities and all employees are safe and accounted for. FDA regulated firms are being contacted to determine if damage to their facilities occurred. On 4/15/2020, FDA's GIS team reviewed new data from the NWS and created new mapping products of FDA regulated firms potentially affected. No significant updates to report at this time. OEO will continue to monitor but no longer report.



FEMA National Situation Report

As of 3:00 a.m. ET, Saturday, April 18, 2020

This report is published twice daily, 3 00 a.m. and 5 00 p.m. ET

Common Operating Picture

FEMA HQ <table border="1"> <tr> <td><i>NWC</i></td> <td><i>NRCC</i></td> </tr> <tr> <td>Monitoring</td> <td>Level I</td> </tr> </table>		<i>NWC</i>	<i>NRCC</i>	Monitoring	Level I	Major Disasters (DR): 97 Emergency Disasters (EM): 90 JFOs: 10 / VJFOs: 10 Staging Area Distribution Center (DC) Declared County (non-COVID-19 Declaration) Fully Activated Partially Activated Monitoring As of 3:00 a.m. ET April 18, 2020 Created by FEMA NWC						N-IMATs 2 Teams <table border="1"> <tr> <td>Red</td> <td></td> </tr> <tr> <td>Blue</td> <td></td> </tr> <tr> <td>Gold</td> <td>IMAT-A Support</td> </tr> </table>		Red		Blue		Gold	IMAT-A Support																																														
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<i>Assigned:</i>		28		36		47		11		13,492 ▲		ADR 16% (7/45); EHP 19% (117/617); FL 9% (15/160); FM 22% (59/264); HM 22% (268/1,221); OPS 18% (50/283); PA 25% (764/3,056); PLAN 21% (88/420); SAF 22% (12/55)																																																					
<i>Unavailable:</i>		17		0		1		0		2,981 ▼																																																							
<i>Deployed:</i>		0		1		42		10		5,770 ▲																																																							
Available:		11		35		4		1		4,741 / 35% ▲																																																							

National Current Operations & Monitoring

COVID-19 (For interagency reporting see FEMA NRCC COVID-19 SLB, published daily)

Situation: FEMA, HHS, and federal partners are working with state, local, tribe, and territorial governments to execute a whole-of-America response to the COVID-19 pandemic. The federal government is coordinating the deployment of PPE and ventilators from multiple sources including SNS, donations, and vendor procurements.

- FEMA NRCC remains at Level I in unified effort with HHS SOC; all FEMA RRCCs activated
- FEMA IMAT-A teams deployed to 27 states; LNOs deployed to 37 states, territories, & tribes
- 56 (+1) major disaster declarations approved
- All State / Territory EOCs activated
- 35,259 FEMA, DOD, HHS, and CDC personnel deployed/activated in support of COVID-19

Health and Medical Lifeline

- GA: CDC assisting with screening and testing in 6 Atlanta shelters; collecting data on shelter processes, number of symptomatic people experiencing homelessness, and total COVID-19; 1,074 individuals tested; 15 positive (14 clients, 1 staff) and 742 negative
- IL: Cook County Jail: 405 inmates tested positive for COVID-19, 57 negative, 30 hospitalized, and 3 inmates deceased; 83 staff tested positive; CDC is assessing risk factors for transmission in detainees/staff and prevalence/comparisons in different density models

Operational Task Forces

Medical Counter-Measure (MCM) Development

- Phase 1 safety trial for mRNA vaccine: 49 healthy volunteers enrolled (target: 105)

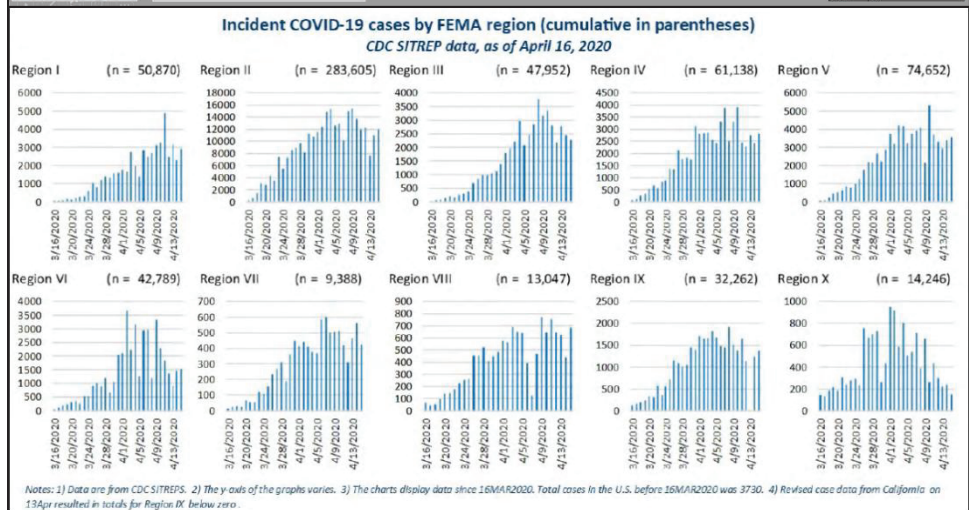
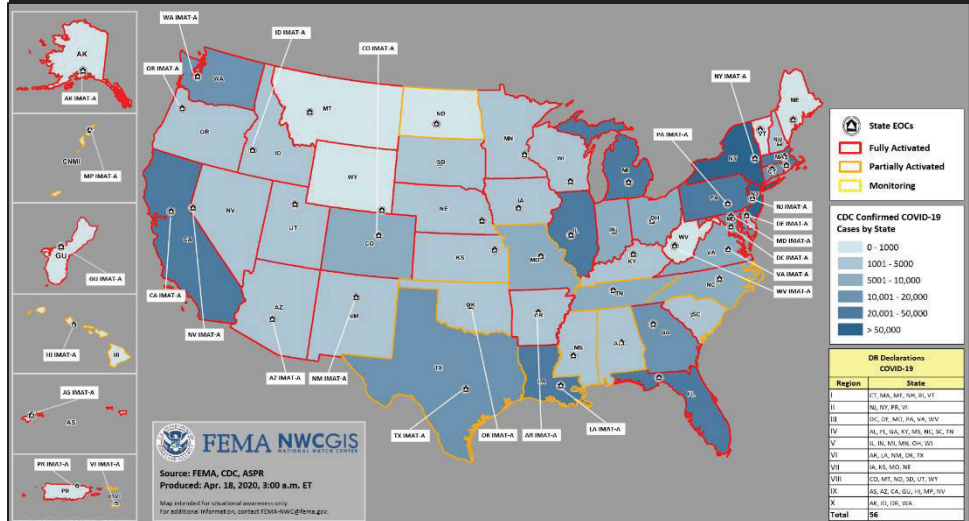
Lab Diagnostics

- The International Reagent Resource is sending 30,000 Abbot ID Now tests to 57 public health labs and 15,000 tests to Indian Health Services

Supply Chain Stabilization

- 7th and 8th Battelle Critical Care Decontamination System (CCDS) units arrived April 15 to Secaucus, NJ and April 16 to New Haven, CT; 9th system will arrive April 20 in Burbank, CA

COVID-19 Cases	Confirmed/Presumptive	Deaths
United States	658,875	32,970
Worldwide	1,991,562	130,885

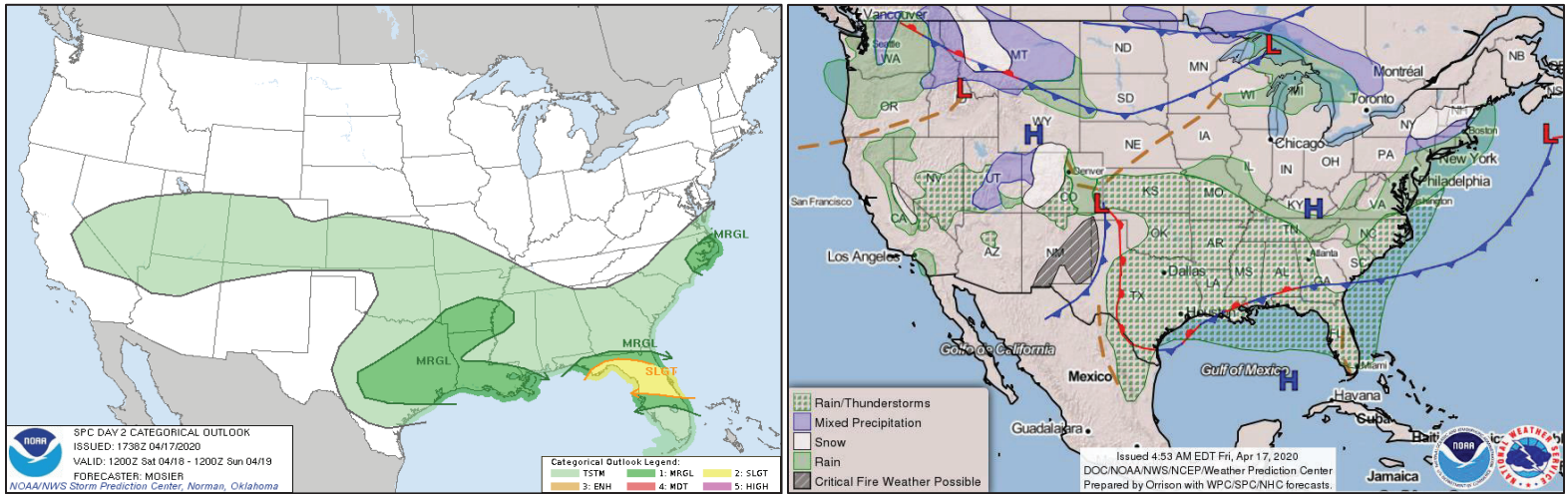


(FEMA SLB COVID-19; 5 00 p.m. ET, April 17, 2020)

Weather Threats

- Slight risk of severe thunderstorms across northern and central Florida beginning this afternoon
- Marginal risk of thunderstorms in central Texas to the Lower Mississippi Valley this afternoon
- Critical fire weather possible over southern and eastern New Mexico

(Latest NOAA Forecasts [WPC](#) | [SPC](#) | [NHC](#) | [SWPC](#))



Joint Preliminary Damage Assessments

Region	State	Event / Date	Type	Counties		Start – End Dates
				Requested	Completed	
IV	AL	Severe Storms, Tornadoes, Straight-line Winds, Flooding, & Mudslides Feb 6 – Mar 6	IA	0	0	N/A
			PA	19	0	4/20 – TBD
	GA	Severe Storms, Tornadoes, & Straight-line Winds Apr 12-13	IA	4	0	4/14 – TBD
			PA	0	0	N/A
	TN	Severe Storms, Tornadoes, & Straight-line Winds Apr 12-13	IA	4	0	4/14 – TBD
			PA	12	0	4/14 – TBD
SC	Severe Storms, Flooding, Tornadoes, & Straight-line Winds Apr 12-13	IA	7	0	4/17 – TBD	
		PA	0	0	N/A	
VI	AR	Severe Storms & Tornado Mar 29	IA	1	0	4/15 – TBD
			PA	1	0	4/15 – TBD

Declaration Activity

Declaration Requests in Process: 6 (AR (Appeal), MS, WA, KY, AK, NC)

Major Disaster Declaration Approved – American Samoa

- On Apr 17, Major Disaster Declaration FEMA-4537-DR-AS was approved for the territory of American Samoa
- For the COVID-19 Pandemic beginning on Jan 20 and continuing
- Provides:
 - Individual Assistance: Under review
 - Public Assistance: Emergency protective measures (Category B) not authorized under other Federal statutes, including direct federal assistance at 75 percent federal funding statewide
 - Hazard Mitigation: Under review

The FCO is Robert J. Fenton

(Declared Disasters [fema.gov](#))

Joint Field Office Status Updates

- FEMA-4519-DR-OR will run as a Virtual JFO in Salem, Oregon; phone and fax service is established

(JFO listing available on ([NWC SharePoint Site](#)))

UNCLASSIFIED

Regional Current Operations & Monitoring	
<i>Region I</i>	<i>Region VI</i>
<p>RRCC: Level I (day shift – COVID-19) WATCH – Maynard MOC: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: No significant activity IMAT: Deployed to RRCC (COVID-19) LNO: CT, MA, ME, NH, RI, & VT EOCs: CT, ME, MA, NH, RI, & VT: Full Activation (COVID-19)</p>	<p>RRCC: Level II (day shift – COVID-19) WATCH – Denton MOC: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: <ul style="list-style-type: none"> ○ Elevated fire weather for NM & TX ○ Severe weather (see above) IMAT-1: FMC / Available IMAT-2: FMC / Available IMAT-A: AR, LA, NM, OK, & TX LNOs: AR, LA, NM, OK, & TX EOCs: <ul style="list-style-type: none"> • AR & NM: Full Activation (COVID-19) • LA, OK, & TX: Partial Activation (COVID-19) </p>
<i>Region II</i>	<i>Region VII</i>
<p>RRCC: Level II (day shift – COVID-19) WATCH: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: No significant activity IMAT: Deployed to NY EOC (COVID-19) IMAT-A: NJ, NY, PR & USVI LNOs: PR, NJ & NY EOCs: <ul style="list-style-type: none"> • NJ, NY, & PR: Full Activation (COVID-19) • USVI: Partial Activation (COVID-19) </p>	<p>RRCC: Level II (day shift – COVID-19) <ul style="list-style-type: none"> • WATCH: Steady State (24/7): Alternate location Monitoring: No significant activity IMAT: Deployed to RRCC (COVID-19) EOCs: <ul style="list-style-type: none"> • IA, KS, & NE: Full Activation (COVID-19) • MO: Partial Activation (COVID-19) </p>
<i>Region III</i>	<i>Region VIII</i>
<p>RRCC: Level II (day shift – COVID-19) WATCH: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: No significant activity IMAT: Deployed to RRCC (COVID-19) IMAT-A: DC, DE, MD, PA, VA, & WV LNOs: PA & WV EOCs: DC, DE, MD, PA, VA, & WV: Full Activation (COVID-19)</p>	<p>RRCC: Level II (day shift – COVID-19) WATCH – Denver MOC: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: No significant activity IMAT: Deployed to RRCC (COVID-19) IMAT-A: CO LNOs: CO, MT, SD, UT, & WY EOCs: <ul style="list-style-type: none"> • CO, MT, SD, UT, & WY: Full Activation (COVID-19) • ND: Partial Activation (COVID-19) </p>
<i>Region IV</i>	<i>Region IX</i>
<p>RRCC: Level II (day shift – COVID-19) WATCH: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: Severe weather (see above) IMAT-1: FMC / Available IMAT-2: FMC / Available LNOs: AL, FL, & TN EOCs: <ul style="list-style-type: none"> • FL: Full Activation (COVID-19) • GA: Full Activation (COVID-19 / Flooding) • MS: Partial Activation (COVID-19 / Flooding) • TN: Partial Activation (COVID-19 / Tornadoes) • AL, KY, NC, SC: Partial Activation (COVID-19) </p>	<p>RRCC: Level I (day shift – COVID-19) WATCH: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: No significant activity IMAT-1: PMC / Staffing shortage IMAT-2: Deployed to RRCC (COVID-19) IMAT-A: AZ, CA, HI, NV, GU, AS, & CNMI EOCs: <ul style="list-style-type: none"> • AS & GU: Full Activation (COVID-19) • AZ, CA, & NV: Full Activation (COVID-19) • CNMI & HI: Partial Activation (COVID-19) </p>
<i>Region V</i>	<i>Region X</i>
<p>RRCC: Level II (day shift – COVID-19) WATCH: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: No significant activity IMAT: Deployed to RRCC (COVID-19) LNOs: IN, MI, & WI EOCs: IL, IN, OH, MI, MN, & WI: Full Activation (COVID-19)</p>	<p>RRCC: Level II (day shift – COVID-19) WATCH – Bothell MOC: Steady State (24/7) <ul style="list-style-type: none"> • Monitoring: No significant activity IMAT: Deployed to RRCC (COVID-19) IMAT-A: AK, ID, OR, & WA LNOs: AK, ID, OR, & WA EOCs: AK, ID, OR & WA: Full Activation (COVID-19)</p>

FEMA National Situation Report Acronyms & Abbreviations**Front Page – Common Operating Picture**

NWC:	National Watch Center	ISB:	Incident Support Base	R-IMAT:	Regional Incident Management Assistance Team
NRCC:	National Response Coordination Center	MERS:	Mobile Emergency Response Support	RRCC:	Regional Response Coordination Center
EX (State):	Exercise (Location)	N-IMAT:	National Incident Management Assistance Team	RWC:	Regional Watch Center
FCO:	Federal Coordinating Officer	NMC:	Non-Mission Capable	US&R:	Urban Search & Rescue
FDRC:	Federal Disaster Recovery Coordinator	PMC:	Partially Mission Capable		
FMC:	Fully Mission Capable				
IM:	Incident Management				

Front Page – Force Laydown Map

CAD:	Caribbean Area Division	DR:	Major Disaster Declaration (Stafford Act)	IST:	Incident Support Team
CNMI:	Commonwealth of the Northern Marianas Islands	EM:	Emergency Declaration (Stafford Act)	JFO:	Joint Field Office
DC:	Distribution Center / District of Columbia	EOC:	Emergency Operations Center	LNO:	Liaison Officer
		FCO:	Federal Coordinating Officer	TF:	Task Force
				VJFO:	Virtual JFO

Front Page – Incident Management Cadres

ACQ:	Acquisitions	DSA:	Disaster Survivor Assistance	HR:	Human Resources
ADR:	Alternative Dispute Resolution	EHP:	Environmental Planning and Historic Preservation	IA:	Individual Assistance
DI:	Disability Integration	ER:	Equal Rights	IT:	Information Technology
DEC:	Disaster Emergency Communications	EA:	External Affairs	OCC:	Office of Chief Counsel
DFTO:	Disaster Field Training Ops	FL:	Field Leadership	LOG:	Logistics
		FM:	Financial Management	HM:	Hazard Mitigation

Other Acronyms & Abbreviations

ARC:	American Red Cross	IPAWS:	Integrated Public Alert & Warning System
CBRN:	Chemical, Biological, Radiological and Nuclear	IST:	Incident Support Team
CDC:	Centers for Disease Control and Prevention	JTWC:	Joint Typhoon Warning Center
CIKR:	Critical Infrastructure / Key Resources	MCOV:	Mobile Communications Operations Vehicle
DCO:	Defense Coordinating Officer	MEOV:	Mobile Emergency Operation Vehicle (MERS)
DFA:	Direct Federal Assistance (Stafford Act program)	MCC:	Movement Coordination Center
DIRS:	Disaster Information Reporting System	MMI:	Modified Mercalli Intensity (Earthquake scale)
DLA:	Defense Logistics Agency	MOC:	MERS Operations Center
DoD:	Department of Defense	NHC:	National Hurricane Center
DOE:	Department of Energy	NOAA:	National Oceanic & Atmospheric Administration
DRC:	Disaster Recovery Center	NWS:	National Weather Service
EAGLE-I:	Environment for Analysis of Geo-Located Energy Information (DOE)	PA:	Public Assistance (Stafford Act program)
EF:	Enhanced Fujita (Tornado scale)	PAGER:	Prompt Assessment of Global Earthquakes for Response
EPA:	Environmental Protection Agency	PDA:	Preliminary Damage Assessment (Joint FEMA/State)
ESF:	Emergency Support Function	PSPS:	Public Safety Power Shutoff
FMAG:	Fire Management Assistance Grant	ROC:	Response Operations Cell (part of the NRCC)
GIS:	Geospatial Information Systems	SEAR:	Special Event Assessment Rating
HHS:	Health & Human Services	SLTT:	State, Local, Tribal, and Territorial (<i>Governments</i>)
HM:	Hazard Mitigation (Stafford Act program)	USACE:	U.S. Army Corps of Engineers
IA:	Individual Assistance (Stafford Act program)	USAID:	U.S. Agency for International Development
IMAAC:	Interagency Modeling & Atmospheric Assessment Center	USCG:	U.S. Coast Guard
IOF:	Initial Operating Facility	USGS:	U.S. Geological Survey

(More FEMA Acronyms [FAAT Book](#))

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To: [Norquist, David HON SD](#); [Hyten, John E Gen USAF JS OCJCS \(USA\)](#); [Oshaughnessy, Terrence J Gen USAF NORAD-USNC CG \(USA\)](#); [Stewart, Jennifer SES SD](#); [Henke, Robert SES SD](#); [Donovan, Matthew P HON OSD OUSD P-R \(USA\)](#); [Lord, Ellen M HON OSD OUSD A-S \(USA\)](#); [McCusker, Elaine A HON OSD OUSD C \(USA\)](#); [Whitley, John E HON OSD OCMO \(USA\)](#); [Thomas Gen Gary L](#); [Burke, Robert P ADM USN VCNO \(USA\)](#); [Wilson, Stephen W Gen USAF AF-CV \(USA\)](#); [Martin, Joseph M GEN USARMY HQDA VCSA \(USA\)](#); [Rapuano, Kenneth P HON OSD OUSD POLICY \(USA\)](#); [Ross, Alexis SES SD](#); [Blake, Robert M Brig Gen USAF AF-A3 \(USA\)](#); [Blanks, Julie A SES OSD OUSD P-R \(USA\)](#); [Bushman, William G SES \(USA\)](#); [Byrne, William D Jr RADM USN JS ODJS \(USA\)](#); [Castle, William S SES OSD OGC \(USA\)](#); [Dumont, Michael J \(Mike\) VADM USN NORAD-USNC CG \(USA\)](#); [Fedrigo, John A SES USAF SAF-MR \(USA\)](#); [Fisher, Vincent L SES OSD OUSD C \(USA\)](#); [Flynn, Charles A LTG USARMY HQDA DCS G-3-5-7 \(USA\)](#); [Friedrichs, Paul A Brig Gen USAF JS OCJCS \(USA\)](#); [Funkhouser, Anthony C MG USARMY CEHO \(USA\)](#); [Greene, Jodi J SES USN \(USA\)](#); [Hebert, Lernes J SES OSD OUSD P-R \(USA\)](#); [Henke, Robert SES SD](#); [Hershman, Lisa W HON \(USA\)](#); [Hoffman, Jonathan R SES OSD OSD \(USA\)](#); [Hood, Robert R HON OSD OASD LA \(USA\)](#); [Kelly, Mark D Lt Gen USAF AF-A3 \(USA\)](#); [LaNeve, Christopher Charles BG USARMY HQDA DCS G-3-5-7 \(USA\)](#); [Lei, JihFen SES OSD OUSD R&E \(USA\)](#); [Lestorti, Joseph M BG USARMY JS J3 \(USA\)](#); [Liszewski BGen Stephen E](#); [Lord, Ellen M HON OSD OUSD A-S \(USA\)](#); [Maurer, Derek J \(Dirk\) SES OSD OUSD POLICY \(USA\)](#); [McAndrew, Anne J SES OSD OUSD C \(USA\)](#); [Mccaffery, Thomas P HON OSD OUSD P-R \(USA\)](#); [Mott, Jon K Maj Gen USAF NG CTANG \(USA\)](#); [Muir, Thomas M SES \(USA\)](#); [Piatt, Walter E LTG USARMY HQDA DAS \(USA\)](#); (b) (6); [Ross, Alexis Lasselle SES OSD OUSD P-R \(USA\)](#); [Sawyer, Phillip G VADM USN \(USA\)](#); [Semonite, Todd I LTG USARMY HQDA OCE \(USA\)](#); [Shaffer, Alan R HON OSD OUSD A-S \(USA\)](#); [Simon, Martin S \(Marty\) SES USN UNSECOM DC \(USA\)](#); [Taliaferro, Jeffrey B \(Jeff\) Maj Gen USAF JS J3 \(USA\)](#); [Trigilio \(b\) \(6\)](#); [VanHerck, Glen D Lt Gen USAF JS ODJS \(USA\)](#); [Walsh, Daniel P SES PFAA HOS \(USA\)](#); [Whitney, Steven P Brig Gen USAF OSD OUSD A-S \(USA\)](#); [Williams, Lorraine A SES OSD OUSD C \(USA\)](#); [Williams, Marshall M \(Will\) SES USARMY HQDA ASA MRA \(USA\)](#); [Friedrichs, Paul A Brig Gen USAF JS OCJCS \(USA\)](#); [Payne, Lee E Maj Gen USAF DHA J-3 \(USA\)](#); (b) (6); [Lyons, Judd H SES OSD OUSD P-R \(USA\)](#); [Deasy, Dana S HON \(USA\)](#); [Mewbourne, Dee L VADM USN TRANSCOM TCDC \(USA\)](#); [Shaffer, Alan R HON OSD OUSD A-S \(USA\)](#)
Cc: [Lyons, David Brig Gen SD](#); [OSD Pentagon OUSD Policy List CVTF Team Leads](#); [JS Pentagon J3 Mailbox Joint Staff CMT Leadership](#); [OSD Pentagon OUSD Policy List CVTF Distro](#); [SD - DSD Read ahead](#); (b) (6)
Subject: COVID-19 DoD CVTF Full Meeting Due Outs - May 15
Date: Friday, May 15, 2020 5:46:42 PM

Deputy Secretary, Vice Chairman, and Distinguished Task Force Colleagues,

Good evening. Thank you for the productive meeting this afternoon. The following were identified as due-outs from today's COVID-19 DoD TF Meeting. Additionally, specific due outs have been identified for the Secretary's update May 19th.

Force Health Protection/Medical Preparedness

Task – Integrated diagnostics, therapeutics, and vaccine development program – (HD&GS):

Provide update on status of MOA with HHS. **(DSD) Suspense: May 18**

Task – Increasing Production Capacity for Vaccines & Therapeutics – (A&S): Provide an update on discussions with manufacturers to increase manufacturing fill and finish capacity. Include next steps with HHS and DoD. **(SD) Suspense: May 18**

Task – Testing Framework – (P&R): Provide an update on testing requirement for tiers 1, 2, 3, and 4. Include maximum capacity and actual tests completed per day. **(SD) Suspense: May 18**

Task – Contact Tracing and Using Testing as a Sentinel Tool – (P&R): Develop FHP-10 guidance for DoD surveillance testing. Develop two case studies (aboard a ship and on an installation) for conducting contact tracing. Studies will include feasibility, pros and cons, and value of conducting contact tracing in each environment. In coordination with the CIO, develop an info paper on the risk of using Bluetooth devices in a secure facility. Conduct an exhaustive review of potential hardware to determine if it is possible for DoD to exclusively retain all data collected via electronic contract tracing tools. **(DSD) Suspense: May 20**

Task – Serology Testing – (P&R): Update on progress and timelines associated with serological testing for the presence of SAR-CoV-2 (COVID-19) antibodies. **(SD) Suspense: May 18**

Mission Readiness

Task – Enabling Operations in a COVID-19 Environment – (HD&GS): Provide an update on the guidance memo on strategy to resume daily operations across the Department. **(SD) Suspense: May 20**

Task – (FPH-9) Military Personnel Deploying in support of CCMDs – (P&R, JS): Provide update on FHP-9 and the plan to ensure military forces deploying in support of Combatant Commands have procedures in place to minimize risk of being COVID positive. **(SD) Suspense: May 20; Topic for May 19 SD update**

New Task – Exception to 14-day ROM of DoD Forces deploying OCONUS – (Policy): Negotiate with host nations on an exception to restriction of movement requirements for deploying forces that isolated within the U.S. prior to departure. **(SD) Suspense: May 20**

Personnel Policy & Mitigation

Task – Adjustments to HPCON memo – (P&R): Provide an update on draft guidance memo. **(SD) Suspense: To SD on May 15 for weekend review; Topic for May 19 SD update**

Task – Elective Medical Procedures – (P&R): Provide an update on the draft guidance memo. **(SD) Suspense: To SD on May 15 for weekend review; Topic for May 19 SD update**

Task – Lifting Travel Restrictions – (P&R): Provide update on guidance memo for transition to conditions-based approach to personnel movement and travel restrictions. **(SD) Suspense: Topic for May 19 SD update**

New Task – Cost-based Analysis of ROM – (CAPE): Provide a cost-based analysis of the impacts from DoD’s current Restriction of Movement (ROM) policy. **(SD) Suspense: May 21**

Modified Task – Household Goods Movement Plan – (USTRANSCOM): Provide update on plan to meet challenges of upcoming “peak season” coming out of COVID stop move. Include previous year historical data on number of moves per week. **(DSD) Suspense: Topic for May 19 SD update**

New Task – Household goods movement policy – (P&R, A&S): Develop policy on movement of household goods as personnel movements resume. Policy should include incentives for Service Members to conduct personally procured moves. **(DSD) Suspense: May 22**

Task – Dependent Passports – (CMO): Provide an update on the State Department effort to process DoD dependent passports to support PCS moves. **(SD) Suspense: May 18**

Task – International Students – (Policy, P&R): Develop plan for addressing COVID-19 concerns for international students entering DoD schools, PME, and training courses this fall. **(DSD) Suspense:**

May 20

Pentagon Reservation

Task – Pentagon Plan – (CMO): Provide an update on the plan. **(SD) Suspense: To SD on May 15 for weekend review.**

International Support

Modified Task – Assistance to International Partners – (SOLIC): Provide an update on State Department plan to provide USG assistance to international partners. Provide an update on prioritized international partners for DoD to assist with COVID supplies. Provide updated policy memo and country list to USDs, Services, and CCMDs for comment. **(DSD) Suspense: Topic for May 19 SD update**

Task – Support COCOM and FMS Programs – (SOLIC): Provide update on support to CCMD and Foreign Military Sales programs. **(DSD) Suspense: May 20**

Task – Ventilator aid – (SOLIC): Provide an update on the status of ventilator aid and potential DoD request for transport. **(DSD) Suspense: May 20**

Task – Ventilator offer to NATO – (SOLIC): Provide an update on the status of ventilator offer to NATO. **(DSD) Suspense: May 20**

Installations and Logistics

Task – DPA and JATF update – (A&S): Provide an update on the Defense Production Act and the Joint Acquisition Task Force. **(SD) Suspense: Ongoing**

Strategic Communications

Task – Coordinated PA Plan for Service New Normal Plans – (PA, Services): Develop coordinated PA and launch plan for Service New Normal plans. **(SD) Suspense: Pending release of SD guidance memo**

Funding

Task – New Supplemental Request – (Comptroller): Update on status of DoD submission for supplemental funding and authorities. **(SD) Suspense: Ongoing**

Modeling

Task – Modeling and analytic update – (CVTF, CAPE): Provide an update on DoD’s modeling and analytics effort and how it fits into the larger USG modeling effort. **(SD) Suspense: Ongoing**

Lessons Learned

Task – Lessons Learned – (JS J7, HD&GS): Update on status of DSD memo directing all DoD components to collect lessons learned and to be prepared to provide them to DoD’s Lessons Learned Task Force on a continuing basis. **(SD) Suspense: Ongoing**

Please let me know if you have any questions or need assistance.

Best, Bob

From: [Salesses, Robert G SES OSD OUSD POLICY \(USA\)](#)
To: [Norquist, David HON SD](#); [Hyten, John E Gen USAF JS OCJCS \(USA\)](#); [Oshaughnessy, Terrence J Gen USAF NORAD-USNC CG \(USA\)](#); [Stewart, Jennifer SES SD](#); [Henke, Robert SES SD](#); [Donovan, Matthew P HON OSD OUSD P-R \(USA\)](#); [Lord, Ellen M HON OSD OUSD A-S \(USA\)](#); [McCusker, Elaine A HON OSD OUSD C \(USA\)](#); [Whitley, John E HON OSD OCMO \(USA\)](#); [Thomas Gen Gary L](#); [Burke, Robert P ADM USN VCNO \(USA\)](#); [Wilson, Stephen W Gen USAF AF-CV \(USA\)](#); [Martin, Joseph M GEN USARMY HQDA VCSA \(USA\)](#); [Rapuano, Kenneth P HON OSD OUSD POLICY \(USA\)](#); [Ross, Alexis SES SD](#); [Blake, Robert M Brig Gen USAF AF-A3 \(USA\)](#); [Blanks, Julie A SES OSD OUSD P-R \(USA\)](#); [Bushman, William G SES \(USA\)](#); [Byrne, William D Jr RADM USN JS ODJS \(USA\)](#); [Castle, William S SES OSD OGC \(USA\)](#); [Dumont, Michael J \(Mike\) VADM USN NORAD-USNC CG \(USA\)](#); [Fedrigo, John A SES USAF SAF-MR \(USA\)](#); [Fisher, Vincent L SES OSD OUSD C \(USA\)](#); [Flynn, Charles A LTG USARMY HQDA DCS G-3-5-7 \(USA\)](#); [Friedrichs, Paul A Brig Gen USAF JS OCJCS \(USA\)](#); [Salesses, Robert G SES OSD OUSD POLICY \(USA\)](#); [Funkhouser, Anthony C MG USARMY CEHQ \(USA\)](#); [Greene, Jodi J SES USN \(USA\)](#); [Hebert, Lernes J SES OSD OUSD P-R \(USA\)](#); [Henke, Robert SES SD](#); [Hershman, Lisa W HON \(USA\)](#); [Hoffman, Jonathan R SES OSD OSD \(USA\)](#); [Hood, Robert R HON OSD OASD LA \(USA\)](#); [Kelly, Mark D Lt Gen USAF AF-A3 \(USA\)](#); [LaNeve, Christopher Charles BG USARMY HQDA DCS G-3-5-7 \(USA\)](#); [Lei, JihFen SES OSD OUSD R&E \(USA\)](#); [Lestorti, Joseph M BG USARMY JS J3 \(USA\)](#); [Liszewski BGen Stephen E](#); [Lord, Ellen M HON OSD OUSD A-S \(USA\)](#); [Maurer, Derek J \(Dirk\) SES OSD OUSD POLICY \(USA\)](#); [McAndrew, Anne J SES OSD OUSD C \(USA\)](#); [McCaffery, Thomas P HON OSD OUSD P-R \(USA\)](#); [Mott, Jon K Maj Gen USAF NG CTANG \(USA\)](#); [Muir, Thomas M SES \(USA\)](#); [Piatt, Walter E LTG USARMY HQDA DAS \(USA\)](#); [\(b\) \(6\)](#) [Ross, Alexis Lasselle SES OSD OUSD P-R \(USA\)](#); [Sawyer, Phillip G VADM USN \(USA\)](#); [Semonite, Todd T LTG USARMY HQDA OCE \(USA\)](#); [Shaffer, Alan R HON OSD OUSD A-S \(USA\)](#); [Simon, Martin S \(Marty\) SES USN UNSECOM DC \(USA\)](#); [Taliaferro, Jeffrey B \(Jeff\) Maj Gen USAF JS J3 \(USA\)](#); [\(b\) \(6\)](#) [VanHerck, Glen D Lt Gen USAF JS ODJS \(USA\)](#); [Walsh, Daniel P SES PFPA HQS \(USA\)](#); [Whitney, Steven P Brig Gen USAF OSD OUSD A-S \(USA\)](#); [Williams, Lorraine A SES OSD OUSD C \(USA\)](#); [Williams, Marshall M \(Will\) SES USARMY HQDA ASA MRA \(USA\)](#); [Friedrichs, Paul A Brig Gen USAF JS OCJCS \(USA\)](#); [Payne, Lee E Maj Gen USAF DHA J-3 \(USA\)](#); [\(b\) \(6\)](#) [Lyons, Judd H SES OSD OUSD P-R \(USA\)](#); [Deasy, Dana S HON \(USA\)](#); [Mewbourne, Dee L VADM USN TRANSCOM TCDC \(USA\)](#); [Shaffer, Alan R HON OSD OUSD A-S \(USA\)](#); [\(b\) \(6\)](#)
Cc: [Lyons, David Brig Gen SD](#); [OSD Pentagon OUSD Policy List CVTF Team Leads](#); [JS Pentagon J3 Mailbox Joint Staff CMT Leadership](#); [OSD Pentagon OUSD Policy List CVTF Distro](#); [SD - DSD Read ahead](#); [\(b\) \(5\)](#), [\(b\) \(6\)](#)
Subject: DoD CVTF Full Meeting Due Outs - May 13
Date: Wednesday, May 13, 2020 6:10:04 PM

Deputy Secretary, Vice Chairman, and Distinguished Task Force Colleagues,

Good evening. Thank you for the productive meeting this afternoon. The following were identified as due-outs from today's COVID-19 DoD TF Meeting:

Force Health Protection/Medical Preparedness

Task – Integrated diagnostics, therapeutics, and vaccine development program – (HD&GS):

Provide update on status of MOA with HHS. **(DSD) Suspense: May 15**

Task – Increasing Production Capacity for Vaccines & Therapeutics – (A&S): Provide an update on discussions with manufacturers to increase manufacturing fill and finish capacity. Include next steps with HHS and DoD. **(SD) Suspense: May 15**

Modified Task – Testing Framework – (P&R): Provide an update on testing requirement for tiers 1, 2, 3, and 4. Include maximum capacity and actual tests completed per day. **(SD) Suspense: May 15;**
Service CONOPS briefed to DSD/VCJCS on May 14

Task – Contact Tracing and Using Testing as a Sentinel Tool – (P&R): Develop FHP-10 guidance for DoD surveillance testing. Develop two case studies (aboard a ship and on an installation) for conducting contact tracing. Studies will include feasibility, pros and cons, and value of conducting contact tracing in each environment. In coordination with the CIO, develop an info paper on the risk of using Bluetooth devices in a secure facility. Conduct a review of potential hardware to determine if it is possible for DoD to exclusively retain all data collected via electronic contact tracing tools.

(DSD) Suspense: May 20

Task – Serology Testing – (P&R): Provide an update on progress and timelines associated with serological testing for the presence of SAR-CoV-2 (COVID-19) antibodies. **(SD) Suspense: May 15**

Modified Task – Convalescence Blood Plasma – (P&R): Provide an update on FDA approval to collect and use convalescence blood plasma. Develop a plan to use collected convalescence blood plasma. **(DSD) Suspense: May 13 for update; May 20 for plan**

Mission Readiness

Task – Enabling Operations in a COVID-19 Environment – (HD&GS): Provide an update on the guidance memo on strategy to resume daily operations across the Department. **(SD) Suspense: May 15**

Task – Military Personnel Deploying in support of CCMDs – (P&R, JS): Provide update on FHP-9 and the plan to ensure military forces deploying in support of Combatant Commands have procedures in place to minimize risk of being COVID positive. **(SD) Suspense: May 15**

Personnel Policy & Mitigation

Task – Adjustments to HPCON memo – (P&R): Provide an update on draft guidance memo. **(SD) Suspense: To SD for approval on May 15**

Task – Elective Medical Procedures – (P&R): Provide an update on the draft guidance memo. **(SD) Suspense: To SD for review on May 15**

Task – Global Stop Movement Assessment – (P&R): Provide an update on the draft assessment criteria and placemat. **(SD) Suspense: To SD for review on May 15**

Task – Dependent Passports – (CMO): Provide an update on the State Department effort to process DoD dependent passports to support PCS moves. **(SD) Suspense: May 15**

Modified Task – International Students – (Policy, P&R): Develop a plan addressing COVID-19 concerns for international students entering DoD schools, PME, and training courses this fall. **(DSD) Suspense: May 20**

Pentagon Reservation

Task – Pentagon Plan – (CMO): Provide an update on the plan. **(SD) Suspense: To SD for review on May 15**

International Support

Task – Ventilator aid – (SOLIC): Provide an update on the status of ventilator aid and potential DoD request for transport. **(DSD) Suspense: May 15**

Task – Ventilator offer to NATO – (SOLIC): Provide an update on the status of ventilator offer to NATO. **(DSD) Suspense: May 15**

Task – USG Process for International Support – (SOLIC): Provide an update on State Department plan to provide USG assistance to international partners. Provide an update on the memo from DSD to Deputy Secretary of State and the Administrator of USAID requesting assistance with nomination of a lead federal agency for COVID-19 international support. **(DSD) Suspense: May 15**

Modified Task -- DoD support to International Partners and others – (SOLIC): Provide recommendations on providing COVID-19 response related equipment and supplies to foreign partners and other nations. **(DSD) Suspense: May 15; Provide draft memo to DSD and JS/Services by COB May 13**

-

Installations and Logistics

Task – DPA and JATF update – (A&S): Provide an update on the Defense Production Act and the Joint Acquisition Task Force. **(SD) Suspense: Ongoing**

|

Strategic Communications

Task – Coordinated PA Plan for Service New Normal Plans – (PA, Services): Develop coordinated PA and launch plan for Service New Normal plans. **(SD) Suspense: Pending release of SD guidance memo**

Funding

Task – New Supplemental Request – (Comptroller): Update on status of DoD submission for supplemental funding and authorities. **(SD) Suspense: Ongoing**

-

Modeling

Task – Modeling and analytic update – (CVTF, CAPE): Provide an update on DoD’s modeling and analytics effort and how it fits into the larger USG modeling effort. **(SD) Suspense: Ongoing**

Lessons Learned

Task – Lessons Learned – (JS J7, HD&GS): Update on status of DSD memo directing all DoD components to collect lessons learned and to be prepared to provide them to DoD’s Lessons Learned Task Force on a continuing basis. **(SD) Suspense: Ongoing**

Please let me know if you have any questions or need assistance.

Best, Bob

From: [Lord, Ellen M HON OSD OUSD A-S \(USA\)](#)
To: [Stewart, Jennifer SES SD](#)
Cc: [Norquist, David HON SD](#); [Hood, Robert R HON OSD OASD LA \(USA\)](#)
Subject: DoD Response to SASC Request
Date: Wednesday, March 18, 2020 4:19:47 PM

Jen –

Please pass the following to Secretary Esper.

(b) (5)

Best,
Ellen

Mr. Secretary,

(b) (5)

*** Message Begins***

John,

(b) (5)

(b) (5)

(b) (5)

We continue to work with OGC and the Services to identify broad contracting authorities that would further speed business transactions at DoD. Please let me know if you would like to discuss further. We are happy to discuss with other committees; please let me know if you so advise.

Best,
Ellen
Message Ends

From: [Fenton, Bryan LTG SD](#)
To: [Ross, Alexis SES SD](#)
Subject: RE: Household Goods during CV-19
Date: Thursday, April 16, 2020 12:37:39 PM

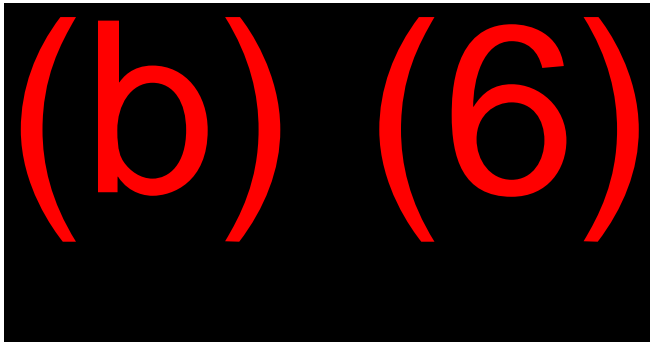
Thank you DR Ross!!!

How are you ma'am... hope all is well with you and fam... really glad to have you back!

V/r,

Bryan

LTG Bryan P. Fenton, USA
Senior Military Assistant to the Secretary of Defense



-----Original Message-----

From: Ross, Alexis SES SD (b) (6)
Sent: Thursday, April 16, 2020 12:29 PM
To: Fenton, Bryan LTG SD (b) (6)
Subject: RE: Household Goods during CV-19

Talked to Cain a bit ago. I think we're good.

Alexis Lasselle Ross | Deputy Chief of Staff | Secretary of Defense |
(b) (6)

-----Original Message-----

From: Fenton, Bryan LTG SD (b) (6)
Sent: Thursday, April 16, 2020 10:59 AM
To: Ross, Alexis SES SD (b) (6)
Cc: Johnson, Justin SES SD (b) (6)
Subject: RE: Household Goods during CV-19

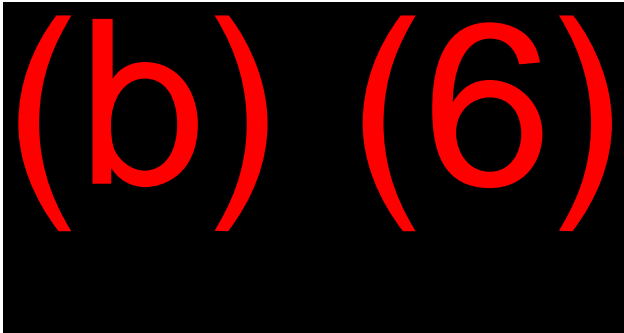
Alexis,

I failed to do so... should I now?

V/r,

Bryan

LTG Bryan P. Fenton, USA
Senior Military Assistant to the Secretary of Defense



-----Original Message-----

From: Ross, Alexis SES SD (b) (6)

Sent: Thursday, April 16, 2020 9:03 AM

To: Fenton, Bryan LTG SD (b) (6)

Cc: Johnson, Justin SES SD (b) (6)

Subject: RE: Household Goods during CV-19

Team,

Did you send this to TRANSCOM already? Happy to jump in if it still needs to get out.

Thanks,
ALR

Alexis Lasselle Ross | Deputy Chief of Staff | Secretary of Defense |

(b) (6)

-----Original Message-----

From: Ross, Alexis SES SD

Sent: Wednesday, April 15, 2020 9:24 AM

To: Fenton, Bryan LTG SD (b) (6)

Cc: Johnson, Justin SES SD (b) (6)

Subject: RE: Household Goods during CV-19

{removing some folks}

Team, do you envision providing this feedback to TRANSCOM? If the fact that HHG movers are contracted, and contract terms come into play, we could pull in A&S to consult, if necessary.

Alexis Lasselle Ross | Deputy Chief of Staff | Secretary of Defense |

(b) (6)

-----Original Message-----

From: Stewart, Jennifer SES SD (b) (6)

Sent: Wednesday, April 15, 2020 9:15 AM

To: Fenton, Bryan LTG SD (b) (6); Johnson, Justin SES SD (b) (6); Ross, Alexis SES SD (b) (6)

Subject: FW: Household Goods during CV-19

Per Top Four read-out call, the SEAC is concerned the onus is on service members and their families to screen.

-----Original Message-----

From: Lyons, Stephen R GEN USARMY TRANSCOM TCCC (USA)

(b) (6)

Sent: Tuesday, April 14, 2020 5:50 PM

To: McConville, James C GEN USARMY HQDA CSA (USA)

(b) (6)

; Gilday, Michael M ADM USN CNO (USA)

(b) (6)

Goldfein, David L Gen USAF AF-CC (USA)

(b) (6)

Berger Gen David H

(b) (6)

Cc: Norquist, David HON SD (b) (6); Hyten, John E Gen USAF

JS OCJCS (USA) (b) (6)

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Subject: Household Goods during CV-19

Chiefs, CNO, and Commandant,

During last week's SVTC Secretary Esper asked what measures were in place to protect Service and Family Members during their household goods pack out and delivery process. While the Stop Movement Order is the most effective mitigation we acknowledge that PCS activities must continue in support of mission essential activities. In coordination with your staffs we promulgated the following guidance to service members, installations, and transportation service providers:

First and foremost, if Service Members are not comfortable with movers in their home we encourage them to communicate directly with their chain of command to reschedule their shipment.

We are asking DOD Families and moving companies to have an honest discussion on their health and COVID-related contacts before any work begins.

Questions to frame that discussion include:

- Have you (or anyone in your party) had a fever over 100.4 or greater in the last 72-hrs?
- Do you (or anyone in your party) have a cough?
- Are you (or anyone in your party) experiencing shortness of breath

or difficulty breathing?

- Have you (or anyone in your party) had any EXPOSURE to or CONTACT with a POSITIVE or SUSPECTED person with COVID-19?

** If anyone in the moving crew or family answers 'Yes' to any of these questions, the shipment should be rescheduled and health care providers should be contacted.

We are encouraging members to limit the number of people in the residence. Moving companies should bring the minimum number of employees required to service the shipment. Where possible, the DOD customer responsible for supervising the move should be the only person on site. If possible family members are encouraged to vacate the residence during the moving process. If this is not possible, families should prepare a room before moving day where they can wait while the crew works.

All parties in the residence (on or off base) must cover their face in accordance with CDC guidelines.

During the move, we encourage all involved to take steps to minimize contact with surfaces (prop doors open, etc.) and routinely clean frequently-contacted surfaces in accordance with CDC guidelines.

For SA, we have seen a 70% reduction in HHG activity relative to last year this time. There have been 6,265 shipments picked-up since the Stop Movement Order went into effect. The breakdown of those shipments is as follows:

USAF	1785	28.49%
USA	2034	32.47%
USN	1632	26.05%
USMC	640	10.22%
USCG	174	2.78%

Looking ahead, SES Rick Marsh and DP3 team are working closely with OSD P&R and your personnel communities to ensure we have a common picture of your PCS demands post 30 June. Prioritization of late summer moves will be key to success as capacity will be somewhat limited. Assuming a surge beginning in July we should anticipate traditional summer 'peak' HHG shipments could extend into Oct/Nov.

As always, standing by for questions, please let me know how we can help.

V/r, Steve

(b) (5)

(b) (5)

(b) (5)

(b) (5)

THE WHITE HOUSE,

From: [Hershman, Lisa W HON \(USA\)](#)
To: [Norquist, David HON SD](#); [Hyten, John E Gen USAF JS OCJCS \(USA\)](#)
Cc: [Stewart, Jennifer SES SD](#); [Johnson, Justin SES SD](#); [Rapuano, Kenneth P HON OSD OUSD POLICY \(USA\)](#); [Mapes, Andrew M \(Andy\) SES OSD OCMO \(USA\)](#); [Salesses, Robert G SES OSD OUSD POLICY \(USA\)](#); [Muir, Thomas M SES \(USA\)](#); [Henke, Robert SES SD](#); [\(b\) \(6\)](#); [McCusker, Elaine A HON OSD OUSD C \(USA\)](#); [Donovan, Matthew P HON OSD OUSD P-R \(USA\)](#); [Whitley, John E HON OSD OCMO \(USA\)](#)
Subject: 20200511 - CMO COVID-19 Report
Date: Wednesday, May 13, 2020 7:50:18 AM
Attachments: [20200511 Pentagon Reservation Access Report - Weekend.pdf](#)
[20200511 COVID Report DoD.docx](#)

Deputy and General,

No changes to building population or COVID transmission trends we have been seeing over the past two weeks. The building population is steadily increasing during the work week, while our COVID case growth rate remains below that of the local area.

The local leadership of northern Virginia has determined that the region has not met conditions required for moving to Phase 1 of the state re-opening plan due to limited availability of testing, limited contact tracing capacity, and concerns with hospital bed surge and PPE availability. As briefed on the PMC call today by A/DDM Rigas, this is also impacting regional mass transportation decisions to resume operations. We are taking into consideration all conditions for implementing the Pentagon Reservation Resiliency Plan.

Pentagon Reservation COVID case roll-up. Total: 125 (+2)

- Pentagon: 74 (+1)
- Mark Center: 15 (no change)
- Leased facilities: 32 (+1)
- Raven Rock: 2 (no change)
- Armed Forces Retirement Home: 2 (no change)

Pentagon Components:

- Army: 18 (no change)
- Navy: 8 (no change)
- USMC: 3 (no change)
- Air Force: 9 (no change)
- Joint Staff: 8 (no change)
- NGB: 2 (no change)
- OSD: 77 (+2)

OSD Components on the Pentagon Reservation breakout:

- WHS: 24 (no change)
- PFPA: 7 (+1)
- P&R: 12 (no change)
- DiLorenzo: 5 (no change)
- CIO: 6 (no change)
- OGC: 4 (no change)
- Policy: 4 (no change)

- A&S: 6 (+1)
- OIG: 3 (no change)
- I&S: 3 (no change)
- R&E: 2 (no change)
- CAPE: 1 (no change)

Pentagon Reservation COVID-19 positive case growth rates remain below the NCR.

COVID-19 Case Growth Rate		
Date Range	Pentagon Reservation	NCR
13 – 19 APR 20	21%	53%
20 – 26 APR 20	9%	46%
27 APR – 03 MAY	16%	36%
04 – 10 MAY	15%	23%

Pentagon Reservation population for 09-10 MAY 20:

- Pentagon Building: Weekend Average – 592; on par with previous weekends
- Leased Facilities: Weekend Average – 169; less than previous weekends

No new EOP / OMB updates.

No new OPM Releases.

The Agency daily report to OMB is attached.

Respectfully,

HON Lisa Hershman
Chief Management Officer

FOUO
 Pentagon Entries
 (as of midnight)

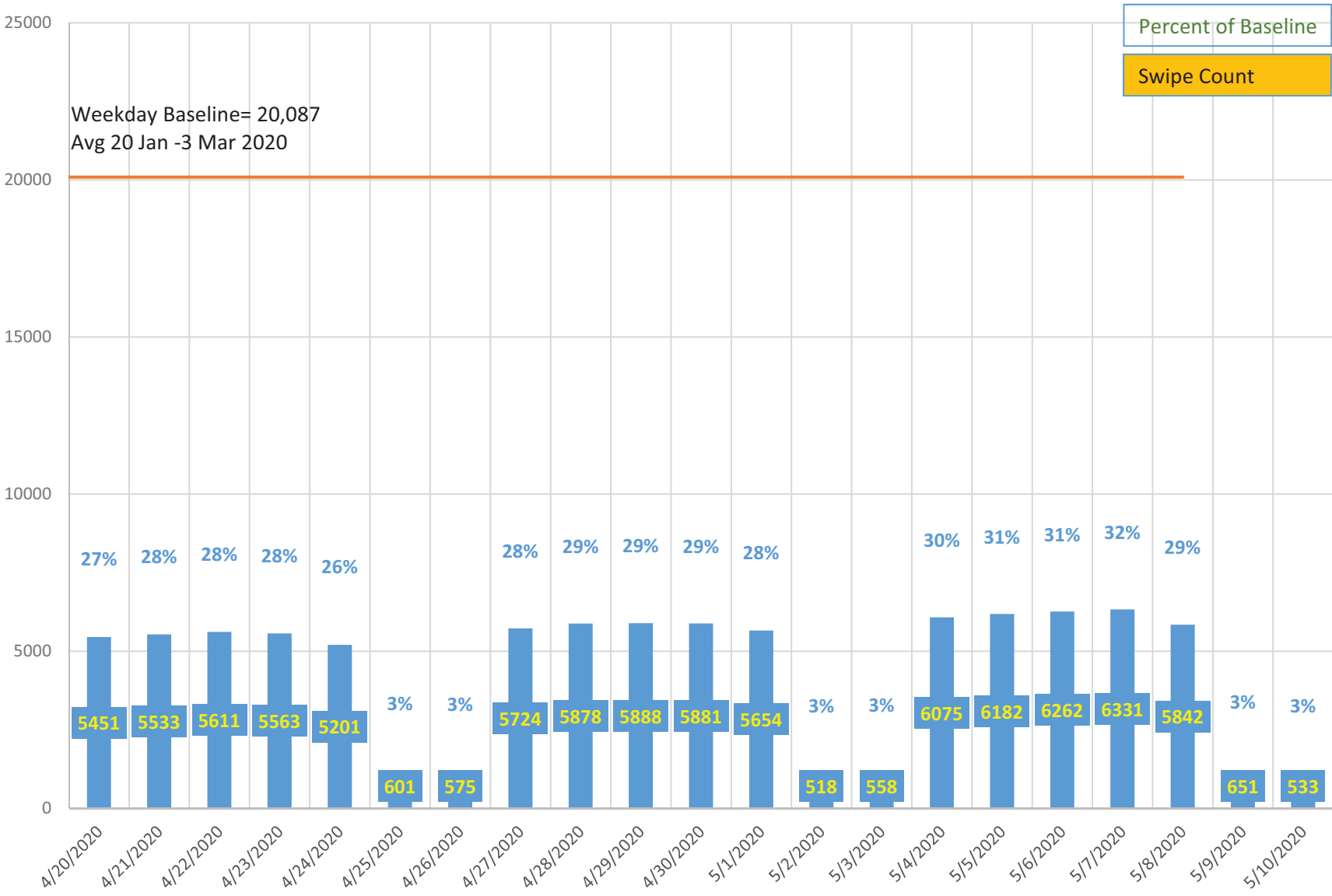
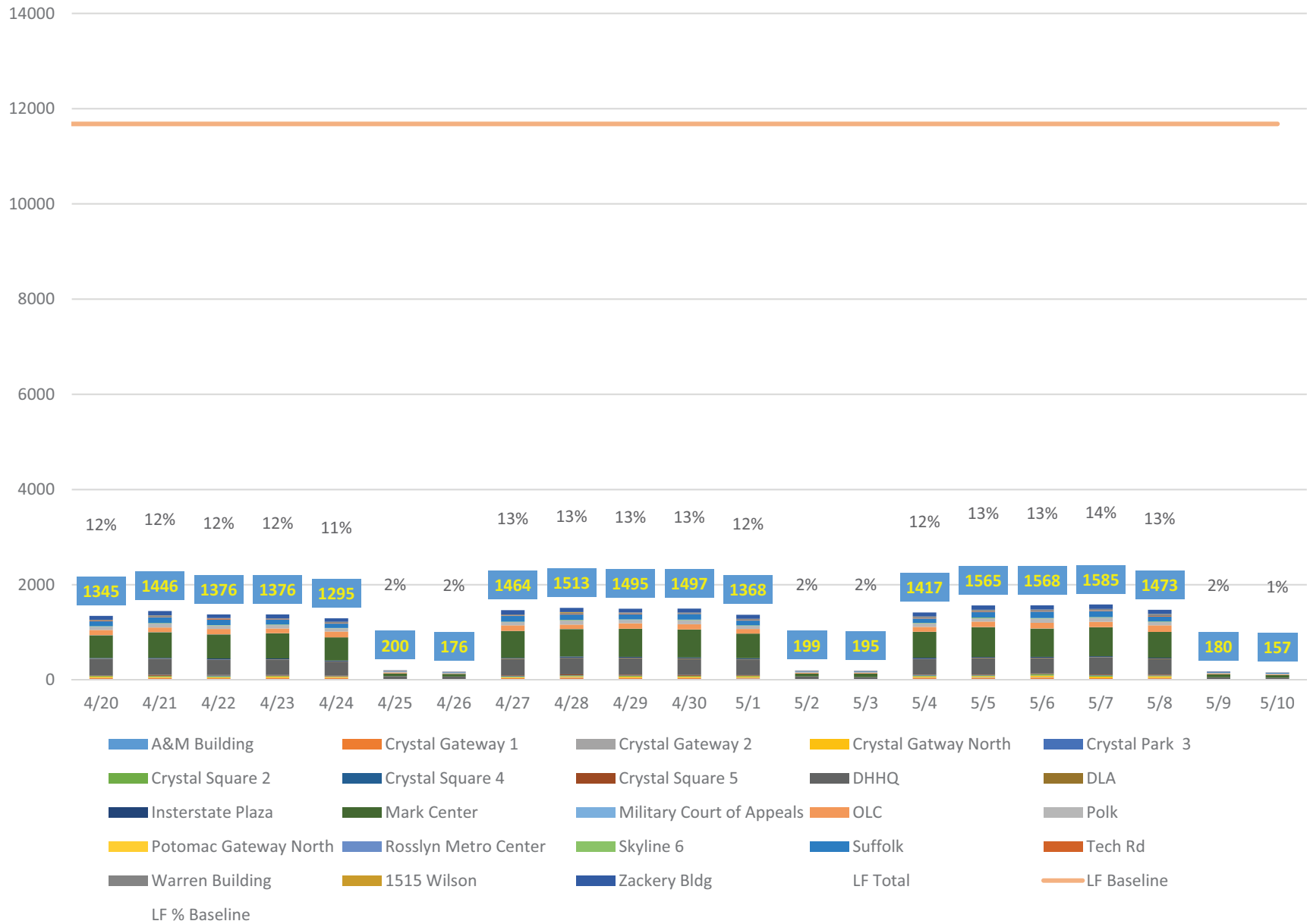


Chart Title



COVID-19 – Agency Response
May 11, 2020
Department of Defense

Administrative Actions, Waivers, and Other Programmatic Changes that Impact Agency Provision of Service or Mission Delivery (Externally Facing)

- Pentagon Reservation: **HPCON CHARLIE**
- Armed Forces Retirement Home: **HPCON DELTA**.
- DoD Installations: **HPCON CHARLIE**
- Pentagon Reservation positive COVID-19 cases: 125 (+2).

CARES ACT IMPLEMENTATION – KEY ACTIVITIES AND MILESTONES

(Please also include activities related to the implementation of other COVID-related supplementary funding legislation, including P.L. 116-127 and P.L. 116-123)

- NSTR

Major upcoming decisions that require POTUS or Task Force-level decisions

- NSTR

Guidance, Communication and Outreach with Stakeholders

- NSTR

Actions That Affect Federal Facilities and Personnel

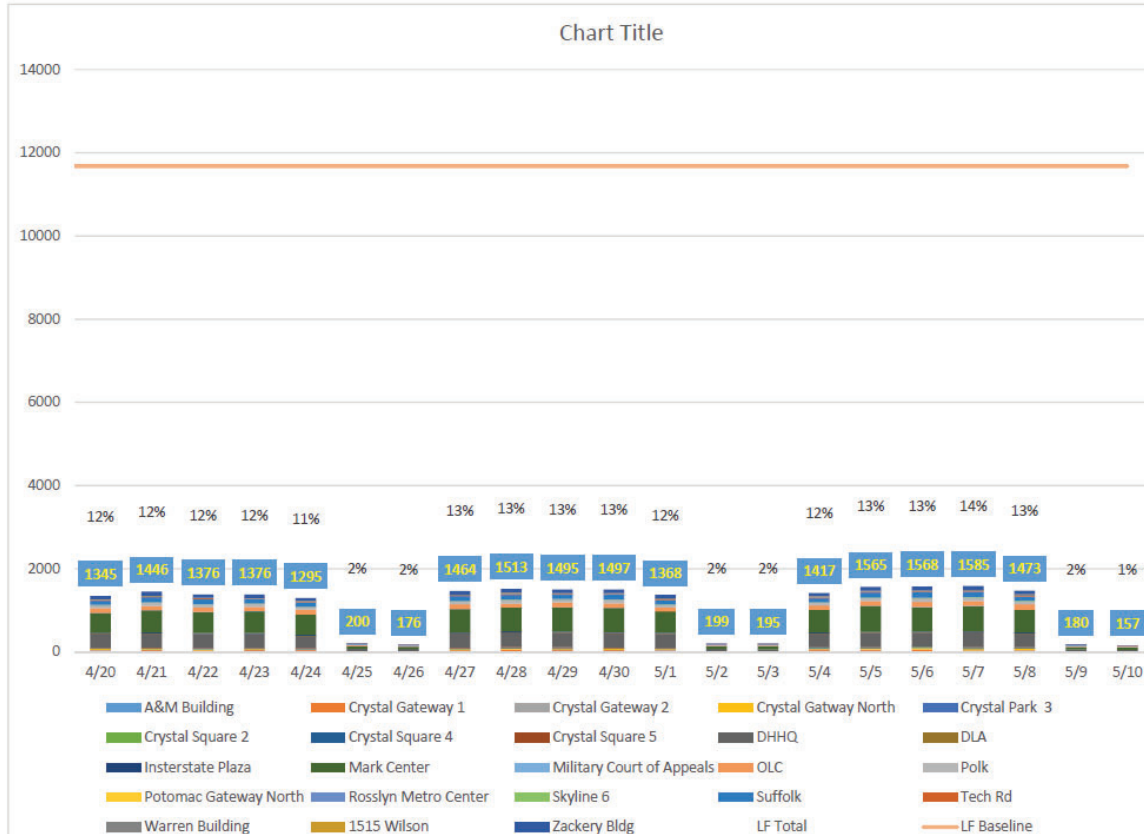
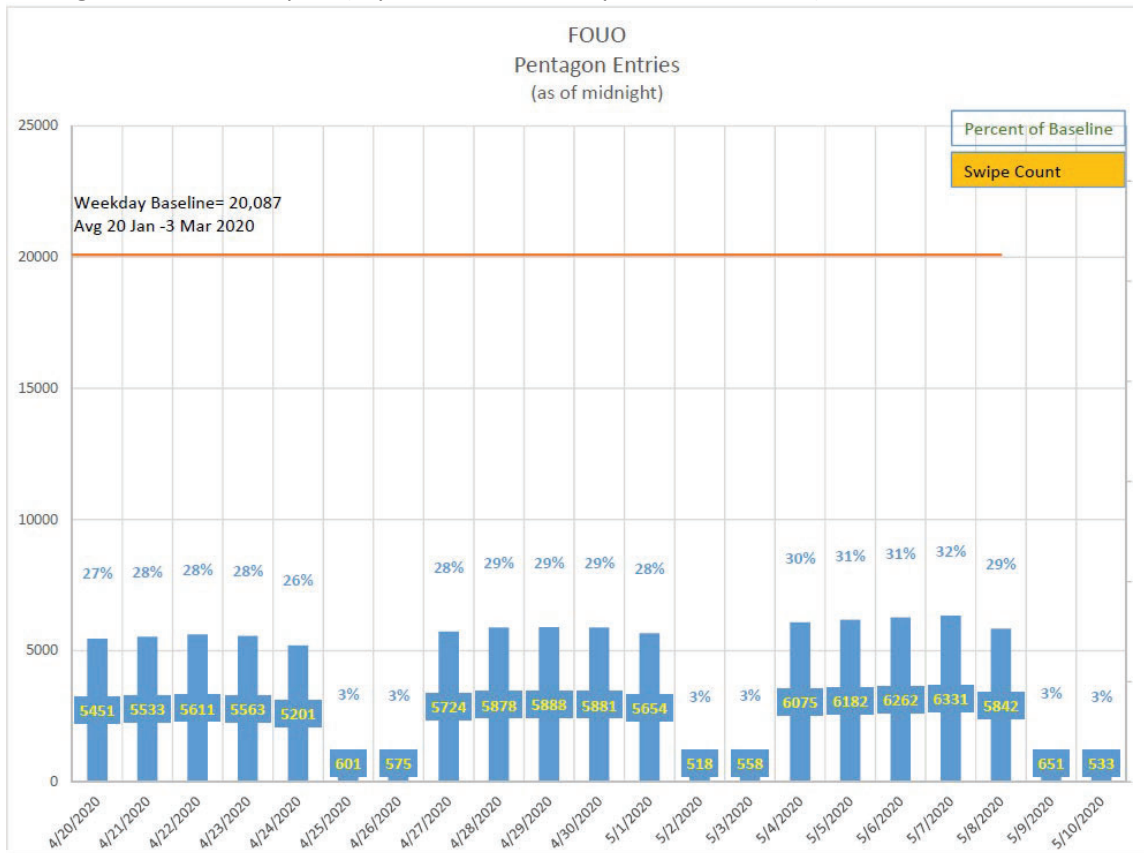
- Pentagon building population: Weekend average: 592; on par with previous weekends
- NCR DoD leased building population: Weekend average 169; less than previous weekends

Other Notable Responses

Updates: 62,100+ DoD personnel supporting COVID relief

- **U.S. Northern Command** is responsible for DoD's support of COVID-19 efforts with approximately 13,100 people deployed, including 2,200 medical personnel. This includes almost 800 medical providers working alongside civilian counterparts in New York City-area hospitals, alleviating the heavy burden placed on the New York City medical system.
- 46,400+ members of the **National Guard** are supporting COVID-19 response at the direction of their governors.
- The **U.S. Army Corps of Engineers** is executing 38 FEMA Mission Assignments totaling \$1.8 billion, with 15,000 personnel engaged and 1,074 deployed in support of COVID-19 response operations.

Pentagon Utilization Report (representative of response across DoD):



DoD Wide COVID-19 Cases: Next report – 11 MAY 20

DoD Cumulative Totals, 0500, May 11, 2020

Note: These figures are refined as the Joint Staff Crisis Management Team receives updated/corrected reporting on case numbers

	Cumulative Cases	Cumulative Hospitalized	Cumulative Recovered	Cumulative Deaths
Military	5,316	118	2,218	2
Civilian	1,304	93	591	14
Dependent	955	25	458	4
Contractor	471	31	197	7
Total	8,046	267	3,464	27

Cases	USA	USAF	USMC	USN	NGB	DoD Agencies
Military	1,122	417	460	2,162	1,037	118

From: [Rapuano, Kenneth P HON OSD OUSD POLICY \(USA\)](#)
To: [Norquist, David HON SD](#); [Hyten, John E Gen USAF JS OCJCS \(USA\)](#); [Hershman, Lisa W HON \(USA\)](#); [McCarthy, Ryan D HON USARMY HODA SECARMY \(USA\)](#); [Barrett, Barbara M HON USAF SAF-OS \(USA\)](#); [\(b\) \(6\)](#); [RAYMOND, JOHN W Gen USSF HOSF USSF/CSO USSPACECOM/CC](#); [McConville, James C GEN USARMY HODA CSA \(USA\)](#); [Gilday, Michael M ADM USN CNO \(USA\)](#); [Goldfein, David L Gen USAF AF-CC \(USA\)](#); [Berger Gen David H](#); [Burke, Robert P ADM USN VCNO \(USA\)](#); [Martin, Joseph M GEN USARMY HODA VCSA \(USA\)](#); [Thomas Gen Gary L](#); [Wilson, Stephen W Gen USAF AF-CV \(USA\)](#); [Griffin, Michael D HON OSD OUSD R-E \(USA\)](#); [Lord, Ellen M HON OSD OUSD A-S \(USA\)](#); [Anderson, James H HON OSD OUSD POLICY \(USA\)](#); [McCusker, Elaine A HON OSD OUSD C \(USA\)](#); [Donovan, Matthew P HON OSD OUSD P-R \(USA\)](#); [Kernan, Joseph D HON \(USA\)](#); [Oshaughnessy, Terrence J Gen USAF NORAD-USNC CG \(USA\)](#); [Faller, Craig Stephen ADM USN SOUTHCOM SC-CC \(USA\)](#); [Wolters, Tod D Gen USAF EUCOM COM \(USA\)](#); [McKenzie, Kenneth F Jr Gen USMC CENTCOM CCCG \(USA\)](#); [Davidson, Phillip S ADM USN INDOPACOM J00 \(USA\)](#); [Clarke, Richard D GEN USARMY USSOCOM SOCOM \(USA\)](#); [Townsend, Stephen J \(Steve\) GEN USARMY AFRICOM ACCC \(USA\)](#); [Lyons, Stephen R GEN USARMY TRANSCOM TCCC \(USA\)](#); [Nakasone, Paul M GEN USARMY USCYBERCOM \(USA\)](#); [Richard, Charles A ADM USN STRATCOM J0CC \(USA\)](#); [Lengyel, Joseph L Gen USAF NG NGB \(US\)](#); [Ney, Paul C Jr HON OSD OGC \(USA\)](#); [Whitley, John E HON OSD CAPE \(USA\)](#); [Deasy, Dana S HON \(USA\)](#); [Manasco, Shon J HON USAF SAF-US \(USA\)](#); [Hood, Robert R HON OSD OASD LA \(USA\)](#); [Hoffman, Jonathan R SES OSD OSD \(USA\)](#); [Baker, James H SES OSD ODNA \(USA\)](#); [Stewart, Jennifer SES SD](#); [Fenton, Bryan LTG SD](#)
Cc: [Henke, Robert SES SD](#); [Lyons, David Brig Gen SD](#); [Johnson, Justin SES SD](#); [Ross, Alexis SES SD](#); [Salesses, Robert G SES OSD OUSD POLICY \(USA\)](#); [Payne, Lee E Maj Gen USAF DHA J-3 \(USA\)](#); [\(b\) \(6\)](#); [Castle, William S SES OSD OGC \(USA\)](#); [SD - DSD Read ahead](#)
Subject: Agenda and RAH for Thur 30Apr20 COVID-19 Update to the SecDef
Date: Wednesday, April 29, 2020 6:42:41 PM
Attachments: [TAB 3A - CMO briefing to COVID TF 04292020 v1.pptx](#)
[TAB 3B - 20200428 Pentagon Plan for Resilience v2.docx](#)
[TAB 3C - Pentagon Reservation Plan Matrix 28Apr20 Version5c.pdf](#)
[TAB 4 - Elective Surgery Consideration v3.pptx](#)
[TAB 4A - Elective Surgical Invasive and Dental Procedures in Military Treatment F... .pdf](#)
[TAB 5 - SECDEF RD Serological Testing Update Final 29apr20.pptx](#)
[TAB 2 - 20200430 DoD Lab Testing Update v7.pptx](#)
[TAB 1A - MCM Manufacturing Industrial Base-30 Apr 20.pptx](#)
[TAB 1 - VT Production Capacity-RAH Coversheet_30 Apr 20.docx](#)
[Agenda_Thur 30 Apr SD COVID-19 Update Meeting \(28Apr 2005\).docx](#)

DSD, Vice, and Colleagues – provided is the agenda and RAH for Thursday’s COVID-19 Update to the Secretary.

- 1) Updates on key due-outs from last meeting:
 - Increasing production capacity for vaccines & therapeutics (A&S) (TAB 1)
 - Testing requirements and supplies (Maj Gen Payne, P&R) (TAB 2)
 - Breakout of the testing quantities required to meet our testing strategy cross-referenced with the testing supplies (swabs, reagents, machines, etc) on-hand and on-order
-
- 2) Increased workforce at the Pentagon (CMO) (TAB 3)
- 3) Elective medical procedures (P&R) (TAB 4)
- 4) Testing Update
 - Serological Testing R&D (b) (6) (TAB 5)
 - Update on DoD serologic research
 - (b) (5)
 - Testing for the Force (Maj Gen Payne) (TAB 2)

- o DoD Lab testing Lines of Effort

I appreciate your continued efforts and support on these issues.

Best,

Ken





Pentagon Reservation Plan for Resilience

In Washington, D.C. and Guilford, MS, and the U.S. Court of Appeals for the Armed Forces in Washington, D.C.



During all phases of the plan, Pentagon Reservation Personnel **MUST**



populations, Pentagon Force Protection Agency, etc.)



During all phases of the plan, Pentagon Reservation Personnel MUST (Continued)

<http://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/disinfecting-your-home.html>.

<https://www.cdc.gov/coronavirus/2019-ncov/community/organizations/cleaning-disinfection.html>

<https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/people-at-higher-risk.html>

Special Populations).



Overview of the Five Phased Plan

Gate One Gate Two Gate Three Post-Pandemic



ZERO (Now)	ONE (Restricted)	TWO (Moderate)	THREE (Normal)	FOUR (Resilience)
HPCON Charlie +	HPCON Charlie	HPCON Bravo	HPCON Alpha	HPCON Alpha
20% in office (28% on 4/28)	40% in office	80% in office	100% in office	Optimized
80% telework goal	60% telework goal	20% telework goal	Normal telework as directed	Optimized telework and new arrangements
Limited screening	20-50% screening	10-20% screening	<5% screening	Limited screening

◆ Gating Criteria For Phased Opening

- Downward trajectory for Influenza-like Illnesses **AND** COVID symptoms reported in 14 day period
- Downward trajectory for documented cases **OR** COVID positive tests as a percent of total tests within a 14 day period (flat or increasing volume of tests)
- Treat all patients without triage care **AND** robust testing
- **AND** no evidence of a rebound between phases



Pentagon Reservation Resilience Plan

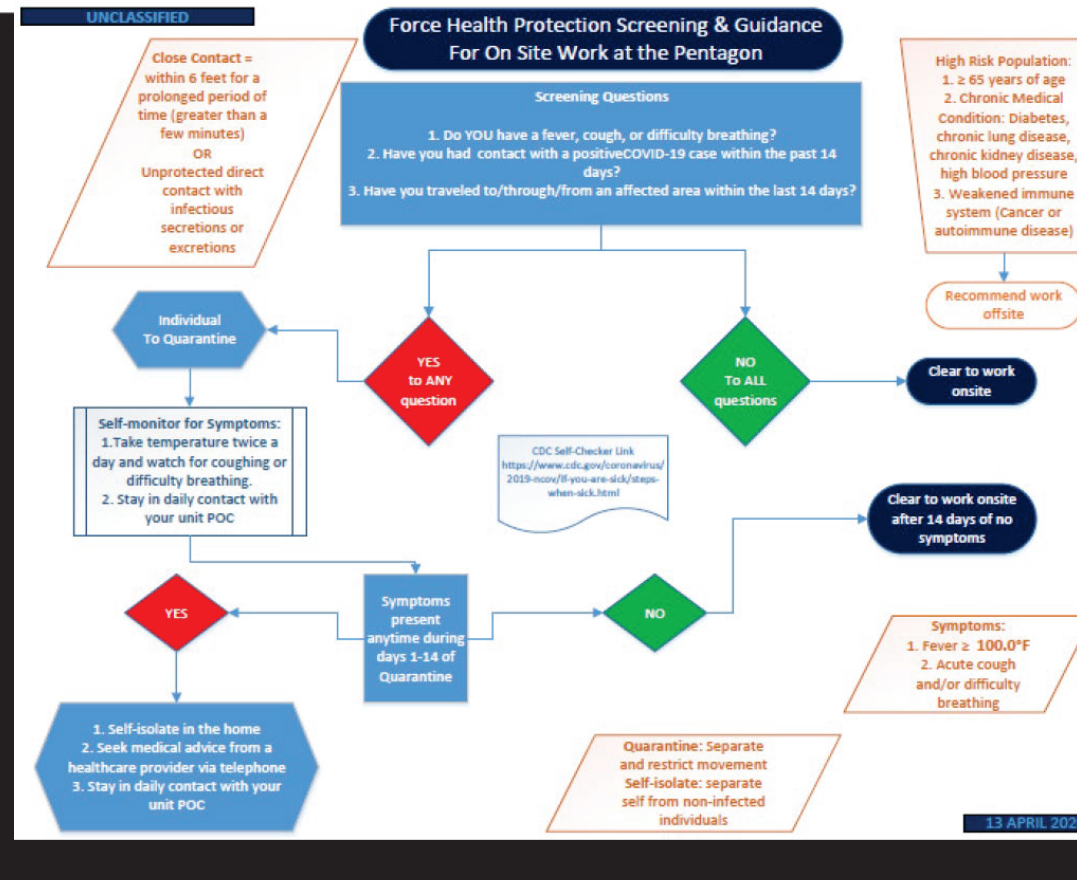
Pentagon Reservation Resilience Plan															
PHASE	HPCON	DC, MD, and VA Conditions	Public Health Readiness	Workforce	Telework	Vulnerable Populations ⁽¹⁾	Cloth Face Coverings	Hygiene Supplies	Social Distancing	Symptoms ⁽²⁾	Entrance Screening	Facilities ⁽³⁾	Mass Transit		
ZERO (Now)	CHARLIE PLUS	Stay at home orders in place	Testing is available for symptomatic and those at risk	Minimal workforce	Maximum telework flexibilities	Stay at home (Telework or Weather-Safety Leave)	Mandatory on reservation if you cannot maintain 6 feet social distance	Limited cleaning supplies available (disinfectant and wipes)	6 feet	If you have symptoms notify supervisor and stay home	No screening for employees and contractors	Increased cleaning and disinfecting of common and high-traffic areas	Reduced mass transit schedules		
		Schools daycare and camps closed	Hospital surge is available in region					Limited Hygiene supplies available (hand sanitizer hand soap paper towels and toilet paper)	No gatherings			Stay home for 3 days if temperature is 100.4 degrees F or 38 degrees C or display symptoms	100% screen of Pentagon visitors and temporary badges; implement screen for temperature and questions	Closed common areas	Metro rail every 15-20 minutes
		Essential businesses only	PPE is available for health care workers	20% in office spaces	80% telework goal										Metro bus every 30 min
		Social distancing	Tracing is available to track positive cases											PAC and gyms closed	Increased Pentagon parking available
AFTER FIRST GATE															
14 day period downward trajectory of influenza-like illness AND COVID-like symptoms; AND 14 day period downward trajectory of COVID cases OR percent positive tests; AND health care available with robust testing															
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		Continued social distancing	Increased tracing												
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AFTER RETURN TO NORMAL															
Continue to monitor for resurgence of Influenza or COVID-19; increased medical surveillance and tracing; Incorporate lessons learned and prepare for next epidemic															
FOUR (Resilience)	ALPHA or ZERO	To be determined	To be determined	Optimized workforce	Optimized telework and new work arrangements	At office spaces and monitor threat to vulnerable workforce	Replenish supplies of face coverings	Replenish cleaning supplies available (disinfectant and wipes)	Increased awareness of hand hygiene sneeze and cough etiquette	Recommend monitor health daily	Maintain capability to ramp up screening if necessary	Increased cleaning and disinfecting of common and high-traffic areas	Normal mass transit schedules		
				Increased opportunities for distributed and virtual work	Goals to be determined			Replenish hygiene supplies available (hand sanitizer hand soap paper towels and toilet paper)	Gatherings not restricted; tours are open			Maintain increased screening for visitors	Common areas open	Metro rail every 6-15 minutes	
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NOTE (1) - Vulnerable populations: Agencies and Managers must continue to take precautions for vulnerable populations that are at higher risk for severe illness from COVID-19 including older adults people of any age who have serious underlying medical conditions and those with vulnerable persons in their home. Supervisor actions must be consistent with the Rehabilitation Act of 1973 as amended. See <https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/groups-at-higher-risk.html>
 NOTE (2) - Symptoms: Fever shortness of breath or difficulty breathing cough chills repeated shaking with chills muscle pain headache sore throat new loss of taste or smell. Seek advice of a healthcare professional if you are ill.
 NOTE (3) - Facilities and Cleaning: See <https://www.cdc.gov/coronavirus/2019-ncov/community/disinfecting-building-environment.html>

OSJI-Covid / 20cv5096 (DoD 20-L-1014) / 3795



Screening Concept of Operations



WELCOME

The Pentagon Force Protection Agency is conducting Body Temperature Screening using Enhanced Body Temperature screening equipment for visitors entering the Pentagon. This device uses infrared technology to measure temperature at a distance of 6-8 Feet using a forward looking infrared camera.

- 1** AS YOU ENTER THE BUILDING, YOU MAY BE ASKED TO PAUSE FOR A SECOND TO TAKE A READING.
- 2** IF YOUR TEMPERATURE IS ELEVATED (100.4°F/38°C OR HIGHER), YOU WILL BE ASKED TO STEP ASIDE FOR SECONDARY SCREENING WITH A NON-CONTACT FOREHEAD THERMOMETER
- 3** IF A SECONDARY SCREENING CONFIRMS AN ELEVATED TEMPERATURE, YOU WILL BE REFERRED TO YOUR SUPERVISOR AND HEALTHCARE PROVIDER, AND DIRECTED TO LEAVE THE PENTAGON.

REMOVE

- HATS
- FACE COVERS
- EYEBASSES



Screening Concept of Operations





Raven Rock Screening Story Board

RRMC COVID-19 Medical Screening

As of 20 Apr 2020



5 March: RRMC's initial response to the to the COVID-19 outbreak was to alert its Defense Health Agency (DHA) counterparts that screening personnel may be needed to ensure the viability of the facility.

13 March: Initial screening begins at the Security Building. RRMC used active duty Soldiers from DHA and a screening station at RRMC's primary access point was established to screen all incoming personnel.

16 March: HPCON B, increased screening questions and the wearing of PPE by the Medical Team. A two-stage screening approach was used wherein personnel were questioned and those determined to have increased risk were subjected to temperature checks. Random temperature checks were incorporated as an added measure of protection.

23 March: Upon increasing the HPCON C, random temperature testing increased and screening questions became further refined to include areas of travel. The use of a secondary questioning site was added to allow further questioning while maintain personnel flow onto the site.

Throughout this process the RRMC Clinic's nursing staff along with its PHEO contacted all individuals who where turned away, obtained an in-depth history, reinforced self-isolation and conducted follow ups with individual medical providers. Additionally, they tracked and maintained records of all individuals turned away, regularly updating their status which was incorporated into Pentagon reporting as well as a "No entry for Medical Reason" list that revokes access to the facility further ensuring the mission space.

To date 74 individuals have been identified as "at risk" by the screening team and denied entry. Of that number, 65 have been released to return to work.

17 RRMC workers have been fully tested, only one has tested positive for COVID-19, and there are no indications that this case was workplace acquired. The individual in question was identified as at-risk by the screening team and did not enter the facility.

The screening team has averaged 368 daily screenings, with a daily range of 280 to 487. To date, 8,860 screenings have been conducted; as of 29 Mar the inclusion of 800 random (25%) on Tue and Thur began.



Initial Walk up Screening Station: Using the Site's recently purchased decontamination trailers, the staff was provided a rapidly deployable and all weather mobile screening platform.



Defense Health Agency Soldiers ready to receive: screening moves to the West Gate ensuring all staff on both Sites are screened prior to parking.



Key Guidance Needed

(b) (5)



Recommendation and Next Steps

(b) (5)



Pentagon Reservation Resilience Plan

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Resumption of Elective Surgery

- On 24 Mar 2020, ASD (HA) directed Medical and Dental Treatment Facility Commanders/Directors to postpone all elective surgeries, invasive procedures and dental procedures from 31 Mar 20 for 60 days.
 - Purpose was to conserve vital healthcare resources, to include bed space, personal protective equipment, supplies, and medical personnel.
- The Guidelines for Opening Up American Again outlines a phased approach for reducing community restrictions, including elective surgeries.
- Both HHS and VA have established elective surgery guidelines that are consistent with the Opening Up America Again guidelines. As such, local and regional conditions will drive the resumption of TRICARE network medical care.

(b) (5)



THE ASSISTANT SECRETARY OF DEFENSE

1200 DEFENSE PENTAGON
WASHINGTON, DC 20301-1200

MAR 24 2020

HEALTH AFFAIRS

MEMORANDUM FOR ASSISTANT SECRETARY OF THE ARMY (MANPOWER AND
RESERVE AFFAIRS)
ASSISTANT SECRETARY OF THE NAVY (MANPOWER AND
RESERVE AFFAIRS)
ASSISTANT SECRETARY OF THE AIR FORCE (MANPOWER
AND RESERVE AFFAIRS)
DIRECTOR, DEFENSE HEALTH AGENCY

SUBJECT: Elective Surgical, Invasive, and Dental Procedures in Military Treatment Facilities

This memorandum directs all Military Treatment Facility (MTF) and Dental Treatment Facility (DTF) Commanders and Directors to immediately postpone all elective surgeries, invasive procedures, and dental procedures performed on beneficiaries of the MTFs and DTFs with the exceptions outlined below. This includes aerosol-producing procedures, such as endoscopies, bronchoscopies, pulmonary function tests, and sleep continuous positive airway pressure (CPAP) titrations.

This policy is effective March 31, 2020, and will remain in place for 60 days. This action aligns with actions being taken across the nation to conserve vital healthcare resources during this public health emergency, to include bed space, personal protective equipment, supplies, and medical personnel. This policy also protects patients, medical personnel, and the community from further exposure and transmission of COVID-19.

MTF and DTF Commanders and Directors may authorize surgeries or procedures that can be safely performed at their facility if required to maintain deployability and readiness of Active Duty Service Members including any Reserve component or National Guard member activated or issued a delayed-effective-date active duty order, as provided in 10 U.S.C. 1074(d). MTF and DTF Commanders' and Directors' may authorize an elective surgery or procedure if, after consulting with the relevant medical or dental specialist, he or she determines the risk to the patient of delaying the surgery or procedure outweighs safety concerns and logistics considerations (e.g. availability of beds, supplies, equipment, and medical providers). Any patient whose procedure is cancelled will be contacted through a means that confirms receipt and, to the greatest extent possible, by personal phone call.

As the Military Health System prepares for a surge in demand for health care services related to COVID-19, it is essential that we take prompt action, informed by local conditions and your risk-benefit analysis. I deeply appreciate your leadership role in our comprehensive response to the COVID-19 pandemic. The needs of the mission, the needs of the patient, and local environmental conditions are all important considerations.

As you take action, I ask that you be mindful of the impact that cancelling or postponing surgery has on our patients, their families and our professional staff. While their surgeries may be elective, this is nonetheless a meaningful change to their life plans.

My point of contact for this policy is Richard Mooney, MD, MPH Acting Deputy
Assistant Secretary of Defense Health Services Policy and Oversight at

(b) (6)



Tom McCaffery

R&D Serological Testing Update



OUSD(P&R) / OASD(HA)

Purpose: Update on development of serological tests and their evaluation



Investments in Diagnostics

- Initial investments focused on molecular diagnostics with existing platforms
 - Assays detect presence of virus, supporting diagnosis of infection
 - DoD partner achieved EUA for Biofire platform less than 30 days after receipt of funding
 - >40 assays have received FDA EUA and are available for use
 - DoD and HHS addressing supply chain challenges
- Antibody and antigen assays are more challenging to develop and interpret but are critical to maintain readiness
 - Only 4 antibody assays have received FDA EUA
 - HHS and DoD have investments in 4 additional antibody based assays
 - No antigen assays have received FDA EUA
 - HHS and DoD have investments in 6 additional antigen based assays




USG-Sponsored SARS-CoV-2 Diagnostic Tests

In Development

EUA

Laboratory Assays


POC RT-PCR


PCR for E-Plex Respiratory Panel


POC RT-PCR



Panther-Fusion platform


PCR for NxTAG platform


CDC nCoV 2019 Real-time RT-PCR



RT-PCR


PCR for Aries platform


POC and Lab RT-PCR for GeneXpert


RT-PCR


QIA-Stat Respiratory Panel


RT-PCR

Antibody


Antibody


Antibody


Antibody


Antibody

Antigen



Antigen


Antigen


Antigen


Antigen


Antigen


Antigen



Status and Timelines

- DoD Antibody Assays for EUA
- DoD Antigen Assays receive EUA in 2-3 months
- Other Assays for Serology & Testing being Evaluated



Current and Proposed Research

- Parris Island Study (Naval Medical Research Center) (ongoing)
- Epidemiology, Immunology and Clinical Characteristics of Emerging Infectious Diseases with Pandemic Potential (EPICC) (ongoing)
- Surveillance Stick – NHRC Protocols (ongoing)
- Epidemiology of SARS-COV-2 Infection in Military Trainees (proposed)
- Managing risk associated with rapid FDA EUAs through follow on test and evaluation (e.g. Curative, Inc.)



BACK UP

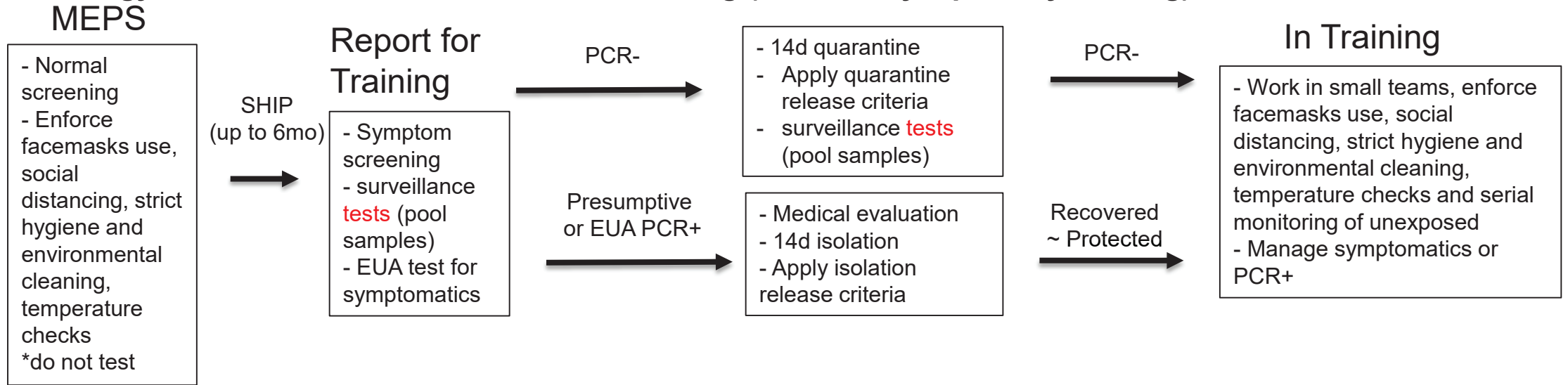
OSJI-Covid / 20cv5096 (DoD 20-L-1014) / 3816

UNCLASSIFIED // ~~FOUO~~ // ~~PRE-DECISIONAL~~

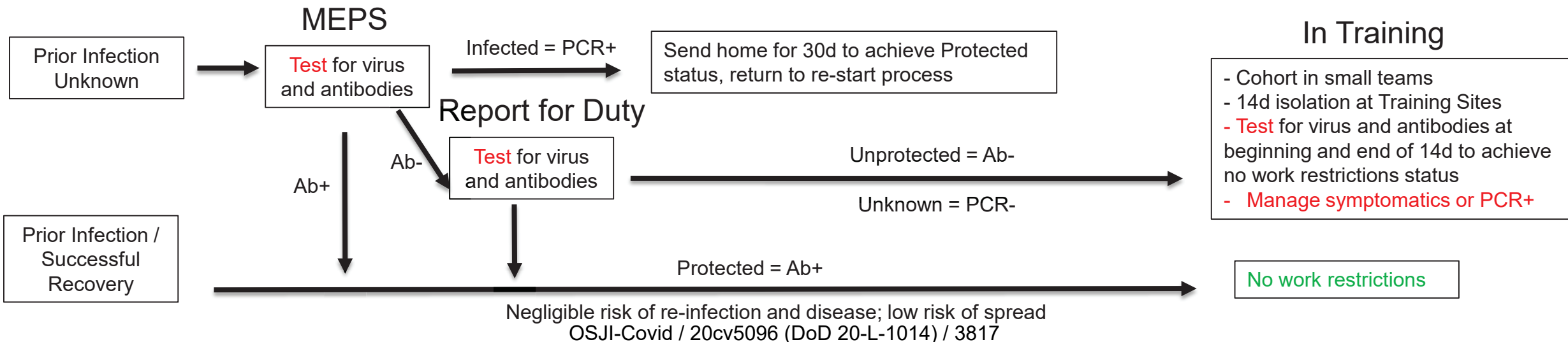


Impact of Testing and Serology on Return to Duty – Training Sites

Current strategy for trainees into accessions and training (Initial entry, specialty training)



Future strategy for trainees into accessions and training (Assumes ideal Point of Care tests and Serology tests)





Current COVID-19 Serology Efforts in DoD

Are You Protected?

Research Questions

- Laboratory: Assay should detect which antibodies?

Spike glycoprotein?
Hemagglutinin?
Other?



- Landscape Tracking:
Open source info
Target, sensitivity/specificity

- Cohort Studies:

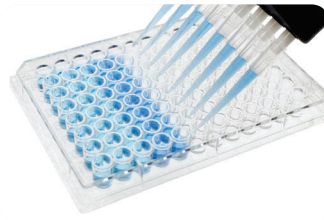


Immune  Not Immune 

What Tools do we need?

Assess Immunity, Improve Detection

Serology



Lateral Flow Immunoassay



Goal: 1) High Volume Lab Testing
2) Point of Care Testing

Tool Evaluation

HHS Partnership for Selection of Commercial Immunoassays

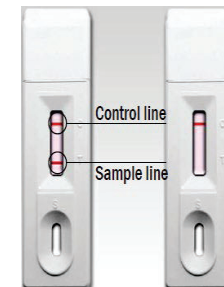
Market Research



Independent Evaluation



Downselect for Testing



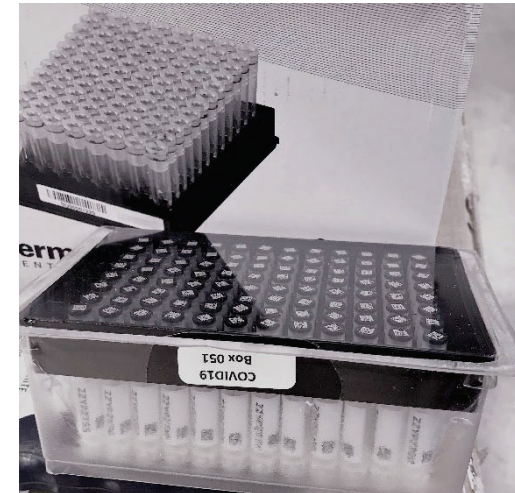
Large Scale Purchase for Field Trials

Goal: Rapid Testing and Evaluation of Immune Status



CDC Process and Efforts

- The CDC developed and qualified an Enzyme Linked Immunosorbant Assay (ELISA) serology test
 - Capability:
 - High specificity
 - High throughput (5,000 samples/day) for detecting antibodies
 - Requirements:
 - Trained laboratory technicians
 - Specific lab facility and equipment
 - Must be run at the CDC in Atlanta, GA
 - Future state:
 - Potential clinical (CLIA) use
 - Transfer technology to DoD partner labs
- Collaboration with DoD
 - Assisting the Navy with an outbreak investigation on the *USS Theodore Roosevelt*
 - The CDC's serology test will be used in combination with PCR diagnostic testing and a short survey
 - Determine prevalence of COVID-19 infection among participants who have remained asymptomatic
 - Potential for future serology surveillance studies in recruit and operational populations





SURVEY AND EVALUATION OF CANDIDATE ASSAYS FOR SARS-COV-2 IMMUNOASSAY

Landscape Survey and Immunoassay Development

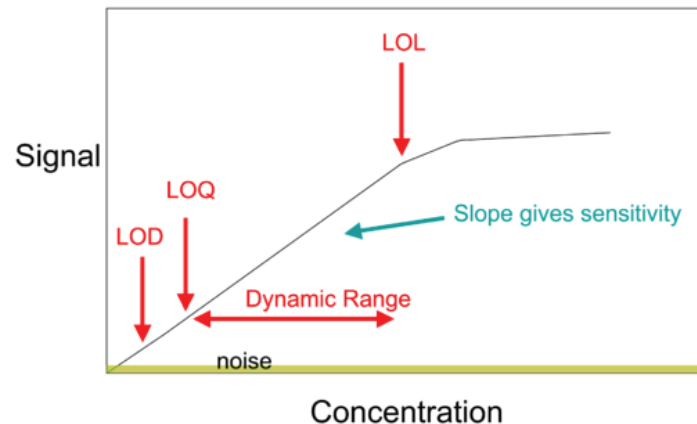
- Industry Partners
- Academia Partners
- HHS, FDA submission data

*Prioritize known EUA submissions and USG purchased assays for evaluation

Score Immunoassays

- Complete evaluation protocols
- Set minimal thresholds for performance
- Agree on sample panel composition for testing

Immunoassay Testing Parameters



1. Range / Limit of Detection (LoD)

- Lowest concentration that can be detected?

2. Analytical Sensitivity

- Test using 0.5X or 5X concentrations

3. Analytical Specificity

- Compare targets and near neighbor viral samples

4. Interfering Substances

- Test substances that may cause false + or false –

5. Reproducibility

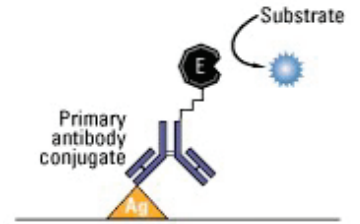
Ongoing Research Questions:

- Does antibody presence equate to immunity?
- Test for both IgM and IgG?
- Determine length of viral shedding with + Immunoassay result



Overview of Antigen vs Antibody Based Testing

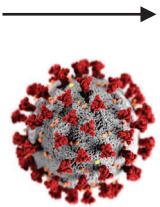
- Antibodies = Y-shaped molecules produced by the body in response to infection
 - Attach to the virus with precision (lock and key concept)
 - Can also be designed and manufactured for different purposes
- Antibody-based tests (Immunoassays) use virus-specific antibodies in a rapid, point of care tests
 - Called Lateral Flow Immunoassay (LFI) - sample runs across the test wells and causes a color change
 - Enzyme-linked Immunosorbent Assay (ELISA)- more specific and quantitative, high throughput



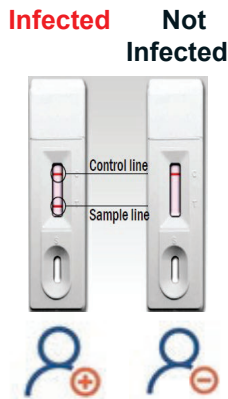
Goal:
Detect Viral Protein (Antigen) to Assess Infection (Diagnosis)



Nasal Swab

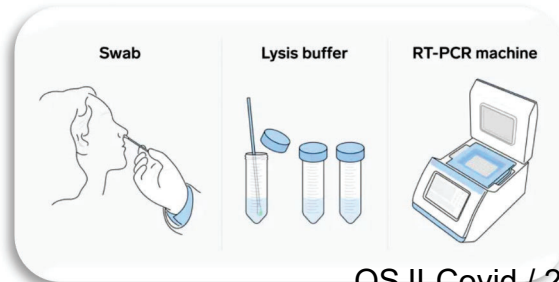


Is viral proteins present?



- Capture antibodies are anchored to test floor
- Virus shed by patient is captured
- Secondary signal antibodies attaches to virus for Color change (+)

PCR*:
Gold Standard Virus Detection
 (*Only Proven Technology)

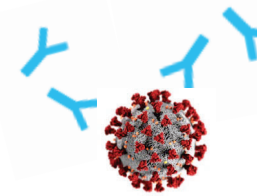


Goal:
Detect Host Antibodies to Assess Protection (Screening)

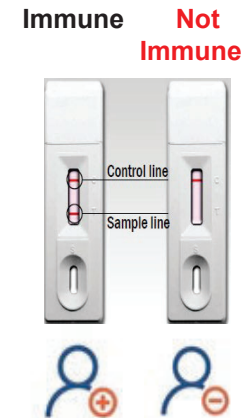
1. POC



Blood or plasma



Are antibodies to the virus present?



- Viral proteins are anchored to test floor
- Patient antibodies in sample attach
- Secondary signal antibodies attaches to patient antibodies for Color change (+)

2. Lab (CDC)

ELISA*:
Enzyme-linked immunosorbent assay
Gold Standard Antibody Test
 (*Only Proven Technology)





IDCRP- EPICC Protocol: Details

- Epidemiology, Immunology and Clinical Characteristics of Emerging Infectious Diseases with Pandemic Potential (EPICC)
- Primary Objective: To describe the epidemiology, immunology and clinical characteristics, course and outcomes of emerging infectious diseases in MHS beneficiaries – Current focus: COVID-19 / SARS-CoV-2
- Objectives:
 1. To describe the natural history of clinical disease
 2. To identify risk factors for infection and severe clinical course
 3. To characterize the host immune response to infection AND to evaluate the correlation between symptom severity, virologic/microbiologic characteristics, host immune response and clinical course
- Study Populations (includes adults and children):
 - Inpatient confirmed COVID-19 cases or persons under investigation (PUI)
 - Outpatient confirmed COVID-19 cases or PUI
 - Asymptomatic individuals with high risk for exposure

DOD COVID-19 Lab Testing Update

Information Brief



Major General Lee Payne, COVID-19 Testing Lead

Thursday 30 APR 20, 1330-1430

Nunn-Lugar Conference Room 3E863

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DOD COVID-19 Lab Testing Update

Dashboard



CURRENT TEST PLAN

Policy		26 APR Weekly Tests
<ul style="list-style-type: none"> ➤ Tiered prioritization for many ➤ Testing for symptomatic service members ➤ Adapt to virus and operational demands 		
Tier 1: Critical National Capabilities	Strategic and Nuclear Deterrence Forces	
	Homeland Defense Forces	5,921
	SOCOM National Mission Force	284
	CYBERCOM National Mission Force	0
	Accession Sources	13,498
Total Tier 1 for week of 26-APR:		24,314
Estimated Recurring Weekly Requirement after 26 APR		
Tier 0: Clinical / Diagnostic Testing		~7.5K/week
Tier 1: Critical National Capabilities		~25K/week
Tier 2: Engaged Field Forces		~12.5K/week
Tier 3: Forward Deployed/Re-Deploying Forces		~6.5K/week
Tier 4: All Other Forces		TBD
AVERAGE TESTS PER WEEK (all tiers):		51.5K

CURRENT TEST SUPPLIES

	Required	On-Hand	Difference	Additional Ordered
Specimen Collection Swabs (assumes 1.25/test)	30K	109K	+79K ●	220K
Transport Medium (assumes 1.1/test)	27K	67K	+40K ●	334K
Reagents/ Controls / Extraction Kit (assumes 1/test)	24K	131K	+107K ●	687K
TOTAL TESTS	24,314	130,646	+106,332 ●	

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DOD COVID-19 Lab Testing Update

Validated Tier 1 Testing Requirements by Week*



Organization	19-Apr			On Alert	26-Apr			3-May			10-May			17-May		
	# Tests	# Sites	Status	#Tests	# Tests	# Sites	Status	# Tests	# Sites	Status	# Tests	# Sites	Status	# Tests	# Sites	Status
US CYBERCOM	-	-	-	-	-	-	-	2,334	6	●	-	-	-	-	-	-
US INDOPACOM	13,646	2	●	-	-	-	-	-	-	-	-	-	-	-	-	-
US NORTHCOM	-	-	-	-	5,817	46	●	5,817	46	●	5,817	46	●	5,817	46	●
US SOCOM	-	-	-	-	-	-	-	430	4	●	-	-	-	-	-	-
US STRATCOM	-	-	-	1,406	1,725	8	●	1,025	6	●	1,025	6	●	1,025	6	●
US TRANSCOM	-	-	-	99	-	-	-	-	-	-	-	-	-	-	-	-
US SOUTHCOM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
US AFRICOM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
US CENTCOM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
US EUCOM	-	-	-	-	2,800	1	●	280	1	●	280	1	●	280	-	●
US SPACECOM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Army Accessions	935	1	●	-	7,115	4	●	7,115	4	●	7,115	4	●	8,095	5	●
Navy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Air Force Acc.	446	13	●	-	600	13	●	600	13	●	600	13	●	600	13	●
Air Force Missions	-	-	-	-	394	8	●	394	8	●	394	8	●	-	-	-
Marine Corps Acc.	4,837	2	●	-	5,783	9	●	5,009	11	●	5,783	9	●	5,383	14	●
Marine Corps Msn	80	2	●	-	80	2	●	80	2	●	80	2	●	80	2	●
TOTAL:	19,944			1,505	24,314			20,750			21,094			21,280		

Status: ● Complete ● In-progress ● Lab Assigned ● Lab Requested ● Delayed *Specific requirements by mission in IPR
 OSJI-Covid / 20cv5096 (DoD 20-L-1014) / 3825



DOD COVID-19 Lab Testing Update

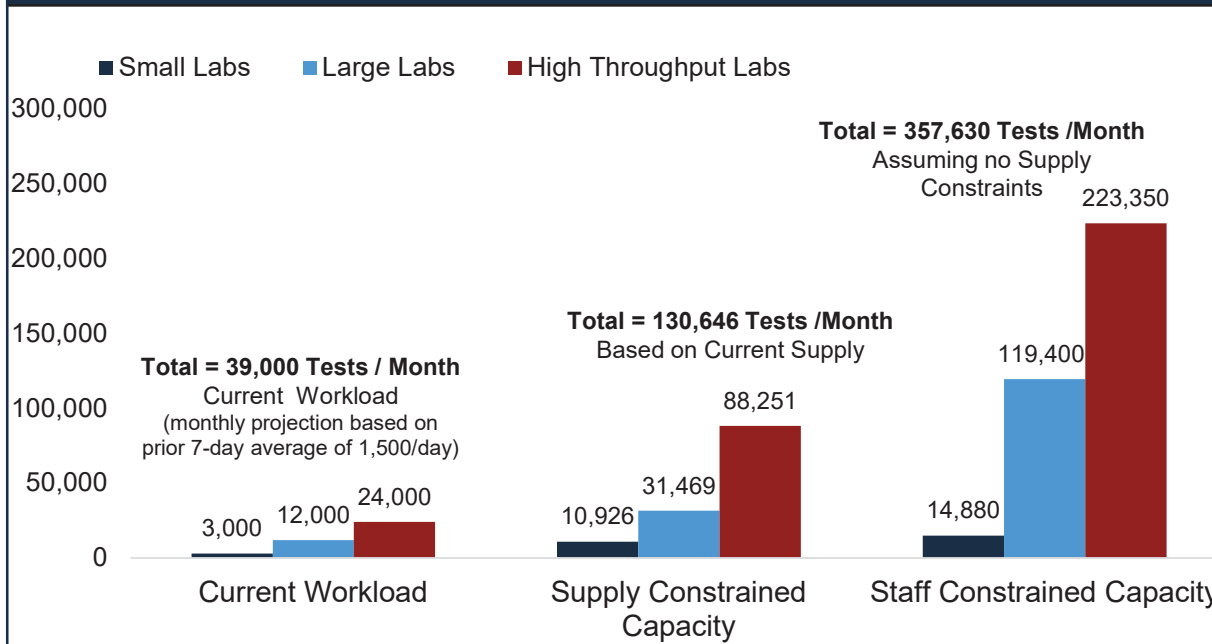
Testing Capacity*



DoD COVID-19 Monthly Testing Capacity – Equipment & Supplies

	# Facilities		# Testing Systems		Cumulative Tests			Test Inventory (no resupply)		
	17 Mar	28 Apr	17 Mar	28 Apr	17 Mar	28 Apr	15 May	17 Mar	28 Apr	15 May
High Throughput Labs	11	11	117	130	858	28,717	~100,000	4,268	88,251	~30K
Large Labs	4	33	21	108	241	9,431	~40,000	1,272	31,469	~6K
Small Labs	0	25	0	79	0	852	~10,000	0	10,926	~3K
All DoD Lab Locations	15	69	138	317	1,099	46,697	~150,000	5,540	130,646	~39K

DoD COVID-19 Monthly Testing Capacity, Projected based on Current Supply & Staffing as of 28 April 2020



Projected Monthly Testing Requirements

	May 2020	June 2020
Beginning Inventory	~165,000	200,000
-Total Tests	149,750	-200,000
Clinical	30,000	30,000
Tier 1	95,000	95,000
Tier 2	16,500	50,000
Tier 3	8250	25,000
= Ending Inventory	15,200	TBD
+ Required Resupply	1848,00	TBD

*Data and figures current as of 28 April 2020 and represent self-reported data from DoD labs

Data does NOT include testing performed at contract laboratories (e.g., ~8,400 in ROK and ~8,800 at LabCorp, ~1,000 at Mayo Clinic)

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DOD COVID-19 Lab Testing Update

Future Testing Technology



Testing for COVID-19

- **Serologic Antibody Test – Identify the Protected (Screening):**
 - Identifies previous exposure to SARS CoV-2 (blood or plasma)
 - Current serology tests are not reliable due to high percentage of false negatives
- **Body Fluid Antigen Test – Identify the Spreaders (Diagnose):**
 - Identify active infection by detecting live virus (saliva or mucus)
- **Interagency is evaluating all available commercial off the shelf tests results in 30 to 60 days**
- **US Government is sponsoring rapid development of new SARS-CoV-2 screening and diagnostic tests**
- **Allows Expansion of Our Testing Capability & Allows For Modification of Our Risk Reduction Protocols**

Research Questions – Basis for all strategies

- Must understand disease progression, development of protection (immunity) and shedding of virus
- Must determine mechanism of protection; type and level of protective antibodies or other markers of protection
- Must validate techniques and protocols for sample collection and testing

Sentinel Surveillance – Incorporate As Supply Chain Expands

- Utilizes a limited network of carefully selected reporting sites to collect high-quality data
- Signals trends, identify outbreaks and monitors the proportion of disease in a community
- Determine scope, scale, and size of total force exposure and adapted immunity

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OSJI Covid / 20cv5006 (DoD 20FL-1014) / 3827



Back Up Slides

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OSJI Covid / 20cv5006 (DoD 20PL-1014) / 3828



DOD COVID-19 Lab Testing Update

Supply Status by Testing System



Testing System	Equipment (# of Instruments)		Supply (Test Inventory)		Throughput (24-hr Max Test Capacity)	Rate (Test Turnaround Time)
	On Hand	Operational	On Hand	Days Supply	Per Unit	
ABI	42	42	34,136	13.5	60	4 hours
BioFire	208	152	16,937	4.6	24	1 hour
Panther	6	2	22,985	12.0	960	2.5 hours
Roche	2	2	34,520	8.6	1,152/ 2,880	3.5 hours
Cepheid	38	16	22,068	1.9	192/ 384/1,300	0.75 hours
BD Max	3	3	N/A	N/A	120	1.5 hours
Abbott ID Now	18	0	0	0	96	0.25 hours
TOTAL	317	217	130,646	5.3		

Equipment	100% equipment operational	50-99% equipment operational	<50% equipment operational
Supply	> 14 days supply >30,000 tests on hand	7-14 days supply 20,000 – 30,000 tests on hand	<7 days supply <10,000 tests on hand
Throughput	> 900 tests per day per unit	100 - 900 tests per day per unit	<100 tests per day per unit
Rate	< 2 hours	2 - <4 hours	4+ hours

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OSJI Covid / 20cvs006 (DoD 20PL-1014) / 3829



DOD COVID-19 Lab Testing Update

Supply Detail

COVID-19 Testing Information:

- Current capability exists at 68 DoD Test Sites
- If labs are overwhelmed / low on reagents, samples are sent to another DoD site or to LabCorp which is our DoD commercial reference lab

Data As of 28 Apr:	
Current Max # of PUIs tests (without restock)	130,646
DoDLab Facilities	
Available	69
Operational	69

Reagent & Extraction Kits on Hand	
ABI	34,136
Biofire	16,937
Panther	22,985
Roche Cobra	34,520
Cepheid Gene Expert	22,068
BD Max	NR
Total	130,646

MTF Consumable Materiel Tracked in Lab	DLA Backorder
BioFire Test Kits	77,283
Extraction Kit and Supplies	686,992
Reagents and Controls	107

DHA Pandemic PPE Assemblage				
Item	OH %	OH Qty	% Delta	OH Delta
Eye Pro	254%	228,750	0.10%	286
Gloves	285%	5,426,393	0.00%	-400
Gowns	100%	7,539,661	0.30%	24,800
Masks	264%	2,514,274	0.00%	-250
N-95				
Respirators	38%	23,115,374	1.60%	369,060

Lab Test Reagents is per test and includes: Reagents, Assays, Cartridges, Trays, and Extraction Kits

MTF Materiel On-Hand				
Item	On Hand	Demand Rate	DOS	DOS Delta
Eye Pro	28,587	504	57	0
Glove	56,189,156	656,291	86	0
Gown	1,137,908	16,508	69	0
Mask	2,661,037	40,991	65	0
Respirator N95	1,169,207	23,283	50	0
Hand Sanitizer	113,314	2,209	51	0
Specimen Swab+	109,337	2,435	45	0
Transport Medium+	26,300	159	165	0
Viral Transport Kit+	41,248	1214	34	0

DLA Total Requirements (1 Feb –26 Apr)					
Item	Qty Ordered	Qty Shipped	Qty Received	% Filled	% Delta
Gloves	91,597,107	66,438,498	65,590,828	71.60%	2.50%
Gown	2,329,452	1,220,120	1,219,345	52.30%	31.80%
Surgical Mask	14,230,254	3,531,913	3,491,738	24.50%	4.80%
N-95 Respirator	3,784,501	1,012,945	1,008,075	26.60%	-1.40%
Hand Sanitizer	803,234	204,873	196,297	24.40%	2.60%
Swab Viral Transport Kit	425,713	91,512	91,512	21.50%	0.30%
Viral Transport Swabs	325,100	105,900	105,200	32.40%	13.30%
Thermoscan	4,281	805	805	18.80%	6.90%
Eye Protection	721	121	121	16.80%	0.00%
Face Shield	124,676	38,645	37,322	29.90%	4.60%

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OSJI Covid-19cv5006 (DoD 20PL-1014) / 3850



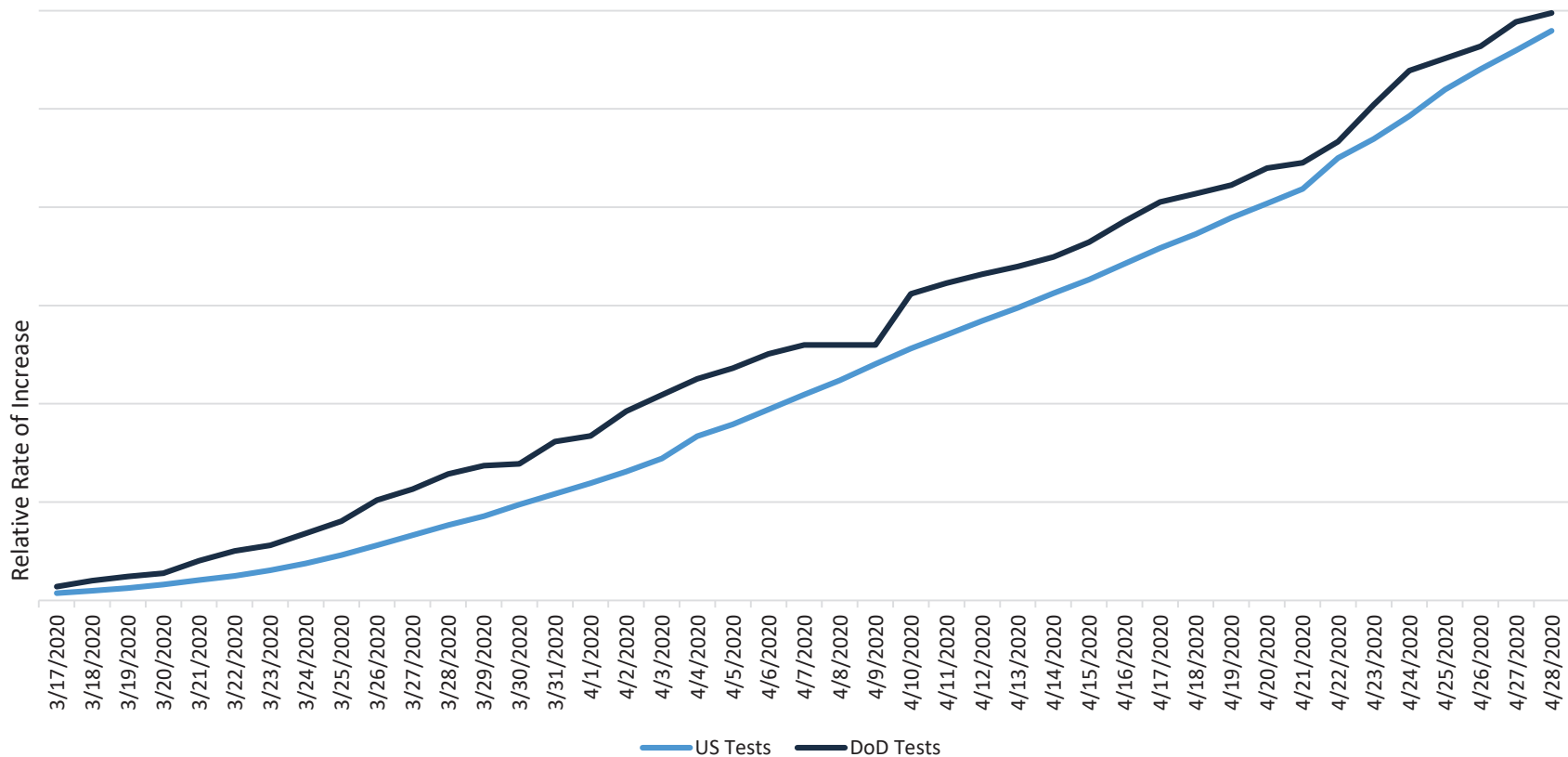
DoD COVID-19 Lab Testing Update

Testing Capacity



DoD & US COVID-19 Testing

Cumulative Tests by Day



Daily US Test Data from The COVID Tracking Project
<https://covidtracking.com/data/us-daily>

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OSJI Covid-19cv506 (DoD 20PL-1014) 73851

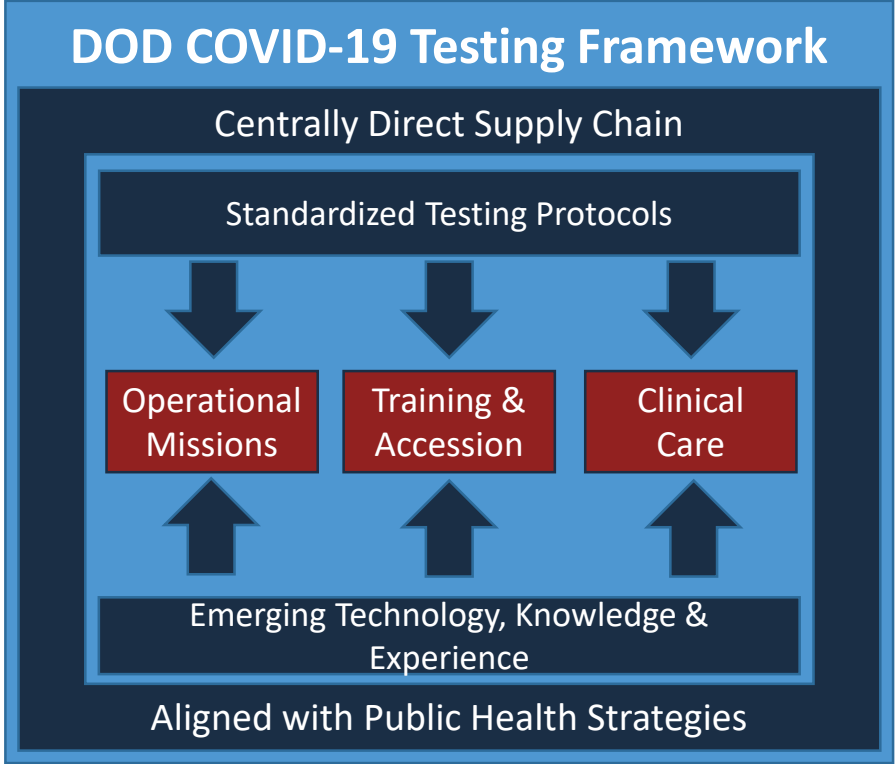


DOD COVID-19 Lab Testing Update Strategy



OBJECTIVE: Execute the National Defense Strategy (NDS) in alignment with the National Testing Strategy for COVID-19

- GOALS:**
- Fulfill 100% of weekly validated **Tier 1 testing requirements beginning 15 MAY**
 - Fulfill 100% of weekly validated **Tier 2 testing requirements beginning 15 JUNE**
 - Fulfill 100% of weekly validated **Tier 3 testing requirements beginning 15 JUNE**
 - Test at least 2-4% of total DOD force by **31 JULY**
 - Expand testing capability and capacity to support ongoing clinical care, DSCA support missions, emergency outbreaks, and additional surveillance requirements



APPROACH: Deploy a risk mitigation and COVID-19 testing plan that supports the most critical NDS missions and optimizes the use of limited testing resources

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OSJI Covid / 20cv5006 (DoD 20FL-1014) / 3852



Secretary of Defense Priorities

Diagnostic and Screening Testing



TIER 1: Critical National Capabilities – 135,000

- Strategic and Nuclear Deterrence Forces
 - **STRATCOM: Msn Essential, ICBM, SSBN**
 - **SPACECOM: NC3**
- Homeland Defense Forces
 - **N/NC: HD/BMD, ONE, COOP/COG, N2C2, HQ, CAT, Msn Essential**
 - **CYBERCOM: JFHQ DODIN**
- National Leadership (Senior Staff)
- SOCOM National Mission Force
- CYBERCOM National Mission Force
- Accession Sources (May – July) – Active: **50,000**; Reserve: **22,000**; Recruiting Force: **20,000**; Training Cadres//Support/MEPS Personnel: **15,000**; **Accessions total: 107,000**

TIER 2: Engaged Field Forces – 200,000

- NORTHCOM COVID-19 Response Forces
- Critical Capabilities/Assets
 - **CYBERCOM: DISA**
 - **SPACECOM: Satellite C2, C2 Nodes**
 - **TRANSCOM: HQ, AMC Msn Essential, SDDC major movements**
- CENTCOM: OFS/USFOR-A, OIR, OSS
- AFRICOM: Djibouti, Niger, Somalia

TIER 3: Forward Deployed/Re-Deploying Forces – 100,000

- **SOUTHCOM: Counter Narc/C-TCO, GTMO, SCO/SCO teams, SOF**
- **INDOPACOM: USS TR, RR & Ohio**
- **EUCOM: 173d ABN Romania, USMC GDO Georgia, USMC MRF-E Norway**

TIER 4: All Other Forces

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OSJI Covid / 20cv5006 (DoD 20FL-1014) / 3855

INDUSTRIAL BASE CONSIDERATIONS FOR MEDICAL COUNTERMEASURE MANUFACTURING PROCESSES

As of April 29, 2020

Dr. Brandi Vann

Deputy Assistant Secretary of Defense for Chemical and Biological Defense

(b) (6)

Stacy Cummings

Principal Deputy Assistant Secretary of Defense, Acquisition Enablers

(b) (6)





BACKGROUND

- The coronavirus pandemic has exposed the nation's inability to rapidly identify, develop and manufacture medical countermeasures (MCM, therapeutics and vaccines)
- U.S. capacity only can contend with ongoing market demand with limited to no surge capacity
- Drug manufacturing processes and supply chains are currently outsourced from the developer –aka: the developer and manufacturer are not the same
- These may become a bottlenecks as multiple technology development efforts converge at these steps
- The MCM candidates remain too early in the pipeline to predict production scale requirements without some risk



CURRENT STATUS

Environment: The coronavirus pandemic has stressed the nation's ability to provide a surge capability to support to manufacture of 10s of millions of doses of MCM

cGMP manufacture of drug substance: Drug companies are negotiating with contract manufacturers to reserve capacity for their planned manufacturing requirements for COVID-19 MCM

- Existing US industrial base is insufficient to meet current manufacturing requirements to supply the US population and significant capacity is off shored (EU/Canada/Mexico/Asia)
- Current capacity for manufacture may be overwhelmed when multiple technology originators converge at similar points in development around the same time.

Sterile Fill-Finish Capability: Large volume, sterile finish capability in the US is a limited pool of performers

- Market research has shown opportunities to build out and lease capacity from performers
- Providers have approached the USG proposing expanded access to existing capacity (priority access for USG) as a near term solution
- Additional of capacity build out has also been proposed
- Proposals have been received for vials, syringes and needles (mid to long term)



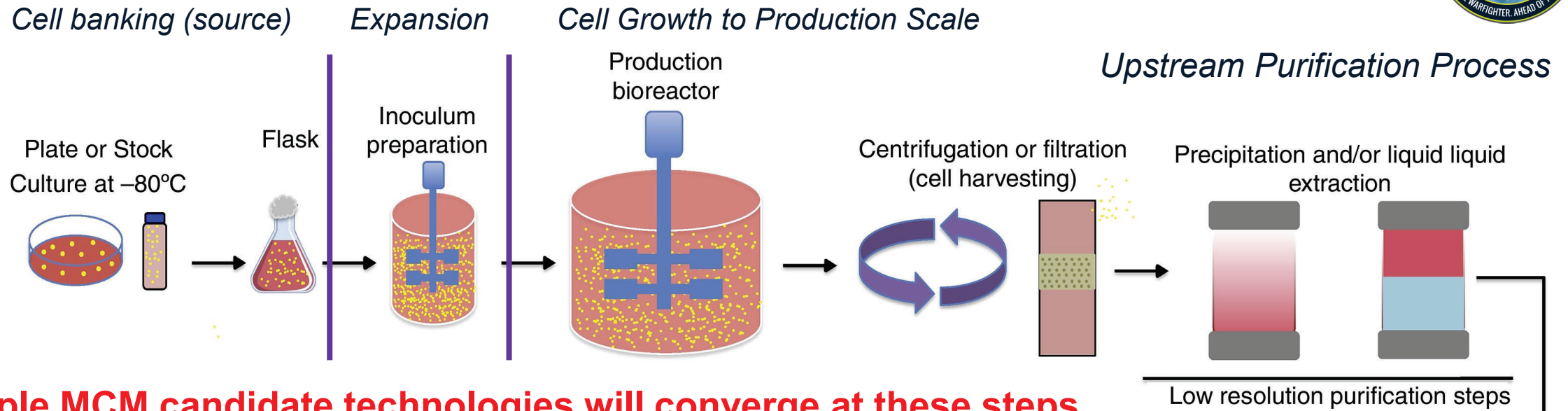
PRODUCTION CAPACITY ACCELERATION

If we are to scale for DoD service member and dependents requirements only; we can get there quickly with current DoD facilities and contracting with key manufacturing and fill/finish performers

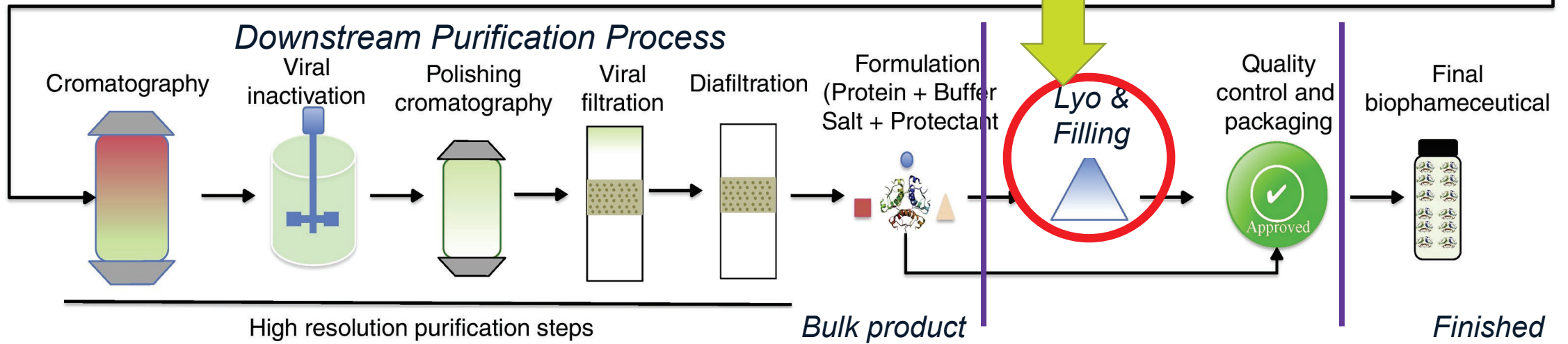
- Contracting now can have capacity ready in 6-8mo for 50M + doses of vaccine and/or therapeutic
- This action will move ready date to the left by up to 12 mo
- Contracting through the industrial base will provide strengthening of domestic pharma industry without ongoing Department sustainment costs

This solution will not scale to national need for 700M doses

GENERIC DRUG PRODUCT BIOLOGIC BASED MANUFACTURING

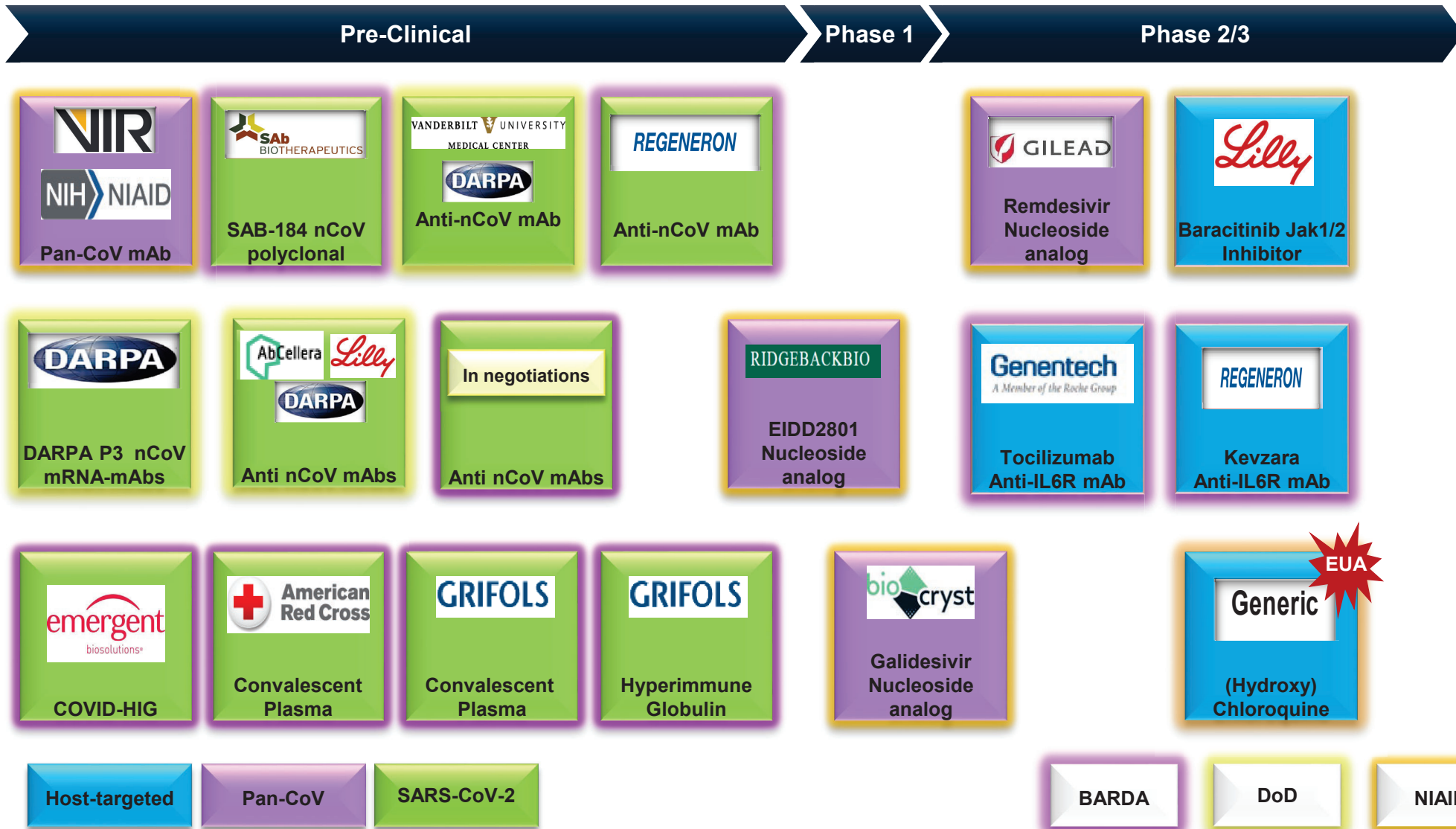


Multiple MCM candidate technologies will converge at these steps





HHS AND DOD SUPPORTED THERAPIES



OSJI-Covid / 20cv5096 (DoD 20-L-1014) / 3839



HHS AND DOD SUPPORTED VACCINES FOR COVID-19

Pre-Clinical

Phase 1

Phase 2

Subunit

 RBD vaccine	 Recombinant subunit	 Molecular clamp	 Spike Protein	 Recombinant Protein Nanoparticle	 Subunit in ferritin nanoparticle	 Oral chimeric protein	 li-Key peptide	 Recombinant Protein	 Peptides	 Spike protein	 Spike on gp96	 N protein	 Spike w/ CpG
 Spike	 Spike microneedles	 Gene-encoded mAb	 ISR-50	 Spike	 Capsid	 Spike + Adj	 VLP Spike Adj.	 RBD Adj.	 peptides	 nanopar	 Trunc. Spike	 Adjuvant-microsph Peptide	

Nucleic Acid

 mRNA	 mRNA	 RNA	 mRNA	 sa-mRNA	 mRNA	 mRNA	 mRNA	 mRNA	 mRNA	 mRNA	 DNA	 DNA Electroporation	 DNA Plasmid	 Advaccine DNA	 NIH/NIAD mRNA
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Virus vector

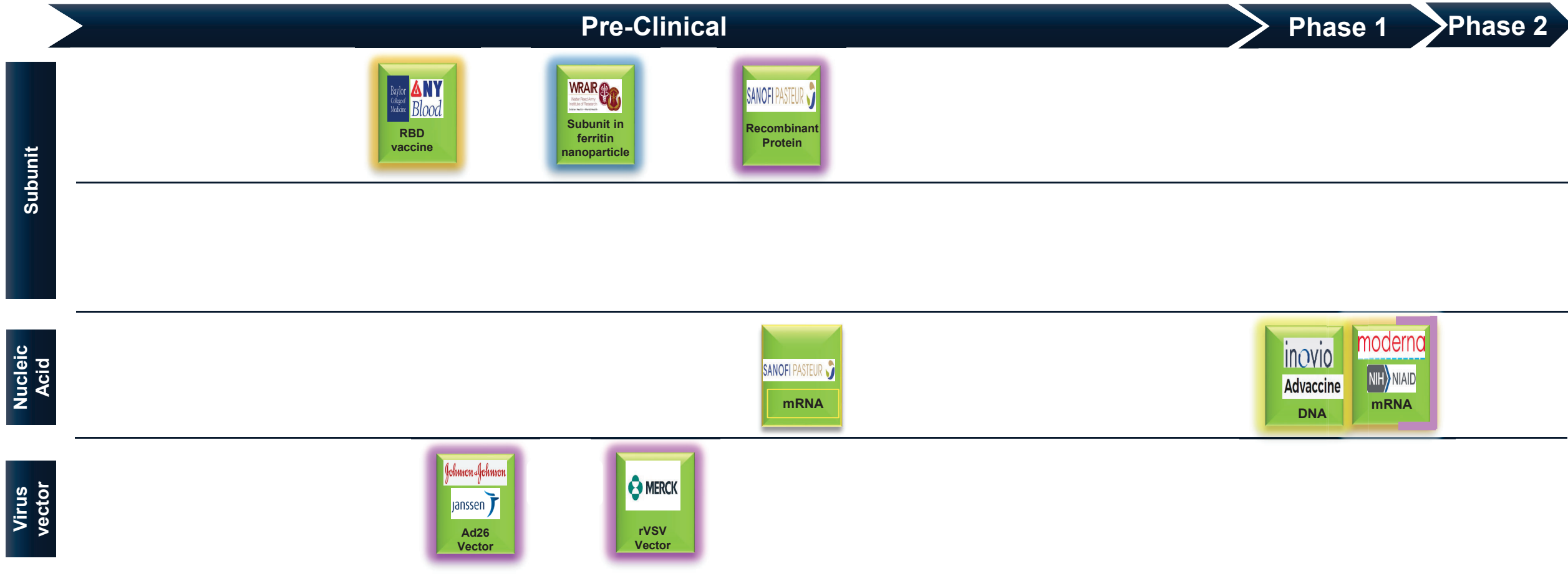
 BravoVax MVA-VLP platform	 Oral Ad5 platform	 ChAD0x1	 Alphavirus vector S Protein	 Ad26 Vector	 VLPs spike	 rVSV Vector	 Whole Inact.virus	 Formalin inact. virus	 Formalin inact. virus	 MVA Spike	 LV vector	 LV vect.+ CTLs	 Ad5 spike
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 Live attenuated	 rVSV S-protein	 rVSV S-protein	 Horsepox S-protein	 Measles vector	 Attenuated Inactivated	 VLP in plants	 Tobacco Expression
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DNA/RNA based Protein based Viral vector based OS JI Covid / 20cv5096 (DoD 20-L-1014) / 3840 UNCLASSIFIED

BARDA
DoD
NIH

DOD SUPPORTED VACCINES FOR COVID-19





MANUFACTURING AND FILL/FINISH SCALE UP

Fill/Finish acceleration is possible within the industrial base

- Four industrial performers have been identified and are being vetted
- Timelines for scale to up to 50M doses/mo ranges 6-8mo
- Cost range: \$40M-100M dependent on scale required
- Market research tells us that we need to put on contract now so we have guaranteed capacity when candidate discovered

Manufacturing scale and acceleration would benefit with a dual approach between DoD assets and the Pharma industrial base

- Use of DoD and HHS Advanced Manufacturing Facilities for mid-scale production
- Timeline depends on selected candidate and scale, but ranges between 6-12 mo
- Transfer of capability to industrial base enables long term strategic strengthening of the Bioeconomy and protection of pharmaceutical industrial base
- Cost range: \$70M-100M dependent on scale required

RECOMMENDATION TO LEADERSHIP

(b) (5)





INDUSTRIAL INVESTMENT PROPOSALS (NOTIONAL)

Performer	Type	Site	Cost (\$M)	Timeline	Impact	Contract Vehicle
Batavia (HIP-Vax)	cGMP manufacture	TBD	78	12 to 15 months, 120 million doses/year	None in CY20, FOC CY22	None/ MCDC Consortium
Corning (cost-share with USG)	Vials	NJ and NC	250	<6 month, 250 million, CY23 additional 500 million units	Significant in CY20, FOC CY23	None/BARDA BAA
SiO2	Vials	Auburn, AL	63 (+40 up to 1000)	5 months 40 million units, additional capacity increments 40 million units	Significant in CY20	None/BARDA BAA
Smiths	Syringes	Keene, NH	10	12 months, 75 millions units	None in CY20, FOC in CY21	None/BARDA BAA
Emergent	Sterile Fill-finish	Rockville, MD	60 (+40)	CY23 Phase 1, 9 millions units per year, Phase 2 45 million units per year CY23	None in CY20, CY21, FOC in CY23	ciADM (HHS)
ThermoFisher/Patheon	Sterile Fill-finish	Greenville, NC and Plainville MA	96 (immediate), 175	< 6 months 100 million doses, 12 months 150-200 million doses, 28 months 350-500 million doses every 4 months	Immediate in CY20, significant in CY21 FOC CY22	None/ MCDC consortium
Nephron Pharmaceutical	Blow-Fill-Seal (plastic based fill finish)	Columbia SC	38	6-8 mo for 50M doses/mo	CY20	None/MCDC Consortium

UNCLASSIFIED





FACILITY CONSTRUCTION AND VALIDATION TIMELINES

- New Facility Build (Greenfield)
 - Construction 11 – 24 months
 - Size Varies (42K ft² to >200K ft² – purpose built)
 - Capacities (fill) 5M to 180M doses (purpose built)
 - Cost Varies (\$51M to \$700M)
 - FDA Licensure / Approval 3 to 8 months (compliance & filing dependent)
 - Total time 22 – 32 months
- Modified Facility (Brownfield)
 - Construction 4 – 12 months
 - Size Varies (140K ft² – purpose built)
 - Capacities (fill) 170M (purpose built)
 - Cost Varies (\$70M – \$150M)
 - FDA Licensure / Approval 3 to 12 months (compliance & filing dependent)
 - Total time 11 – 20+ months
- Recent observations: Single-use technology important to agility & scale
- Installed process, at scale, required. Inspections cover bulk process and form/fill processes separately.

INFO ONLY

Table I. Vaccine manufacturing costs

Facilities and R&D account for most of the spending on vaccine development and manufacturing

- Fixed (i.e., product development, facilities and equipment, third-party financing and grants)
- Variable (i.e., consumables, raw materials, biological and chemical agents, vials, stoppers and seals, labels cartons, and quality-control testing kits)
- Semi-variable (direct labor)
- Mixed (overhead, commercialization, and licensing costs)

R&D	\$500 million (\$135 to \$350 million, when adjusted for risk)
Facilities	\$50 to \$700 million
Direct Labor	Less than 25% of total manufacturing costs
Overhead	Up to 45% of the costs of raw materials and labor combined
Licensing	WHO site audit fee: \$30,000

Traditional vaccine fees

Evaluation: \$35,000 to \$100,000
Annual: \$4800 to \$140,000

Complex or novel vaccine fees

Evaluation: \$69,500 to \$232,800
Annual: \$8400 to \$250,000

Sources: (8) Production Economics for Vaccines, a guide released by the Bill and Melinda Gates Foundation in 2016, and (9) S. Plotkin, et al., "The Complexity and Cost of Vaccine Manufacturing," *Vaccine* 35 (2017), 4064.





ACQUISITION

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE

3600 DEFENSE PENTAGON
WASHINGTON, DC 20301-3600

READ AHEAD FOR THE SECRETARY OF DEFENSE SD COVID-19 Update

Meeting Location/Date: JWICS VTC | 30 April 2020, 1330-1430

FROM: Ellen M. Lord USD(A&S)

SUBJECT: Read Ahead for Vaccine and Therapeutic Production Capacity Meeting

1. **Purpose:** Provide a status update on potential pathways to increase COVID-19 therapeutic and vaccine production capacity.

2. **Key Points:**

- **Vaccine and Therapeutic Candidate Status:**

- There have been significant research and development investment in accelerating the discovery of a medical countermeasure (MCM) by both government and industry. However, once a vaccine is developed, it is passed on to another company to manufacture. As a result, the manufacturing process and supply chain is likely to become a bottleneck as multiple vaccine development efforts move towards mass production.
- The necessary supply chain (inputs, packaging components) also present a challenge to pandemic response as much of the U.S. capacity only can contend with ongoing market demand, with limited to no surge capacity.
- All MCM candidates require FDA regulatory oversight throughout the product's development, clinical testing stages, and final approval. Based upon the targeted volume, DoD should continue to pursue multiple platforms to support national pandemic response, in parallel with requesting FDA relief in oversight of processes.

- **Manufacturing Status:**

- The US industrial base would benefit from the increase in single use biologic manufacturing capability at scale to support DoD requirements.
- A balanced approach between organic DoD and commercial capabilities for manufacturing is needed to fulfill the need of the Department while ensuring surge capacity exists without long sustainment burden to the Department.

- Near term solutions (6-8mo) exist using the industrial base to expand existing capacity that will prioritize DoD access for immediate use once a candidate is approved.

3. **Tabs:**

- a. MCM_Manufacturing_Industrial_Base-draft

Prepared by: (b) (6)



Updated: 28 April 2020 (2005)

Secretary of Defense COVID-19 Update

Thursday, April 30, 2020, 1330-1500

Multiple Locations

AGENDA

Key due-outs from last meeting:

1. Increasing production capacity for vaccines & therapeutics (A&S) (TAB 1)
2. Testing requirements and supplies (Maj Gen Payne, P&R) (TAB 2)
 - Breakout of the testing quantities required to meet our testing strategy cross-referenced with the testing supplies (swabs, reagents, machines, etc) on-hand and on-order

Decisions:

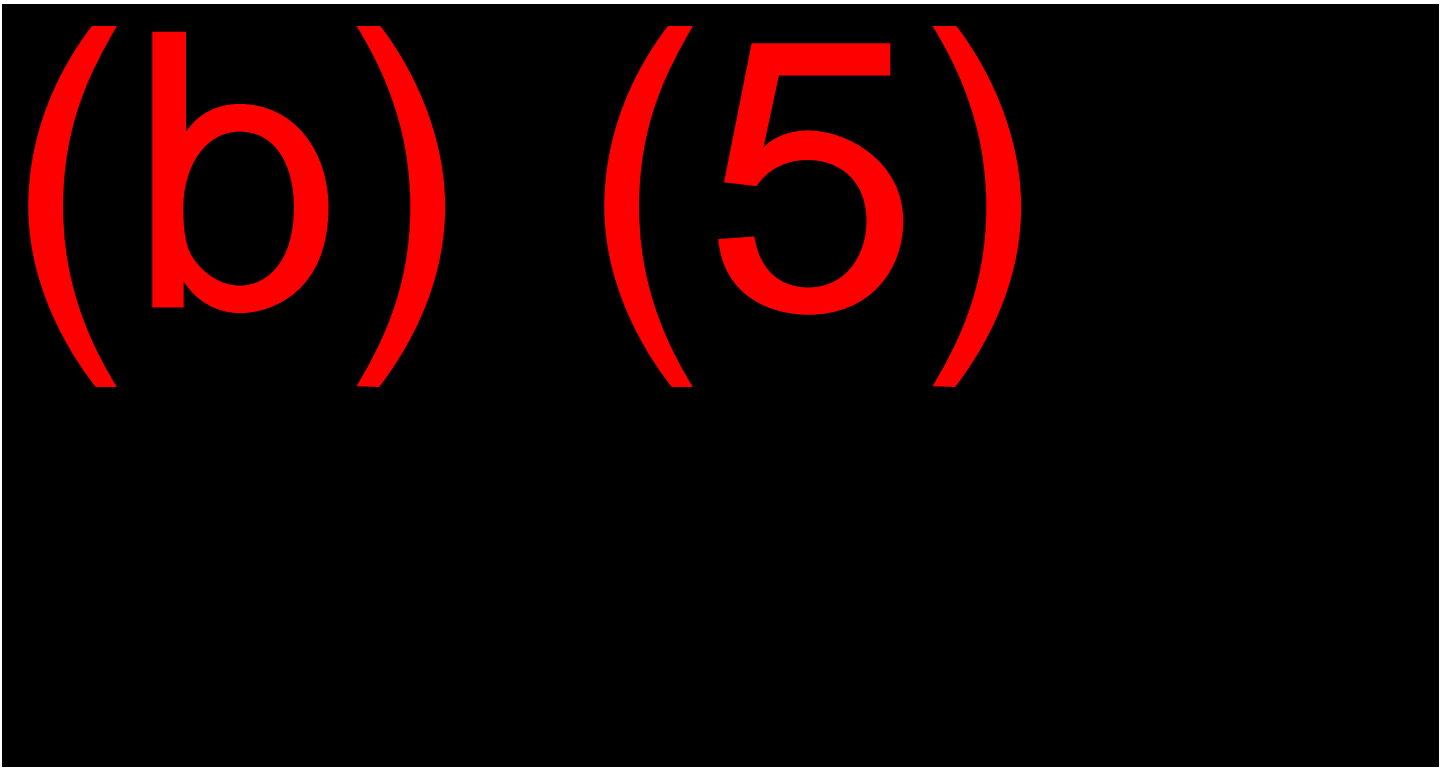
1. None expected

Discussion:

1. Increased workforce at the Pentagon (CMO) (TAB 3)
2. Elective medical procedures (P&R) (TAB 4)
3. Testing Update
 - Serological Testing R&D (b) (6) [REDACTED] (TAB 5)
 - Update on DoD serologic research
 - (b) (5) [REDACTED]
 - Testing for the Force (Maj Gen Payne) (TAB 2)
 - DoD Lab testing Lines of Effort



Updated: 28 April 2020 (2005)



From: [Rapuano, Kenneth P HON OSD OUSD POLICY \(USA\)](#)
To: [Norquist, David HON SD](#); [Hyten, John E Gen USAF JS OCJCS \(USA\)](#); [Hershman, Lisa W HON \(USA\)](#); [McCarthy, Ryan D HON USARMY HODA SECARMY \(USA\)](#); [Barrett, Barbara M HON USAF SAF-OS \(USA\)](#); [\(b\) \(6\)](#); [RAYMOND, JOHN W Gen USSF HOSF USSF/CSO USSPACECOM/CC](#); [McConville, James C GEN USARMY HODA CSA \(USA\)](#); [Gilday, Michael M ADM USN CNO \(USA\)](#); [Goldfein, David L Gen USAF AF-CC \(USA\)](#); [Berger Gen David H](#); [Burke, Robert P ADM USN VCNO \(USA\)](#); [Martin, Joseph M GEN USARMY HODA VCSA \(USA\)](#); [Thomas Gen Gary L](#); [Wilson, Stephen W Gen USAF AF-CV \(USA\)](#); [Griffin, Michael D HON OSD OUSD R-E \(USA\)](#); [Lord, Ellen M HON OSD OUSD A-S \(USA\)](#); [Anderson, James H HON OSD OUSD POLICY \(USA\)](#); [McCusker, Elaine A HON OSD OUSD C \(USA\)](#); [Donovan, Matthew P HON OSD OUSD P-R \(USA\)](#); [Kernan, Joseph D HON \(USA\)](#); [Oshaughnessy, Terrence J Gen USAF NORAD-USNC CG \(USA\)](#); [Faller, Craig Stephen ADM USN SOUTHCOM SC-CC \(USA\)](#); [Wolters, Tod D Gen USAF EUCOM COM \(USA\)](#); [McKenzie, Kenneth F Jr Gen USMC CENTCOM CCCG \(USA\)](#); [Davidson, Phillip S ADM USN INDOPACOM J00 \(USA\)](#); [Clarke, Richard D GEN USARMY USSOCOM SOCOM \(USA\)](#); [Townsend, Stephen J \(Steve\) GEN USARMY AFRICOM ACCC \(USA\)](#); [Lyons, Stephen R GEN USARMY TRANSCOM TCCC \(USA\)](#); [Nakasone, Paul M GEN USARMY USCYBERCOM \(USA\)](#); [Richard, Charles A ADM USN STRATCOM J0CC \(USA\)](#); [Lengyel, Joseph L Gen USAF NG NGB \(US\)](#); [Ney, Paul C Jr HON OSD OGC \(USA\)](#); [Whitley, John E HON OSD CAPE \(USA\)](#); [Deasy, Dana S HON \(USA\)](#); [Manasco, Shon J HON USAF SAF-US \(USA\)](#); [Hood, Robert R HON OSD OASD LA \(USA\)](#); [Hoffman, Jonathan R SES OSD OSD \(USA\)](#); [Baker, James H SES OSD ODNA \(USA\)](#); [Stewart, Jennifer SES SD](#); [Fenton, Bryan LTG SD](#)
Cc: [Henke, Robert SES SD](#); [Lyons, David Brig Gen SD](#); [Johnson, Justin SES SD](#); [Ross, Alexis SES SD](#); [Salesses, Robert G SES OSD OUSD POLICY \(USA\)](#); [Payne, Lee E Maj Gen USAF DHA J-3 \(USA\)](#); [\(b\) \(6\)](#); [RESEARCH-DEV \(USA\)](#); [Castle, William S SES OSD OGC \(USA\)](#); [SD - DSD Read ahead](#)
Subject: Agenda for Thur 23Apr20 COVID-19 Update to the SecDef
Date: Tuesday, April 21, 2020 6:17:20 PM
Attachments: [Agenda_Thur_23_Apr_SD_COVID-19_Update_Meeting_\(21Apr_1030\).docx](#)

DSD, Vice, and Colleagues – provided is the agenda for Thursday’s COVID-19 Update to the Secretary.

- 1) Updates on key due-outs from last meeting:
 - Stimulus and Supplemental Update (Comptroller)
 - Testing Framework (P&R)
 - [\(b\) \(5\)](#)

- 2) Medical R&D Update [\(b\) \(6\)](#)
 - Update on DoD serologic research
 - [\(b\) \(5\)](#)

- 3) Around the room

Please provide all RAHs by 1500 on 22 April to DASD Bob Salesses, [\(b\) \(6\)](#)

I appreciate your continued efforts and support on these issues.

Best,

Ken



21 April 2020 (1030)

Secretary of Defense COVID-19 Update

Thursday, April 23, 2020, 1330-1430

Multiple Locations

AGENDA

Updates on key due-outs from last meeting:

1. Stimulus and Supplemental Update (Comptroller)
2. Testing Framework (P&R)
3. (b) (5)

Decisions:

1. None expected

Discussion:

1. Medical R&D Update (b) (6)
 - Update on DoD serologic research
 - (b) (5)
2. Around the room



21 April 2020 (1030)

DRAFT AGENDA for Tuesday, April 28

(b) (5)

From: (b) (6)
To: Norquist, David HON SD; Hyten, John E Gen USAF JS OCJCS (USA); Oshaughnessy, Terrence J Gen USAF NORAD-USNC CG (USA); Stewart, Jennifer SES SD; Henke, Robert SES SD; Donovan, Matthew P HON OSD OUSD P-R (USA); Lord, Ellen M HON OSD OUSD A-S (USA); McCusker, Elaine A HON OSD OUSD C (USA); Whitley, John E HON OSD OCMO (USA); Thomas Gen Gary L; Burke, Robert P ADM USN VCNO (USA); Wilson, Stephen W Gen USAF AF-CV (USA); Martin, Joseph M GEN USARMY HQDA VCSA (USA); Rapuano, Kenneth P HON OSD OUSD POLICY (USA); Ross, Alexis SES SD; Blake, Robert M Brig Gen USAF AF-A3 (USA); Blanks, Julie A SES OSD OUSD P-R (USA); Bushman, William G SES (USA); Byrne, William D Jr RADM USN JS ODJS (USA); Castle, William S SES OSD OGC (USA); Dumont, Michael J (Mike) VADM USN NORAD-USNC CG (USA); Fedrigo, John A SES USAF SAF-MR (USA); Fisher, Vincent L SES OSD OUSD C (USA); Flynn, Charles A LTG USARMY HQDA DCS G-3-5-7 (USA); Friedrichs, Paul A Brig Gen USAF JS OCJCS (USA); Funkhouser, Anthony C MG USARMY CEHO (USA); Greene, Jodi J SES USN (USA); Hebert, Lernes J SES OSD OUSD P-R (USA); Henke, Robert SES SD; Hershman, Lisa W HON (USA); Hoffman, Jonathan R SES OSD OSD (USA); Hood, Robert R HON OSD OASD LA (USA); Kelly, Mark D Lt Gen USAF AF-A3 (USA); LaNeve, Christopher Charles BG USARMY HQDA DCS G-3-5-7 (USA); Lei, JihFen SES OSD OUSD R&E (USA); Lestorti, Joseph M BG USARMY JS J3 (USA); Liszewski BGen Stephen E; Lord, Ellen M HON OSD OUSD A-S (USA); Maurer, Derek J (Dirk) SES OSD OUSD POLICY (USA); McAndrew, Anne J SES OSD OUSD C (USA); Mccaffery, Thomas P HON OSD OUSD P-R (USA); Mott, Jon K Maj Gen USAF NG CTANG (USA); Muir, Thomas M SES (USA); Piatt, Walter E LTG USARMY HQDA DAS (USA); (b) (6); Ross, Alexis Lasselle SES OSD OUSD P-R (USA); Sawyer, Phillip G VADM USN (USA); Semonite, Todd I LTG USARMY HQDA OCE (USA); Shaffer, Alan R HON OSD OUSD A-S (USA); Simon, Martin S (Marty) SES USN UNSECNV DC (USA); Taliaferro, Jeffrey B (Jeff) Maj Gen USAF JS J3 (USA); (b) (6); VanHerck, Glen D Lt Gen USAF JS ODJS (USA); Walsh, Daniel P SES PFAA HOS (USA); Whitney, Steven P Brig Gen USAF OSD OUSD A-S (USA); Williams, Lorraine A SES OSD OUSD C (USA); Williams, Marshall M (Will) SES USARMY HQDA ASA MRA (USA); Friedrichs, Paul A Brig Gen USAF JS OCJCS (USA); Payne, Lee E Maj Gen USAF DHA J-3 (USA); (b) (6); Lyons, Judd H SES OSD OUSD P-R (USA); Deasy, Dana S HON (USA); Mewbourne, Dee L VADM USN TRANSCOM TCDC (USA); Shaffer, Alan R HON OSD OUSD A-S (USA); (b) (6); Smith, David J SES OSD OUSD P-R (USA); Salesses, Robert G SES OSD OUSD POLICY (USA)
Cc: Lyons, David Brig Gen SD; OSD Pentagon OUSD Policy List CVTF Team Leads; JS Pentagon J3 Mailbox Joint Staff CMT Leadership; OSD Pentagon OUSD Policy List CVTF Distro; SD - DSD Read ahead; (b) (6)
Subject: COVID-19 DoD CVTF Full Meeting - May 15 (RAH Material)
Date: Friday, May 15, 2020 8:12:38 AM
Attachments: [Agenda for 15 May DoD CVTF Full Meeting \(15May20 - 0800\).docx](#)
[Tab 1 - 15 MAY Capacity and Apportionment Discussion.pdf](#)
[Tab 2 - International Response Info Memo.docx](#)
[TAB 2A-International Assistance COVID-19 FINAL.pptx](#)
[TAB 2B-DRAFT Strategy for DoD International Response to COVID-19 v.5.14.docx](#)
[TAB 2C-DoD Procurement Guidance.docx](#)
[TAB 2D-Priority Countries.docx](#)

Ladies and Gentlemen,
Please find attached RAH material for today's 1230 CVTF Full Meeting.

v/r
(b) (6)

From: Salesses, Robert G SES OSD OUSD POLICY (USA) (b) (6)
Sent: Thursday, May 14, 2020 7:37 PM
Subject: COVID-19 DoD CVTF Full Meeting - May 15

Deputy Secretary, Vice Chairman, and Distinguished Task Force Colleagues,

BLUF: DSD and VCJCS will Chair the next COVID TF meeting 1230-1330 tomorrow, May 15, 2020 in multiple SVTC locations to maintain social distance.

Tomorrow's Agenda:

- I. **President's Task Force Update: ASD Rapuano**
- II. **NORTHCOM Update: General O'Shaughnessy**

III. **Review Task List:**

Force Health Protection/Medical Preparedness

Task – Integrated diagnostics, therapeutics, and vaccine development program – (HD&GS):

Provide update on status of MOA with HHS. **(DSD) Suspense: May 18**

Task – Increasing Production Capacity for Vaccines & Therapeutics – (A&S): Provide an update on discussions with manufacturers to increase manufacturing fill and finish capacity. Include next steps with HHS and DoD. **(SD) Suspense: May 18**

Task – Testing Framework – (P&R): Provide an update on testing requirement for tiers 1, 2, 3, and 4. Include maximum capacity and actual tests completed per day. **(SD) Suspense: May 18**

Task – Contact Tracing and Using Testing as a Sentinel Tool – (P&R): Develop FHP-10 guidance for DoD surveillance testing. Develop two case studies (aboard a ship and on an installation) for conducting contact tracing. Studies will include feasibility, pros and cons, and value of conducting contact tracing in each environment. In coordination with the CIO, develop an info paper on the risk of using Bluetooth devices in a secure facility. Conduct an exhaustive review of potential hardware to determine if it is possible for DoD to exclusively retain all data collected via electronic contract tracing tools. **(DSD) Suspense: May 20**

Task – Serology Testing – (P&R): Update on progress and timelines associated with serological testing for the presence of SAR-CoV-2 (COVID-19) antibodies. **(SD) Suspense: May 18**

Mission Readiness

Task – Enabling Operations in a COVID-19 Environment – (HD&GS): Provide an update on the guidance memo on strategy to resume daily operations across the Department. **(SD) Suspense: May 18**

Task – Military Personnel Deploying in support of CCMDs – (P&R, JS): Provide update on FHP-9 and the plan to ensure military forces deploying in support of Combatant Commands have procedures in place to minimize risk of being COVID positive. **(SD) Suspense: May 18**

-

Personnel Policy & Mitigation

Task – Adjustments to HPCON memo – (P&R): Provide an update on draft guidance memo. **(SD) Suspense: To SD for review on May 15**

Task – Elective Medical Procedures – (P&R): Provide an update on the draft guidance memo. **(SD) Suspense: To SD for review on May 15**

Modified Task – Lifting Travel Restrictions – (P&R): Provide update on guidance memo for transition to conditions-based approach to personnel movement and travel restrictions. **(SD) Suspense: May 18**

New Task – Household Good Movement – (USTRANSCOM): Provide update on plan to meet

challenges of upcoming “peak season” coming out of COVID stop move. **(DSD) Suspense: May 15 (Tab 1)**

Task – Dependent Passports – (CMO): Provide an update on the State Department effort to process DoD dependent passports to support PCS moves. **(SD) Suspense: May 18**

Task – International Students – (Policy, P&R): Develop plan for addressing COVID-19 concerns for international students entering DoD schools, PME, and training courses this fall. **(DSD) Suspense: May 20**

Pentagon Reservation

Task – Pentagon Plan – (CMO): Provide an update on the plan. **(SD) Suspense: May 15**

International Support

Modified Task – Assistance to International Partners – (SOLIC): Provide an update on plan to prioritize international partners to assist with COVID supplies. **(DSD) Suspense: May 15 (Tabs 2, 2A, 2B, 2C, 2D)**

New Task – Support COCOM and FMS Programs – (SOLIC): Provide update on support to COCOM and FMS programs. **(DSD) Suspense: May 15**

Task – Ventilator aid – (SOLIC): Provide an update on the status of ventilator aid and potential DoD request for transport. **(DSD) Suspense: May 15**

Task – Ventilator offer to NATO – (SOLIC): Provide an update on the status of ventilator offer to NATO. **(DSD) Suspense: May 15**

Task – USG Process for International Support – (SOLIC): Provide an update on State Department plan to provide USG assistance to international partners. **(DSD) Suspense: May 15**

-

Installations and Logistics

Task – DPA and JATF update – (A&S): Provide an update on the Defense Production Act and the Joint Acquisition Task Force. **(SD) Suspense: Ongoing**

Strategic Communications

Task – Coordinated PA Plan for Service New Normal Plans – (PA, Services): Develop coordinated PA and launch plan for Service New Normal plans. **(SD) Suspense: Pending release of SD guidance memo**

Funding

Task – New Supplemental Request – (Comptroller): Update on status of DoD submission for supplemental funding and authorities. **(SD) Suspense: Ongoing**

-

Modeling

Task – Modeling and analytic update – (CVTF, CAPE): Provide an update on DoD’s modeling and analytics effort and how it fits into the larger USG modeling effort. **(SD) Suspense: Ongoing**

Lessons Learned

Task – Lessons Learned – (JS J7, HD&GS): Update on status of DSD memo directing all DoD components to collect lessons learned and to be prepared to provide them to DoD’s Lessons Learned Task Force on a continuing basis. **(SD) Suspense: Ongoing**

Services Issues: Army: General Martin; Navy: Admiral Burke; Air Force: General Wilson; Marine Corps: General Thomas

As time permits, we will review other tasks, so please come prepared for those as well.

Please let me know if you have any questions or need assistance.

Best, Bob



15 May 2020 (0800)

DoD CVTF Full Meeting

Friday, May 15, 2020, 1230-1330

Multiple Locations

AGENDA

Preview of 19 May SD Meeting:

- Household Goods Movement (Tab 1)
- International Update

(b) (5)

- Support COCOM and FMS programs
- Impediments to Success
- Lifting Travel Restrictions
- Force Health Protection 9

Task List Update:

- Force Health Protection/Medical Preparedness
- Mission Readiness
- Personnel Policy & Mitigation
- Pentagon Reservation
- International Support
- Installations and Logistics
- Strategic Communications
- Funding
- Modeling
- Lessons Learned
- Service Updates



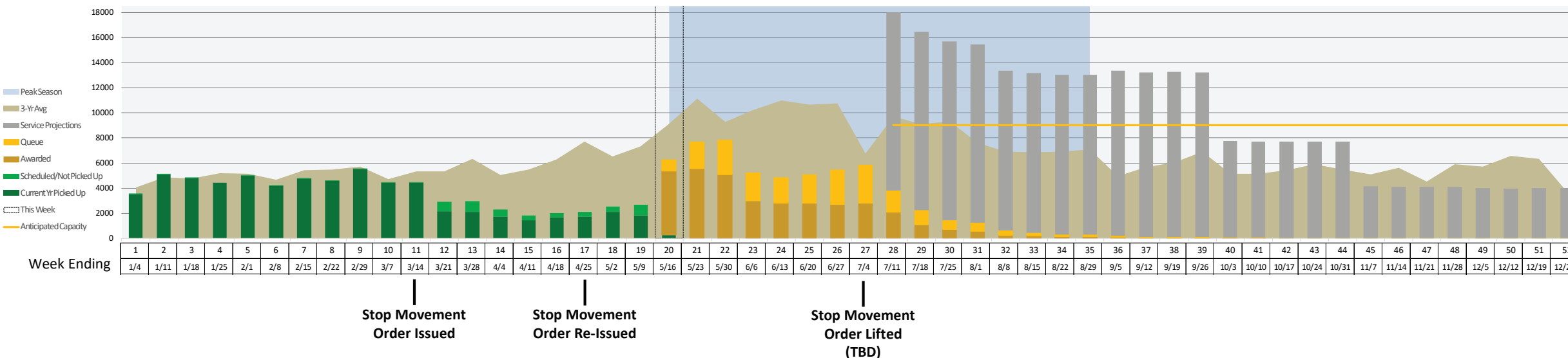
DPS Shipments + Service Forecast

Together, we deliver.

Hist. Avg.	This Year to Date	DPS Annual Shipments
346,667	63690	

Hist. Avg.	This Year	DPS Peak Season Shipments
143,107	0	

Pickups and Booking Queue



CONSIDERATIONS & REQUIRED ACTIONS

- Establish 'Ceiling' of pick-ups per week (**USTC Recommendation:** 9K per week)
- Apportion Capacity to Services (**USTC Recommendation:** Apply existing 'Fair Share' business rules)
- Codify Ceiling & Apportionment in Policy (**USTC Recommendation:** OSD P&R memo)
- Establish Process to collect Service projections
 - Ensure 'projected demand' data isn't duplicative of shipments in DPS
 - Ensure DPS reflects true demand
- 'Smooth Demand' in JUL, AUG, & SEP (> 50K Shipments)
- Codify and Communicate Prioritization Scheme from Personnel Community to Shipping Offices
- Who coordinates / manages activities for each Service?
 - Designated Shipping Office?
 - Service Personal Property Activity?

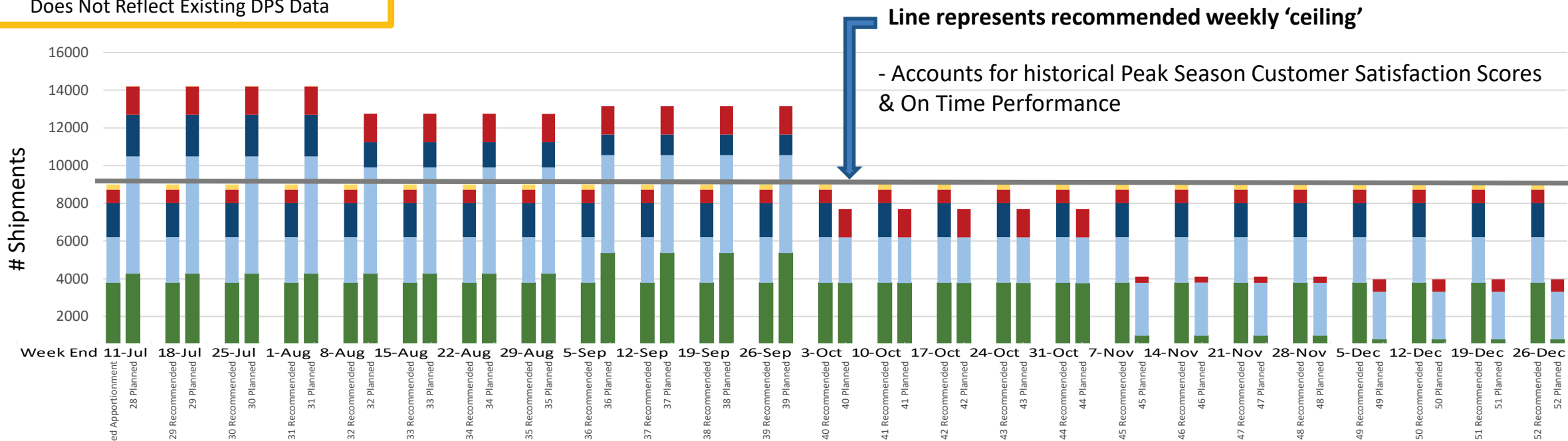


Recommended Capacity Ceiling & Apportionment vs Planned Shipments (as of 12 MAY)

Together, we deliver.

For Discussion Purposes Only

Does Not Reflect Existing DPS Data



Line represents recommended weekly 'ceiling'
 - Accounts for historical Peak Season Customer Satisfaction Scores & On Time Performance

Each pair of columns represents 1 week

- The first column represents USTC's recommended ceiling and apportionment
- The 2nd column represents Service projections

Apportionment Based on Historical Usage / 'Fair Share' Billing Methodology:

- USA 42%
- USAF 27%
- USN 20%
- USMC 8%
- USCG 3%

OSIP Covid-19 / 2015-2016 (DOD 20-L-1014) / 3861

INFO MEMO

DepSec Action _____
PDO USD(P) _____

(b) (6)

FOR: SECRETARY OF DEFENSE

FROM: Stephanie L. Hammond, Acting Deputy Assistant Secretary of Defense, Stability and Humanitarian Affairs

SUBJECT: DoD's COVID-19 International Response Briefing

PURPOSE: To provide DoD's current COVID-19 international response efforts to include key funding authorities and response timelines, identify challenges, and the next steps.

COORDINATION: N/A

BLUF: Briefing provided to inform you on DoD's current international response and draft policy documents for review

DISCUSSION:

- Following a May 5, 2020 COVID Competition Small Group briefing, you requested a list of prioritized countries to provide assistance in response to COVID-19.
- Deputy Secretary Norquist provided additional feedback at the May 13, 2020 COVID-19 Task Force update. He wanted additional fidelity on current international response efforts and the draft DoD procurement guidance.
- The attached brief (TAB A) provides the various authorities used in providing assistance; DoD's current efforts; various policy guidance provided; challenges for international response; country prioritization; and the way ahead.
- Three draft policy documents are provided to ensure Policy is meeting your intent:
 - Draft strategy for DoD International Response to COVID-19 (TAB B). Provides the framework for DoD's international response in which a subsequent implementation plan would follow.

USP000000-00

OSD00000-00

UNCLASSIFIED//FOR OFFICIAL USE ONLY

- Draft DoD Procurement Guidance (TAB C). Provides guidance to the CCMDs on how to purchase items identified on FEMA’s critical medical supply list to support Allies and Partner Nations.
- Country Prioritization List (TAB D). This list prioritizes countries based off of the criteria identified in the enclosed briefing (TAB A).

WAY FORWARD: Provide feedback on DoD’s international COVID-19 response efforts.

COORDINATION: N/A

Attachment:

TAB A: COVID-19 International Assistance Briefing

TAB B: Draft DoD Strategy for International Response to COVID-19

TAB C: Draft DoD Procurement Guidance

TAB D: DoD Priority Countries

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OSJI-Covid / 20cv5096²(DoD 20-L-1014) / 3863

Policy Coordination Sheet

Subject: International Response Briefing

Control Number: *USP000000-00*

Title/Organization	Name	Coordination Requested	Coordination Received
---------------------------	-------------	-----------------------------------	----------------------------------

DUSD(P)

COVID-19 International Assistance



AGENDA

- ✓ Key Elements in DoD Response
- ✓ International Assistance
- ✓ Policy Guidance
- ✓ Challenges
- ✓ Country Prioritization
- ✓ Way Ahead

15 May 2020

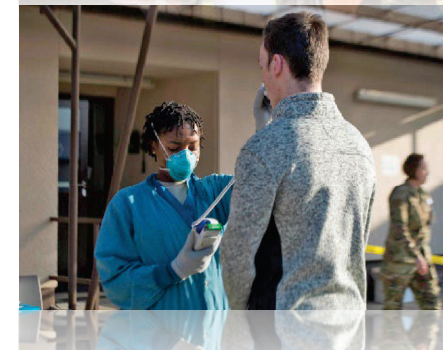


Key Elements in DoD's Immediate Response



Respond to urgent COVID-19 Partner Nation requests in a synchronized & prioritized approach:

- ✓ Geographic Combatant Commands – OHDACA Funds
 - ✓ Purchase humanitarian and medical supplies/equipment
- ✓ DoD CTR Program
 - ✓ Bio-related activities in 30+ countries – FY20 \$203.6M
 - ✓ Reduce WMD threats (including biological, nuclear, & chemical weapons & related delivery systems) against U.S. homeland, U.S. forces abroad, & U.S. partners & allies
- ✓ DoD Labs
 - ✓ Education, training, surveillance, diagnostic testing to partners
- ✓ DSCA – Foreign Military Sales
 - ✓ 20 international requests for medical supplies/equipment
 - ✓ DOS determines which recipient countries – DoD executes



DoD's persistent response should expand to security cooperation programs, humanitarian and civic assistance, State Partnership Program, etc. to help PN's prevent, mitigate, and respond to pandemics



International Assistance

- **Over 840 Partner Nation requests for USG assistance**
 - **USAID – over \$214M obligated**
 - **DoD**
 - ▶ Over \$18M immediate impact humanitarian assistance to over 70 partner nations (medical support, PPE, & transportation of humanitarian cargo)
 - SD authorized up to \$10M for humanitarian activities in Italy
 - ▶ DoD CTR Program provided \$1.1M+ for COVID-19 related requests (lab & diagnostic supplies) to ~30 Partner Nations since COVID-19 outbreak started
 - ▶ Defense Health Agency coordinated with ~400 surveillance sites in over 30 countries – \$8.4M+ in support



Policy Guidance

- **OHDACA minimal cost projects**
 - Increased purchase threshold from \$15K to \$30K for COVID-19 related supplies/equipment
- **Partnered w/U.S. Embassy General Service Officers (GSOs)**
 - Obtained waiver to use GSO contracting capability to support local CCMD purchases of medical supplies/equipment
- **USEUCOM response to Italy**
- **Transportation of ROK medical supplies to Romania**
- **Authorized waiver for OCONUS Army Labs to provide diagnostic testing for PNs**
- **Drafted DoD purchasing guidance for PPE & other COVID-19 related supplies, in coordination w/CCMDs, DSCA, & the DoD CTR Program – based on draft WH memo**
- **CCMDs develop humanitarian strategies w/OSD & JS each year – linked to CCMD theater strategies/country prioritization**



Challenges

- **No lead federal agency to validate, coordinate, prioritize, & manage over 840 requests for USG assistance**
 - USAID/OFDA, the normal lead for international disaster response, is sidelined
 - State CGCRU is the clearinghouse/pass-thru – NO directive authority/disaster experience
 - Lack of insight into what other capable donor nations are providing to Partner Nations – leading to possible overlap of donated supplies
- **Lack of supply chain guidance for international partners when compared to domestic**
 - Delayed/postponed CCMD response to requests for assistance
 - Twenty (20) FMS cases involving medical supplies are on hold
 - 87 unfulfilled non-FMS requests for medical supplies from 51 countries



Challenges (cont.)

- **DoD humanitarian authorities limited to mil-civ; PNs are requesting mil-mil**
- **Multiple COVID-19 strategies & country prioritizations being developed in stove-piped fashion**
- **Travel restrictions and limited manpower, including contracting, have slowed down response efforts**



Country Prioritization

- **COVID-19 TF developed a country prioritization tiered system tool to inform decision makers:**
 - Countries w/permanent basing, ongoing operations (365-day presence & troop size of >50), major logistical nodes, or as SD-directed in Jan 2020 SWPR)
 - Rotational presence or ongoing operations (<365-day presence or 365-day presence, but troop size <50)
 - Exercises in the country w/in next 3-months
 - Contributor to U.S. supply chain
- **Key factors to be considered during the decision making process using the above tool:**
 - National security interests
 - DoD interests
 - Malign actor influence
 - Foreign country's risk profile (fragility, resilience, etc.)
 - Vulnerability (political situation, displaced populations)
 - Response capabilities
 - Political will



Way Ahead

- **Updated CCMD OHDACA guidance to address immediate & persistent requirements (Policy)**
- **Provide guidance for critical medical supplies, PPE, testing kits, & related items to solve immediate response challenges faced by CCMDs, DSCA & the DoD CTR Program (Policy)**
- **Provide waiver & coordination process for determining when Allies or Partner Nations merit consideration for obtaining supplies from USG/DoD stocks of critical items (A&S)**
- **Refine & incorporate country prioritization list for COVID-19 support w/ CCMDs, DSCA & the DoD CTR Program (Policy, JS)**
- **Refine COVID-19 strategy & align DoD & USG international assistance efforts (Policy, JS)**



BACKUP SLIDES

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72 Priority Countries

Algeria
Djibouti
Ethiopia
Ghana
Kenya
Libya
Morocco
Niger
Senegal
Somalia
South Africa
Tunisia
Uganda
Afghanistan
Kazakhstan
Pakistan
Turkmenistan
Uzbekistan
Australia
Japan
Mongolia
Republic of Marshal Islands
ROK
Taiwan
New Zealand
Azerbaijan
Bosnia and Herzegovina
Georgia
Serbia
Ukraine
India
Indonesia
Malaysia
Philippines
Singapore
Sri Lanka
Thailand
Vietnam
Canada
Brazil
Honduras
El Salvador
Chile
Colombia
Cuba (GTMO)

Belgium
Czech republic
Denmark/ Greenland
Estonia
France
Germany
Greece
Italy
Lithuania
Luxembourg
Netherlands
Norway
Poland
Portugal
Romania
Spain
Turkey
United Kingdom
Bahrain
Egypt
Iraq
Israel
Kuwait
Saudi Arabia
UAE
Panama
Peru

From: [Salesses, Robert G SES OSD OUSD POLICY \(USA\)](#)
To: [Norquist, David HON SD](#); [Hyten, John E Gen USAF JS OCJCS \(USA\)](#); [Oshaughnessy, Terrence J Gen USAF NORAD-USNC CG \(USA\)](#); [Stewart, Jennifer SES SD](#); [Henke, Robert SES SD](#); [Donovan, Matthew P HON OSD OUSD P-R \(USA\)](#); [Lord, Ellen M HON OSD OUSD A-S \(USA\)](#); [McCusker, Elaine A HON OSD OUSD C \(USA\)](#); [Whitley, John E HON OSD OCMO \(USA\)](#); [Thomas Gen Gary L](#); [Burke, Robert P ADM USN VCNO \(USA\)](#); [Wilson, Stephen W Gen USAF AF-CV \(USA\)](#); [Martin, Joseph M GEN USARMY HQDA VCSA \(USA\)](#); [Rapuano, Kenneth P HON OSD OUSD POLICY \(USA\)](#); [Ross, Alexis SES SD](#); [Blake, Robert M Brig Gen USAF AF-A3 \(USA\)](#); [Blanks, Julie A SES OSD OUSD P-R \(USA\)](#); [Bushman, William G SES \(USA\)](#); [Byrne, William D Jr RADM USN JS ODJS \(USA\)](#); [Castle, William S SES OSD OGC \(USA\)](#); [Dumont, Michael J \(Mike\) VADM USN NORAD-USNC CG \(USA\)](#); [Fedrigo, John A SES USAF SAF-MR \(USA\)](#); [Fisher, Vincent L SES OSD OUSD C \(USA\)](#); [Flynn, Charles A LTG USARMY HQDA DCS G-3-5-7 \(USA\)](#); [Friedrichs, Paul A Brig Gen USAF JS OCJCS \(USA\)](#); [Funkhouser, Anthony C MG USARMY CEHO \(USA\)](#); [Greene, Jodi J SES USN \(USA\)](#); [Hebert, Lernes J SES OSD OUSD P-R \(USA\)](#); [Henke, Robert SES SD](#); [Hershman, Lisa W HON \(USA\)](#); [Hoffman, Jonathan R SES OSD OSD \(USA\)](#); [Hood, Robert R HON OSD OASD LA \(USA\)](#); [Kelly, Mark D Lt Gen USAF AF-A3 \(USA\)](#); [LaNeve, Christopher Charles BG USARMY HQDA DCS G-3-5-7 \(USA\)](#); [Lei, JihFen SES OSD OUSD R&E \(USA\)](#); [Lestorti, Joseph M BG USARMY JS J3 \(USA\)](#); [Liszewski BGen Stephen E](#); [Lord, Ellen M HON OSD OUSD A-S \(USA\)](#); [Maurer, Derek J \(Dirk\) SES OSD OUSD POLICY \(USA\)](#); [McAndrew, Anne J SES OSD OUSD C \(USA\)](#); [McCaffery, Thomas P HON OSD OUSD P-R \(USA\)](#); [Mott, Jon K Maj Gen USAF NG CTANG \(USA\)](#); [Muir, Thomas M SES \(USA\)](#); [Piatt, Walter E LTG USARMY HQDA DAS \(USA\)](#); (b) (6); [Ross, Alexis Lasselle SES OSD OUSD P-R \(USA\)](#); [Sawyer, Phillip G VADM USN \(USA\)](#); [Semonite, Todd I LTG USARMY HQDA OCE \(USA\)](#); [Shaffer, Alan R HON OSD OUSD A-S \(USA\)](#); [Simon, Martin S \(Marty\) SES USN UNSECNAV DC \(USA\)](#); [Taliaferro, Jeffrey B \(Jeff\) Maj Gen USAF JS J3 \(USA\)](#); (b) (5); [VanHerck, Glen D Lt Gen USAF JS ODJS \(USA\)](#); [Walsh, Daniel P SES PFAA HOS \(USA\)](#); [Whitney, Steven P Brig Gen USAF OSD OUSD A-S \(USA\)](#); [Williams, Lorraine A SES OSD OUSD C \(USA\)](#); [Williams, Marshall M \(Will\) SES USARMY HQDA ASA MRA \(USA\)](#); [Friedrichs, Paul A Brig Gen USAF JS OCJCS \(USA\)](#); [Payne, Lee E Maj Gen USAF DHA J-3 \(USA\)](#); (b) (6); [Lyons, Judd H SES OSD OUSD P-R \(USA\)](#); [Deasy, Dana S HON \(USA\)](#); [Mewbourne, Dee L VADM USN TRANSCOM TCDC \(USA\)](#); [Shaffer, Alan R HON OSD OUSD A-S \(USA\)](#)
Cc: [Lyons, David Brig Gen SD](#); (b) (6)
Subject: COVID-19 DoD CVTF Full Meeting Due Outs - May 20
Date: Wednesday, May 20, 2020 6:01:24 PM

Deputy Secretary, Vice Chairman, and Distinguished Task Force Colleagues,

Good evening. Thank you for the productive meeting this afternoon. The following were identified as due-outs from today's COVID-19 DoD TF Meeting. Additionally, specific due outs have been identified for the Secretary's update on May 26.

As directed by DSD, we have added a status update for each task which will be updated twice a week. Please provide a 1-2 line status update underneath each task below assigned to your organization to osd.pentagon.ousd-policy.list.cvtf-team-leads@mail.mil NLT 1200 EDT every Monday and Thursday.

Force Health Protection/Medical Preparedness

Task – MOU on integrated diagnostics, therapeutics, and vaccine development program – (HD&GS)

- **Description:** Provide update on status of MOU with HHS. (DSD)
- **Suspense:** May 27
- **Status:**

Task – Increasing Production Capacity for Vaccines & Therapeutics – (A&S)

- **Description:** Provide an update on discussions with manufacturers to increase manufacturing fill and finish capacity. Include next steps with HHS and DoD. (DSD)
- **Suspense:** May 27
- **Status:**

Task – Collection of Convalescent Blood Plasma – (P&R)

- **Description:** Develop a plan to increase collection, storage, and use of convalescent blood plasma from DoD beneficiaries who have recovered from COVID-19. **(SD*)**
- **Suspense:** May 26
- **Status:**

Task – DHA Facility in Florida – (P&R)

- **Description:** Develop an info paper on capacity to expand DoD's Medical Counter Measures Advanced Biologics Manufacturing (DoD MCM ABM) Facility in Alachua, FL. **(SD*)**
- **Suspense:** May 26
- **Status:**

Task – Zinc and Vitamin-D Supplements – (P&R)

- **Description:** Provide a recommendation on assessing the feasibility and efficacy of providing zinc and vitamin-D supplements for DoD beneficiaries to boost immune defense. **(SD*)**
- **Suspense:** May 26
- **Status:**

Task – Testing Framework – (P&R)

- **Description:** Provide an update on testing framework. **(SD*)**
- **Suspense:** Ongoing
- **Status:** Update provided during Thursday Direct Reports Meeting.

Task – Serology Testing – (P&R)

- **Description:** Provide and update on progress and timelines associated with serological testing for the presence of SAR-CoV-2 (COVID-19) antibodies. **(SD*)**
- **Suspense:** Ongoing
- **Status:** Update provided during Thursday Direct Reports Meeting.

Task – (FHP-10) DoD Surveillance Testing – (P&R)

- **Description:** Develop FHP-10 guidance for DoD surveillance testing. Include a plan to increase DoD surveillance testing from its current 1% of the total force to 8-10%. **(DSD)**
- **Suspense:** May 22
- **Status:**

Task – Ortho Test for Neutralizing Antibodies – (P&R)

- **Description:** Develop an info paper on DoD's capacity to conduct COVID-19 antibody testing using the Ortho Clinical Diagnostics COVID-19 Total or IgG antibody test. **(SD*)**
- **Suspense:** May 26
- **Status:**

Modified Task – Contact Tracing – (P&R)

- **Description:** Develop a SD decision brief for DoD using Bluetooth technology to facilitate COVID-19 contact tracing. Brief will include a review of currently available Bluetooth

technologies to include their limitations. Include how DoD can mitigate those limitations. **(DSD)**

- **Suspense:** May 27
- **Status:**

Task – Guidance for Susceptible Populations – (P&R)

- **Description:** Provide a recommendation on providing COVID-19 specific guidance concerning the susceptibility of certain portions of the population. **(SD*)**
- **Suspense:** May 26
- **Status:**

Task – COVID-19 Isolation – (P&R)

- **Description:** Develop an info paper on the possibility of reducing COVID-19 isolation period from 14-days to 10-days. **(SD*)**
- **Suspense:** May 26
- **Status:**

Task – Displaying Health Surveillance Data – (P&R)

- **Description:** In coordination with ADVANA, provide a geospatial display DoD health surveillance data in the map format displayed during the May 19 SD update. **(SD)**
- **Suspense:** May 26
- **Status:**

Mission Readiness

Task – Enabling Operations in a COVID-19 Environment – (HD&GS)

- **Description:** Provide an update on the guidance memo on strategy to resume daily operations across the Department. **(SD*)**
- **Suspense:** May 22
- **Status:**

Task – (FHP-9) DoD Guidance for Deployment and Redeployment of Individuals and Units during COVID-19 Pandemic Response – (P&R, JS)

- **Description:** Provide update on FHP-9 and the plan to ensure military forces deploying in support of Combatant Commands have procedures in place to minimize risk of being COVID positive. **(SD*)**
- **Suspense:** Topic for May 26 SD update. RAH material due May 22.
- **Status:**

Task – Exception to 14-day ROM of DoD Forces deploying OCONUS – (Policy)

- **Description:** Negotiate with host nations on an exception to restriction of movement (ROM) requirements for deploying forces that isolated within the U.S. prior to departure. **(SD*)**
- **Suspense:** May 22
- **Status:**

Personnel Policy & Mitigation

Task – Lifting Travel Restrictions – (P&R)

- **Description:** Provide update on guidance memo for transition to conditions-based approach to personnel movement and travel restrictions. **(SD*)**
- **Suspense:** Topic for May 26 SD update. RAH material due May 22.
- **Status:**

Task – Cost-based Analysis of ROM – (CAPE)

- **Description:** Provide a cost-based analysis of the impacts from DoD’s current Restriction of Movement (ROM) policy. **(DSD)**
- **Suspense:** May 22
- **Status:**

Task – Household Goods Movement Plan – (USTRANSCOM)

- **Description:** Provide update on plan to meet challenges of upcoming “peak season” coming out of COVID stop move. Include previous year historical data on number of moves per week. **(DSD)**
- **Suspense:** Topic for May 26 SD update. RAH material due May 22.
- **Status:**

Task – Household goods movement policy – (P&R, A&S)

- **Description:** Develop policy on movement of household goods as personnel movements resume. Policy should include incentives for Service Members to conduct personally procured moves. **(DSD)**
- **Suspense:** May 22
- **Status:**

Task – International Students – (Policy, P&R)

- **Description:** Develop a policy/plan for addressing COVID-19 concerns for international students entering DoD schools, PME, and training courses this fall. **(DSD)**
- **Suspense:** May 22
- **Status:**

Pentagon Reservation

Task – Pentagon Plan – (CMO)

- **Description:** Provide an update on the plan. **(SD*)**
- **Suspense:** SD reviewed and pending release of HPCON memo.
- **Status:**

International Support

Task – Assistance to International Partners – (SOLIC)

- **Description:** Provide an update on State Department plan to provide USG assistance to international partners. Provide an update on prioritized international partners for DoD to assist with COVID supplies. Provide updated policy memo and country list to USDs, Services, and CCMDs for comment. **(DSD)**
- **Suspense:** Topic for May 26 SD update. RAH material due May 22.

- **Status:**

Task – Support CCMD and FMS Programs – (SOLIC)

- **Description:** Provide update on support to CCMD and Foreign Military Sales programs. **(DSD)**
- **Suspense:** Topic for May 26 SD update. RAH material due May 22.
- **Status:**

Task – Ventilator aid – (SOLIC)

- **Description:** Provide an update on the status of ventilator aid and potential DoD request for transport. **(SD)**
- **Suspense:** Topic for May 26 SD update. RAH material due May 22.
- **Status:**

Task – Ventilator offer to NATO – (SOLIC)

- **Description:** Provide an update on the status of ventilator offer to NATO. **(DSD)**
- **Suspense:** Topic for May 26 SD update. RAH material due May 22.
- **Status:**

Installations and Logistics

Task – DoD Pandemic Stockpile – (JS, A&S, P&R)

- **Description:** Provide a recommendation on items to add to the DoD Pandemic Stockpile and a recommendation on increasing the on-hand supply of items in the DoD Pandemic Stockpile. **(SD*)**
- **Suspense:** June 05
- **Status:**

Task – Industrial Expansion Update – (A&S)

- **Description:** Provide an update on Industrial Expansion. **(SD*)**
- **Suspense:** Ongoing
- **Status:** Update provided during Thursday Direct Reports Meeting.

Strategic Communications

Task – Coordinated PA Plan for Service New Normal Plans – (PA, Services)

- **Description:** Develop coordinated PA and launch plan for Service New Normal plans. **(SD*)**
- **Suspense:** Pending release of SD guidance memo.
- **Status:**

Funding

Task – New Supplemental Request – (Comptroller)

- **Description:** Update on status of DoD submission for supplemental funding and authorities. **(SD*)**
- **Suspense:** Ongoing
- **Status:**

-

Modeling

Task – Modeling and analytic update – (CVTF, CAPE)

- **Description:** Provide an update on DoD’s modeling and analytics effort and how it fits into the larger USG modeling effort. **(SD*)**
- **Suspense:** Ongoing
- **Status:**

Lessons Learned

Task – Lessons Learned – (JS J7, HD&GS)

- **Description:** Update on status of DSD memo directing all DoD components to collect lessons learned and to be prepared to provide them to DoD’s Lessons Learned Task Force on a continuing basis. **(SD*)**
- **Suspense:** Ongoing
- **Status:**

*** - Denotes an SD-directed task**

Please let me know if you have any questions or need assistance.

Best, Bob



COVID-19 Update 3 June 20

Pentagon Facilities: HPCON Charlie

Situation

- The DoD facilities in the NCR have changed to FPCON C due to the unrest in the area, change in the FPCON has no affect on the HPCON C measures
- As of 1900 2 Jun, FEMA reports 68 private Community Based Testing Sites sites in 17 states and DC closed due to civil unrest
- VA: Governor signed EO Sixty-Five, the second phase of the “Forward Virginia” plan to begin 5 Jun , EO Sixty-One amended directing Northern Virginia and the City of Richmond to remain in Phase One
- MD Dept of Health announced a new state-wide campaign “Respond, Connect, and Recover” to educate residents about the importance of contact tracing

AFRH (DC and MS): HPCON Delta

Threats/Risks

- **Pentagon Reservation risk is assessed as MODERATE**
- **AFHSD COVID-19 public health threat assessment High**
- CDC - Widespread transmission of COVID-19 in the United States will occur, most of the U.S. population will be exposed to this virus
- Critical personnel exposed/sick due to virus
- Critical personnel with recent travel history unable to work in facilities
- Closures of schools and daycare facilities reducing critical staff
- New cases of COVID-19 as NCR reopens businesses, reduces travel and stay at home restrictions

24 Hour Health Surveillance

NCR Cases (last 24 hrs): 65,382 (+178) Positive, 2518 (+46) deaths,

VA: 398,946 Tested 46,239 (+1632) Positive, 1407 (+37) deaths, Pos/Tested 13%

MD: 315,815 Tested, 54,175 (+1397) Positive, 2474 (+63) deaths, Pos/Tested 17%

District: 47,701 Tested, 8,886 (+85) Positive, 470 (+4) deaths, Pos/Tested 18%

PA.: 472,255 Tested 72,894 (+968) Positive, 5667 (+112) deaths, Pos/Tested 15%

West Virginia: 102,298 Tested, 2,056 (+46) Positive, 78 (+3) deaths, Pos/Tested 2%

NCR Openings

Jurisdiction	Order in Place	Effective Dates / Significant Information	EOs, Press Details
District of Columbia	Phase 1	5/29	Mayor's Order 2020-067 COVID-19 Situational Update (May 29)
Maryland	Stage 1	Began Stage 1 on 5/15 *Fully implemented on 5/29	20-05-29-01 20-05-29-02 EO 20-05-27-01 Press Release Briefing Slides Press Release Press Conference
Charles County	Stage 1	5/29	EO 02-2020 Press Release
Frederick County	Stage 1	5/29	EO 02-2020 Press Release
Montgomery County	Phase 1	6/1	EO 067-20 EO 9-2020 EO 8-2020 Press Release
Prince George's County	Stage 1	6/1	EO 067-20 EO 9-2020 EO 8-2020 Press Release
Virginia	Phase 1	Virginia began Phase 1 on 5/15 *Northern Virginia entered Phase 1 on 5/29	EO Seven Forward Virginia Guidelines EO 61 Amendment 2 EO 65 *New
Virginia	Phase 2	Begins on 6/5 for most of the Commonwealth (except for Northern Virginia and the City of Richmond) *Opening with restrictions for: restaurant, fitness centers, recreation and entertainment, swimming pools, religious services, non-essential retail, and personal grooming services, overnight summer camps, amusement parks, fairs, and carnivals	
Virginia	Phase 1	5/29	EO 62
City of Alexandria	Phase 1	5/29	EO 62
Fairfax Health District	Phase 1	5/29	EO 62
Loudoun County	Phase 1	5/29	EO 62
Prince William Health District	Phase 1	5/29	EO 62

From:
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Cc:

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[Cooper, Laura K SES OSD OUSD POLICY](#)

[\(US\); Sendak, Catherine E SES \(USA\)](#)

Subject: DoD COVID-19 Int'l Response Efforts - 21MAY
Date: Thursday, May 21, 2020 5:12:49 PM
Attachments: [May 21 - TPs Russia Ventilator Delivery.docx](#)

Liz,

Below is SOLIC/SHA's biweekly update on DoD's COVID-19 international response efforts. Attached, FYSA, are the NSC talking points on the ventilators for Russia.

-

Contributions to Allies and Partners:

- DoD assistance to Allies and Partners is a testament to the value we place on our relationships. SD recent calls: PAK, FRA, UKR, ITA, CAN, IDN, NATO; Calls next week to GER, JPN (SD FO to update)
- DoD has provided an estimated \$18.5M to approximately 70 partner nation COVID-19 response activities through the provision of medical and PPE equipment and the transportation of humanitarian cargo, including over \$14 million in Afghanistan Security Force Funding has been approved for local procurement of COVID-19 supplies for use by the Afghan Forces.
- U.S. European Command is supporting Italy's COVID-19 response but providing military transport to move over 45,000 kilograms of COVID-19 relief supplies between Milan and Rome distribution hubs.
 - SD has authorized up to \$10M for humanitarian activities in Italy.
- As an example of our long-term global health engagement activities, DoD recently completed Phase 2 of a multi-year collaboration – to donate a \$1.1 million field hospital, consisting of 16 shelters, 2 generators, 15 HVACs, and ancillary equipment to Mexico's Ministry of Health – for building health and disaster response capacity in Mexico, a collaboration that began after the 2017 Oaxaca earthquake. DoD understands it will be put to immediate use in Mexico City as part of Mexico's COVID-19 response.
- On May 21, 2020, at the request of the Department of State and due to commercial air limitations, USTRANSCOM transported the first shipment (50) of U.S. government donated ventilators to the people of Russia, using a C-17 Globe Master. NSC has committed 15,000 ventilators to partner countries across the globe. Most USG ventilator donations will be commercial shipment by USAID, but DOS may request future DoD transportation support.
- DTRA provided lab and diagnostic supplies to approximately 30 partner nations with over \$1.1M lab and diagnostic supplies. DHA coordinating w/~400 surveillance site in over 30 countries, totaling to over \$8.4M.
 - The Armed Forces Research Institute of Medical Science (AFRIMS) is providing urgently needed COVID-19 lab support to the Royal Thai Army, which will strengthen our longstanding relationship with Thailand by promoting health security at an important moment in history. AFRIMS is also supporting the governments of the Philippines and Nepal.

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(b) (6)
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[Little, Gregory B SES OSD OUSD C \(USA\);](#) (b) (6)
[Grobman, Jeffrey H SES OSD CAPE \(USA\);](#) (b) (6)
[Edward R SES OSD CAPE \(USA\);](#) (b) (6)
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[Swallow,](#)
[Robert Chandler SES USAF AF-A9 \(USA\);](#) [Giddings, Angela P SES \(USA\);](#) (b) (6)

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Crain, William F SES USARMY CAA (US); (b) (6)

Cc: Payne, Michael D SES OSD CAPE (USA); (b) (6)

Oxford, Vayl S SES DTRA J0 (USA); (b) (6)

Subject: DoD COVID-19 Modeling Synchronization Readout - 043020

Date: Monday, May 4, 2020 9:35:01 AM

Attachments: [2020APR30_DoD_Modeling_Synchronization_rev3.pdf](#)
[Combined Metro Only 20200430 \(002\).pdf](#)
[20200504_GeoSpark_Risk_Comparison - All Regions Table Only.xlsx](#)
[COVID19 SEASONALITY - SPECIAL SCIENCE UPDATE 04222023 - FINAL.pdf](#)

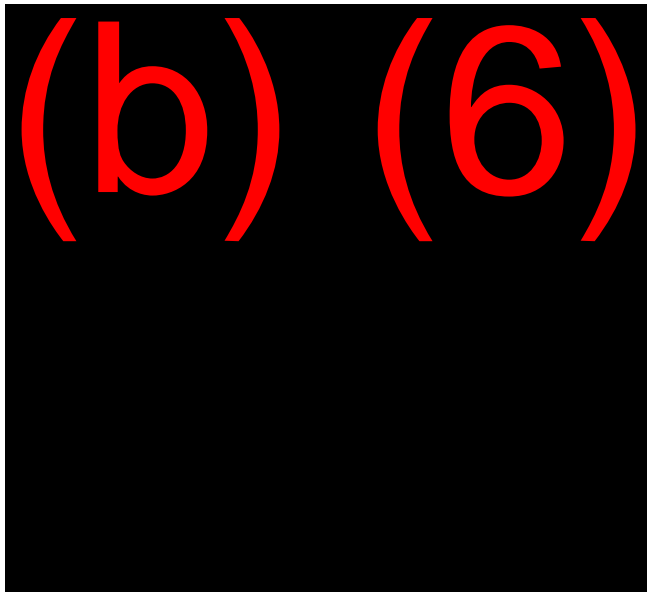
All,

Apologies for the late readout, busy end to the week! I really want to thank the folks from DTRA for briefing at the synch meeting on Thursday. (b) (6) and (b) (6) (OI) + their teams have been doing amazing work. DTRA has been leading much of the DoD's modeling and analytic efforts and have been informing not only the Department but the entire USG COVID-19 response. Very grateful for their overall efforts and their time on Thursday to bring their goodness to the group. THANK YOU DTRA!

I've attached their slides and the content discussed on Thursday. I've also attached a science report from the CDC on potential seasonality of SARS-CoV-2 (a topic that is on everyone's mind these days). Happy Monday all and I'm looking forward to touching base with the group tomorrow.

Exec Sum:

Observational data regarding SARS-CoV-2 infections that compare incidence in tropical (wet vs. dry) with temperate (i.e., warm vs. cold) global regions are at present biased and inadequate to inform seasonality estimation. Evidence from statistical models and experimental studies of SARS-CoV-2 and other coronaviruses suggest that temperature and humidity could affect SARS-CoV-2 transmission so that if they were major factors cases may progressively decrease in the U.S. as heat and humidity increase in summer months. If SARS-CoV-2 elicits at least short-duration immunity, a seasonal pattern of infections is likely to emerge after the current infection wave, with winter seasonal peaks. Predicting seasonality of SARS-CoV-2 based on the available evidence is impossible at this time. Additional experimental evidence and seasonal experience is needed to assess the interplaying roles of temperature, humidity, and other environmental factors, including ultraviolet radiation, on transmissibility of viable SARS-CoV-2.



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DTRA Technical Reachback Modeling of SARS-CoV-2

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Chief, Technical Reachback Division

OSJI-Covid / 20cv5096 (DoD 20-L-1014) / 3894

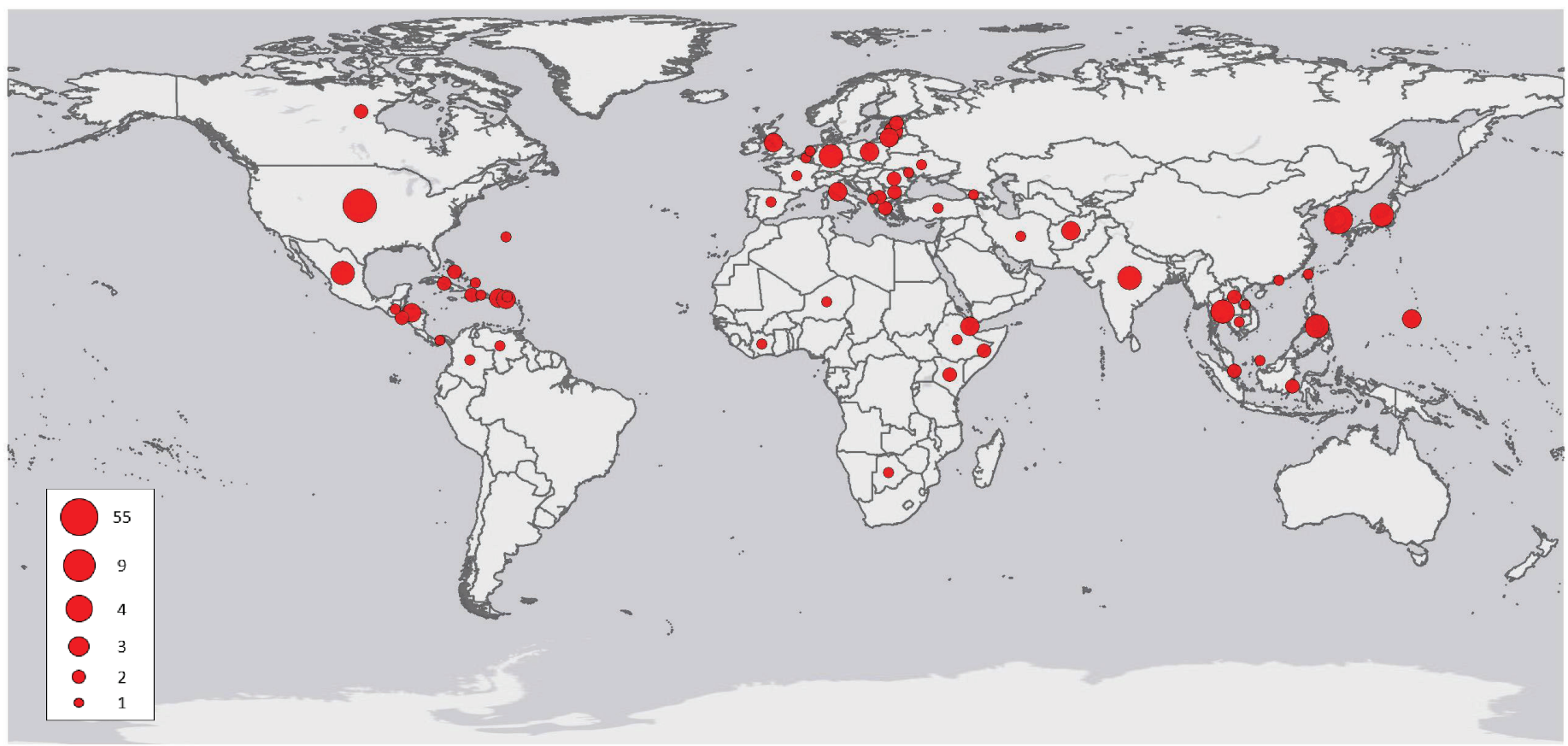
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RD Directorate
Technical Reachback Division

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SARS-CoV-2 Modeling Requests





Reachback Modeling Capabilities

- Using extended compartmental SEIR models with geographic spread
 - EPIGRID (LANL)
 - PatchSim (UVA)
- Weekly-updated model of the US (including all 50 states, Washington DC, and three territories)
 - Uses PatchSim (variably seeded with infections relative to assessed testing & contact tracing by state and time)
 - Model outputs at the county level (state level training correlated into a national fit)
 - Includes effects of social distancing, testing, and contact tracing
- As requested, custom built models for OCONUS areas (completed over 50 countries)
 - Uses primarily EPIGRID; PatchSim used depending on geographic size and timeline of request
 - Have the ability to model special populations
 - Includes effects of local mitigation efforts (social distancing, school and business closures, travel restrictions)

S → E → I → R

Susceptible → Exposed → Infectious → Removed

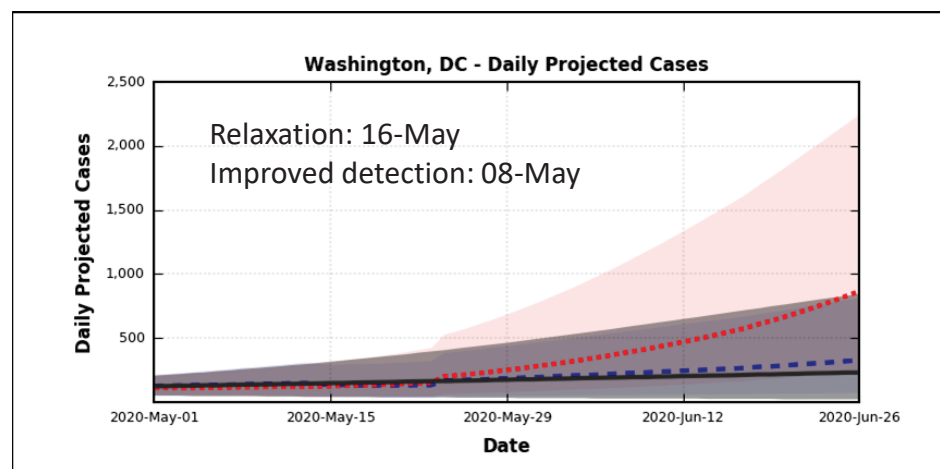
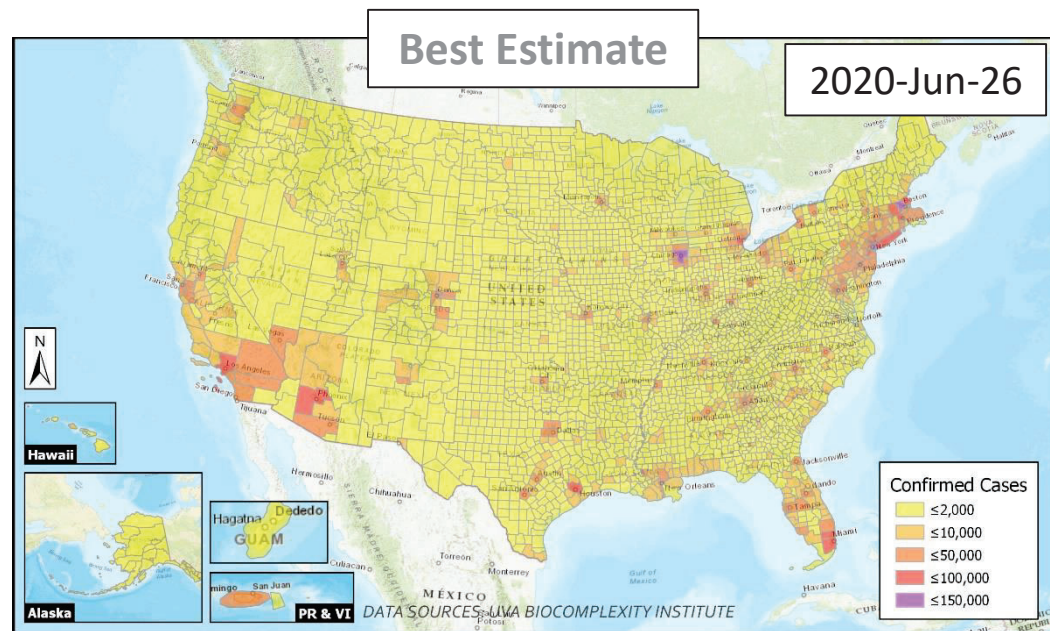


Weekly CONUS Modeling

- Model is initiated with reported cases for each county and territory (assumed 15% detection rate)
- Each state is individually calibrated
 - Reproductive number (2.1-2.3)
 - Infectious period (3-5 days)
 - Intensity of social distancing (30-50% reduction in transmission)
- Report cases, hospital demand, and ventilator demand
- Modeled COVID-19 spread in the U.S. using 3 scenarios

1. **Best Estimate** based on current mitigation efforts persisting
2. **Relaxed social distancing**, intensity of social distancing decreases by half (15-25%) on a specified date*
3. **Improved detection**, relaxed social distancing*, improved case detection - testing and contact tracing to reduce infectious period by half (1.5-2.5 days) on 08-May

*The relaxation date for each state is based upon governors' announcements and media reports

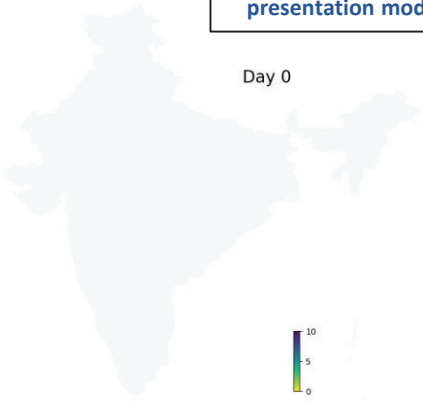




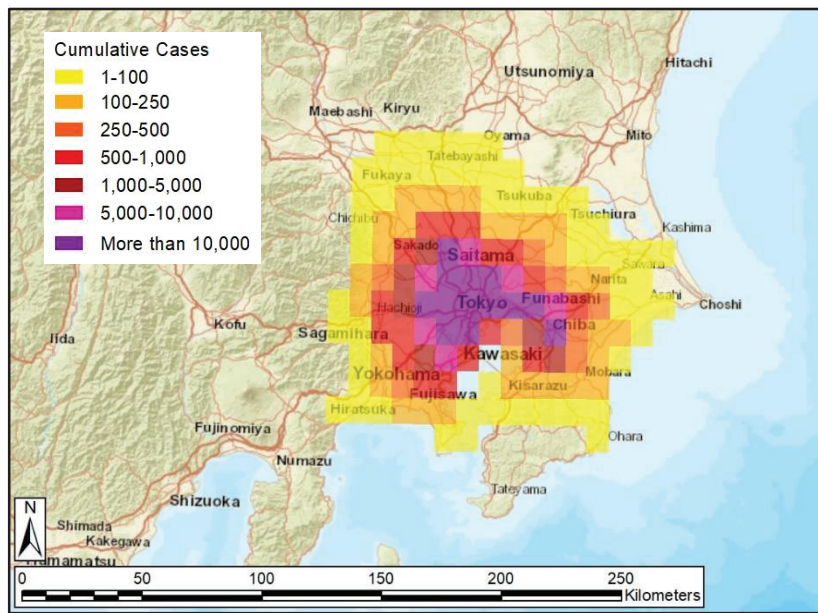
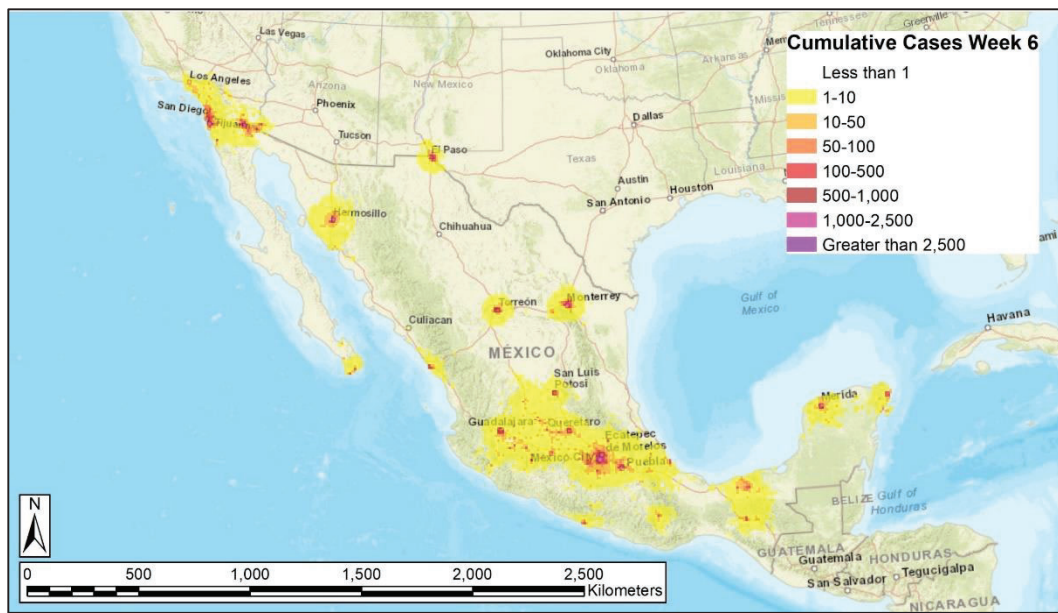
Upon Request OCONUS Modeling

Image is dynamic. Display in presentation mode to see animation

Day 0



- OCONUS modeling upon request
- Countries are modeled based upon the local situation
 - Case counts
 - Healthcare system capacity and preparedness
 - Official mitigation efforts, school and business closures, lockdowns, travel restrictions
- EPIGRID models include data about population (LandScan) and travel networks (airline, railway, and road)





General Comments

- Working to get data/links into ADVANA
- DTRA supported website for CONUS forecasts (best viewed in Chrome)
 - Includes data export functionality

<https://maps.dtra.mil/portal/apps/MapSeries/index.html?appid=e78954b2b9884e759e06c2ad68d6c969>

- COVID-19 Progression Visualization
 - A "time slider" that shows weekly change in COVID-19 confirmed cases, at the county level (best viewed in Chrome)

<https://intelshare.intelink.gov/sites/gcas/ciic/C2D2/CIIC-App-Showcase/SiteAssets/covid-19-temporal/index.html#/>

- Repository of all completed RFIs:
 - <https://opscenter.dtra.mil/AUTH/homepage/index.cfm>
 - 'Coronavirus Situational Awareness' link
 - 'DTRA Reachback SARS-CoV-2 RFI Products' link

- POCs:

- (b) (6) – Visualization
- Technical Reachback, (b) (6)

COVID-19 in Seattle-Tacoma-Bellevue Metro Area

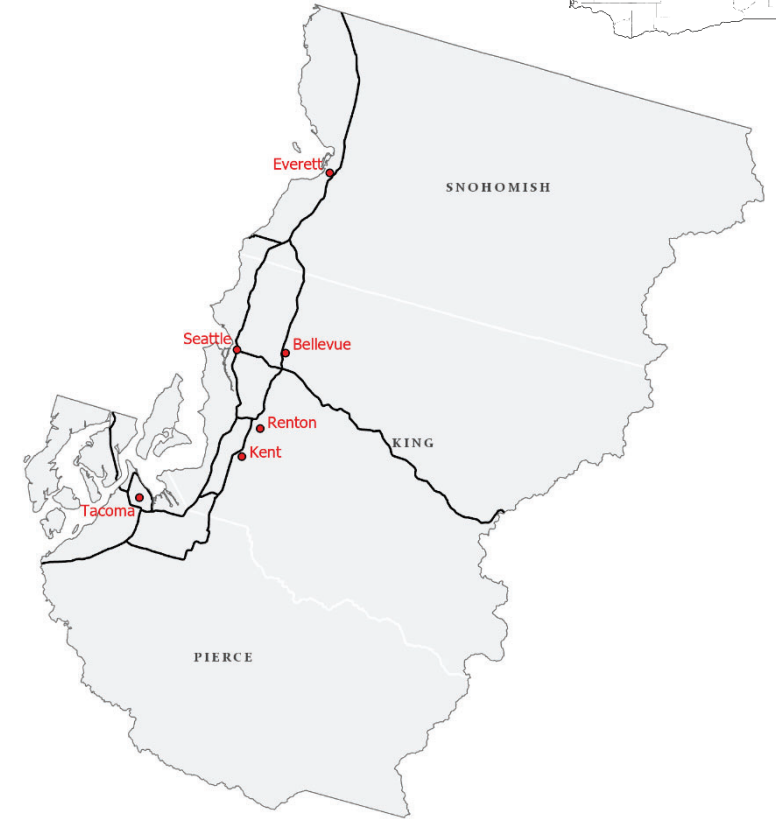


Summary:

- **62% of confirmed cases were from the central region of the CBSA (localization)**
- **74% of deaths were from the white demographic**
- **91% of deaths were from the 60+ demographic**

Table of Key Events

- 21JAN:** WA 1st case (in all of the USA)
- 29FEB:** WA 1st death
- 29FEB:** WA declares state of emergency
 - 7 Total Cases, 600% increase from 7 days prior
- 11MAR:** WA mass gathering restrictions
 - 319 Total cases, 718% increase from 7 days prior
 - 31,800% increase from 14 days prior
- 13MAR:** POTUS declares a national emergency
- 13MAR:** WA educational facilities closed
 - 480 Total cases, 523% increase from 7 days prior
 - 47,900% increase from 14 days prior
- 16MAR:** WA initial business closure
 - 726 Total cases, 362% increase from 7 days prior
 - 3,933% increase from 14 days prior
- 23MAR:** WA Governor issues stay-at-home order
 - 1,15 Total cases, 150% increase from 7 days prior
 - 1,056% increase from 14 days prior
- 25MAR:** WA non-essential services closed
 - 2,148 Total cases, 131% increase from 7 days prior
 - 573% increase from 14 days prior



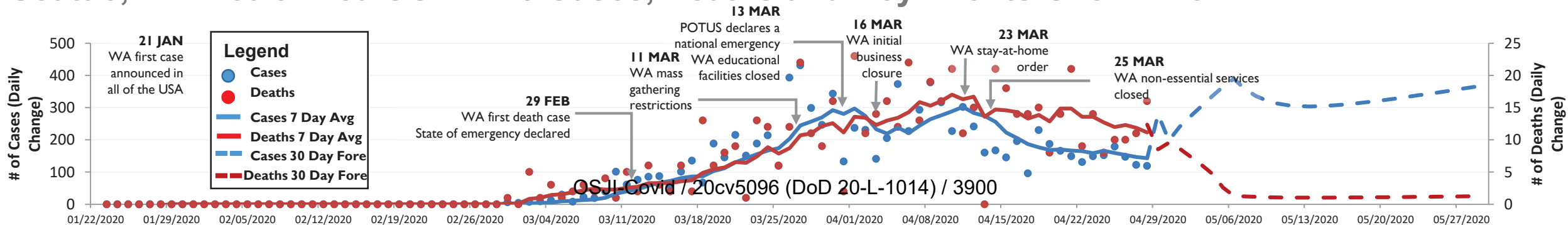
Demographics for Seattle-Tacoma-Bellevue CBSA	
Population	3,808,715
Median Age	36.67
Race	
White	68%
Black or African American	4%
Asian	9%
Hispanic or Latino	13%
Other	6%
Median Household Income	\$85,647

Similar CBSA/Counties*

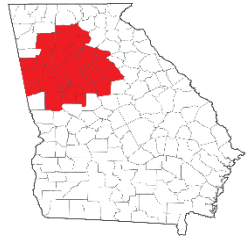
- Monroe, NY
- Manatee, Florida
- Kent, MI

*Calculated based on CDC Social Vulnerability Index, Population, and Population Density

Seattle, WA Metro Area COVID-19 Cases, Deaths and Key Events Over Time



COVID-19 in Atlanta, GA Metro Area



Summary:

- **Cases and deaths per day were steadily increasing since 03MAR.**
- **Rate of increased difference between current cases and cases 7 and 14 days earlier decreases over time.**
- **Result of easing stay at home order should be under watch and has not produced a spike to date. Some businesses remain closed and others are operating at reduced populations.**

Demographics for Atlanta, GA Metro Area	
Population	5,779,463
Median Age	36.2
Race	
White	47.6%
Black or African American	33.4%
Asian	5.7%
Hispanic or Latino	10.6%
Median Household Income	\$64,766

Table of Key Events

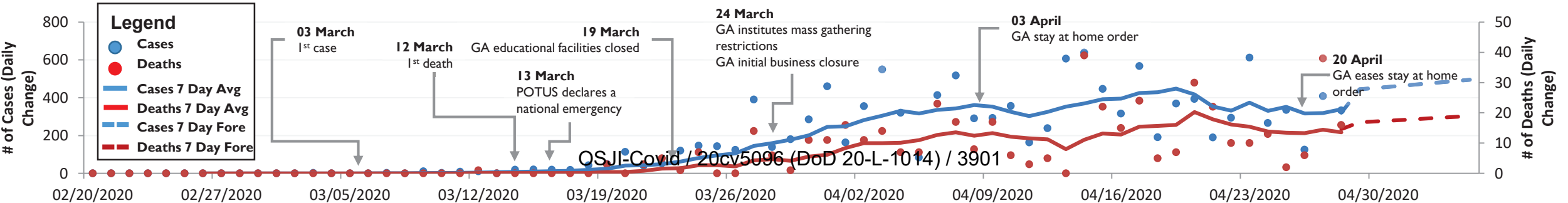
- 03MAR:** 1st case
- 12MAR:** 1st death
- 13MAR:** POTUS declares a national emergency
 - 37 total cases
 - 750% increase from 7 days prior
- 18MAR:** GA educational facilities closed
 - 158 total cases
 - 158% increase from 7 days prior
 - 7800% increase from 14 days prior
- 24MAR:** GA mass gathering restrictions
- 24MAR:** GA initial business closure
 - 683 total cases
 - 494% increase from 7 days prior
 - 3918% increase from 14 days prior
- 03APR:** GA stay at home order
 - 3,476 total cases
 - 159% increase from 7 days prior
 - 980% increase from 14 days prior
- 20APR:** GA eases stay at home order
 - 9,686 total cases
 - 43% increase from 7 days prior
 - 126% increase from 14 days prior

Similar CBSA/Counties*

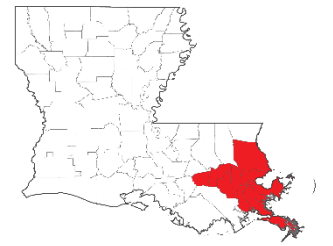
- New Haven, CT
- Davidson, TN

*Calculated based on CDC Social Vulnerability Index, Population, and Population Density

Atlanta, GA Metro Area COVID-19 Cases, Deaths and Key Events Over Time



COVID-19 in New Orleans , LA Metro Area



Summary:

- **Cases have steadily declined since 02APR and have been below 500 per day since 10APR**
- **Deaths peaked on 14APR at 107, but have been below 60 per day since 15APR**
- **Between 13-23MAR, Louisiana implemented 5 social distancing measures prior to case/death increases**

Table of Key Events

- 09MAR:** 1st case
- 13MAR:** POTUS declares a national emergency
- 13MAR:** LA mass gathering restrictions
 - 32 total cases
- 14MAR:** 1st death
- 16MAR:** LA educational facilities closed
 - 127 total cases
 - 126 case increase from 7 days prior
- 17MAR:** LA initial business closure
 - 183 total cases
 - 3,560% increase from 7 days prior
- 22MAR:** LA non-essential services closed
 - 697 total cases
 - 619% increase from 7 days prior
- 23MAR:** LA stay at home order
 - 928 total cases
 - 631% increase from 7 days prior
 - 927 case increase from 14 days prior

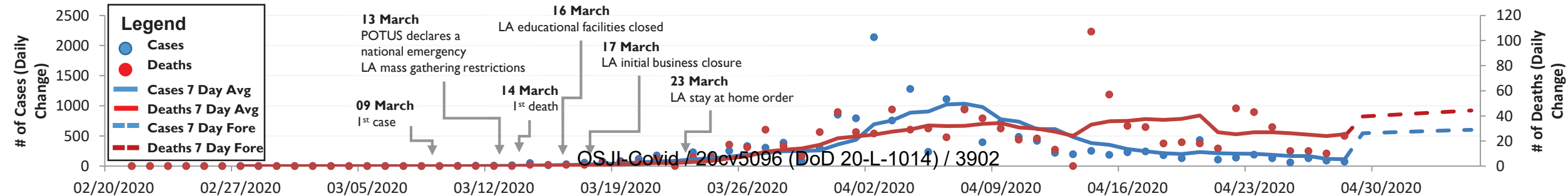
Demographics for New Orleans, LA Metro Area	
Population	1,263,635
Median Age	38.0
Race	
White	51.7%
Black or African American	34.6%
Asian	2.8%
Hispanic or Latino	8.7%
Median Household Income	\$51,449

Similar CBSA/Counties*

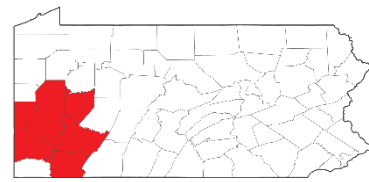
- Washoe, NV
- Brazoria, Texas
- Hartford, CT
- St. Louis, MO

*Calculated based on CDC Social Vulnerability Index, Population, and Population Density

New Orleans, LA Metro Area COVID-19 Cases, Deaths and Key Events Over Time



COVID-19 in Pittsburgh , PA Metro Area



Summary:

- **7-day average of new daily cases has generally declined since peaking on 08APR**
- **Deaths had slowed over the last week, but spiked on 28APR to 22 deaths**
- **01APR, Pennsylvania instituted stay at home orders after the number of positive cases showed steady growth at the end of April**

Demographics for Pittsburgh, PA Metro Area	
Population	2,339,941
Median Age	43.1
Race	
White	85.6%
Black or African American	8.0%
Asian	2.3%
Hispanic or Latino	1.7%
Median Household Income	\$58,290

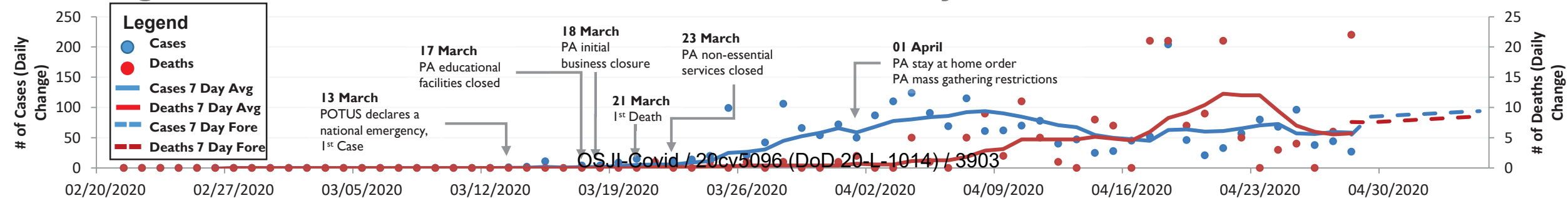
Table of Key Events

- 13MAR:** 1st case
- 13MAR:** POTUS declares a national emergency
- 17MAR:** PA educational facilities closed
 - 10 total cases, 10 case increase from 7 days prior
- 18MAR:** PA initial business closure
 - 14 total cases, 14 case increase from 7 days prior
- 21MAR:** 1st death
- 23MAR:** PA non-essential services closed
 - 70 total cases
 - 1067% increase from 7 days prior
 - 70 case increase from 14 days prior
- 01APR:** PA stay at home order, mass gathering restrictions
 - 600 total cases
 - 217% increase from 7 days prior
 - 4,186% increase from 14 days prior
- 18APR:** 100th Death

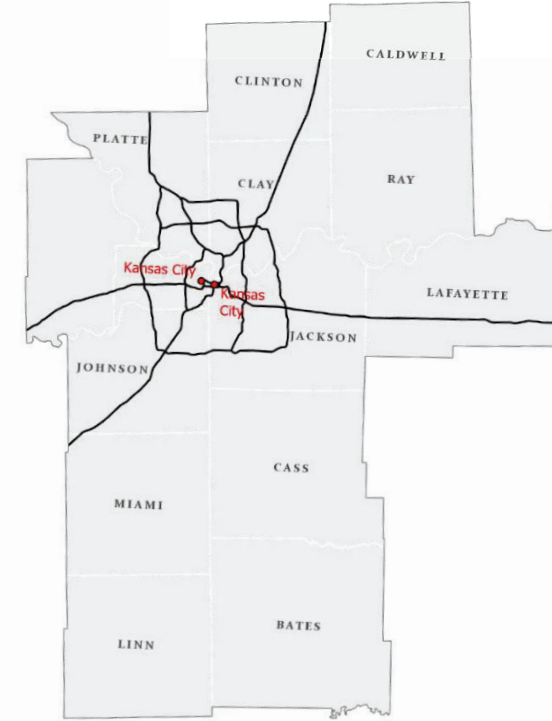
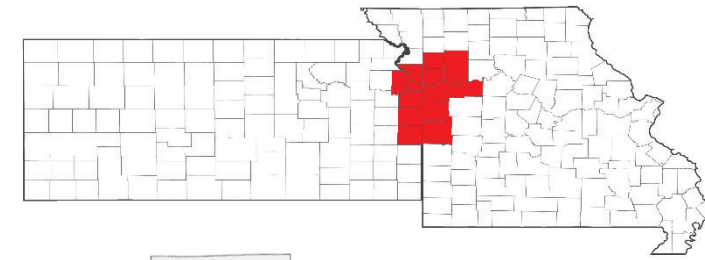
Similar CBSA/Counties*

- McKean, PA
 - Crawford, PA
 - Montcalm, MI
 - Lincoln, NE
- *Calculated based on CDC Social Vulnerability Index, Population, and Population Density

Pittsburgh, PA Metro Area COVID-19 Cases, Deaths and Key Events Over Time



COVID-19 in Kansas City, MO Metro Area



Summary:

- *Despite MO issuing three social distancing measures on 23MAR, cases and deaths continued to rise until ~13APR*
- *Since then, cases and deaths have steadily declined, which could be a result of the 06APR MO stay at home order*

Table of Key Events

- 09MAR:** 1st case
- 12MAR:** 1st death
- 13MAR:** POTUS declares a national emergency
- 23MAR:** MO mass gathering restrictions
- 23MAR:** MO educational facilities closed
- 23MAR:** MO initial business closure
 - 91 cases
 - 727% increase from 7 days prior
 - 9000% increase from 14 days prior
- 06APR:** MO stay at home order
 - 929 cases
 - 122% increase from 7 days prior
 - 921% increase from 14 days prior
- Not Implemented:** non-essential services closed

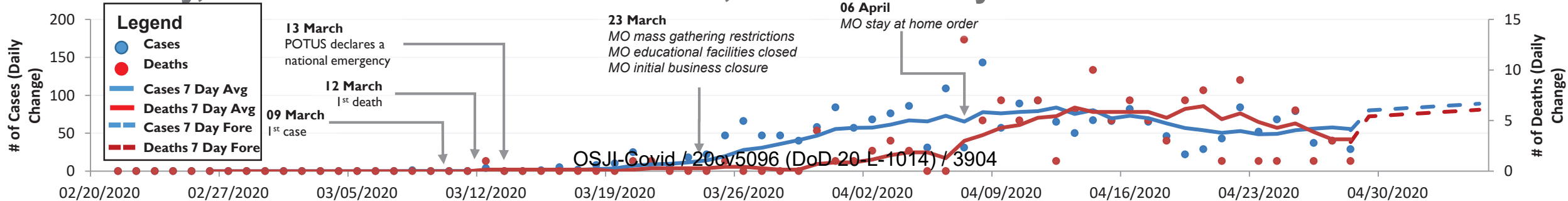
Similar CBSA/Counties*

- Dodge, MN
- Carson, Texas

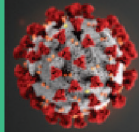
*Calculated based on CDC Social Vulnerability Index, Population, and Population Density

Demographics for Kansas City, MO Metro Area	
Population	2,106,632
Median Age	37.3
Race	
White	72.8%
Black or African American	12.2%
Asian	2.8%
Hispanic or Latino	8.9%
Median Household Income	\$64,020

Kansas City, MO Metro Area COVID-19 Cases, Deaths and Key Events Over Time



COVID-19 Science Update



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SPECIAL TOPIC: COVID-19 and Potential Seasonality

EXECUTIVE SUMMARY

Observational data regarding SARS-CoV-2 infections that compare incidence in tropical (wet vs. dry) with temperate (i.e., warm vs. cold) global regions are at present biased and inadequate to inform seasonality estimation. Evidence from statistical models and experimental studies of SARS-CoV-2 and other coronaviruses suggest that temperature and humidity could affect SARS-CoV-2 transmission so that if they were major factors cases may progressively decrease in the U.S. as heat and humidity increase in summer months. If SARS-CoV-2 elicits at least short-duration immunity, a seasonal pattern of infections is likely to emerge after the current infection wave, with winter seasonal peaks. Predicting seasonality of SARS-CoV-2 based on the available evidence is impossible at this time. Additional experimental evidence and seasonal experience is needed to assess the interplaying roles of temperature, humidity, and other environmental factors, including ultraviolet radiation, on transmissibility of viable SARS-CoV-2.

BACKGROUND

- SARS-CoV-2 transmissibility and viability may be affected by environmental factors, such as temperature and humidity.
- These factors could drive development of seasonal variation in COVID-19, including potential declines in SARS-CoV-2 infection rates as the summer months approach.
- Whether SARS-CoV-2 transmission is affected by environmental factors has important implications for informing the timing of population-based prevention policies, such as social distancing and opening of businesses currently deemed non-essential.

WHAT IS KNOWN ABOUT THE IMPACT OF TEMPERATURE AND HUMIDITY ON COVID-19 FROM OBSERVATIONAL STUDIES?

Several studies have reported an association between rising temperature and decreasing COVID-19 cases. However, these studies have key limitations and *should be interpreted with caution.*

- Numerous early observational studies have reported an inverse correlation between COVID-19 cases and meteorological variables, particularly temperature and humidity.
- Early in the pandemic, a significantly larger number of cases were observed in cooler, low humidity climates than in warmer, higher humidity climates.⁴⁻¹⁷

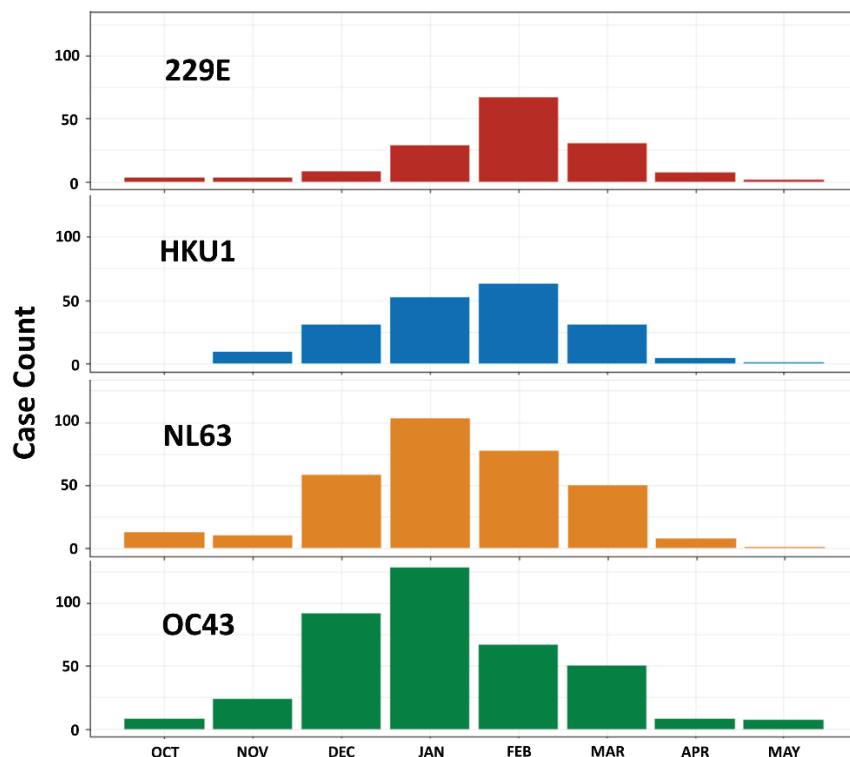
- These observations have key limitations:
 - All these reports were preliminarily published without peer-review.
 - Nearly all included data that were from the first two months of the pandemic (particularly from China) and were collected prior to the significant spike in U.S. cases.
 - Most are subject to potential case-testing and case-reporting bias. Specifically, warmer, more humid tropical countries are more likely to be low or middle income and less likely to have had testing capacity.¹⁸⁻¹⁹
- The results of these studies *should be interpreted with caution and re-assessed* as models are updated, and subsequent findings are published in the peer-reviewed literature.

WHAT IS KNOWN ABOUT THE SEASONALITY OF OTHER RESPIRATORY VIRUSES, INCLUDING CORONAVIRUSES?

Most of the common cold viruses (rhinovirus, respiratory syncytial virus, parainfluenza virus, and coronaviruses) have a seasonal pattern, with increased cases in autumn, a peak in the winter, and then a decrease in spring and summer. Seasonal winter outbreaks of SARS-CoV-2 have been predicted after the initial pandemic wave.

- Of the seven coronaviruses that infect humans, four (229E, HKU1, NL63, and OC43) have low virulence in otherwise health persons. All are seasonal, with cases occurring mostly between December and March (Figure 1).¹

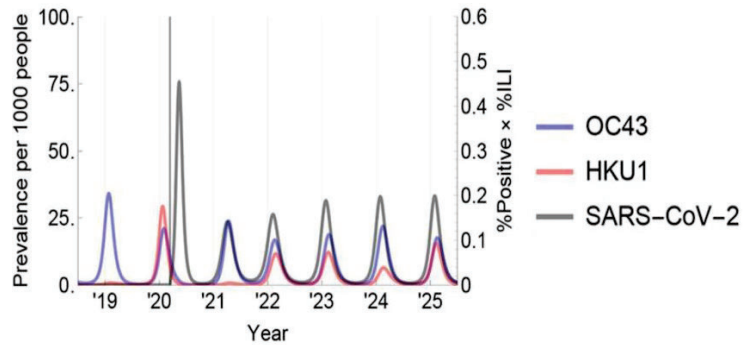
Figure 1. Adapted from Monto *et al.* Data shown are case counts of household human coronavirus infections by month, 2010-2018 - Michigan, USA.



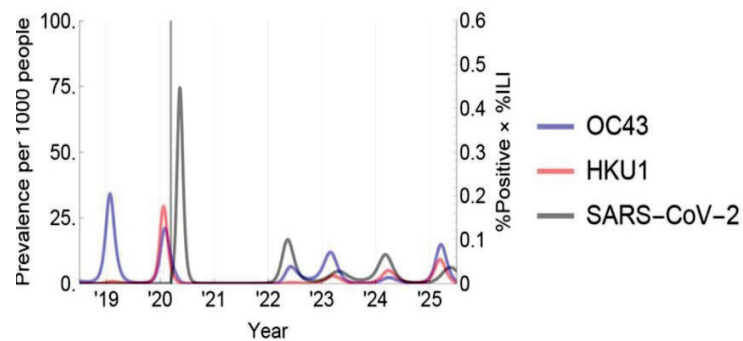
- Among these less virulent coronaviruses, SARS-CoV-2 is most closely related to OC43 and HKU1.
- Immunity to OC43 and HKU1 appears to wane within one year.²
- If like OC43 and HKU1, SARS-CoV-2 imparts only partial immunity that wanes, and not robust long-lasting immunity like SARS-CoV-1, one model has projected that recurrent winter outbreaks of SARS-CoV-2 will probably occur after the initial, ongoing infection wave.³

Figure. 2. Possible pandemic and post-pandemic SARS-CoV-2 scenarios based on level of immunity.³

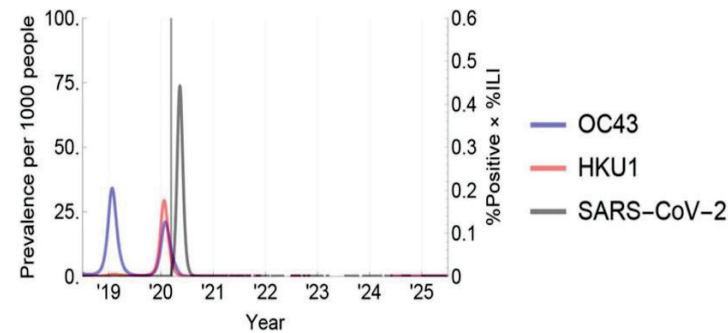
a. If duration of SARS-CoV-2 immunity is short, then annual outbreaks were predicted.



b. If duration of SARS-CoV-2 immunity is longer, then biennial outbreaks were predicted with possible smaller outbreaks in between.



c. If there is robust and long-term immunity, it could result in viral elimination.



WHAT IS KNOWN ABOUT THE IMPACT OF TEMPERATURE AND HUMIDITY ON COVID-19 FROM EXPERIMENTAL STUDIES?

Under experimental conditions, one study found that increasing temperature significantly reduced tissue-cultured SARS-CoV-2 concentrations. Studies of SARS-CoV-1 virus stability suggest a decline only at high temperature and humidity. Survival of human coronavirus surrogates, TGEV and MHV, decline with increasing temperature and relative humidity.

SARS-CoV-2

- To date, only one published report has examined the stability of tissue-cultured SARS-CoV-2.²⁰
- Researchers observed cultures for up to 14 days at 3 temperatures.
- SARS-CoV-2 survivability decreased substantially with higher temperatures (Table).
 - Winter at 4°C (39°F): only a 0.7 log-unit reduction of titers at 14 days.
 - Spring at 22°C (71°F): within days, levels reduced nearly 1,000 times those seen at 4°C.
 - Summer at 37°C (98.6°F): virus was not detected after one day.

Table.

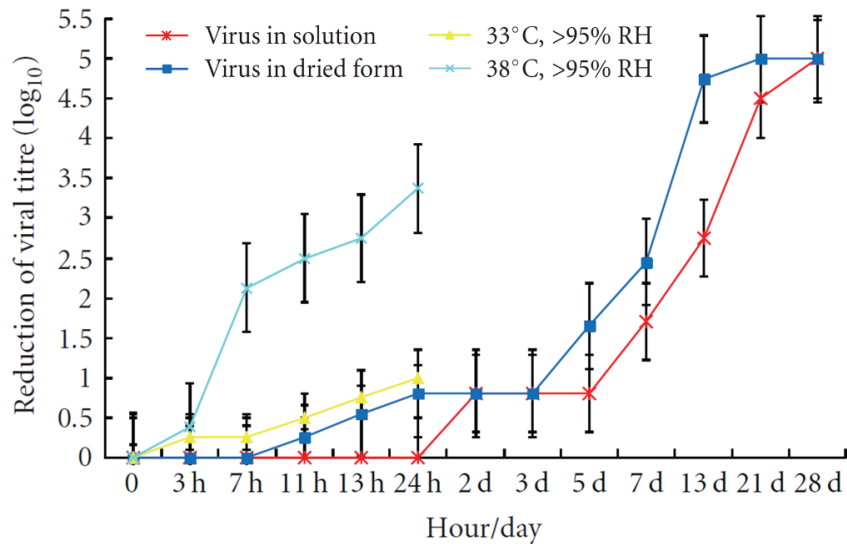
Time	Virus titre (Log TCID ₅₀ /mL)					
	4°C		22°C		37°C	
	Mean	±SD	Mean	±SD	Mean	±SD
1 min	N.D.	N.D.	6.51	0.27	N.D.	N.D.
5 mins	N.D.	N.D.	6.7	0.15	N.D.	N.D.
10 mins	N.D.	N.D.	6.63	0.07	N.D.	N.D.
30 mins	6.51	0.27	6.52	0.28	6.57	0.17
1 hr	6.57	0.32	6.33	0.21	6.76	0.05
3 hrs	6.66	0.16	6.68	0.46	6.36	0.19
6 hrs	6.67	0.04	6.54	0.32	5.99	0.26
12 hrs	6.58	0.21	6.23	0.05	5.28	0.23
1 day	6.72	0.13	6.26	0.05	3.23	0.05
2 days	6.42	0.37	5.83	0.28	U	-
4 days	6.32	0.27	4.99	0.18	U	-
7 days	6.65	0.05	3.48	0.24	U	-
14 days	6.04	0.18	U	-	U	-

TCID, tissue culture infectious dose. N.D., not determined. U, undetectable.

SARS-CoV-1

- SARS-CoV-1 is the virus most closely related to SARS-CoV-2 (79% sequence similarity).
- The stability of dried SARS-CoV-1 has been studied under various conditions (Figure 3).
 - The virus was viable for over 5 days at 22-25°C (71.6 - 77°F) and relative humidity of 40-50%, conditions typical of air-conditioned environments.
 - SARS-CoV-1 viability was significantly reduced (>3 log) at 33 - 38°C (91.4 - 100.4°F), and relative humidity >95%.²¹

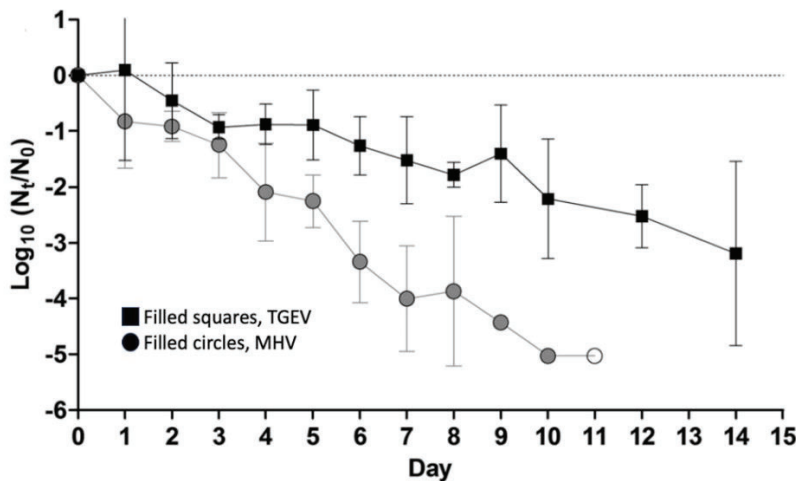
Figure 3. Reduction in viral titers over time at 22-25°C and relative humidity (RH) 40-50% (virus in solution, **red**; and virus in dried form, **blue**); and at 33°C (**yellow**) and 38°C (**light blue**) and >95% RH.



Non-human coronaviruses (TGEV and MHV)

- One study has tested survival of transmissible gastroenteritis virus (TGEV) and mouse hepatitis virus (MHV), two animal coronaviruses used widely in animal models of human disease. The study tested survival during 28 days at temperatures of 4°C (39.2°F), 20°C (68°F) and 40°C (104°F), relative humidity of 20%, 50% and 80%.²²
- At all humidity levels, coronavirus inactivation was greater at higher temperatures (Figure 4).
- Infectious virus persisted for up to 28 days, and the lowest level of inactivation occurred at low humidity (20%).

Figure 4. Survival of coronaviruses TGEV and MHV at 20°C (68°F) and 80% relative humidity (representative figure with average temperature and relative humidity closest to major U.S. cities in June; 68°F is lower than average in U.S. cities in June; 80% RH is higher than average RH in U.S. cities in June).



FUTURE RESEARCH OPPORTUNITIES RELATED TO COVID-19 and ENVIRONMENTAL FACTORS

- Observational data regarding SARS-CoV-2 infections that compare incidence in tropical (wet vs. dry) with temperate (i.e., warm vs. cold) global regions are at present biased; more uniform surveillance is needed to make inferences about the role of seasonality using these data sources.
- Additional experimental evidence and seasonal experience is needed to assess the interplaying roles of temperature, humidity, and other environmental factors, including ultraviolet radiation, on transmissibility of viable SARS-CoV-2
- The extent and duration of SARS-CoV-2 protective immunity could influence any seasonal patterns.

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To: [Norquist, David HON SD](#); [Hyten, John E Gen USAF JS OCJCS \(USA\)](#); [Oshaughnessy, Terrence J Gen USAF NORAD-USNC CG \(USA\)](#); [Stewart, Jennifer SES SD](#); [Henke, Robert SES SD](#); [Donovan, Matthew P HON OSD OUSD P-R \(USA\)](#); [Lord, Ellen M HON OSD OUSD A-S \(USA\)](#); [McCusker, Elaine A HON OSD OUSD C \(USA\)](#); [Whitley, John E HON OSD OCMO \(USA\)](#); [Thomas Gen Gary L](#); [Burke, Robert P ADM USN VCNO \(USA\)](#); [Wilson, Stephen W Gen USAF AF-CV \(USA\)](#); [Martin, Joseph M GEN USARMY HQDA VCSA \(USA\)](#); [Rapuano, Kenneth P HON OSD OUSD POLICY \(USA\)](#); [Ross, Alexis SES SD](#); [Blake, Robert M Brig Gen USAF AF-A3 \(USA\)](#); [Blanks, Julie A SES OSD OUSD P-R \(USA\)](#); [Bushman, William G SES \(USA\)](#); [Byrne, William D Jr RADM USN JS ODJS \(USA\)](#); [Castle, William S SES OSD OGC \(USA\)](#); [Dumont, Michael J \(Mike\) VADM USN NORAD-USNC CG \(USA\)](#); [Fedrigo, John A SES USAF SAF-MR \(USA\)](#); [Fisher, Vincent L SES OSD OUSD C \(USA\)](#); [Flynn, Charles A LTG USARMY HQDA DCS G-3-5-7 \(USA\)](#); [Friedrichs, Paul A Brig Gen USAF JS OCJCS \(USA\)](#); [Funkhouser, Anthony C MG USARMY CEHO \(USA\)](#); [Greene, Jodi J SES USN \(USA\)](#); [Hebert, Lernes J SES OSD OUSD P-R \(USA\)](#); [Henke, Robert SES SD](#); [Hershman, Lisa W HON \(USA\)](#); [Hoffman, Jonathan R SES OSD OSD \(USA\)](#); [Hood, Robert R HON OSD OASD LA \(USA\)](#); [Kelly, Mark D Lt Gen USAF AF-A3 \(USA\)](#); [LaNeve, Christopher Charles BG USARMY HQDA DCS G-3-5-7 \(USA\)](#); [Lei, JihFen SES OSD OUSD R&E \(USA\)](#); [Lestorti, Joseph M BG USARMY JS J3 \(USA\)](#); [Liszewski BGen Stephen E](#); [Lord, Ellen M HON OSD OUSD A-S \(USA\)](#); [Maurer, Derek J \(Dirk\) SES OSD OUSD POLICY \(USA\)](#); [McAndrew, Anne J SES OSD OUSD C \(USA\)](#); [McCaffery, Thomas P HON OSD OUSD P-R \(USA\)](#); [Mott, Jon K Maj Gen USAF NG CTANG \(USA\)](#); [Muir, Thomas M SES \(USA\)](#); [Piatt, Walter E LTG USARMY HQDA DAS \(USA\)](#); (b) (6)
(b) (6) [Ross, Alexis Lasselle SES OSD OUSD P-R \(USA\)](#); [Sawyer, Phillip G VADM USN \(USA\)](#); [Semonite, Todd I LTG USARMY HQDA OCE \(USA\)](#); [Shaffer, Alan R HON OSD OUSD A-S \(USA\)](#); [Simon, Martin S \(Marty\) SES USN UNSECNV DC \(USA\)](#); [Taliaferro, Jeffrey B \(Jeff\) Maj Gen USAF JS J3 \(USA\)](#); (b) (6)
(b) (6) [VanHerck, Glen D Lt Gen USAF JS ODJS \(USA\)](#); [Walsh, Daniel P SES PFPA HOS \(USA\)](#); [Whitney, Steven P Brig Gen USAF OSD OUSD A-S \(USA\)](#); [Williams, Lorraine A SES OSD OUSD C \(USA\)](#); [Williams, Marshall M \(Will\) SES USARMY HQDA ASA MRA \(USA\)](#); [Friedrichs, Paul A Brig Gen USAF JS OCJCS \(USA\)](#); [Payne, Lee E Maj Gen USAF DHA J-3 \(USA\)](#); (b) (6); [Lyons, Judd H SES OSD OUSD P-R \(USA\)](#); [Deasy, Dana S HON \(USA\)](#); [Mewbourne, Dee L VADM USN TRANSCOM TCDC \(USA\)](#); [Shaffer, Alan R HON OSD OUSD A-S \(USA\)](#)
Cc: [Lyons, David Brig Gen SD](#); [OSD Pentagon OUSD Policy List CVTF Team Leads](#); [JS Pentagon J3 Mailbox Joint Staff CMT Leadership](#); [OSD Pentagon OUSD Policy List CVTF Distro](#); [SD - DSD Read ahead](#); (b) (6)
Subject: DoD CVTF Full Meeting - May 13
Date: Tuesday, May 12, 2020 4:56:32 PM
Attachments: [A1 - Pentagon Reservation Plan for Resilience v4 8May2020.pdf](#)
[A2 - Pentagon Reservation Plan Matrix SD v4 8May2020.pdf](#)
[COVID-19 TF 13 May meeting agenda - 051220 \(1630\).docx](#)

Deputy Secretary, Vice Chairman, and Distinguished Task Force Colleagues,

BLUF: DSD and VCJCS will Chair the next COVID TF meeting 1230-1330 tomorrow, May 13, 2020 in multiple SVTC locations to maintain social distance.

Tomorrow's Agenda:

- I. **President's Task Force Update: ASD Rapuano**
- II. **NORTHCOM Update: General O'Shaughnessy**
- III. **Review Task List:**

Force Health Protection/Medical Preparedness

Task – Integrated diagnostics, therapeutics, and vaccine development program – (HD&GS):

Provide update on status of MOA with HHS. **(DSD) Suspense: May 13**

Task – Increasing Production Capacity for Vaccines & Therapeutics – (A&S): Provide an update on discussions with manufacturers to increase manufacturing fill and finish capacity. Include next steps with HHS and DoD. **(SD) Suspense: May 13**

Task – Testing Framework – (P&R): Provide an update on testing requirement for tiers 1, 2, 3, and 4. Include maximum capacity and actual tests completed per day. **(SD) Suspense: May 13**

Modified Task – Contact Tracing and Using Testing as a Sentinel Tool – (P&R): Develop FHP-10 guidance for DoD surveillance testing. Develop two case studies (aboard a ship and on an installation) for conducting contact tracing. Studies will include feasibility, pros and cons, and value of conducting contact tracing in each environment. In coordination with the CIO, develop an info paper on the risk of using Bluetooth devices in a secure facility. Conduct a review of potential hardware to determine if it is possible for DoD to exclusively retain all data collected via electronic contract tracing tools. **(DSD) Suspense: May 20**

Task – Serology Testing – (P&R): Update on progress and timelines associated with serological testing for the presence of SAR-CoV-2 (COVID-19) antibodies. **(SD) Suspense: May 13**

Mission Readiness

Task – Enabling Operations in a COVID-19 Environment – (HD&GS): Provide an update on the guidance memo on strategy to resume daily operations across the Department. **(SD) Suspense: May 13**

Task – Military Personnel Deploying in support of CCMDs – (P&R, JS): Provide update on FHP-9 and the plan to ensure military forces deploying in support of Combatant Commands have procedures in place to minimize risk of being COVID positive. **(SD) Suspense: May 13**

-

Personnel Policy & Mitigation

Modified Task – Adjustments to HPCON memo – (P&R): Provide an update on draft guidance memo. **(SD) Suspense: To SD for review on May 15**

Modified Task – Elective Medical Procedures – (P&R): Provide an update on the draft guidance memo. **(SD) Suspense: To SD for review on May 15**

Modified Task – Global Stop Movement Assessment – (P&R): Provide an update on the draft assessment criteria and placemat. **(SD) Suspense: To SD for review on May 15**

Task – Dependent Passports – (CMO): Provide an update on the State Department effort to process DoD dependent passports to support PCS moves. **(SD) Suspense: May 13**

New Task – International Students – (P&R and Policy): Develop plan for addressing COVID-19 concerns for international students entering DoD schools, PME, and training courses this fall. **(DSD) Suspense: May 15**

Pentagon Reservation

Modified Task – Pentagon Plan – (CMO): Provide an update on the plan. All attendees are requested to review attached plan and matrix ([Tabs A1 and A2](#)). **(SD) Suspense: May 13**

International Support

New Task – Ventilator aid – (SOLIC): Provide an update on the status of ventilator aid and potential DoD request for transport. **(DSD) Suspense: 15 May**

New Task – Ventilator offer to NATO – (SOLIC): Provide an update on the status of ventilator offer to NATO. **(DSD) Suspense: 15 May**

Task – USG Process for International Support – (SOLIC): Provide an update on State Department plan to provide USG assistance to international partners. Provide an update on the memo from DSD to Deputy Secretary of State and the Administrator of USAID requesting assistance with nomination of a lead federal agency for COVID-19 international support. **(DSD) Suspense: May 13**

Task – Exports to international partners – (SOLIC): Provide an update on progress with A&S on DoD position, recommendation, and process for providing exports of COVID-19 response related equipment and supplies to foreign partners. **(DSD) Suspense: May 13**

-

Installations and Logistics

Task – DPA and JATF update – (A&S): Provide an update on the Defense Production Act and the Joint Acquisition Task Force. **(SD) Suspense: Ongoing**

|

Strategic Communications

Task – Coordinated PA Plan for Service New Normal Plans – (PA, Services): Develop coordinated PA and launch plan for Service New Normal plans. **(SD) Suspense: Pending release of SD guidance memo**

Funding

Task – New Supplemental Request – (Comptroller): Update on status of DoD submission for supplemental funding and authorities. **(SD) Suspense: Ongoing**

-

Modeling

Task – Modeling and analytic update – (CVTF, CAPE): Provide an update on DoD’s modeling and analytics effort and how it fits into the larger USG modeling effort. **(SD) Suspense: Ongoing**

Lessons Learned

Task – Lessons Learned – (JS J7, HD&GS): Update on status of DSD memo directing all DoD components to collect lessons learned and to be prepared to provide them to DoD’s Lessons Learned Task Force on a continuing basis. **(SD) Suspense: Ongoing**

Services Issues: Army: General Martin; Navy: Admiral Burke; Air Force: General Wilson; Marine Corps: General Thomas

As time permits, we will review other tasks, so please come prepared for those as well.

Please let me know if you have any questions or need assistance.

Best, Bob

Pentagon Reservation Resilience Plan														
PHASE/ HPCON		DC, MD, and VA Conditions	Public Health Readiness	Mass Transit	Hygiene Supplies		Workforce (recommended)	Telework (recommended)	Vulnerable Populations ⁽¹⁾ (recommended)	Cloth Face Coverings (mandatory)	Social Distancing (mandatory)	Symptoms ⁽²⁾ (mandatory)	Entrance Screening (recommended)	Facilities ⁽³⁾ (recommended)
ZERO (Now)/ CHARLIE+	IF	Stay at home orders in place	Testing is available for symptomatic and those at risk	Reduced mass transit schedules	Limited cleaning supplies available (disinfectant and wipes)	THEN	Minimal workforce in office spaces	Maximum telework flexibilities	Stay at home (Telework or Weather-Safety Leave)	Mandatory on reservation if you cannot maintain 6 feet social distance	6 feet	If you have symptoms, notify supervisor and stay home	No screening for employees and contractors	Increased cleaning and disinfecting of common and high-traffic areas
		Schools, daycare, and camps closed	Hospital surge is available in region	Metro rail every 15-20 minutes										Closed common areas
		Essential businesses only	PPE is available for health care workers	Metro bus every 30 min	Limited Hygiene supplies available (hand sanitizer, hand soap, paper towels, and toilet paper)		Goal of no more than 20% in office spaces	80% or more telework goal			No gatherings	Stay home for 3 days if temperature is 100.0 degrees F or 37.8 degrees C or display symptoms	100% screen of Pentagon visitors and temporary badges; implement screen for temperature and questions	Limited food court choices
		Social distancing	Tracing is available to track positive cases	Increased Pentagon parking available										PAC and gyms closed
AFTER FIRST GATE: 14 day period downward trajectory of influenza-like illness AND COVID-like symptoms; AND 14 day period downward trajectory of COVID cases OR percent positive tests; AND health care available with robust testing														
ONE (Restricted)/ CHARLIE	IF	Stay at home orders lifted	Increased testing	Reduced mass transit schedules	Appropriate cleaning supplies available (disinfectant and wipes)	THEN	Mission essential; consider cohort or alternating schedules	Encourage telework; maximize for vulnerable populations	Stay at home (Telework or Weather-Safety Leave)	Mandatory on reservation if you cannot maintain 6 feet social distance	6 feet	If you have symptoms, notify supervisor and stay home. Take temperature before reporting to office space even if well.	Random (20%-50%) screen of employees and contractors for temperature and questions	Increased cleaning and disinfecting of common and high-traffic areas
		Schools opened or out of session; daycare available	Adequate hospital beds and ICU capacity	Metro rail every 15-20 minutes										Social distancing in common areas
		Some businesses reopen	Increasing and sustainable supply of PPE	Metro bus every 30 minutes	Appropriate hygiene supplies available (hand sanitizer, hand soap, paper towels, and toilet paper)		Goal of no more than 40% in office spaces	60% or more telework goal			Gatherings < 10 people	Stay home for 3 days if temperature is 100.0 degrees F or 37.8 degrees C or display symptoms	100% screen of Pentagon visitors and temporary badges; implement screen for temperature and questions	Limited food court choices
		Continued social distancing	Increased tracing	Increased Pentagon parking available										PAC and gyms closed
AFTER SECOND GATE: No evidence of rebound; AND 14 day period downward trajectory of influenza-like illness AND COVID-like symptoms; AND 14 day period downward trajectory of COVID cases OR percent positive tests; AND health care available with robust testing														
TWO (Moderate)/ BRAVO	IF	Stay at home orders lifted	Increased testing	Reduced mass transit schedules	Appropriate cleaning supplies available (disinfectant and wipes)	THEN	Mission and non-mission essential; consider cohort or alternating schedules	Encourage telework	Stay at home (Telework or Weather-Safety Leave)	Mandatory on reservation if you cannot maintain 6 feet social distance	6 feet	If you have symptoms, notify supervisor and stay home. Take temperature before reporting to office space even if well.	Random (10%-20%) screen of employees and contractors for temperature and questions	Increased cleaning and disinfecting of common and high-traffic areas
		Schools opened or out of session; daycare available	Adequate hospital beds and ICU capacity	Metro rail every 12-15 minutes										Social distancing in common areas
		Some businesses reopen	Increasing and sustainable supply of PPE	Metro bus every 20-30 minutes	Appropriate hygiene supplies available (hand sanitizer, hand soap, paper towels, and toilet paper)		Goal of no more than 80% in office spaces	20% or more telework goal			Gatherings < 50 people	Stay home for 3 days if temperature is 100.0 degrees F or 37.8 degrees C or display symptoms	100% screen of Pentagon visitors and temporary badges; implement screen for temperature and questions	More food court choices
		Continued social distancing	Increased tracing	Increased Pentagon parking available on case-by-case basis										PAC and gyms open with social distancing and increased cleaning
AFTER THIRD GATE: No evidence of rebound; AND 14 day period downward trajectory of influenza-like illness AND COVID-like symptoms; AND 14 day period downward trajectory of COVID cases OR percent positive tests; AND health care available with robust testing														
THREE (Normal)/ ALPHA	IF	No stay at home orders	Increased testing	Normal mass transit schedules	Appropriate cleaning supplies available (disinfectant and wipes)	THEN	Mission and non-mission essential; consider cohort or alternating schedules	Normal telework	Return to office spaces but should continue social distancing (physical distancing) protocols and other mitigation measures	On hand but not mandatory to wear on reservation	Not required to maintain 6 feet	If you have symptoms, notify supervisor and stay home. Take temperature before reporting to office space even if well.	Random (<5%) screen of employees and contractors for questions	Increased cleaning and disinfecting of common and high-traffic areas
		Schools opened or out of session; daycare available	Adequate hospital beds and ICU capacity	Metro rail every 6-15 minutes										Common areas open
		Most businesses reopened	Increasing and sustainable supply of PPE	Metro bus every 15-20 minutes	Appropriate hygiene supplies available (hand sanitizer, hand soap, paper towels, and toilet paper)		Normal office space availability	As determined by leadership and supervisors			Gatherings not restricted; tours are limited	Stay home for 3 days if temperature is 100.0 degrees F or 37.8 degrees C or display symptoms	100% screen of Pentagon visitors and temporary badges; implement screen for temperature and questions	Normal food court choices
		Social distancing as appropriate	Increased tracing	Normal Pentagon parking										PAC and gyms open with increased cleaning
AFTER RETURN TO NORMAL: Continue to monitor for resurgence of Influenza or COVID-19; increased medical surveillance and tracing; Incorporate lessons learned and prepare for next epidemic														
FOUR (Resilience)/ ALPHA or ZERO	IF	To be determined	To be determined	Normal mass transit schedules	Replenish cleaning supplies available (disinfectant and wipes)	THEN	Optimized workforce	Optimized telework and new work arrangements	At office spaces and monitor threat to vulnerable workforce	Replenish supplies of face coverings	Increased awareness of hand hygiene, sneeze and cough etiquette	Recommend monitor health daily	Maintain capability to ramp up screening if necessary	Increased cleaning and disinfecting of common and high-traffic areas
				Metro rail every 6-15 minutes										Replenish hygiene supplies available (hand sanitizer, hand soap, paper towels, and toilet paper)
				Metro bus every 15-20 minutes	Normal Pentagon parking		Normal food court choices	PAC and gyms open with increased cleaning						

NOTE (1) - Vulnerable populations: Agencies and Managers must continue to take precautions for vulnerable populations that are at higher risk for severe illness from COVID-19, including older adults, people of any age who have serious underlying medical conditions, and those with vulnerable persons in their home. Supervisor actions must be consistent with the Rehabilitation Act of 1973, as amended. See <https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/groups-at-higher-risk.html>

NOTE (2) - Symptoms: Fever, shortness of breath or difficulty breathing, cough, chills, repeated shaking with chills, muscle pain, headache, sore throat, new loss of taste or smell. Seek advice of a healthcare professional if you are ill.

NOTE (3) - Facilities and Cleaning: See <https://www.cdc.gov/coronavirus/2019-ncov/community/disinfecting-building-facility.html> and <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/disinfecting-your-home.html>

COVID-19 DoD CVTF Full Meeting*Wednesday, May 13, 2020 / 1230-1330**Multiple Locations***AGENDA**

- 1. Opening Remarks – DSD & VCJCS**
- 2. President’s Task Force Update – ASD Rapuano**
- 3. NORTHCOM Update – Gen O’Shaughnessy**
- Task List Updates:**
- 4. Force Health Protection/Medical Preparedness**
 - Integrated diagnostics, therapeutics, and vaccine development program – (HD&GS)
 - Increasing production capacity for vaccines and therapeutics – (A&S)
 - Testing framework – (P&R)
 - Contact tracing and using testing as a sentinel tool – (P&R)
 - Serology testing – (P&R)
- 5. Mission Readiness**
 - Enabling operations in a COVID-19 Environment – (HD&GS)
 - Military personnel deploying in support of CCMDs – (P&R, JS)
- 6. Personnel Policy & Mitigation**
 - Adjustments to HPCON memo – (P&R)
 - Elective Medical Procedures – (P&R)
 - Global stop movement assessment – (P&R)
 - Dependent passports – (CMO)
 - International students – (P&R, Policy)
- 7. Pentagon Reservation**
 - Pentagon plan – (CMO)
- 8. International Support**
 - International aid/offers for ventilators – (SOLIC)
 - USG process for international support – (SOLIC)
 - Exports to international partners– (SOLIC)
- 9. Installations and Logistics**
 - DPA and JATF update – (A&S)
- 10. Strategic Communications**
 - Coordinated PA Plan for Service New Normal Plans – (PA, Services)
- 11. Funding**
 - New Supplement request – (Comptroller)
- 12. Modeling**
 - Modeling and analytic update – (CVTF, CAPE)
- 13. Lessons Learned**
 - Lessons Learned – (JS J7, HD&GS)
- 14. Service Updates – GEN Martin (Army), ADM Burke (Navy), Gen Wilson (AF), Gen Thomas (USMC)**
- 15. Closing Comments – DSD & VCJCS**

From: (b) (6)
To: [Henke, Robert SES SD](#); [Verga, Peter SES SD](#); (b) (6)
Cc: [Salesses, Robert G SES OSD OUSD POLICY \(USA\)](#); [Taliaferro, Jeffrey B \(Jeff\) Maj Gen USAF JS J3 \(USA\)](#); [Friedrichs, Paul A Brig Gen USAF JS OCJCS \(USA\)](#) (b) (6)
Subject: DSD Prep for Cabinet Call on 14 Feb 2020
Date: Thursday, February 13, 2020 2:26:19 PM
Attachments: [TALKING POINTS DSD prep for Cabinet Call - 13 Feb 2020.docx](#)
[Phases of USG nCoV Response 12Feb WHTF draft.docx](#)

Good afternoon,

Please find the Talking Points for DSD's Cabinet Call tomorrow on Coronavirus.

Below is a read-out of the President's Task Force on Coronavirus that DASD Salesses and I attended yesterday evening at the White House. This will help frame the discussion for this afternoon and help prep DSD for tomorrow's Cabinet Call.

v/r,

(b) (6)

From: Salesses, Robert G SES OSD OUSD POLICY (USA) (b) (6)
Sent: Thursday, February 13, 2020 9:01 AM
To: Anderson, James H HON OSD OUSD POLICY (USA) (b) (6) Rapuano,
Kenneth P HON OSD OUSD POLICY (USA) (b) (6) Alexander, Thomas A
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Cc: (b) (6) (b) (6) Taliaferro, Jeffrey B
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(b) (6)

Subject: Read-out from President's Task Force on Coronavirus Meeting

James, Ken, and Tom – below is the readout from last evening's meeting of the President's Task Force on Coronavirus.

Attendees: Mick Mulvaney chaired the meeting. Attendees included Secretary Azar, Deputy Secretary Biegun, Acting Deputy Secretary Cuccinelli, Deputy National Security Advisor Matthew Pottinger, Rob Blair (Aide to Mr. Mulvaney), Joseph Grogan (Director, Domestic Policy Council), Dr. Robert Redfield (Director, CDC), Dr. Anthony Fauci (Director, National Institute of Allergy and Infectious Diseases at NIH), Acting Under Secretary Joel Szabat (DOT), Deputy Chief of Staff Christopher Liddell and other members of the White House staff.

BLUF: The Task Force reviewed and supported a white paper on the U.S. Government Response to the 2019 Novel Coronavirus. A Cabinet Call is scheduled for Friday, February 14, 2019, during which Secretary Azar will provide an update on the U.S. response to the Coronavirus, the Task Force's progress, and to align messaging for consistency.

Due-outs: None for DoD.

Overview of the Meeting: The meeting began with an update by HHS/CDC of the current spread of Coronavirus and the USG response posture. China reports 44,654 cases and 1,113 deaths, and globally, the virus has spread into 28 countries. The USG is postured for containment. The meeting proceeded with discussion of the white paper on the U.S. Government Response to the 2019 Novel Coronavirus. The paper supplements the National Strategy for Pandemic Influenza and identifies four phases of the response.

1. Current Posture (Containment): Continue with Presidential Proclamation limiting travel to the United States and continue funneling passengers arriving from China through eleven major U.S. international airports. The objectives are (1) contain the outbreak at its source, (2) minimize domestic importation of additional cases, (3) limit potential for domestic epidemic, (4) prepare the domestic response mechanisms, and (5) begin outreach to state and local authorities to prepare for mitigation.
2. Aggressive Containment: Triggers for this phase could include sustained human-human transmission (three generations) and exportation of cases without nexus to China. This phase could include an expansion of travel restrictions. CDC would recommend a transition model for airport screening and quarantine/isolation with the overarching goal of moving from a mostly Federal response to a response primarily driven by state and local health authorities. The objectives of this phase are (1) limit the outbreak to the source and additional outbreak areas, (2) minimize importation of additional cases, (3) limit potential for domestic epidemic, (4) additional preparation of the domestic response mechanisms and in some cases executing

those plans, and (5) accelerate outreach to state and local authorities to prepare for mitigation.

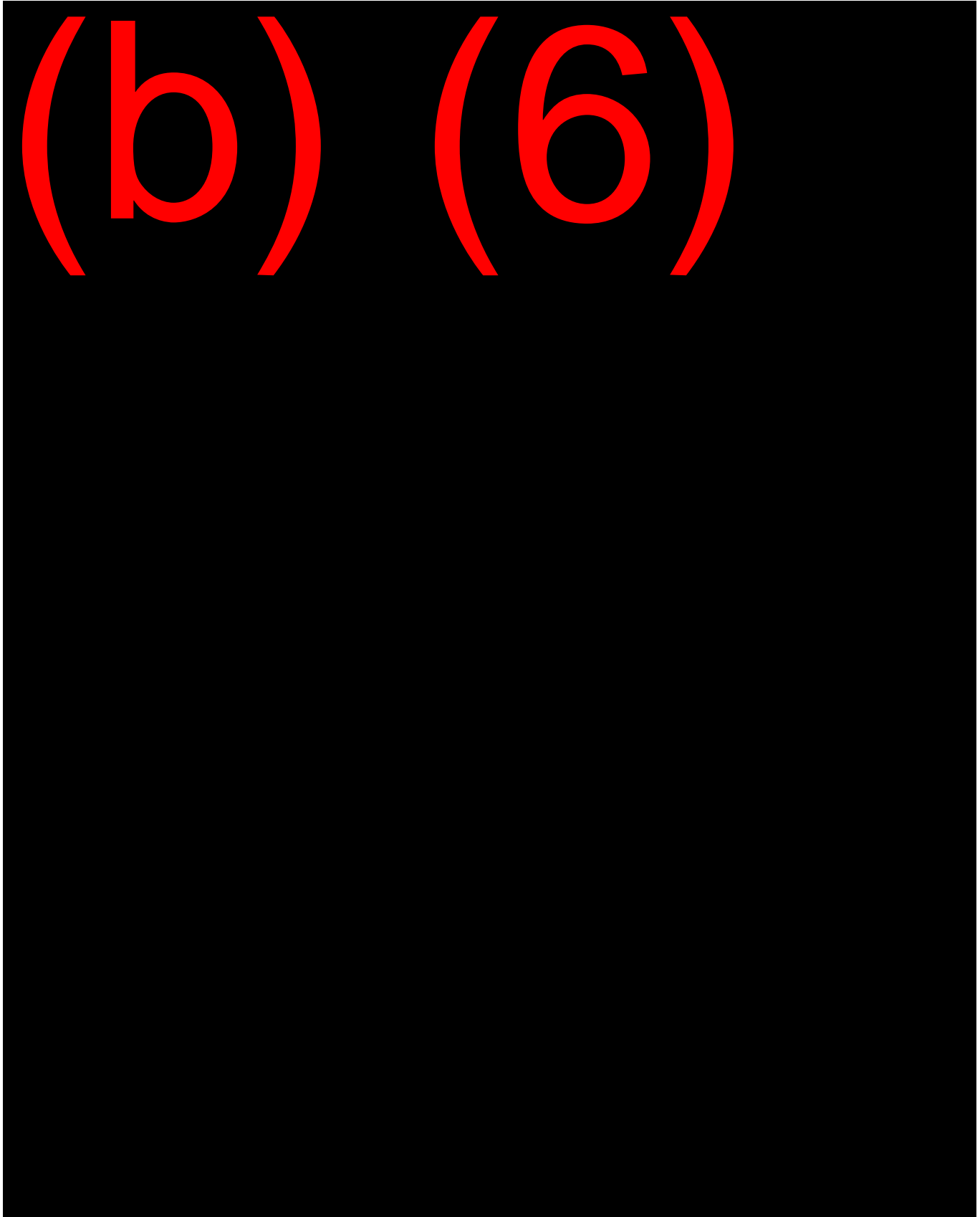
3. Transitioning from Containment to Community Mitigation Efforts: Triggers for this stage include (1) greater than 3 generations of human-to-human transmission, and (2) evidence that public health systems in multiple U.S. locations are unable to meet the demands for achieving containment or providing care. In this stage the USG would implement broader community and healthcare-based mitigation measures proportionate to disease severity and impact on healthcare systems. In this stage the U.S. government would pursue broader community and healthcare-based mitigation measures proportionate to disease severity and impact on healthcare systems.
4. Full Domestic Mitigation: Triggers for this phase include established widespread transmission of disease in the United States. Examples in this stage could include cancelling mass gathering, closing schools, working on alternating schedules / encouraging telework, etc.

Please let me know if you have any questions.

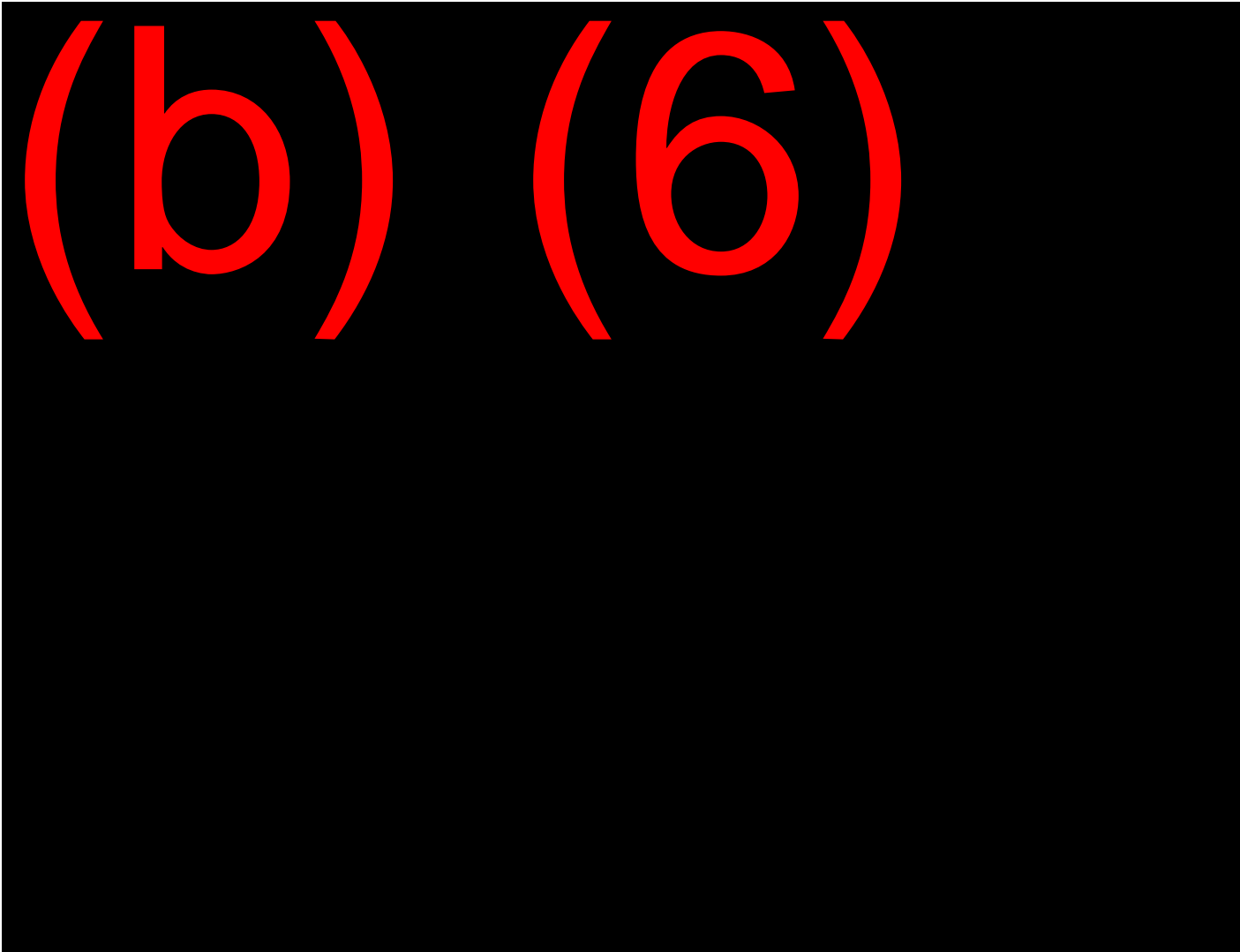
Best, Bob

(b) (5)

(b) (5)



(b) (6)



Adapted nCoV Phase Indicators and Triggers

The PanCAP phases align the federal operational response phases outlined in the Response Federal Interagency Operational Plan (FIOP) and its Biological Incident Annex (BIA) with the CDC intervals outlined in the Pandemic Intervals Framework (PIF). This update layers in the Phases of U.S. Government Response to the 2019 Novel Coronavirus (2019-nCoV), dated February 11, 2020. The PanCAP triggers that move action between the phases have also been adapted by ASPR, CDC, and FEMA for the novel coronavirus.

PanCAP Phase Indicators and Triggers

Phase	1C	2A	2B	2C
Operational Phase	Near Certainty or Credible Threat	Activation, Situational Assessment, and Movement	Employment of Resources and Stabilization	Intermediate Operations
CDC Interval	Recognition	Initiation	Acceleration	
nCoV Containment Mitigation Strategy	Current Posture	Aggressive Containment	Transitioning from Containment to Community Mitigation Efforts	Mitigation
Trigger	<ul style="list-style-type: none"> Confirmation of multiple human cases or clusters with virus characteristics indicating limited human-to-human transmission and heightened potential for pandemic Determination of a Significant Potential for a Public Health Emergency 	<ul style="list-style-type: none"> Demonstration of efficient and sustained human-to-human transmission of the virus Declaration of a Public Health Emergency Sustained human-to-human transmission (third generation) and exportation of cases without nexus to China 	<ul style="list-style-type: none"> Increasing number of cases or increasing rate of infection in U.S. Healthcare system burden exceeds State resource capabilities National healthcare supply chain management unable to surge production and/or distribution to meet demand State/local request for assistance that requires federal coordination Increasing private-sector request for assistance to support cross-sector operations Greater than 3 generations of human-to-human nCoV transmission, concurrent in multiple noncontiguous U.S. locations, and Evidence that public health systems in multiple U.S. locations are unable to meet the demands for achieving containment efforts or providing care. 	<ul style="list-style-type: none"> Increasing rate of infection in United States indicating established transmission, with long-term service disruption and critical infrastructure impacts Industry business continuity plans cannot be executed due to insufficient personnel leading to significant disruption across sectors Presidential Stafford Act declaration State/local request for assistance that requires federal coordination Established widespread transmission of disease in the United States

From: [Rapuano, Kenneth P HON OSD OUSD POLICY \(USA\)](#)
To: [Norquist, David HON SD](#); [Hyten, John E Gen USAF JS OCJCS \(USA\)](#); [Donovan, Matthew P HON OSD OUSD P-R \(USA\)](#); [Gilday, Michael M ADM USN CNO \(USA\)](#); [Burke, Robert P ADM USN VCNO \(USA\)](#); (b) (6); [Mccaffery, Thomas P HON OSD OUSD P-R \(USA\)](#); [Payne, Lee E Maj Gen USAF DHA J-3 \(USA\)](#); [Taliaferro, Jeffrey B \(Jeff\) Maj Gen USAF JS J3 \(USA\)](#); [Friedrichs, Paul A Brig Gen USAF JS OCJCS \(USA\)](#); [Salesses, Robert G SES OSD OUSD POLICY \(USA\)](#)
Cc: [SD - DepSecDef SAs & MAs](#); [JS Pentagon OCJCS List VCJCS Executive Staff](#)
Subject: Final Agenda for 24 April DSD Special Interest Mtg
Date: Thursday, April 23, 2020 6:04:51 PM
Attachments: [Agenda_Fri 24 Apr DSD COVID-19 Special Interest Meeting \(23Apr20_1545\).docx](#)

DSD, Vice, Colleagues – provided is the final agenda for Friday’s Special Interest Meeting. We will baseline the following issues:

USS Theodore Roosevelt Response (TR) [Navy]

- a. Review response
- b. Protocols being implemented to assess crew readiness
- c. Challenges to testing and mitigation protocols
- d. Identify Lessons Learned for Way Ahead

R&D Testing (b) (6)

- a. Update on DoD serologic research
- b. (b) (5)

Vaccines & Therapeutics Research Update [P&R]

- a. COVID-19 vaccine candidates update
- b. Estimated timeline for vaccine support to DoD Force Health Protection
- c. How is DoD integrating with national efforts for vaccine development?

Invited attendees are USD(P&R) Donovan, ADM Gilday, ADM Burke, (b) (6), ASD McCaffrey Maj Gen Payne; Maj Gen Taliaferro; Brig Gen Friedrichs; and DASD Salesses. Those not listed shouldn’t call in without pre-approval.

Best,

Ken



23 April 2020 (1545)

Deputy Secretary of Defense Special Interest Meeting

Friday, April 24, 2020, 0930 – 1030

Multiple Locations

AGENDA

Decisions:

1. None expected at this time

Discussion:

1. **USS Theodore Roosevelt Response (TR) [Navy]**
 - a. Review response
 - b. Protocols being implemented to assess crew readiness
 - c. Challenges to testing and mitigation protocols
 - d. Identify Lessons Learned for Way Ahead
2. **Testing R&D (b) (6)**
 - a. Update on DoD serologic research
 - b. (b) (5)
3. **Vaccines & Therapeutics Research Update [P&R]**
 - a. COVID-19 vaccine candidates update
 - b. Estimated timeline for vaccine support to DoD Force Health Protection
 - c. How is DoD integrating with national efforts for vaccine development?

From: (b) (6)
Subject: Staff Distro for Final Agenda for Thur 23Apr20 COVID-19 Update to the SecDef
Date: Wednesday, April 22, 2020 7:21:35 PM
Attachments: [Agenda_Thur_23_Apr_SD_COVID-19_Update_Meeting_\(22Apr_1800\).docx](#)

Ladies and gentlemen,

Good evening. ASD Rapuano distributed the email below and agenda to your leadership. I will send out the CAPE material to you on SIPR momentarily. I will send out the Comptroller and P&R RAHs, on NIPR, as soon as I get them.

Thank you.

(b) (6)

DSD, Vice, and Colleagues – provided is the final agenda for Thursday’s COVID-19 Update to the Secretary. We will provide the CAPE RAH on SIPR, and all other final RAH materials on NIPR by 0800 on Thursday.

1) Updates on key due-outs from last meeting:

- Stimulus and Supplemental Update (Comptroller)
- Testing Framework (P&R)
- (b) (5)

2) Medical R&D Update:

- Testing R&D (b) (6)
 - o Update on DoD serologic research
 - o (b) (5)
- Vaccine & Medical Counter Measures (b) (6)
 - o Update on vaccine and MCM development and production

3) Around the room

I appreciate your continued efforts and support on these issues.

Best,

Ken



Updated: 22 April 2020 (1800)

Secretary of Defense COVID-19 Update

Thursday, April 23, 2020, 1330-1430

Multiple Locations

AGENDA

Updates on key due-outs from last meeting:

1. Stimulus and Supplemental Update (Comptroller)
2. Testing Framework (P&R)
3. (b) (5)

Decisions:

1. None expected

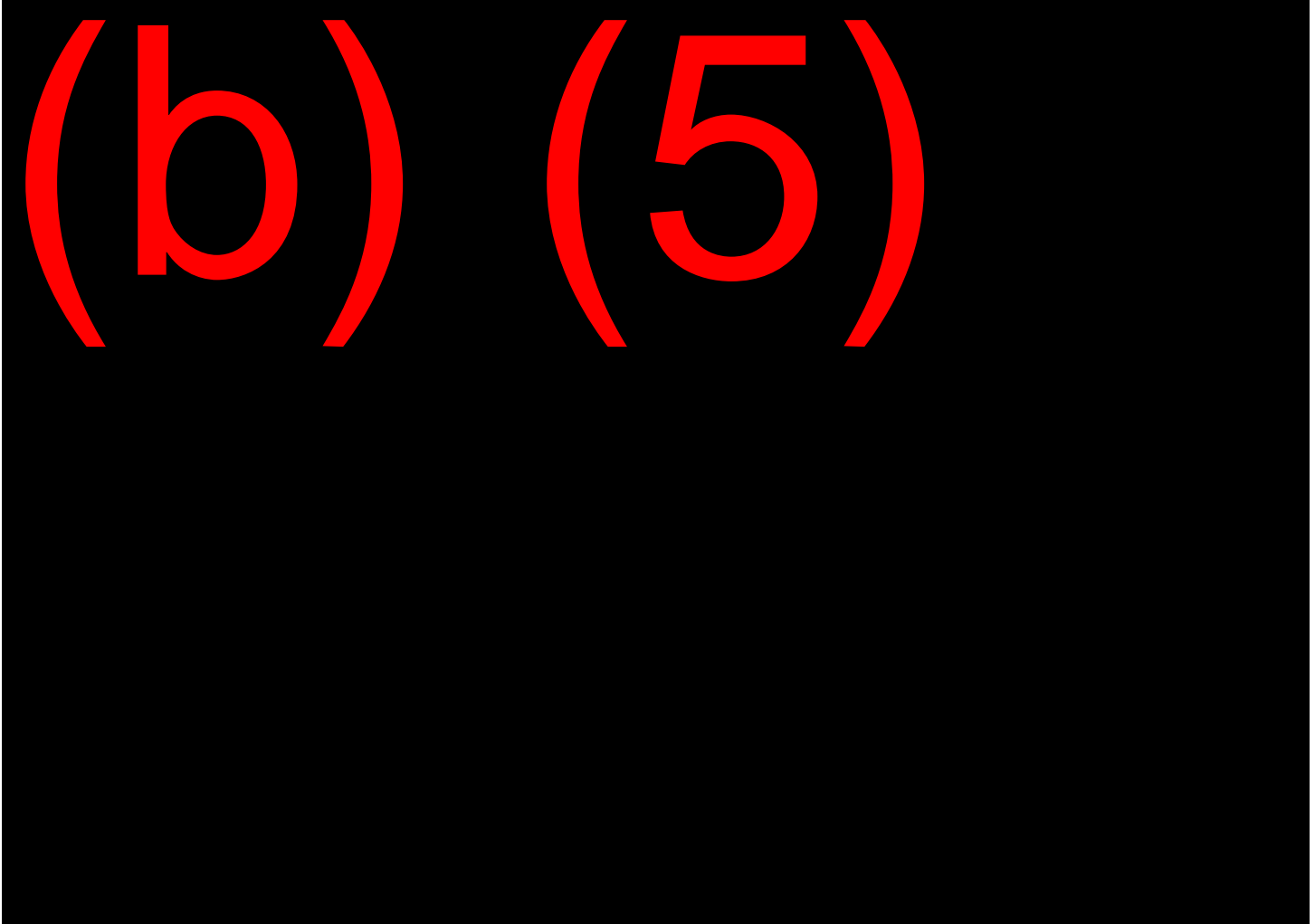
Discussion:

1. Medical R&D Update
 - Testing R&D (b) (6)
 - Update on DoD serologic research
 - (b) (5)
 - Vaccine & Medical Counter Measures (b) (6)
 - Update on vaccine and MCM development and production
2. Around the room



Updated: 22 April 2020 (1800)

DRAFT AGENDA for Tuesday, April 28



From: [Staff Secretary](#)
To: [DL Chief of Staff Office](#); [Hicks, Hope C. EOP/WHO](#); [Farah, Alyssa A. EOP/WHO](#); [Gilmartin, Kayleigh M. EOP/WHO](#); [Hahn, Julia A. EOP/WHO](#); [Kushner, Jared C. EOP/WHO](#); [Navarro, Peter K. EOP/WHO](#); [Kudlow, Larry A. EOP/WHO](#); [Grogan, Joseph J. EOP/WHO](#); (b) (6); [Vought, Russell T. EOP/OMB](#); [Salvi, Mary E. EOP/WHO](#); [Philbin, Patrick F. EOP/WHO](#); [Eisenberg, John A. EOP/WHO](#); [DeBacker, Devin A. EOP/WHO](#); (b) (6); [Ueland, Eric M. EOP/WHO](#); [Liddell, Christopher P. EOP/WHO](#); [Hoelscher, Douglas L. EOP/WHO](#); [Pataki, Tim A. EOP/WHO](#); [Miller, Stephen EOP/WHO](#); [Berkowitz, Avraham J. EOP/WHO](#); [Conway, Kellyanne E. EOP/WHO](#); [Short, Marc T. EOP/OVP](#); [Miller, Katie R. EOP/OVP](#); [Pottinger, Matthew F. EOP/WHO](#); [Birx, Deborah L. EOP/NSC](#); (b) (6); [Olmem, Andrew J. EOP/WHO](#); [Nevins, Kristan K. EOP/WHO](#); (b) (6); ["Harrison, Brian \(HHS/IOS\)"](#)
Cc: [Staff Secretary](#)
Subject: FOR EXPEDITED REVIEW: Delegating DPA Authority to DFC
Date: Thursday, May 7, 2020 1:31:10 PM
Attachments: [2020 IDFC DPA EO DRAFT 5.7.2020 1309.docx](#)

Attached for expedited review is a draft Presidential Memorandum delegating authority under the Defense Production Act to the United States International Development Finance Corporation to respond to COVID-19.

Affirmative clearance is requested from **WHCO, HHS, and DFC**. Others are welcome to comment. Please send feedback to Staff Sec **by 7:00 pm tonight.**

Reach out directly with questions.

Thanks,

Staff Sec

(b) (5)

(b) (5)

(b) (5)

(b) (5)

THE WHITE HOUSE,

(b) (6)

Subject: FW: 3 Jun COVID update
Date: Wednesday, June 3, 2020 8:34:28 AM
Attachments: [image001.png](#)
[Daily Update 3 June 2020.pdf](#)

Today's Updates:

The risk assessment for the Pentagon Reservation and DoD designated facilities in the NCR is **MODERATE**. The Pentagon Reservation and DoD Designated Facilities in the NCR are at **HPCON C+**. Access to and from the Pentagon building is limited to specific entrances. The Pentagon Visitor's Center (located adjacent to the Metro Entrance) is open for official visitors and CAC appointments from 0600-1400 Monday through Friday. All visitors and CAC appointments must enter through the Visitor's Center. All persons entering the Pentagon Reservation will wear face coverings.

The DoD facilities in the NCR have changed to FPCON C due to the unrest in the area, change in the FPCON has no effect on the HPCON C measures.

Nationwide: As of 1900 2 Jun, *FEMA* reports 68 private Community Based Testing Sites in 17 states and DC closed due to civil unrest.

The *National Command Center* is currently monitoring 76 cargo vessels in transit that have embarked from a COVID-19 port of interest within 14 days and have a scheduled arrival in a US port within next 96 hours, 27 of which will arrive in the next 24 hours.

The *FDA* added to the list of authorized ventilators, a second ventilator under the emergency use authorization in response to concerns relating to insufficient supply and availability of FDA-cleared ventilators for use in healthcare settings to treat patients during the COVID-19 pandemic. The Ventilator Intervention Technology Accessible Locally (VITAL) is intended to last three to four months and is specifically tailored to provide respiratory support for COVID-19 patients who are experiencing respiratory failure or insufficiency. Where the first NASA ventilator relied on wall gas as the pressure source, the second ventilator uses an internal compressor for its energy source.

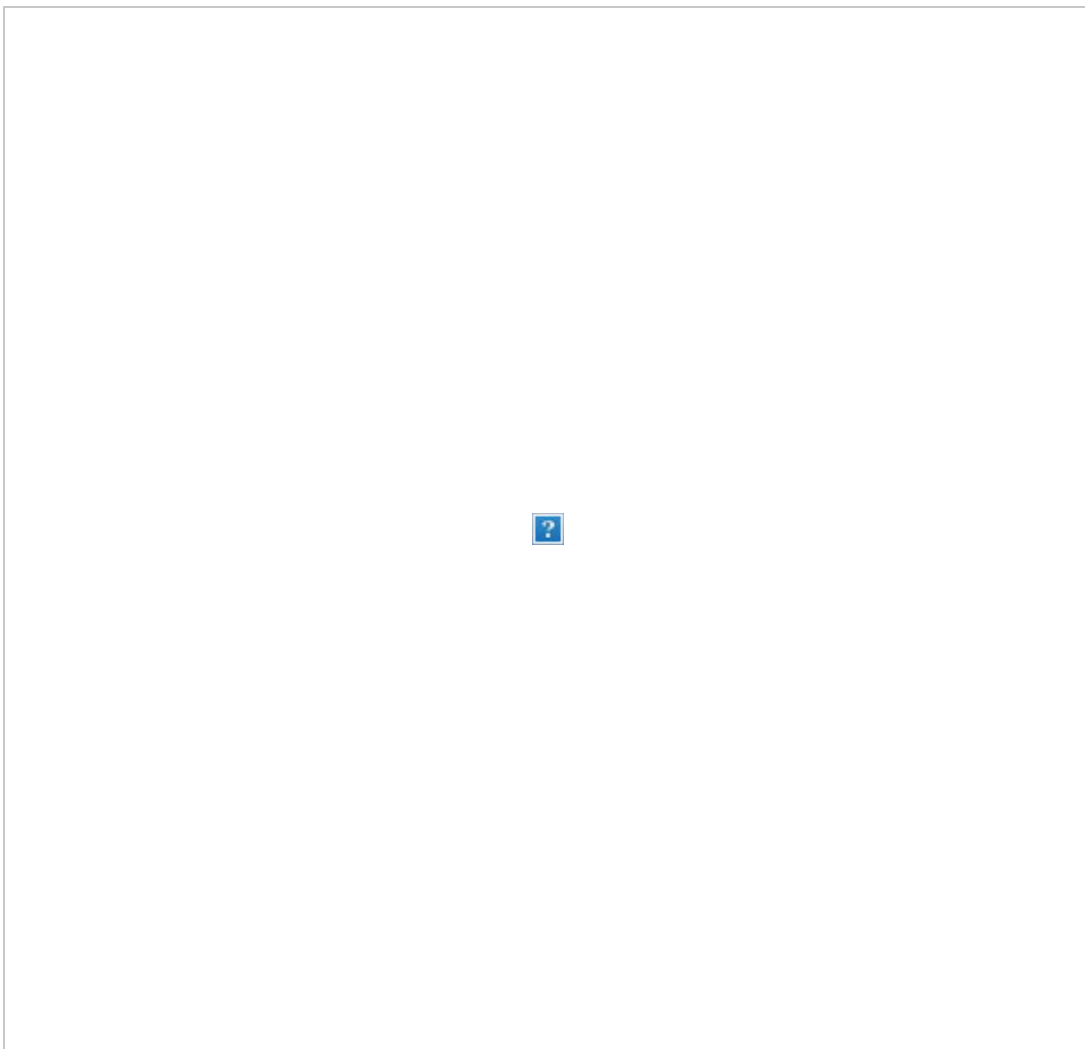
Since the start of Operation Stolen Promise, the *Immigration Customs Enforcement (ICE)*, has made 18 criminal arrests, analyzed over 36,000 COVID-19 related websites, seized more than \$4 million in illicit proceeds, disrupted 36 instances of illicit activity, sent 831 leads to domestic and international field offices, executed 38 search warrants, and made 621 COVID-19 related seizures.

Health and Human Services has provided an additional \$250 million to aid U.S. healthcare

systems treating patients and responding to the COVID-19 pandemic. The funds will support hospitals and other healthcare entities to train workforces, expand telemedicine, and the use of virtual healthcare. This funding will advance the mission of the National Special Pathogen System to enhance national capacity and capability to respond to highly infectious diseases now and in the future.

NCR: In the past 24 hours, there have been 65,382 (+178) Positive COVID-19 cases, and 2,518 (+46) deaths.

- VA: 398,946 Tested – 46,239 (+1,632) Positive, 1,407 (+37) deaths
- MD: 315,815 Tested – 54,175 (+1,397) Positive, 2,474 (+63) deaths
- District: 47,701 Tested – 8,886 (+85) Positive, 470 (+4) deaths
- PA: 472,255 Tested – 72,894 (+968) Positive, 5,667 (+112) deaths
- West Virginia: 102,298 Tested – 2,056 (+46) Positive, 78 (+3) deaths



DC: NTR

Maryland: MD Dept of Health announced a new state-wide campaign “Respond, Connect, and Recover” to educate residents about the importance of contact tracing.

As staffing levels return to normal and traffic increases on the city’s streets as a result of the reopening, street sweeping will resume its normal schedule and ticketing will return. The City of Frederick will begin issuing courtesy tickets for one month on June 08; normal ticketing will resume on July 06.

On June 04 from 1230-1400, Charles County Department of Health will host a webinar for all county businesses, religious, and civil leaders to discuss health and business-related aspects of Phase One reopening.

Virginia: VA: Executive Order (EO) Sixty-Five was signed modifying the public health guidance in EO-61 and EO-62 and establishes guidelines for Phase Two reopening on June 05, with the exception of Northern Virginia and the City of Richmond, which will remain in Phase One. Under Phase Two, continued recommendations apply for social distancing, teleworking, and requiring individuals to wear face coverings in indoor public settings. The maximum number of individuals permitted in a social gathering will increase from 10 to 50 people. All businesses should still adhere to physical distancing guidelines and continue enhanced workplace safety measures.

- Restaurant and beverage establishments may offer indoor dining at 50 percent occupancy
- Fitness centers may open indoor areas at 30 percent occupancy
- Certain recreation and entertainment venues without shared equipment may open with restrictions. Swimming pools may also expand operations to both indoor and outdoor exercise, diving, and swim instruction
- The current guidelines for religious services, non-essential retail, and personal grooming services will remain the same in Phase Two
- Overnight summer camps, most indoor entertainment venues, amusement parks, fairs, and carnivals will remain closed in Phase Two

Today at 1700, InsideNoVa will discuss the effects of the COVID-19 pandemic on local governments and businesses, as well as the metrics for beginning to ease restrictions.

v/r

(b) (6)

(b) (6)

(b) (6)

[REDACTED]

Muir, Thomas M SES (b) (6)

McMahon, Paul G JR SES WHS FSD (USA) (b) (6)

[REDACTED]

(b) (6)

[Redacted]

Logan, Katrina Lynn SES DODHRA DEOC (USA)

(b) (6)

Cc: (b) (6)

[Redacted]

Flasch, Adam R

BG USARMY NG MDARNG (USA) (b) (6)

[Redacted]

Mapes, Andrew M (Andy) SES OSD

OCMO (USA) (b) (6)

[Redacted]

Subject: 3 Jun COVID update

Good morning.

Attached please find the 2 Jun 20 COVID update. **The risk assessment for the Pentagon Reservation and DoD designated facilities in the NCR is MODERATE.**

The Pentagon Reservation and DoD Designated Facilities in the NCR are at **HPCON C+**. Access to and from the Pentagon building is limited to specific entrances. Please visit **whs.mil/Coronavirus** for additional information, reporting requirements, workforce preparedness, and mitigation measures.

The Pentagon Visitor's Center (located adjacent to the Metro Entrance) is open for official visitors and CAC appointments from 0600-1400 Monday through Friday. All visitors and CAC appointments must enter through the Visitor's Center.

Persons entering the Pentagon at the Visitor's Entrance will undergo body temperature screening. Persons will be screened using forward-looking infrared camera and detected increased temperatures will be validated using a forehead thermometer. Individuals with an elevated temperature above 100.4F will be denied access to the Pentagon, referred to their supervisor/leadership, and advised to consult with a healthcare practitioner. All individuals entering the Pentagon Visitor Entrance will be required to participate in this screening process.

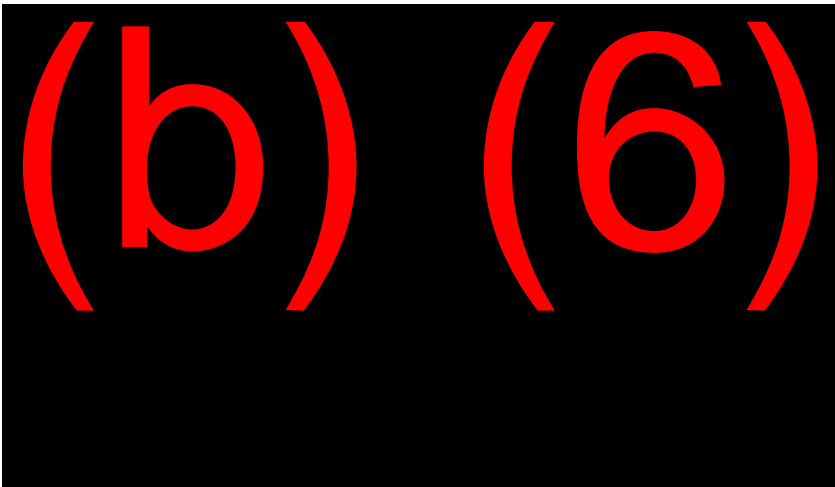
The DD Form 3112 for reporting COVID cases in the DoD is available to download. Information on submitting the form can be found at whs.mil/Coronavirus. When downloading the form, save the PDF and open it in Adobe Acrobat. Click the "Enable All Features" button

All persons entering the Pentagon Reservation will wear face coverings. Please see the memorandum from the Chief Management Officer located on whs.mil/Coronavirus.

The Pentagon Emergency Operations Center is activated and staffed 24/7.

Additional products with mapping can be obtained from the NCR Watch and DHS NOC.

Have a great day.



(b) (6)

"Protecting Those Who Protect Our Nation"

www.PFPA.mil



COVID-19 Update 3 June 20

FOR OFFICIAL USE ONLY

Pentagon Facilities: HPCON Charlie

Situation

- The DoD facilities in the NCR have changed to FPCON C due to the unrest in the area, change in the FPCON has no affect on the HPCON C measures
- As of 1900 2 Jun, FEMA reports 68 private Community Based Testing Sites sites in 17 states and DC closed due to civil unrest
- VA: Governor signed EO Sixty-Five, the second phase of the “Forward Virginia” plan to begin 5 Jun , EO Sixty-One amended directing Northern Virginia and the City of Richmond to remain in Phase One
- MD Dept of Health announced a new state-wide campaign “Respond, Connect, and Recover” to educate residents about the importance of contact tracing

AFRH (DC and MS): HPCON Delta

Threats/Risks

- **Pentagon Reservation risk is assessed as MODERATE**
- **AFHSD COVID-19 public health threat assessment High**
- CDC - Widespread transmission of COVID-19 in the United States will occur, most of the U.S. population will be exposed to this virus
- Critical personnel exposed/sick due to virus
- Critical personnel with recent travel history unable to work in facilities
- Closures of schools and daycare facilities reducing critical staff
- New cases of COVID-19 as NCR reopens businesses, reduces travel and stay at home restrictions

24 Hour Health Surveillance

NCR Cases (last 24 hrs): 65,382 (+178) Positive, 2518 (+46) deaths,
VA: 398,946 Tested 46,239 (+1632) Positive, 1407 (+37) deaths, Pos/Tested 13%
MD: 315,815 Tested, 54,175 (+1397) Positive, 2474 (+63) deaths, Pos/Tested 17%
District: 47,701 Tested, 8,886 (+85) Positive, 470 (+4) deaths, Pos/Tested 18%
PA.: 472,255 Tested 72,894 (+968) Positive, 5667 (+112) deaths, Pos/Tested 15%
West Virginia: 102,298 Tested, 2,056 (+46) Positive, 78 (+3) deaths, Pos/Tested 2%

NCR Openings

Jurisdiction	Order in Place	Effective Dates / Significant Information	EOs, Press Details
District of Columbia	Phase 1	5/29	Mayor's Order 2020-067 COVID-19 Situational Update (May 29)
Maryland	Stage 1	Began Stage 1 on 5/15 *Fully implemented on 5/29	20-05-29-01 20-05-29-02 EO 20-05-27-01 Press Release Briefing Slides Press Release Press Conference
Charles County	Stage 1	5/29	EO 02-2020 Press Release
Frederick County	Stage 1	5/29	EO 02-2020 Press Release
Montgomery County	Phase 1	6/1	EO 067-20 EO 9-2020 EO 8-2020 Press Release
Prince George's County	Stage 1	6/1	EO 067-20 EO 9-2020 EO 8-2020 Press Release
Virginia	Phase 1	Virginia began Phase 1 on 5/15 *Northern Virginia entered Phase 1 on 5/29	EO 61 Forward Virginia Guidelines EO 61 Amendment 2 EO 65 *New
Virginia	Phase 2	Begins on 6/5 for most of the Commonwealth (except for Northern Virginia and the City of Richmond) *Opening with restrictions for: restaurant, fitness centers, recreation and entertainment, swimming pools, religious services, non-essential retail, and personal grooming services, overnight summer camps, amusement parks, fairs, and carnivals	
Virginia	Phase 1	5/29	EO 62
City of Alexandria	Phase 1	5/29	EO 62
Fairfax Health District	Phase 1	5/29	EO 62
Loudoun County	Phase 1	5/29	EO 62
Prince William Health District	Phase 1	5/29	EO 62

From: [Johnson, Justin SES SD](#)
To: (b) (6)
Subject: FW: Agenda for Thur 30Apr20 COVID-19 Update to the SecDef
Date: Wednesday, April 29, 2020 4:03:18 PM
Attachments: [Agenda_Thur_30_Apr_SD_COVID-19_Update_Meeting_\(28Apr_2005\).docx](#)

From: Rapuano, Kenneth P HON OSD OUSD POLICY (USA) (b) (6)
Sent: Wednesday, April 29, 2020 9:24 AM
To: Norquist, David HON SD (b) (6); Hyten, John E Gen USAF JS OCJCS (USA) (b) (6); Hershman, Lisa W HON (USA) (b) (6); McCarthy, Ryan D HON USARMY HQDA SECARMY (USA) (b) (6); Barrett, Barbara M HON USAF SAF-OS (USA) (b) (6); (b) (6); (b) (6); >; RAYMOND, JOHN W Gen USSF HQSF USSF/CSO USSPACECOM/CC (b) (6); McConville, James C GEN USARMY HQDA CSA (USA) (b) (6); Gilday, Michael M ADM USN CNO (USA) (b) (6); Goldfein, David L Gen USAF AF-CC (USA) (b) (6); Berger Gen David H (b) (6); Burke, Robert P ADM USN VCNO (USA) (b) (6); Martin, Joseph M GEN USARMY HQDA VCSA (USA) (b) (6); Thomas Gen Gary L (b) (6); Wilson, Stephen W Gen USAF AF-CV (USA) (b) (6); Griffin, Michael D HON OSD OUSD R-E (USA) (b) (6); Lord, Ellen M HON OSD OUSD A-S (USA) (b) (6); Anderson, James H HON OSD OUSD POLICY (USA) (b) (6); McCusker, Elaine A HON OSD OUSD C (USA) (b) (6); Donovan, Matthew P HON OSD OUSD P-R (USA) (b) (6); Kernan, Joseph D HON (USA) (b) (6); Oshaughnessy, Terrence J Gen USAF NORAD-USNC CG (USA) (b) (6); Faller, Craig Stephen ADM USN SOUTHCOM SC-CC (USA) (b) (6); Wolters, Tod D Gen USAF EUCOM COM (USA) (b) (6); McKenzie, Kenneth F Jr Gen USMC CENTCOM CCCG (USA) (b) (6); Davidson, Philip S ADM USN INDOPACOM J00 (USA) (b) (6); Clarke, Richard D GEN USARMY USSOCOM SOCOM (USA) (b) (6); Townsend, Stephen J (Steve) GEN USARMY AFRICOM ACCC (USA) (b) (6); Lyons, Stephen R GEN USARMY TRANSCOM TCCC (USA) (b) (6); Nakasone, Paul M GEN USARMY USCYBERCOM (USA) (b) (6); Richard, Charles A ADM USN STRATCOM JOCC (USA) (b) (6); Lengyel, Joseph L Gen USAF NG NGB (US) (b) (6); Ney, Paul C Jr HON OSD OGC (USA) (b) (6); Whitley, John E HON OSD CAPE (USA) (b) (6); Deasy, Dana S HON (USA) (b) (6); Manasco, Shon J HON USAF SAF-US (USA) (b) (6); Hood, Robert R HON OSD OASD LA (USA) (b) (6); Hoffman, Jonathan R SES OSD OSD (USA) (b) (6); Baker, James H SES OSD ODNA (USA) (b) (6); Stewart, Jennifer SES SD (b) (6); Fenton, Bryan LTG SD (b) (6)

Cc: Henke, Robert SES SD (b) (6); Lyons, David Brig Gen SD (b) (6); Johnson, Justin SES SD (b) (6); Ross, Alexis SES SD (b) (6); Salesses, Robert G SES OSD OUSD POLICY (USA) (b) (6); Payne, Lee E Maj Gen USAF DHA J-3 (USA) (b) (6); (b) (6); (b) (6); Castle, William S SES OSD OGC (USA) (b) (6); SD - DSD Read ahead (b) (6)
Subject: Agenda for Thur 30Apr20 COVID-19 Update to the SecDef

DSD, Vice, and Colleagues – provided is the agenda for Thursday’s COVID-19 Update to the Secretary.

- 1) Updates on key due-outs from last meeting:
 - Increasing production capacity for vaccines & therapeutics (A&S)
 - Testing requirements and supplies (Maj Gen Payne, P&R)
 - Breakout of the testing quantities required to meet our testing strategy cross-referenced with the testing supplies (swabs, reagents, machines, etc) on-hand and on-order
-
- 2) Increased workforce at the Pentagon (CMO)
- 3) Elective medical procedures (P&R)
- 4) Testing Update
 - Serological Testing R&D (b) (6)
 - Update on DoD serologic research
 - (b) (5)
 - Testing for the Force (Maj Gen Payne)
 - DoD Lab testing Lines of Effort

Please provide all RAHs by 1400 on 29 April to DASD Bob Salesses, (b) (6)

I appreciate your continued efforts and support on these issues.

Best,

Ken



Updated: 28 April 2020 (2005)

Secretary of Defense COVID-19 Update

Thursday, April 30, 2020, 1330-1500

Multiple Locations

AGENDA

Key due-outs from last meeting:

1. Increasing production capacity for vaccines & therapeutics (A&S)
2. Testing requirements and supplies (Maj Gen Payne, P&R)
 - Breakout of the testing quantities required to meet our testing strategy cross-referenced with the testing supplies (swabs, reagents, machines, etc) on-hand and on-order

Decisions:

1. None expected

Discussion:

1. Increased workforce at the Pentagon (CMO)
2. Elective medical procedures (P&R)
3. Testing Update
 - Serological Testing R&D (b) (6)
 - Update on DoD serologic research
 - (b) (5)
 - Testing for the Force (Maj Gen Payne)
 - DoD Lab testing Lines of Effort



Updated: 28 April 2020 (2005)

(b) (5)

(b) (6)

Subject: FW: COVID-19 DoD CVTF Full Meeting Due Outs - May 20
Date: Thursday, May 21, 2020 8:56:06 AM

Respectfully,

(b) (6)

From: Salesses, Robert G SES OSD OUSD POLICY (USA) (b) (6)
Sent: Wednesday, May 20, 2020 6:00 PM
To: Norquist, David HON SD (b) (6); Hyten, John E Gen USAF JS OCJCS (USA)
(b) (6) Oshaughnessy, Terrence J Gen USAF NORAD-USNC CG (USA)
(b) (6) Stewart, Jennifer SES SD (b) (6)
Henke, Robert SES SD (b) (6); Donovan, Matthew P HON OSD OUSD P-R (USA)
(b) (6); Lord, Ellen M HON OSD OUSD A-S (USA)
(b) (6); McCusker, Elaine A HON OSD OUSD C (USA)
(b) (6) Whitley, John E HON OSD OCMO (USA)
(b) (6); Thomas Gen Gary L (b) (6); Burke, Robert P
ADM USN VCNO (USA) (b) (6); Wilson, Stephen W Gen USAF AF-CV (USA)
(b) (6); Martin, Joseph M GEN USARMY HQDA VCSA (USA)
(b) (6) Rapuano, Kenneth P HON OSD OUSD POLICY (USA)
(b) (6) Ross, Alexis SES SD (b) (6); Blake, Robert M Brig
Gen USAF AF-A3 (USA) (b) (6) Blanks, Julie A SES OSD OUSD P-R (USA)
(b) (6); Bushman, William G SES (USA) (b) (6)
Byrne, William D Jr RADM USN JS ODJS (USA) (b) (6) Castle, William S SES
OSD OGC (USA) (b) (6) Dumont, Michael J (Mike) VADM USN NORAD-
USNC CG (USA) (b) (6); Fedrigo, John A SES USAF SAF-MR (USA)
(b) (6); Fisher, Vincent L SES OSD OUSD C (USA)
(b) (6); Flynn, Charles A LTG USARMY HQDA DCS G-3-5-7 (USA)
(b) (6); Friedrichs, Paul A Brig Gen USAF JS OCJCS (USA)
(b) (6); Funkhouser, Anthony C MG USARMY CEHQ (USA)
(b) (6); Greene, Jodi J SES USN (USA) (b) (6);
Hebert, Lernes J SES OSD OUSD P-R (USA) (b) (6); Henke, Robert SES SD
(b) (6); Hershman, Lisa W HON (USA) (b) (6),
Jonathan R SES OSD OSD (USA) (b) (6); Hood, Robert R HON OSD
OASD LA (USA) (b) (6) Kelly, Mark D Lt Gen USAF AF-A3 (USA)

(b) (6) LaNeve, Christopher Charles BG USARMY HQDA DCS G-3-5-7 (USA)
(b) (6); Lei, JihFen SES OSD OUSD R&E (USA) (b) (6)
Lestorti, Joseph M BG USARMY JS J3 (b) (6) Liszewski BGen
Stephen E (b) (6); Lord, Ellen M HON OSD OUSD A-S (USA)
(b) (6); Maurer, Derek J (Dirk) SES OSD OUSD POLICY (USA)
(b) (6); McAndrew, Anne J SES OSD OUSD C (USA)
(b) (6); Mccaffery, Thomas P HON OSD OUSD P-R (USA)
(b) (6); (b) (6)
(b) (6); Muir, Thomas M SES (USA) (b) (6); Piatt, Walter
E LTG USARMY HQDA DAS (USA) (b) (6) (b) (6)
(b) (6) Ross, Alexis Lasselle SES OSD OUSD P-R (USA)
(b) (6); Sawyer, Phillip G VADM USN (USA) (b) (6);
Semonite, Todd T LTG USARMY HQDA OCE (USA) (b) (6); Shaffer, Alan R
HON OSD OUSD A-S (USA) (b) (6); Simon, Martin S (Marty) SES USN
UNSECNAV DC (USA) (b) (6); Taliaferro, Jeffrey B (Jeff) Maj Gen USAF JS J3 (USA)
(b) (6); (b) (6)
(b) (6); VanHerck, Glen D Lt Gen USAF JS ODJS (USA)
(b) (6); Walsh, Daniel P SES PFPA HQS (USA)
(b) (6); Whitney, Steven P Brig Gen USAF OSD OUSD A-S (USA)
(b) (6); Williams, Lorraine A SES OSD OUSD C (USA)
(b) (6) Williams, Marshall M (Will) SES USARMY HQDA ASA MRA (USA)
(b) (6) Friedrichs, Paul A Brig Gen USAF JS OCJCS (USA)
(b) (6) Payne, Lee E Maj Gen USAF DHA J-3 (USA)
(b) (6); (b) (6)
Lyons, Judd H SES OSD OUSD P-R (USA) (b) (6); Deasy, Dana S HON (USA)
(b) (6); Mewbourne, Dee L VADM USN TRANSCOM TCDC (USA)
(b) (6); Shaffer, Alan R HON OSD OUSD A-S (USA)
(b) (6)
Cc: Lyons, David Brig Gen SD (b) (6) OSD Pentagon OUSD Policy List CVTF Team
Leads (b) (6); (b) (6)
(b) (6)
(b) (6)
(b) (6)
(b) (6)
(b) (6)

Subject: COVID-19 DoD CVTF Full Meeting Due Outs - May 20

Deputy Secretary, Vice Chairman, and Distinguished Task Force Colleagues,

Good evening. Thank you for the productive meeting this afternoon. The following were identified as due-outs from today's COVID-19 DoD TF Meeting. Additionally, specific due outs have been identified for the Secretary's update on May 26.

As directed by DSD, we have added a status update for each task which will be updated twice a week. Please provide a 1-2 line status update underneath each task below assigned to your

organization to (b) (6) NLT 1200 EDT every Monday and Thursday.

-

Force Health Protection/Medical Preparedness

Task – MOU on integrated diagnostics, therapeutics, and vaccine development program – (HD&GS)

- **Description:** Provide update on status of MOU with HHS. **(DSD)**
- **Suspense:** May 27
- **Status:**

Task – Increasing Production Capacity for Vaccines & Therapeutics – (A&S)

- **Description:** Provide an update on discussions with manufacturers to increase manufacturing fill and finish capacity. Include next steps with HHS and DoD. **(DSD)**
- **Suspense:** May 27
- **Status:**

Task – Collection of Convalescent Blood Plasma – (P&R)

- **Description:** Develop a plan to increase collection, storage, and use of convalescent blood plasma from DoD beneficiaries who have recovered from COVID-19. **(SD*)**
- **Suspense:** May 26
- **Status:**

Task – DHA Facility in Florida – (P&R)

- **Description:** Develop an info paper on capacity to expand DoD's Medical Counter Measures Advanced Biologics Manufacturing (DoD MCM ABM) Facility in Alachua, FL. **(SD*)**
- **Suspense:** May 26
- **Status:**

Task – Zinc and Vitamin-D Supplements – (P&R)

- **Description:** Provide a recommendation on assessing the feasibility and efficacy of providing zinc and vitamin-D supplements for DoD beneficiaries to boost immune defense. **(SD*)**
- **Suspense:** May 26
- **Status:**

Task – Testing Framework – (P&R)

- **Description:** Provide an update on testing framework. **(SD*)**
- **Suspense:** Ongoing
- **Status:** Update provided during Thursday Direct Reports Meeting.

Task – Serology Testing – (P&R)

- **Description:** Provide and update on progress and timelines associated with serological testing for the presence of SAR-CoV-2 (COVID-19) antibodies. **(SD*)**
- **Suspense:** Ongoing
- **Status:** Update provided during Thursday Direct Reports Meeting.

Task – (FHP-10) DoD Surveillance Testing – (P&R)

- **Description:** Develop FHP-10 guidance for DoD surveillance testing. Include a plan to increase DoD surveillance testing from its current 1% of the total force to 8-10%. **(DSD)**
- **Suspense:** May 22
- **Status:**

Task – Ortho Test for Neutralizing Antibodies – (P&R)

- **Description:** Develop an info paper on DoD's capacity to conduct COVID-19 antibody testing using the Ortho Clinical Diagnostics COVID-19 Total or IgG antibody test. **(SD*)**
- **Suspense:** May 26
- **Status:**

Modified Task – Contact Tracing – (P&R)

- **Description:** Develop a SD decision brief for DoD using Bluetooth technology to facilitate COVID-19 contact tracing. Brief will include a review of currently available Bluetooth technologies to include their limitations. Include how DoD can mitigate those limitations. **(DSD)**
- **Suspense:** May 27
- **Status:**

Task – Guidance for Susceptible Populations – (P&R)

- **Description:** Provide a recommendation on providing COVID-19 specific guidance concerning the susceptibility of certain portions of the population. **(SD*)**
- **Suspense:** May 26
- **Status:**

Task – COVID-19 Isolation – (P&R)

- **Description:** Develop an info paper on the possibility of reducing COVID-19 isolation period from 14-days to 10-days. **(SD*)**
- **Suspense:** May 26
- **Status:**

Task – Displaying Health Surveillance Data – (P&R)

- **Description:** In coordination with ADVANA, provide a geospatial display DoD health surveillance data in the map format displayed during the May 19 SD update. **(SD)**
- **Suspense:** May 26
- **Status:**

Mission Readiness

Task – Enabling Operations in a COVID-19 Environment – (HD&GS)

- **Description:** Provide an update on the guidance memo on strategy to resume daily operations across the Department. **(SD*)**
- **Suspense:** May 22
- **Status:**

Task – (FHP-9) DoD Guidance for Deployment and Redeployment of Individuals and Units during COVID-19 Pandemic Response – (P&R, JS)

- **Description:** Provide update on FHP-9 and the plan to ensure military forces deploying in support of Combatant Commands have procedures in place to minimize risk of being COVID positive. **(SD*)**
- **Suspense:** Topic for May 26 SD update. RAH material due May 22.
- **Status:**

Task – Exception to 14-day ROM of DoD Forces deploying OCONUS – (Policy)

- **Description:** Negotiate with host nations on an exception to restriction of movement (ROM) requirements for deploying forces that isolated within the U.S. prior to departure. **(SD*)**
- **Suspense:** May 22
- **Status:**

-

Personnel Policy & Mitigation

Task – Lifting Travel Restrictions – (P&R)

- **Description:** Provide update on guidance memo for transition to conditions-based approach to personnel movement and travel restrictions. **(SD*)**
- **Suspense:** Topic for May 26 SD update. RAH material due May 22.
- **Status:**

Task – Cost-based Analysis of ROM – (CAPE)

- **Description:** Provide a cost-based analysis of the impacts from DoD’s current Restriction of Movement (ROM) policy. **(DSD)**
- **Suspense:** May 22
- **Status:**

Task – Household Goods Movement Plan – (USTRANSCOM)

- **Description:** Provide update on plan to meet challenges of upcoming “peak season” coming out of COVID stop move. Include previous year historical data on number of moves per week. **(DSD)**
- **Suspense:** Topic for May 26 SD update. RAH material due May 22.
- **Status:**

Task – Household goods movement policy – (P&R, A&S)

- **Description:** Develop policy on movement of household goods as personnel movements resume. Policy should include incentives for Service Members to conduct personally procured moves. **(DSD)**
- **Suspense:** May 22
- **Status:**

Task – International Students – (Policy, P&R)

- **Description:** Develop a policy/plan for addressing COVID-19 concerns for international students entering DoD schools, PME, and training courses this fall. **(DSD)**

- **Suspense:** May 22
- **Status:**

Pentagon Reservation

Task – Pentagon Plan – (CMO)

- **Description:** Provide an update on the plan. **(SD*)**
- **Suspense:** SD reviewed and pending release of HPCON memo.
- **Status:**

International Support

Task – Assistance to International Partners – (SOLIC)

- **Description:** Provide an update on State Department plan to provide USG assistance to international partners. Provide an update on prioritized international partners for DoD to assist with COVID supplies. Provide updated policy memo and country list to USDs, Services, and CCMDs for comment. **(DSD)**
- **Suspense:** Topic for May 26 SD update. RAH material due May 22.
- **Status:**

Task – Support CCMD and FMS Programs – (SOLIC)

- **Description:** Provide update on support to CCMD and Foreign Military Sales programs. **(DSD)**
- **Suspense:** Topic for May 26 SD update. RAH material due May 22.
- **Status:**

Task – Ventilator aid – (SOLIC)

- **Description:** Provide an update on the status of ventilator aid and potential DoD request for transport. **(SD)**
- **Suspense:** Topic for May 26 SD update. RAH material due May 22.
- **Status:**

Task – Ventilator offer to NATO – (SOLIC)

- **Description:** Provide an update on the status of ventilator offer to NATO. **(DSD)**
- **Suspense:** Topic for May 26 SD update. RAH material due May 22.
- **Status:**

Installations and Logistics

Task – DoD Pandemic Stockpile – (JS, A&S, P&R)

- **Description:** Provide a recommendation on items to add to the DoD Pandemic Stockpile and a recommendation on increasing the on-hand supply of items in the DoD Pandemic Stockpile. **(SD*)**
- **Suspense:** June 05
- **Status:**

Task – Industrial Expansion Update – (A&S)

- **Description:** Provide an update on Industrial Expansion. **(SD*)**

- **Suspense:** Ongoing
- **Status:** Update provided during Thursday Direct Reports Meeting.

Strategic Communications

Task – Coordinated PA Plan for Service New Normal Plans – (PA, Services)

- **Description:** Develop coordinated PA and launch plan for Service New Normal plans. **(SD*)**
- **Suspense:** Pending release of SD guidance memo.
- **Status:**

Funding

Task – New Supplemental Request – (Comptroller)

- **Description:** Update on status of DoD submission for supplemental funding and authorities. **(SD*)**
- **Suspense:** Ongoing
- **Status:**

Modeling

Task – Modeling and analytic update – (CVTF, CAPE)

- **Description:** Provide an update on DoD’s modeling and analytics effort and how it fits into the larger USG modeling effort. **(SD*)**
- **Suspense:** Ongoing
- **Status:**

Lessons Learned

Task – Lessons Learned – (JS J7, HD&GS)

- **Description:** Update on status of DSD memo directing all DoD components to collect lessons learned and to be prepared to provide them to DoD’s Lessons Learned Task Force on a continuing basis. **(SD*)**
- **Suspense:** Ongoing
- **Status:**

*** - Denotes an SD-directed task**

Please let me know if you have any questions or need assistance.

Best, Bob

From: [Nevins, Kristan K. EOP/WHO](#)
To: [Agrella, Austin J. EOP/WHO](#)
Subject: FW: ESF 15 Daily Briefing Points 5.5.20
Date: Tuesday, May 5, 2020 12:27:55 PM
Attachments: [image001.png](#)
[image003.png](#)
[COVID-19 By the Numbers_05.05.2020 \(National\).pdf](#)
[ESF15_DailyBriefingPoints_20200505 FINAL.pdf](#)

All,

Please find attached today's briefing points.

All the best,

Kristan

From: FEMA-ESF15-Coordination <FEMA-ESF15-Coordination@fema.dhs.gov>
Sent: Tuesday, May 5, 2020 11:57 AM
Subject: ESF 15 Daily Briefing Points 5.5.20

Coronavirus (COVID-19) Pandemic Whole-of-America Response

Tuesday, May 5, 2020

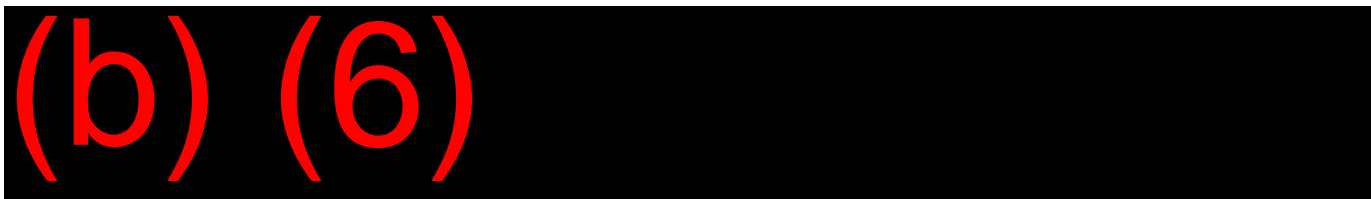
"[It's] GREAT TO SEE PROGRESS MADE ON TESTING IN VARIOUS STATES. AS AREAS ACROSS THE COUNTRY ARE REOPENING WITH WHITE HOUSE GUIDELINES, WE WILL WORK TO PROVIDE TESTING RESOURCES FOR STATES IN NEED."

- ADMINISTRATOR PETE GAYNOR

Topline Briefing Points and Messages

- On **May 4**, FEMA [announced](#) \$200 million in supplemental funding from the CARES act for grants through its Emergency Food and Shelter Program.
 - Combined with the \$120 million in annual funding appropriated by Congress, a total of \$320 million will be distributed beginning in early June to human service organizations assisting those in need throughout the country.
 - These funds will be allocated to local jurisdictions across the country to supplement organizations dedicated to feeding, sheltering, and providing critical resources to people experiencing, or at-risk of experiencing, hunger and homelessness.

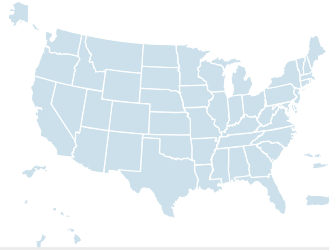
- As of **May 4**, FEMA, HHS, and the private sector combined have coordinated the delivery of or are currently shipping: 66.8 million N95 respirators, 115.4 million surgical masks, 7.5 million face shields, 18.7 million surgical gowns, 946.6 million gloves, 10,663 ventilators and 8,450 federal medical station beds.
 - [FEMA is coordinating two shipments](#) totaling a 14-day supply of personal protective equipment to all 15,400 Medicaid and Medicare-certified nursing homes. The shipments are meant to supplement existing efforts to provide equipment to nursing homes.
- As of May 4, CDC, state, and local public health labs and other laboratories have tested more than 7 million samples.
 - HHS and FEMA have expanded items supplied by the [International Reagent Resource \(IRR\)](#) to help public health labs access free diagnostics supplies and reagents.
 - As of May 4, the FDA has issued 58 individual [emergency use authorizations](#) for test kit manufacturers and laboratories.
- On April 27, President Trump unveiled the [Opening Up America Again Testing Overview](#) and [Testing Blueprint](#) designed to facilitate state development and implementation of the robust testing plans and rapid response programs described in the President's [Guidelines for Opening Up America Again](#).
 - The President's Testing Blueprint sets forth the partnership between federal, state, local, and tribal governments, along with the private-sector and professional associations, all of which play important roles in meeting the Nation's testing needs.
- To support the Administration's [Testing Blueprint](#), FEMA is working to source and procure testing material – specifically, testing swabs and transport media.
 - The FEMA-sourced material will be provided to states, territories and tribes for a limited duration to help increase testing capacity in support of their individualized plans.



COVID-19 By the Numbers

56 Major Disaster Declarations

approved in all 50 states, 5 territories and Washington DC



\$5.9 billion

in emergency protective measures



117

airbridge flight missions

226

messages to cell phones via the Wireless Emergency Alert System

53

messages to broadcast stations via the Emergency Alert System

critical supplies shipped

7.5 million



face shields

115.4 million



surgical masks

926,683



coveralls

946.6 million



gloves

66.8 million



N95 respirators

18.7 million

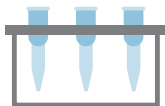


gowns

7.0 million

samples tested

149,013 samples tested at Community-Based Testing Sites
132,603 private partner site samples



12,752

ventilators available

39,934

National Guard troops activated in a Title 32 duty status



Coronavirus (COVID-19) Pandemic

Whole-of-America Response

Tuesday, May 5, 2020

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Supply Chain Task Force

- FEMA continues to expedite movement of commercially pre-sourced and commercially procured critical supplies from the global market to medical distributors in various locations across the U.S. through [Project Airbridge](#).
- As of **May 3**, Project Air Bridge has completed 117 flights with an additional 19 scheduled, or in transit, for a total of approximately 136 flights.
 - One flight landed in Chicago yesterday, May 4.
 - Three flights are scheduled to land in Chicago today, May 5.
 - It is important to note that any number of variables can affect international flight schedules, causing unexpected delays, cancellations or variations in final cargo quantities.
- The Air Bridge program delivers PPE to the point of greatest need through prioritized distributor supply chains nine times faster than movement by sea.
- Through Project Air Bridge, the following supplies have been delivered from overseas manufacturers to the U.S. and into private sector supply chains from March 29 through May 4:
 - More than 768,000 N95 respirators
 - More than 874 million gloves
 - 79.1 million surgical masks
 - 13.3 million surgical gowns
 - More than 2.2 million thermometers
 - 742,000 face shields
 - Nearly 324,000 coveralls
 - 109,000 stethoscopes
 - 370,000 oxygen masks
 - 250,000 swabs
 - More than 160,000 cannulas
- Since April 12, 40 flights carrying more than 35 million FEMA-procured masks and respirators from 3M landed in the U.S. The masks are inventoried at a warehouse and then distributed to prioritized areas as determined by FEMA and HHS.
- The strategy to allocate medical supplies and equipment is based on COVID-19 disease activity and its effects, as well as the need to facilitate distribution of limited supplies to areas where resources are needed most urgently.
 - Leveraging quantitative data sets provided by FEMA, HHS, and Centers for Disease Control and Prevention, FEMA's National Resource Prioritization Cell combines these data streams, analyzes the available COVID-19 disease activity data to determine current and potential future areas that most urgently require resources.
 - The team of experts works through this process every 96 hours to ensure resource prioritization recommendations are driven by the best available or most current data.
- The Defense Logistics Agency awarded a contract to Battelle for 60 N95 Critical Care Decontamination System units for the sanitation and reuse of N95 respirators.
 - Thirty-nine systems have been delivered: four to Texas, two to California, Colorado, New York, and Virginia and one each to Arizona, Arkansas, Connecticut, Idaho, Indiana, Florida, Georgia, Illinois, Kansas, Kentucky, Louisiana, Maryland, Massachusetts,

DAILY BRIEFING POINTS: COVID-19 WHOLE-OF-AMERICA RESPONSE

Michigan, Missouri, Montana, New Jersey, New Mexico, North Dakota, Nevada, Ohio, Pennsylvania, Rhode Island, Tennessee, Washington, Wisconsin and the District of Columbia.

- Additional systems are allocated to Alabama, Mississippi, Oregon, South Carolina, Texas (fifth unit), and Virginia (third unit).

By the Numbers

- Forty-two states, four territories and more than 40 tribes have issued stay-at-home orders.
- All 50 states, five territories, and Washington, D.C. have been approved for major disaster declarations to assist with additional needs identified.
- As of **May 5**, 149,013 samples have been tested at Community Based Testing Sites.
- Combined, FEMA and HHS have obligated \$62.0 billion in support of COVID-19 efforts, which is an increase of \$10.9 billion in the last week.
- The federal government has approximately 12,752 total ventilators available: 11,670 in the Strategic National Stockpile; 1,082 from the Department of Defense.
- As of **April 30**, FEMA and HHS have provided or are currently shipping 10,663 ventilators from the Strategic National Stockpile and the Defense Department to states, tribes and territories.
- In support of the U.S. Department of Veterans Affairs and our nation's veterans, FEMA has coordinated shipments of more than 4.3 million respirator masks, 1 million surgical masks, 1.5 million gloves, and 14,000 face shields to facilities across the country. An additional 1 million surgical masks and 28,000 gowns are shipping this week.
- FEMA has 3,154 employees supporting COVID-19 pandemic response out of a total 20,605 agency employees ready to respond to other emergencies should they occur.
- As of **May 4**, FEMA has obligated \$5.9 billion in support of COVID-19 efforts.
- As of **May 5**, 86 agencies across 28 states, the District of Columbia, one tribe and one U.S. territory have sent 226 alerts with information on COVID-19 via the Wireless Emergency Alert system; 53 alerts to broadcast stations via the Emergency Alert System.
- To date, the President has approved 48 National Guard requests for federal support for the use of National Guard personnel in a Title 32 duty status.
 - Pursuant to this approval, the federal government will fund 100 percent of the cost share for T-32 National Guard orders through May 31.
 - More than 39,900 National Guard troops have activated in T-32 duty status and 911 troops have activated in State Active Duty status to help with testing and other response efforts.
- The CDC has nearly 4,300 personnel supporting the outbreak response.
- The U.S. Public Health Service deployed more than 1,500 officers in support of nation-wide efforts to mitigate the virus' potential spread.
- To date, the U.S. Department of Veterans Affairs has made more than 1,400 acute and intensive care hospital beds across the nation available to non-veteran patients, if necessary.
- The U.S. Army Corps of Engineers has awarded 36 contracts for the design and build of alternate care facilities in Alaska, Arizona, California, Colorado, District of Columbia, Florida, Illinois,

DAILY BRIEFING POINTS: COVID-19 WHOLE-OF-AMERICA RESPONSE

Maryland, Michigan, Missouri, the Navajo Nation, New Jersey, New Mexico, New York, Oklahoma, Oregon, Tennessee, U.S. Virgin Islands, and Wisconsin.

- As of **May 5**, 1,268 USACE personnel are activated to support the COVID-19 mission, with more than 15,000 personnel engaged in additional response efforts.

FEMA and HHS Response

- FEMA, HHS, and our federal partners work with state, local, tribal and territorial governments to execute a whole-of-America response to COVID-19 pandemic and protect the health and safety of the American people.
- FEMA, HHS and the Cybersecurity Infrastructure and Security Agency (CISA) along with other federal agencies are distributing cloth face coverings for critical infrastructure workers as part of a multi-prong approach to re-open American economic activity while continuing to limit spread of COVID-19.
 - As of **May 4**, over 73.8 million cloth face coverings are being processed and distributed to state, local, tribal, private sector, and federal entities.
 - The federal government will provide additional face coverings in production to states, territories and tribes for distribution, with priority to emergency services, food production and distribution, and other sectors that support community lifelines.
 - FEMA and HHS are also providing face coverings to federal departments and agencies with mission essential functions to promote health and safety in the workplace and in their execution of public-facing missions.

FEMA

- On **March 13**, President Trump declared a nationwide emergency pursuant to the Stafford Act.
 - 50 states, the District of Columbia, five territories, and 40 tribes are working directly with FEMA.
 - A tribal government may choose to be a subrecipient under a state that has chosen to be a recipient of FEMA assistance, or choose to be a direct recipient of FEMA.
 - All 10 Regional Response Coordination Centers and emergency operations centers in all states and territories are active and supporting response efforts across the country.
- Requests for assistance, especially for critical supplies, should be routed through the proper channels as soon as possible. The most efficient way to identify critical gaps and get results:
 - Consistent with the principle of locally executed, state managed, and federally supported response, requests for assistance at the local and county levels should first be routed to their respective state.
 - Any needs that cannot be met by the state or tribe should then be sent to the respective FEMA regional office. FEMA regions will direct requests to the FEMA NRCC in Washington, D.C. for fulfillment.
- HHS and FEMA deployment of ventilators from the stockpile have helped ensure that hospitals in states such as New York have not run out of ventilator capacity while working to save lives.
 - The federal government adopted a process to manage allocation of federal ventilator resources to ensure the right number of ventilators are shipped to the right states to sustain life within a 72-hour window.

DAILY BRIEFING POINTS: COVID-19 WHOLE-OF-AMERICA RESPONSE

- Emergency managers and public health officials submit requests for ventilators to FEMA/HHS, providing detailed data on total medical/ hospital beds; total acute care (ICU) beds; normal occupancy; predicted surge occupancy; and number of ventilators available in the state.
- On **April 25**, [FEMA announced](#) that more than \$5.1 million dollars in crisis counseling service grants have been made available to five states to support programs providing free, confidential counseling through community-based outreach and educational services.
 - On **April 30**, amendments were made to 31 major disaster declarations, making crisis counseling service grants available to an additional 30 states and the District of Columbia.
 - On **May 4**, amendments were made to six major disaster declarations, making crisis counseling service grants available to an additional six states.
- On **April 23**, [FEMA announced](#) an additional \$100 million in funding for the Assistance to Firefighters Grant Program. This supplemental funding will provide financial assistance directly to eligible fire departments, non-affiliated emergency medical service organizations and State Fire Training Academies for critical PPE and supplies needed to respond to COVID-19. The application period begins April 28.
- On **April 20**, President Trump launched the Dynamic Ventilator Reserve Program, an innovative public-private partnership to access up to 65,000 additional ventilators in hospitals across the country that can be redeployed when not in use.
- On **April 15**, FEMA Administrator Pete Gaynor [issued a letter to the nation's emergency managers](#) outlining lessons learned from the first 30 days of FEMA leading the "Whole-of-America" response to the coronavirus (COVID-19) pandemic.
 - This guidance is a follow-on to the Administrator's [first letter to emergency managers](#) on March 27, which requested key actions and outlined critical steps for the initial COVID-19 response.
- On **April 15**, FEMA's Office of Equal Rights issued a [bulletin outlining best practices](#) to assist state, local, tribal and territorial partners in anticipating and attending to civil rights concerns during the COVID-19 response and recovery.
- On **April 13**, The [Department of Homeland Security and FEMA announced](#) the funding notice for an additional \$100 million in supplemental Emergency Management Performance Grant Program funds.
- On **April 12**, FEMA [issued guidance](#) on the framework, policy details and requirements for determining the eligibility for FEMA reimbursement of states purchasing and distributing food to meet the immediate needs of those who do not have access to food as a result of COVID-19 and to protect the public from the spread of the virus.
- On **April 9**, FEMA announced that it is [suspending rent for disaster survivors](#) living in FEMA-purchased temporary housing units in California, Florida, North Carolina and Texas. The temporary suspension means residents will not have to pay rent in April, May or June.

U.S. Department of Health and Human Services Agencies and Offices

- On **May 1**, HHS [announced](#) \$40 million of available funding for the development and coordination of a strategic network of national, state, territorial, tribal and local organizations to deliver important COVID-19 related information to minority, rural, and socially vulnerable communities hardest hit by the pandemic.

DAILY BRIEFING POINTS: COVID-19 WHOLE-OF-AMERICA RESPONSE

- On **May 1**, [HHS began processing payments](#) from the Provider Relief Fund to hospitals with large numbers of COVID-19 inpatient admissions through April 10, as well as to rural providers in support of the national response to COVID-19.
 - These payments are being distributed to healthcare providers who have been hardest hit by the virus. Facilities admitting large numbers of COVID-19 patients received \$12 billion and providers in rural areas received \$10 billion.
- On **April 30**, HHS through the Health Resources and Services Administration, [awarded \\$20 million to increase telehealth access](#) and infrastructure for providers and families to help prevent and respond to COVID-19.
 - The funds will increase capability, capacity and access to telehealth and distant care services for providers, pregnant women, children, adolescents and families. It will assist telehealth providers with cross-state licensure to improve access to health care during the pandemic.
- On **April 29**, the National Institutes of Health announced positive results of a [trial using Remdesivir](#); patients with advanced COVID-19 and lung involvement who received Remdesivir recovered, on average, faster than similar patients who received placebo.
- On **April 29**, the [National Institutes of Health announced](#) a new initiative, Rapid Acceleration of Diagnostics; aimed at speeding innovation, development, and commercialization of COVID 19 testing technologies and funded by \$1.5 billion from federal stimulus.
- On **April 27**, HHS, through the Health Resources and Services Administration (HRSA), launched a new [COVID-19 Uninsured Program Portal](#), allowing health care providers who have conducted COVID-19 testing or provided treatment for uninsured COVID-19 individuals on or after Feb. 4 to submit claims for reimbursement.
- On **April 24**, the Substance Abuse and Mental Health Services Administration (SAMHSA) announced an additional \$250 million in emergency COVID-19 funding to increase access to and improve the quality of community mental and substance use disorder treatment services through the expansion of Certified Community Behavioral Health Clinics (CCBHC).
- As of **April 24**, the Biomedical Advanced Research and Development Authority (BARDA) within the HHS Office of the Assistant Secretary for Preparedness and Response (ASPR) has a COVID-19 Medical Countermeasure Portfolio that includes development of 26 products supported under public-private partnerships.
 - Of these, 15 are diagnostics, seven are treatments, three are vaccines, and one is a rapidly deployable capability to help protect the American people from COVID-19.
 - To date, BARDA has obligated \$39.8 million for diagnostics, \$334.9 million for treatments, more than \$979.3 million for vaccines.
- On **April 23**, HHS, through the through the Health Resources and Services Administration, [awarded nearly \\$5 million to Poison Control Centers](#) across the country to improve their capacity to respond to increased calls due to the COVID-19 pandemic.
 - As more Americans heed cleaning recommendations to combat exposure to COVID-19, the nation's Poison Control Centers are seeing sharp increases in calls related to cleaners and disinfectants.
- On **April 22**, HHS launched [Telehealth.hhs.gov](#). The site is a central source of information on telehealth resources and tools for patients and providers.
- On **April 21**, HHS announced [\\$955 million in grants from the Administration for Community Living](#) to help meet the needs of older adults and people with disabilities. The grants will fund

DAILY BRIEFING POINTS: COVID-19 WHOLE-OF-AMERICA RESPONSE

home-delivered meals, care services in the home, respite care and other support to families and caregivers, and other support services.

- On **April 20**, the [Substance Abuse and Mental Health Services Administration](#) under HHS began releasing \$110 million in emergency grant funding to strengthen access to treatments for substance use disorders and serious mental illnesses during the COVID-19 pandemic.
- On **April 13**, HHS announced five new contracts for ventilator production rated under the Defense Production Act (DPA), to General Electric, Hill-Rom, Medtronic, ResMed, and Vyaire, as well as two other contracts for ventilator production, to Hamilton and Zoll.
 - Combined with contracts with [General Motors](#), [Philips](#) and [GE](#) rated under the DPA issued last week, the contracts will provide a total of 187,431 ventilators by the end of 2020.
- Beginning **April 10**, [HHS and FEMA are working with states with federal Community-Based Testing Sites](#) to clarify whether sites want to continue as they are now, or transition to full state control.
- On **April 10**, HHS began delivering the initial [\\$30 billion in relief funding](#) to providers in support of the national response to COVID-19, with \$26 of the \$30 billion expected to be delivered to providers' bank accounts the same day.
- On **April 10**, HHS Secretary Azar sent a follow up letter to hospital administrators, reinforcing the need for data to be provided daily to facilitate planning, monitoring, and resource allocation in response to COVID-19.
- On **April 8**, HHS, through the Health Resources and Services Administration [awarded more than \\$1.3 billion to 1,387 health centers](#). These centers will help communities across the country detect coronavirus; prevent, diagnose, and treat COVID-19; and maintain or increase health capacity and staffing levels to address this public health emergency.
- On **April 6**, HHS [announced it will release \\$186 million in additional CDC funding](#) to state and local jurisdictions with accelerating or rapidly accelerating COVID-19 cases to support response activities and surveillance capabilities.
- HHS identified [\\$80 million dollars specifically for tribes](#), tribal organizations, and tribal health service providers.

Centers for Disease Control and Prevention

- The nation's [Slow the Spread](#) campaign ended **April 30**. CDC continues to [recommend that everyone use a cloth face covering](#) in community settings to help reduce the spread of COVID-19.
- On **April 28**, the Centers for Disease Control and the Environmental Protection Agency [issued guidance on for cleaning and disinfecting spaces](#) when reopening America; the guidance offers step by step instructions on how Americans can reduce risk of exposure to COVID 19 and stay safe in public spaces, workplaces, businesses, schools, and homes.
- CDC continues to encourage use of [personal protective equipment optimization strategies](#) for healthcare providers to optimize resources, deal with limited resources, and make contingency plans or alternative strategies when supplies are limited.
- On **April 26**, CDC and the Occupational Safety and Health Administration (OSHA) [released targeted guidance](#) to help meat and poultry processing facilities implement infection control practices to reduce the risk of transmission and illness from COVID-19 in these facilities.
- On **April 8**, CDC issued [additional guidance](#) to help ensure critical infrastructure workers can perform their jobs safely after potential exposure to the virus.

Food and Drug Administration (FDA)

- FDA launched the Coronavirus Treatment Acceleration Program (CTAP) to speed approval of drugs and therapies. 72 therapies are now being tested, including hydroxychloroquine, and another 211 are in active planning for clinical trials.
- FDA published a [new blog post](#) on the [Coronavirus Treatment Acceleration Program](#). The program uses every available method to move new treatments to patients as quickly as possible, while at the same time finding out whether the treatments are helpful or harmful.
- As of May 4, the FDA has issued 58 individual [Emergency Use Authorizations](#) (EUAs) for test kit manufacturers and laboratories. In addition, 25 authorized tests have been added to the EUA letter of authorization for high complexity molecular-based laboratory developed tests (LDTs).
- FDA has authorized four mask sterilizations systems to disinfect N95 masks, with one system that can [decontaminate 4 million N95 masks per day](#).
- On **May 1**, the FDA issued an [emergency use authorization](#) for the investigational antiviral drug Remdesivir for the treatment of suspected or laboratory-confirmed COVID-19 in adults and children hospitalized with severe disease.
- On **April 28**, the FDA issued a new [video resource](#) explaining Emergency Use Authorizations (EUAs), one of several tools FDA uses to help make important medical products available quickly during public health emergencies like the COVID-19 pandemic.
 - EUAs provide more timely access to drugs, diagnostic tests and/or other critical medical products that can help diagnose, treat and/or prevent COVID-19.
- On **April 27**, the [FDA released two new fact sheets](#) for the food and agriculture sector outlining guidelines on [use of disposable facemasks and cloth coverings](#), as well as summarizing [key steps employers and coworkers can take](#) to stay open, continue to slow the spread and support continuity of essential operations.
- During the **April 24** White House Press Briefing, FDA Commissioner Dr. Stephen Hahn announced [approval the first COVID-19 home collection test kit](#).
- On **April 21**, the FDA issued an emergency use authorization for IntelliVue Patient monitors intended to be used by healthcare professionals in the hospital environment for remote monitoring of adult, pediatric and neonate patients having or suspected of having COVID-19 to reduce healthcare provider exposure.
- On **April 16**, the FDA [announced an expansion of testing options](#) through use of synthetic swabs – with a design similar to Q-tips – to test patients by collecting a sample from the front of the nose.
- On **April 14**, the FDA issued a consumer update: [How You Can Make a Difference During the Coronavirus Pandemic](#), outlining ways to help such as donating blood or saving PPE for frontline workers.
- The FDA released [food shopping information](#) to reassure consumers that there is currently no evidence of human or animal food or food packaging being associated with transmission of the coronavirus that causes COVID-19.

Other Federal Agencies

- American Red Cross and the American Association of Blood Banks (AABB) continue to seek blood and convalescent plasma donations. To find where you can donate blood, visit aabb.org.
- On **May 4**, the [Small Business Administration \(SBA\) announced](#) that agricultural businesses are now eligible for the SBA Economic Injury Disaster Loans as part of the Paycheck Protection Program and Healthcare Enhancement Act.
 - SBA's [portal will reopen today](#) for farmers, ranchers and certain other agricultural businesses affected by the COVID-19 pandemic.
- On **May 3**, the U.S. Department of Treasury and the SBA [announced](#) that the second round of funding for the Paycheck Protection Program processed 2.2 million loans to small businesses [since it launched on April 27](#). The total value of these loans is over \$175 billion.
 - Including the previous funding bill, more than \$670 billion is available for the loan program in total.
- On **April 28**, President Trump signed an [executive order to keep meat processing plants open](#) to ensure the continued supply of beef, pork, and poultry to the American people. The order uses the Defense Production Act to classify meat processing as critical infrastructure.
 - The Centers for Disease Control and Prevention and the Occupational Safety and Health Administration have put out guidance for plants to help ensure employee safety.
- On **April 17**, U.S. Department of Agriculture announced the [Coronavirus Food Assistance Program](#), an immediate relief program that provides \$16 billion in direct support to farmers and ranchers as well as \$3 billion to purchase and distribute fresh produce, dairy and meat products to food banks, community and faith-based organizations and other non-profits.
- On **April 17**, the Cybersecurity and Infrastructure Security Agency released version 3.0 of the [Essential Critical Infrastructure Workers guidance](#) to help state and local jurisdictions and the private sector identify and manage their essential workforce while responding to COVID-19.
- On **April 15**, Immigration and Customs Enforcement Homeland Security Investigations launched [Operation Stolen Promise](#) to combat COVID-19 related fraud and other criminal activity.
- On **April 23**, the [U.S. Department of Education announced](#) more than \$13.2 billion from the CARES Act is available to state and local education agencies to support continued learning for K-12 students whose educations have been disrupted by the coronavirus.
- The U.S. Department of Labor [announced availability of up to \\$100 million for Dislocated Worker Grants](#) to help address the workforce-related impacts related to COVID-19.

From: [Fenton, Bryan LTG SD](#)
To: (b) (6)
Subject: FW: Final Agenda and RAH for Thur 23Apr20 COVID-19 Update to the SecDef
Date: Thursday, April 23, 2020 9:44:19 AM
Attachments: [Agenda_Thur 23 Apr SD COVID-19 Update Meeting \(23Apr 0845\).docx](#)
[TAB 1 - 20200423 Lab Capacity Brief for SECDEF v1.5.pptx](#)
[TAB 3 - SECDEF COVID-19 DoD Research Efforts Draft Final 5.5.pptx](#)

From: Rapuano, Kenneth P HON OSD OUSD POLICY (USA)
Sent: Thursday, April 23, 2020 9:31:18 AM (UTC-05:00) Eastern Time (US & Canada)
To: Norquist, David HON SD; Hyten, John E Gen USAF JS OCJCS (USA); Hershman, Lisa W HON (USA); McCarthy, Ryan D HON USARMY HQDA SECARMY (USA); Barrett, Barbara M HON USAF SAF-OS (USA); (b) (6) RAYMOND, JOHN W Gen USSF HQSF USSF/CSO USSPACECOM/CC; McConville, James C GEN USARMY HQDA CSA (USA); Gilday, Michael M ADM USN CNO (USA); Goldfein, David L Gen USAF AF-CC (USA); Berger Gen David H; Burke, Robert P ADM USN VCNO (USA); Martin, Joseph M GEN USARMY HQDA VCSA (USA); Thomas Gen Gary L; Wilson, Stephen W Gen USAF AF-CV (USA); Griffin, Michael D HON OSD OUSD R-E (USA); Lord, Ellen M HON OSD OUSD A-S (USA); Anderson, James H HON OSD OUSD POLICY (USA); McCusker, Elaine A HON OSD OUSD C (USA); Donovan, Matthew P HON OSD OUSD P-R (USA); Kernan, Joseph D HON (USA); Oshaughnessy, Terrence J Gen USAF NORAD-USNC CG (USA); Faller, Craig Stephen ADM USN SOUTHCOM SC-CC (USA); Wolters, Tod D Gen USAF EUCOM COM (USA); McKenzie, Kenneth F Jr Gen USMC CENTCOM CCCG (USA); Davidson, Philip S ADM USN INDOPACOM J00 (USA); Clarke, Richard D GEN USARMY USSOCOM SOCOM (USA); Townsend, Stephen J (Steve) GEN USARMY AFRICOM ACCC (USA); Lyons, Stephen R GEN USARMY TRANSCOM TCCC (USA); Nakasone, Paul M GEN USARMY USCYBERCOM (USA); Richard, Charles A ADM USN STRATCOM J0CC (USA); Lengyel, Joseph L Gen USAF NG NGB (US); Ney, Paul C Jr HON OSD OGC (USA); Whitley, John E HON OSD CAPE (USA); Deasy, Dana S HON (USA); Manasco, Shon J HON USAF SAF-US (USA); Hood, Robert R HON OSD OASD LA (USA); Hoffman, Jonathan R SES OSD OSD (USA); Baker, James H SES OSD ODNA (USA); Stewart, Jennifer SES SD; Fenton, Bryan LTG SD
Cc: Henke, Robert SES SD; Lyons, David Brig Gen SD; Johnson, Justin SES SD; Ross, Alexis SES SD; Salesses, Robert G SES OSD OUSD POLICY (USA); Payne, Lee E Maj Gen USAF DHA J-3 (USA); (b) (6) Castle, William S SES OSD OGC (USA); SD - DSD Read ahead
Subject: Final Agenda and RAH for Thur 23Apr20 COVID-19 Update to the SecDef

DSD, Vice, and Colleagues – provided is the final agenda and RAH for today’s COVID-19 Update to the Secretary. Attached are P&R slides for the “Testing Framework” (TAB 1), and “Medical R&D Update” (TAB 3). Separately, your staffs received the CAPE “Analytics Broken Out by Population” (TAB 2) paper, from (b) (6) on SIPR at 1923 on 22 April.

- 1) Updates on key due-outs from last meeting:
 - Stimulus and Supplemental Update (Comptroller)
 - Testing Framework (P&R) (TAB 1)
 - (b) (5)

- 2) Medical R&D Update (TAB 3):
 - Testing R&D (b) (6)
 - Update on DoD serologic research
 - (b) (5)

 - Vaccine & Medical Counter Measures (b) (6)

- o Update on vaccine and MCM development and production

3) Around the room

I appreciate your continued efforts and support on these issues.

Best,

Ken



Updated: 23 April 2020 (0845)

Secretary of Defense COVID-19 Update

Thursday, April 23, 2020, 1330-1430

Multiple Locations

AGENDA

Updates on key due-outs from last meeting:

1. Stimulus and Supplemental Update (Comptroller)
2. Testing Framework (P&R) (TAB 1)
3. (b) (5)

Decisions:

1. None expected

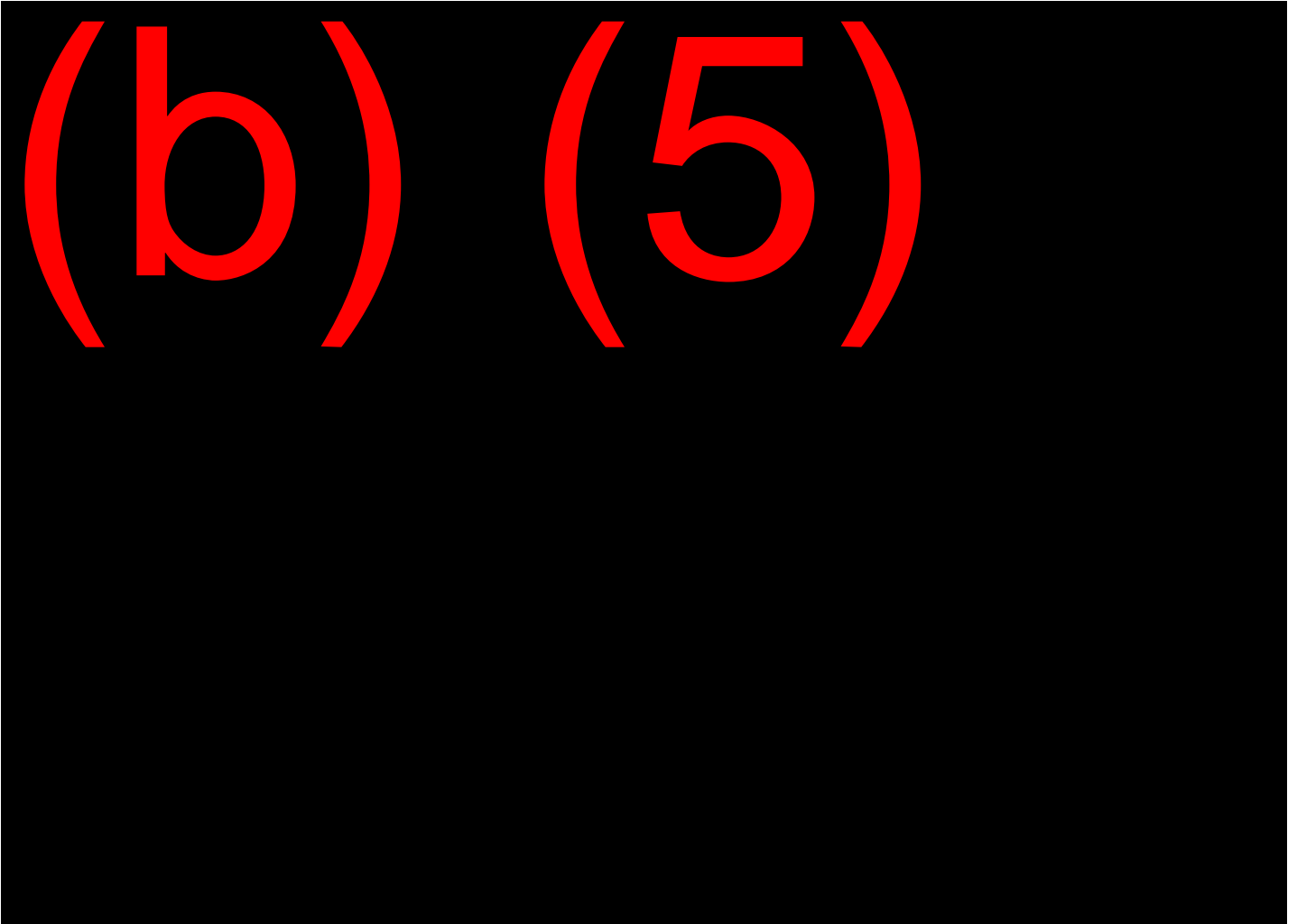
Discussion:

1. Medical R&D Update (TAB 3)
 - Testing R&D (b) (6)
 - Update on DoD serologic research
 - (b) (5)
 - Vaccine & Medical Counter Measures (b) (6)
 - Update on vaccine and MCM development and production
2. Around the room



Updated: 23 April 2020 (0845)

DRAFT AGENDA for Tuesday, April 28



DOD COVID-19 Testing Framework



Major General Lee Payne, COVID-19 Testing Lead

Thursday 23 APR 20, 1330-1430

Nunn-Lugar Conference Room 3E863

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DOD COVID-19 Testing Framework



DoD COVID-19 Testing Framework

ASSUMPTIONS:

- **Military operations** will be challenged until vaccines, treatment, and herd immunity achieved
- **Testing capacity** is constrained by global competition for resources and potential supply chain disruptions
- **Operational demand for testing** will increase over the next 12-18 months
- Testing does not eliminate risk

✓ **DESIGNATE** A DEPARTMENT LEAD

DEFINE OPERATIONAL REQUIREMENTS

ASSESS TESTING CAPACITY

OPTIMIZE LOGISTICS

MITIGATE RISK TO THE MISSION

PROTECT THE FORCE

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DOD COVID-19 Testing Framework

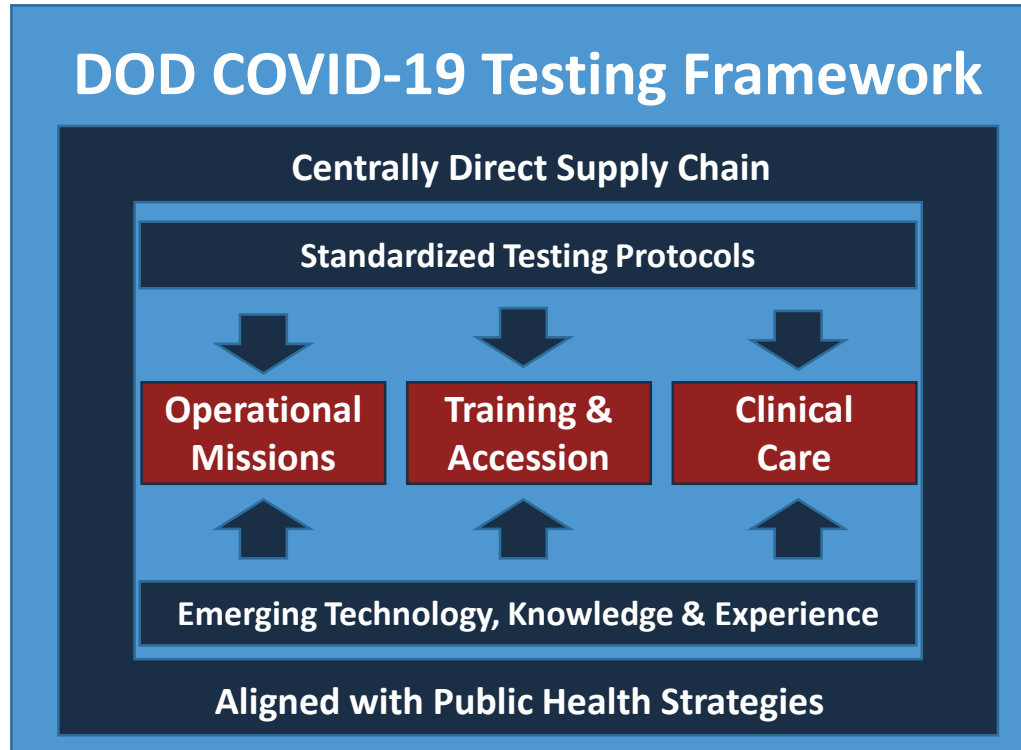
Testing Framework



SECDEF Approved Priority Testing Tiers

- Tier 1:** *Critical National Capabilities*
- Tier 2:** *Engaged Fielded Forces*
- Tier 3:** *Forward Deployed/ Re-Deploying Forces*
- Tier 4:** *All Other Forces*

DOD COVID-19 Testing Framework



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DOD COVID-19 Testing Framework

Stakeholder Engagement & Progress To Date



➤ Engagement with HHS

- ❖ 25K additional tests sent to DoD labs
- ❖ Continued coordination of support for testing on USS Theodore Roosevelt and USS Nimitz
- ❖ 10 Abbott ID Now systems delivered to strategic locations

➤ Engagement with Military Departments and COCOMs

- ❖ Testing support to Services as training for accessions resumes
 - Identified immediate testing requirements & testing locations
- ❖ Testing support to top priority COCOM missions
 - Identified immediate testing requirements & testing locations
 - Refining estimates and testing protocols for next 12 months

➤ Engagement with OSD & 4th Estate

- ❖ VCJCS and Service Chiefs brief on testing framework and approach
- ❖ Engagement with Advana team



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DOD COVID-19 Testing Framework

Validated Testing Requirements



		20 April	27 April	4 May	11 May
Accessions	Army	<ul style="list-style-type: none"> 953 Soldiers Testing at Ft Gordon 	<ul style="list-style-type: none"> 1,400 Soldiers Testing at ATC sites 	<ul style="list-style-type: none"> 1,400 Soldiers Testing at ATC sites 	<ul style="list-style-type: none"> 1,400 Soldiers Testing at ATC sites
	Navy	<ul style="list-style-type: none"> 524 Sailors (RTC Great Lakes) Testing at Lovell FHCC 	<ul style="list-style-type: none"> 826 Sailors (RTC Great Lakes) Testing at Lovell FHCC 	<ul style="list-style-type: none"> 738 Sailors (RTC Great Lakes) Testing at Lovell FHCC 	<ul style="list-style-type: none"> 738 Sailors (RTC Great Lakes) Testing at Lovell FHCC
		<ul style="list-style-type: none"> 2,615 Sailors (Other sites) Testing at multiple sites 	<ul style="list-style-type: none"> 2,615 Sailors (Other sites) Testing at multiple sites 	<ul style="list-style-type: none"> 2,615 Sailors (Other sites) Testing at multiple sites 	<ul style="list-style-type: none"> 2,615 Sailors (Other sites) Testing at multiple sites
	Air Force	<ul style="list-style-type: none"> 465 Airmen (BMT Recruits) Testing at Wright Pat AFB 	<ul style="list-style-type: none"> 465 Airmen (BMT Recruits) Testing at Wright Pat AFB 	<ul style="list-style-type: none"> 465 Airmen (BMT Recruits) Testing at Wright Pat AFB 	<ul style="list-style-type: none"> 465 Airmen (BMT Recruits) Testing at Wright Pat AFB
Marine Corps	<ul style="list-style-type: none"> 300 Marines - Parris Island Testing contract w/Mayo 	<ul style="list-style-type: none"> 300 Marines - Parris Island Testing at WRNMMC 	<ul style="list-style-type: none"> 300 Marines - Parris Island Testing at WRNMMC 	<ul style="list-style-type: none"> 300 Marines - Parris Island Testing at WRNMMC 	
	<ul style="list-style-type: none"> 300 Marines - MCRD Testing at NHRC 	<ul style="list-style-type: none"> 300 Marines - MCRD Testing at NHRC 	<ul style="list-style-type: none"> 300 Marines - MCRD Testing at NHRC 	<ul style="list-style-type: none"> 300 Marines - MCRD Testing at NHRC 	
Operational Missions	Carrier Fleet	<ul style="list-style-type: none"> 7,700 at CVN Testing at Wright Patterson AFB 			
	Other Navy		<ul style="list-style-type: none"> 1,500 at LHA Testing at Keesler AFB 	<ul style="list-style-type: none"> 705 at various locations Testing at multiple locations 	
	Other Air Force	<ul style="list-style-type: none"> 9,920 (ACC-990, AFDW-100, Global Strike-4,248, AFSOC- 476, AMC- 686, USAFE/AFAFRICA- 3,400, US Space Force-20) Testing at Wright Patterson AFB Epidemiology Lab or local Military Treatment Facility 			
	USSOCOM	<ul style="list-style-type: none"> Estimated at 1,000/month Testing at Fort Bragg 			
	USSTRATCOM	<ul style="list-style-type: none"> 668 tests for Nuclear C2 (NC2) and Nuclear Ops Forces for personnel prior to assuming nuclear alert duties Testing at Wright Patterson AFB Epidemiology Lab 			

*Other COCOM operational missions pending validation through data call issued by VCJCS on 24 Apr 2020

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DOD COVID-19 Testing Framework

Next Actions



- **Memo signed by VCJCS directing annual projection of weekly requirements**
 - COCOMS – Assigned & Allocated Forces
 - Services – Service Retained & Accession Training
 - Suspense 24 hours after memo release
- **Project management team building NIPR model to capture requirements**
 - Will build monthly work plan from requirements data
 - Will port to SIPR once we have the data
- **Monthly Work Plan to DHA for Monthly Test Plan through Services (DSA)**
- **Goal to meet Tier 1 Requirements in next few weeks**
 - Goal 200k Tests per month by end of May
- **Begin defining & refining Tier 2 and 3 Operational requirements**
- **More accurate demand projection allows better targets for HHS**

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Back Up Slides

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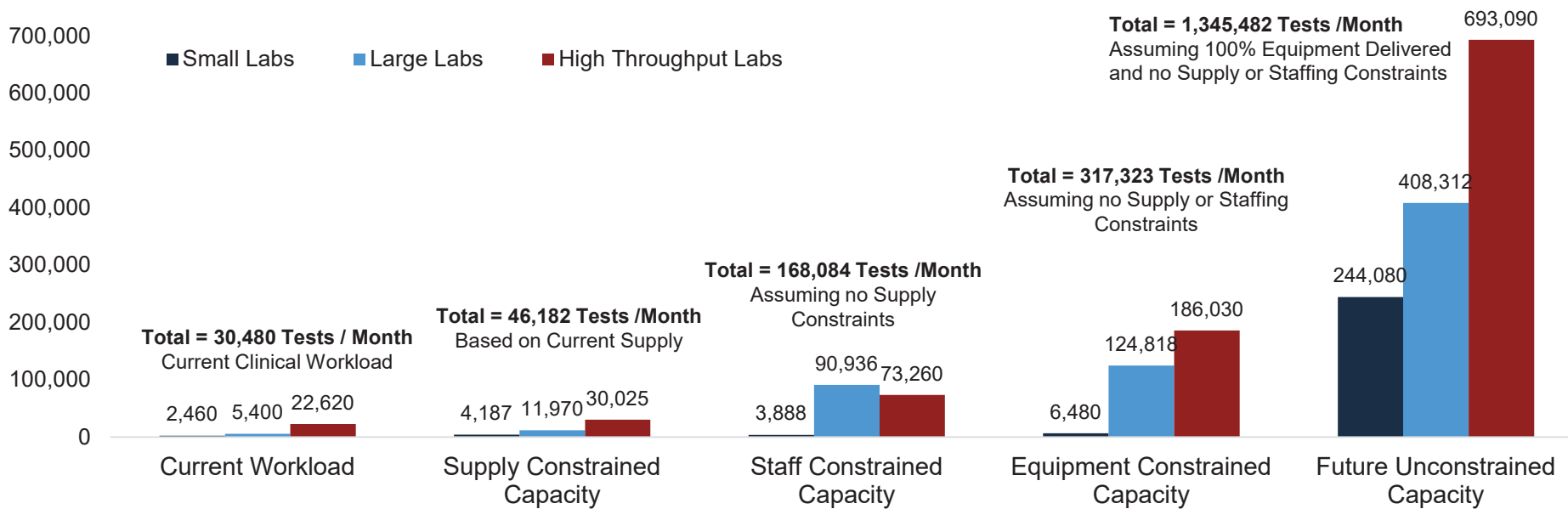


DOD COVID-19 Testing Framework

Testing Capacity to Meet Operational Requirements*

DoD COVID-19 Monthly Testing Capacity – Equipment & Supplies						Monthly Testing Requirements	
	# Facilities		# Testing Systems		Current Inventory		
	Current	Future	Current	Future	Tests on Hand	Days Supply	
High Throughput Labs	11	11	117	166	31,555	14.2	Tier 1: Critical National Capabilities ~90,000
Large Labs	32	39	105	207	12,610	1.7	Tier 2: Engaged Field Forces ~50,000
Small Labs	13	107	29	270	4,398	13.8	Tier 3: Forward Deployed Forces ~25,000
All DoD Lab Locations	56	159	251	643	48,563	4.6	Ongoing Clinical Care ~30,000
							TOTAL 195,000

DoD COVID-19 Monthly Testing Capacity – Supply & Staffing

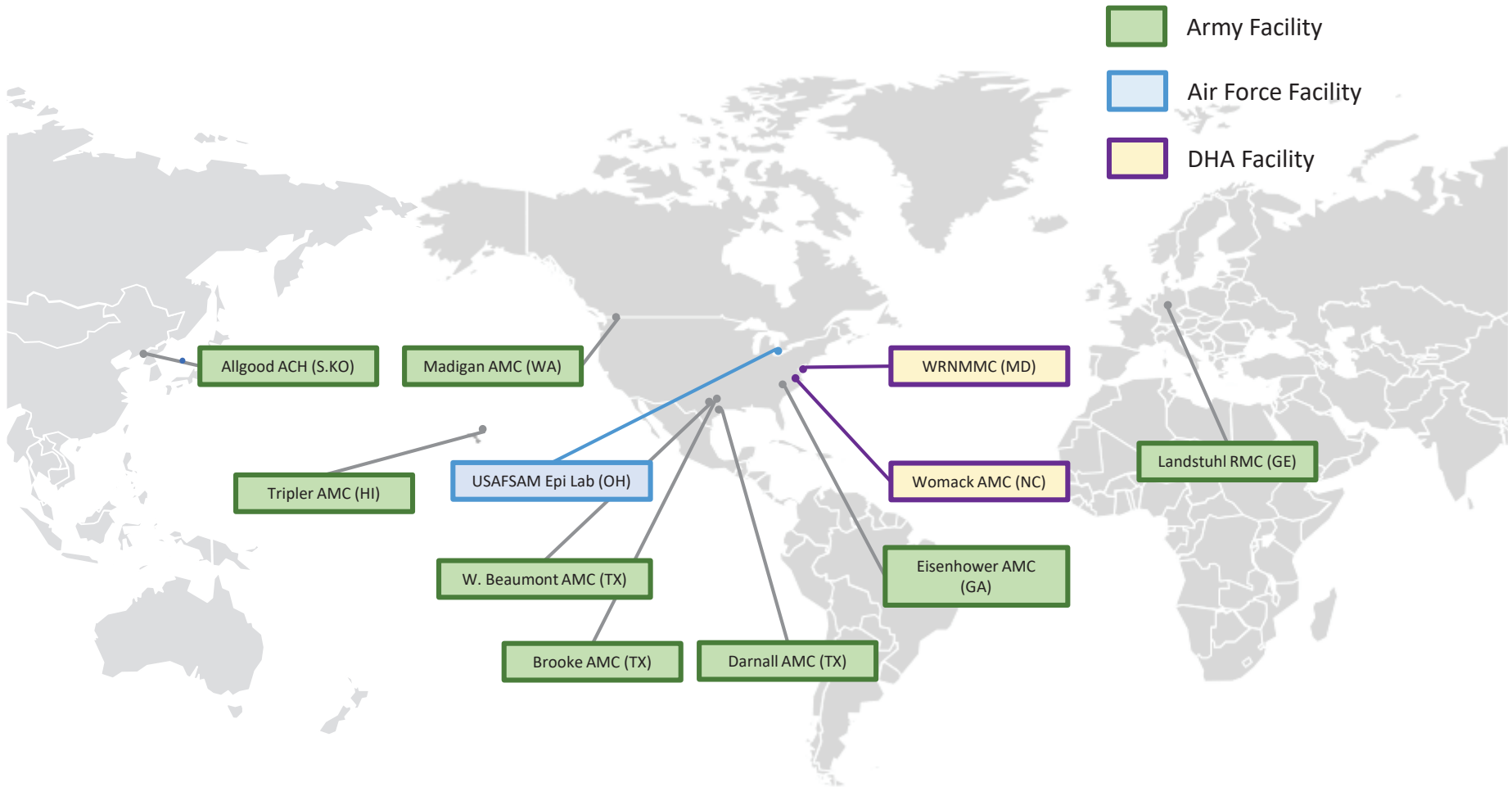


*Data and figures current as of 15 April 2020

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High Capacity Lab Locations



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SECDEF Recommended COVID-19 Testing Priorities

TIER 1: Critical National Capabilities – 135,000

- Strategic and Nuclear Deterrence Forces
 - **STRATCOM: Msn Essential, ICBM, SSBN**
 - **SPACECOM: NC3**
- Homeland Defense Forces
 - **N/NC: HD/BMD, ONE, COOP/COG, N2C2, HQ, CAT, Msn Essential**
 - **CYBERCOM: JFHQ DODIN**
- National Leadership (Senior Staff)
- SOCOM National Mission Force
- CYBERCOM National Mission Force
- Accession Sources (May – July) – Active: **50,000**; Reserve: **22,000**; Recruiting Force: **20,000**; Training Cadres//Support/MEPS Personnel: **15,000**; **Accessions total: 107,000**

TIER 2: Engaged Field Forces – 200,000

- NORTHCOM COVID-19 Response Forces
- Critical Capabilities/Assets
 - **CYBERCOM: DISA**
 - **SPACECOM: Satellite C2, C2 Nodes**
 - **TRANSCOM: HQ, AMC Msn Essential, SDDC major movements**
- CENTCOM: OFS/USFOR-A, OIR, OSS
- AFRICOM: Djibouti, Niger, Somalia

TIER 3: Forward Deployed/Re-Deploying Forces – 100,000

- **SOUTHCOM: Counter Narc/C-TCO, GTMO, SCO/SCO teams, SOF**
- **INDOPACOM: USS TR, RR & Ohio**
- **EUCOM: 173d ABN Romania, USMC GDO Georgia, USMC MRF-E Norway**

TIER 4: All Other Forces

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DoD COVID-19 Research Efforts



OUSD(P&R) / OASD(HA)

Purpose: Provide overview of DoD research field studies and other research efforts related to the novel coronavirus disease (COVID-19)

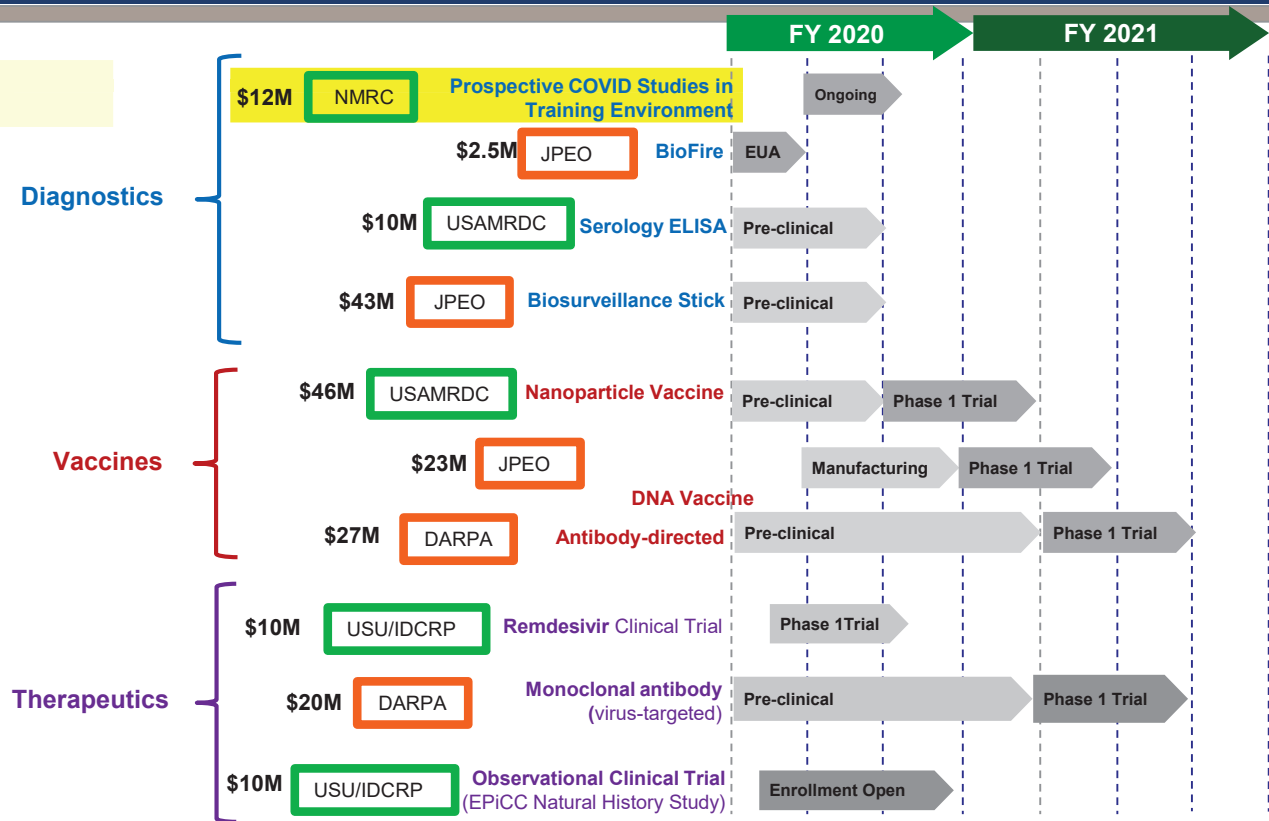


OVERVIEW

- DoD's Three Research Lines of Effort
- Discussion of Field Research Studies
 - Initial Study at Parris Island
- Testing and Serology



DoD COVID-19 Research Update



Diagnostics

- Navy (NMRC) is working with the DHA/J9 to rapidly evaluate viral and serologic testing. DHA/J9 is the overall lead for the research approach to inform operational strategies for use of diagnostics in our military populations.
- BioFire** provides a far-forward 1-hour COVID-19 diagnosis; EUA approved and 1200 assays to CENTCOM.
- Biosurveillance Stick** provides far forward Point of Care diagnosis; detects virus protein and determine infectivity. Contracts awarded this week to 3 companies for prototype development.
- Serology ELISA** provides information on COVID-19 infection & recovery; will inform return to work policy.

Vaccines

- Nanoparticle Vaccine** utilizes multiple copies of COVID-19 proteins to generate a robust immune response.
- Inovio DNA Vaccine** delivers COVID-19 genetic material (DNA) to the body's cells to induce an immune response. DNA is stable and easy to manufacture at large scale. Inovio began Phase I Clinical Trial (human safety trial) on 6 APR. DoD will manufacture DoD vaccine doses.
- Antibody-Directed Vaccine** utilizes information from the body's response to the virus to design an effective vaccine.

Therapeutics

- Remdesivir**, an antiviral funded by DoD to treat Ebola, is being used in DoD/NIAD Interventional Clinical Trial for persons displaying severe symptoms.
- DARPA Monoclonal antibody**: Development of antibodies that will neutralize virus and mitigate infection. DARPA has begun animal testing for 2 of its monoclonal antibody candidates at Vanderbilt University.
- DoD EPICC Observational (Natural History) Clinical Trial** follows the progression of disease and recovery. Results will inform screening efforts, quarantine/isolation procedures, drug design, and return to work policy.

Legend

Performing research (DoD laboratories execute research activities)	NMRC JPEO-CBRND WRAIR DARPA USU/IDCRP
Overseeing research (DoD organizations coordinate with non-DoD performers)	Naval Medical Research Command Joint Program Executive Office Chemical, Biological, Radiological, and Nuclear Defense Walter Reed Army Institute of Research Defense Advanced Research Projects Agency Uniformed Service University / Infectious Disease Clinical Research Program

OASD(HA) supports these COVID-19 efforts through the Defense Health Program RDT&E funds.

FRAMEWORK

- DoD is aligned under the HHS/ASPR Interagency Medical Countermeasures Task Force. Includes NIH, CDC, FDA, USDA, VA, DOE and DoD.
- OASD(HA) leads the DoD MCM TF which consists of JPEO-CBRND, USAMRDC, AF & Navy reps, R&E, A&S, USU and DHA J4 and J9.

Touchpoints:

- DoD JATF for acquisition (via A&S + DHA J-4)
- DoD JATF for screening/diagnostics (via A&S + OASD(HA))
- HHS IA Serology TF (OASD(HA), OASD(NCB), JPEO-CBRND)

Innovative Technology Highlight: Cellex qSARS-CoV-2 IgG/IgM Rapid Test

- The FDA issued an EUA for the Cellex CoV-2 rapid antibody test on 1 April. This test, similar in form to a pregnancy test, can give a result in less than 20 minutes.
- Current point of Care (POC) testing is fast, but have accuracy issues.
- The HHS Interagency Serology Task Force shares these concerns and is rapidly assessing the current antibody tests.

The diagram shows the test procedure: 10µL sample + 2 drops of sample diluent → 15-20 min → Result. The result is shown in a test strip with wells for Control Line, Test Line, and Sample & Buffer Well. Three possible outcomes are shown: IgG positive (Control line, Test line), IgM Positive (Control line, Test line), and IgG and IgM Positive (Control line, Test line).

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- Science and Technology:
 - Additional antiviral therapeutics such as high-throughput serologic screening
 - New research into phage-based vaccine that allows for rapid formulation of vaccines against strain variations
 - Diagnostics research into surveillance stick capabilities, and the development of robust field-deployable rapid diagnostic tests
- Advanced Development:
 - Partnerships to support testing of emerging technologies like DoD Hack-a-vent prototype testing, and oral swab assay – laboratory scale up and DoD pilot testing
 - Accelerating/modifying current Joint acquisition programs such as the BioFire COVID -19 assay and sensor/monitoring systems
 - New investments in adjunctive technologies and performing field study evaluations of technologies.



Field Research Studies: Purpose

- Establish standard research methodologies to evaluate the coronavirus pandemic in our military populations and allow generalization to broader population
- Establish methodologies that supports the integration of new technologies (i.e., earlier detection) to support return to duty and minimize operational disruptions
- ‘Operationalize’ research studies:
 - Initial focused on sequestered training environments (congregate population)
 - Translate methodology to Pre-deployment and deployment (informed by surveillance/testing)





Field Research Studies: Current Status

- Initial research study at Marine Corps Recruit Training Center Parris Island
- Beginning coordination with Navy to establish a second study at Recruit Training Center Great Lakes
- Working with Army (FT Benning) and Air Force (Lackland AFB) for additional protocols
- Tri-service coordination on standardizing research activities
- Utilization of Infectious Disease Clinical Research Program (IDCRP) network of Military Treatment Facilities to run parallel research protocols
- Development of 'lighter' versions of protocols to fill in epidemiological gaps
- Creating linkages to surveillance/testing efforts to inform current and future research goals and designs



Field Research Studies: Initial Study Parris Island



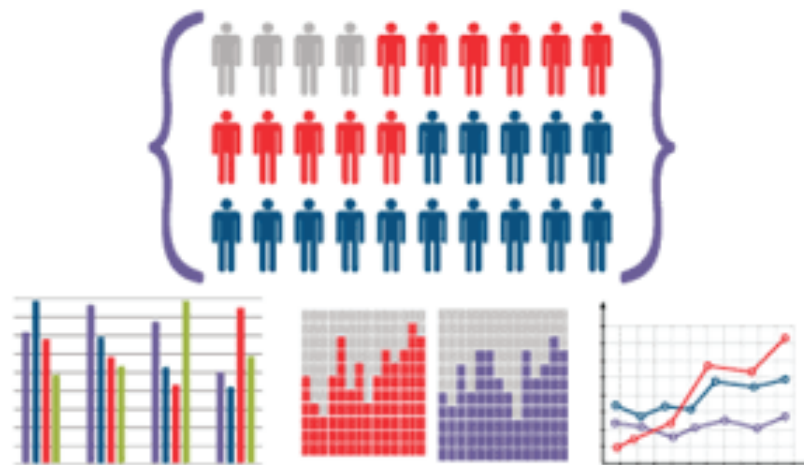
- Naval Medical Research Center (NMRC) to execute the project
- Three primary research questions:
 - What percentage of individuals who acquire the virus have mild, moderate, severe or no symptoms?
 - Is there an antibody response in infected individuals and how does the magnitude of antibody response vary based on symptoms?
 - Is the antibody response protective against infection (generate immunity)?
- 2400 recruit subjects for larger study
- Goal is to start with 04 May 2020 cohort
- Protocol submitted to Institutional Review Board (IRB) for approval
- Funding sent to the NMRC (\$10M) for initial study
- Medical material resources being purchased and support personnel
- Information from the study will be shared as close to real time as possible with base commanders and Public Health Officers

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Field Research Studies: Parris Island Protocol Details

- Summary of Main Protocol
 - Volunteers will have viral swabs & blood drawn prior to their 2 week quarantine (Day 0) and at days 7, 14, 28 and 42
 - If they test positive for the virus they will be asked to enter the smaller cohort study
- Smaller Cohort Study
 - Confirmed infected subjects
 - To evaluate immunological responses in symptomatic and asymptomatic subjects and obtain samples to inform diagnostic, therapeutic and vaccine development (340 subjects)
 - Testing include viral swabs & blood draws to evaluate host immunological response for a 6 week period
 - Support a longer term assessment of possible immunity in these subjects

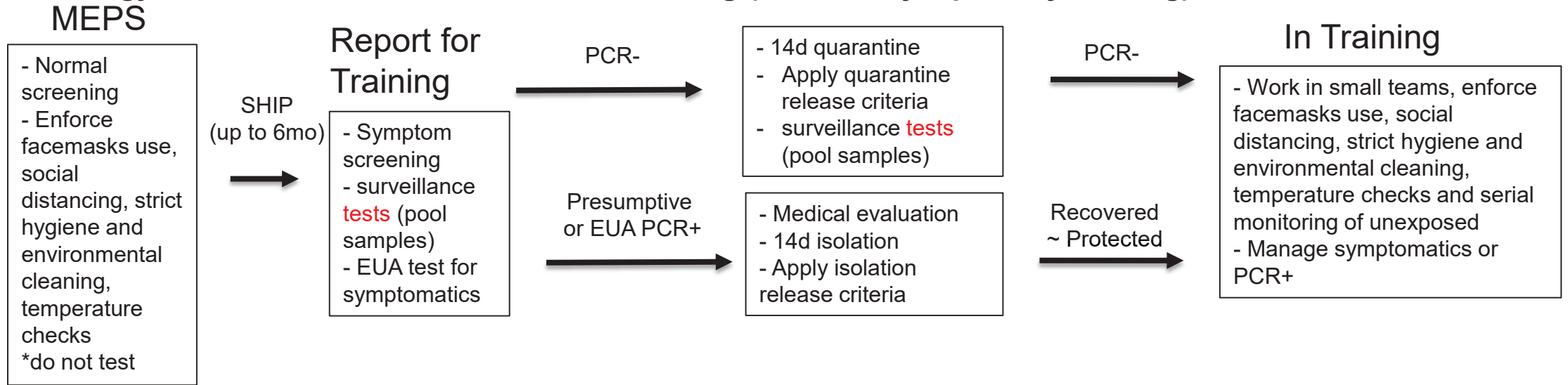


OSJI-Covid / 20cv5096 (DoD 20-L-1014) / 3993

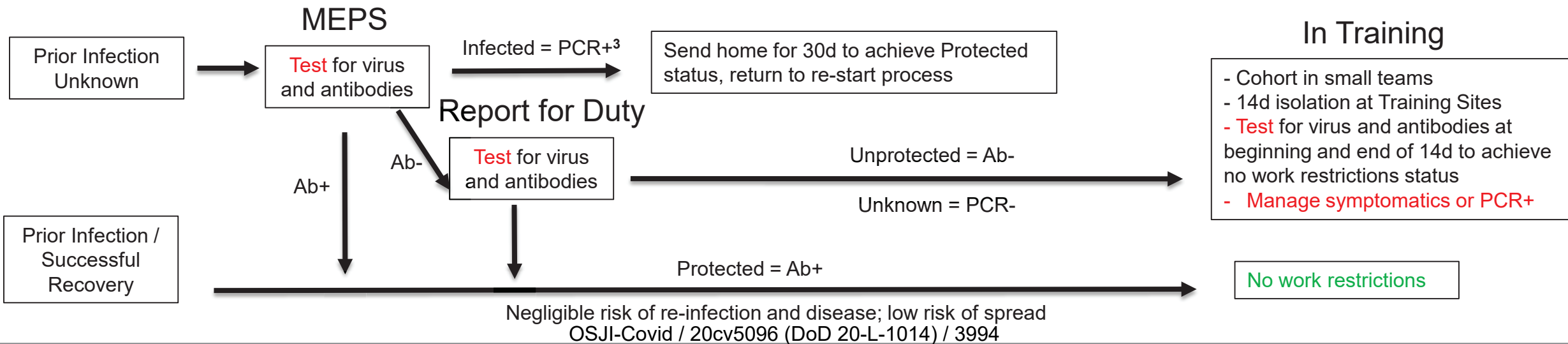


Impact of Testing and Serology on Return to Duty – Training Sites

Current strategy for trainees into accessions and training (Initial entry, specialty training)



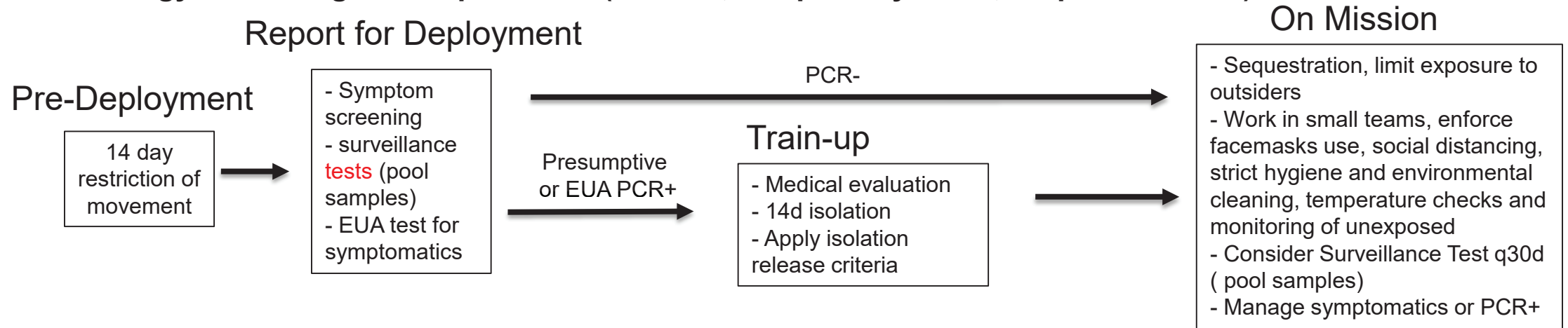
Future strategy for trainees into accessions and training (Assumes ideal Point of Care tests and Serology tests)



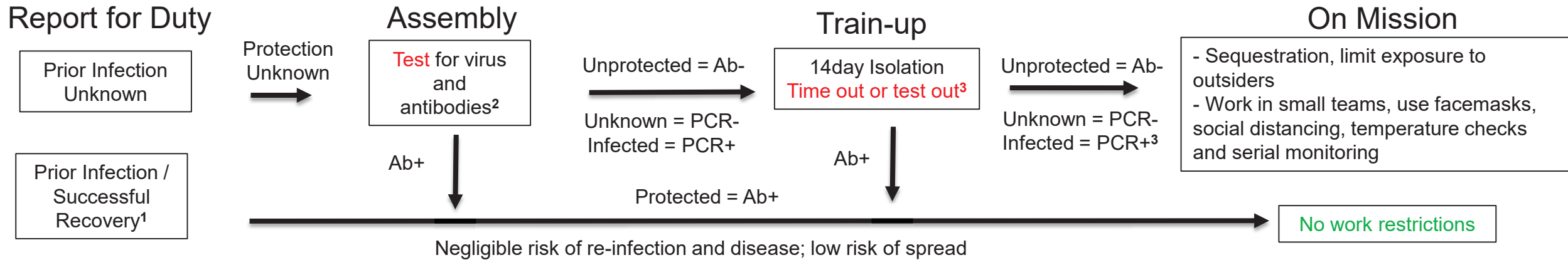


Impact of Testing and Serology on Return to Duty – Operational Units

Current strategy for strategic level platforms (carriers, weapons systems, response forces)



Future strategy for strategic level platforms (Assumes ideal Point of Care tests and Serology tests)



¹Assumption of prior infection and successful recovery prevents re-infection, disease and transmission is based on basic biology. ²At present, protective antibody (Ab) types and levels are unknown. ³PCR+ individuals should undergo isolation and either time out or test out of isolation.



DoD Approach to Vaccines and Prophylaxes

- **Focus is on operational needs and increased speed of product availability**
- **Multiple approaches reduce risk**
- **Five new protective products** leveraging DoD research and manufacturing
 - USMRDC nanoparticle vaccine
 - Inovio DNA vaccine: Phase 1 clinical trial in humans started on April 6, 2020
 - Vero Cell Line Vaccine: BARDA re-prioritizing vaccines now, DOD planning to potentially partner with BARDA
 - Multiple monoclonal antibodies
 - Polyclonal antibody: Ready for clinical trials in July
- **Evaluate** products in DoD populations:
 - Allows early access to potentially protective and therapeutic products
 - Assess safety and effectiveness in DoD populations
- **Partnerships:**
 - Leverage all capabilities within DoD for the effort (basic discovery, manufacturing, clinical trials)
 - Ensure synergistic relationships, not duplication, with HHS NIH and BARDA
 - Leverage private sector investment for cost-sharing

Goal: Rapid Development of Medical Countermeasures

OSJI-Covid / 20cv5096 (DoD 20-L-1014) / 3996



DoD COVID-19 Vaccine Programs

DoD has several vaccine efforts as part of the USG response efforts, under the Interagency SARS-CoV-2 Medical Countermeasures Task Force. Multiple approaches reduce risk.

Vaccine Platform	DoD Lead and Collaborator	Development Status & Concept
Novel Ferritin Nanoparticle	USAMRDC	<ul style="list-style-type: none">• Pre-clinical; planned Phase I Clinical Trial for safety in Sept 2020• A nanoparticle vaccine presents the immune system with multiple displays of the virus protein for an increased immune response; uses a USAMRDC adjuvant (immune booster)
DNA Vaccine	JPEO-CBRND EB /Inovio/CEPI	<ul style="list-style-type: none">• Phase Clinical Trial for safety started 6 April; follow-on efficacy clinical trials could include limited use DoD populations in summer 2020• A nucleic acid vaccine delivers to the host the DNA/RNA needed to produce the vaccine within the host cell; has already been used to develop a vaccine for past coronavirus
Vero Cell-produced Vaccine	JPEO-CBRND EB	<ul style="list-style-type: none">• Pre-clinical• A platform technology that utilizes well-characterized cell lines to produce vaccines such as VSV-based or attenuated viruses



Back Up

OSJI-Covid / 20cv5096 (DoD 20-L-1014) / 3998

UNCLASSIFIED // ~~FOUO~~ // ~~PRE-DECISIONAL~~



IDCRP- EPICC Protocol: Details

- Epidemiology, Immunology and Clinical Characteristics of Emerging Infectious Diseases with Pandemic Potential (EPICC)
- Primary Objective: To describe the epidemiology, immunology and clinical characteristics, course and outcomes of emerging infectious diseases in MHS beneficiaries – Current focus: COVID-19 / SARS-CoV-2
- Objectives:
 1. To describe the natural history of clinical disease
 2. To identify risk factors for infection and severe clinical course
 3. To characterize the host immune response to infection AND to evaluate the correlation between symptom severity, virologic/microbiologic characteristics, host immune response and clinical course
- Study Populations (includes adults and children):
 - Inpatient confirmed COVID-19 cases or persons under investigation (PUI)
 - Outpatient confirmed COVID-19 cases or PUI
 - Asymptomatic individuals with high risk for exposure



OSJI-Covid / 20cv5096 (DoD 20-L-1014) / 3999



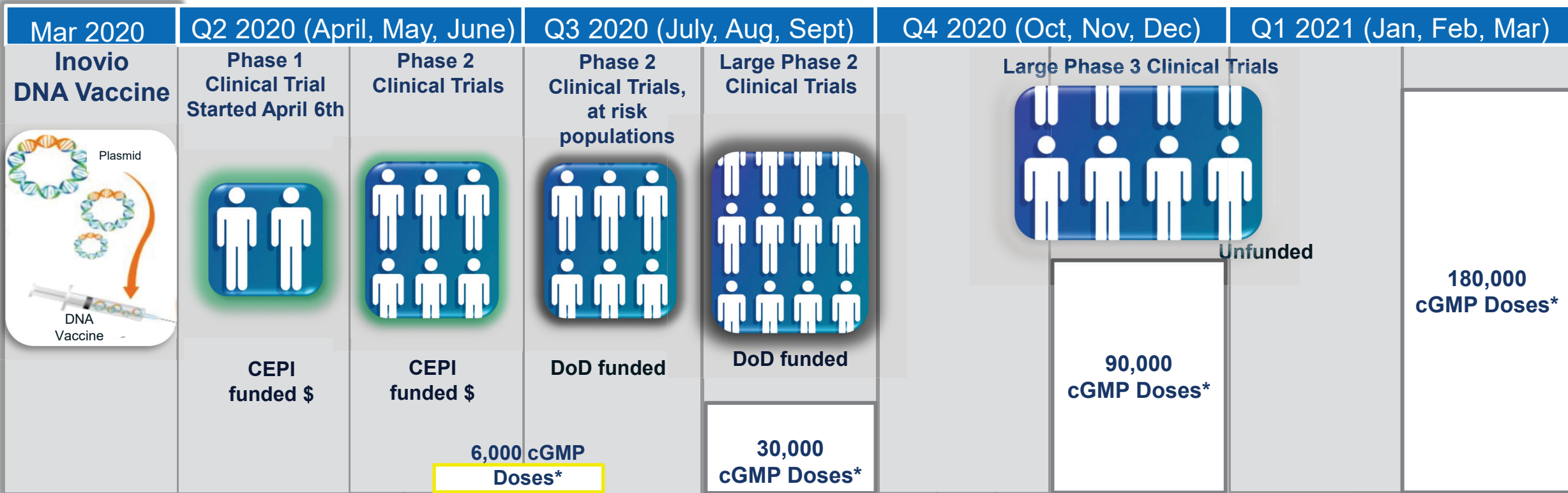
COVID- 19 Paris Island Study Research Questions

COVID-19 RDT&E FIELD STUDIES

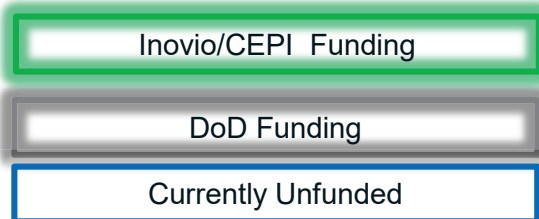
	RESEARCH QUESTION	ALIGNED STUDY/ PROTOCOL	OUTCOMES	TIMELINE
1	What is the attack rate of SARS-CoV-2?	Parris Island & Other Recruit Protocols	Number of individuals positive for SARS-CoV-2 over 8 weeks of observation through nasal swabs (PCR test) and/or blood test (serology)/total number of individuals.	Results available: <ul style="list-style-type: none"> • 24-36 hours after enrollment • 1, 2, 4, 6, and 8 weeks after enrollment of each cohort
2	What percentage of individuals who acquire SARS-CoV-2 have mild, moderate, or severe disease or no symptoms (asymptomatic)?	Parris Island & Other Recruit Protocols	Number of individuals positive for SARS-CoV-2 (PCR and/or serology) with mild or no symptoms/all positive individuals.	Results available: <ul style="list-style-type: none"> • 24-36 hours after enrollment • 1, 2, 4, 6, and 8 weeks after enrollment of each cohort
3	What percentage of recruits become infected after implementing the two week quarantine prior to training?	Parris Island & Other Recruit Protocols	Number of individuals positive for SARS-CoV-2 over 2 week quarantine through nasal swabs (PCR test) and/or blood test (serology)/total number of individuals.	Results available: <ul style="list-style-type: none"> • 24-36 hours after enrollment • 1, 2, 4, 6, and 8 weeks after enrollment of each cohort
4	Is there an antibody response in infected individuals and how does the magnitude of the antibody response vary based on symptoms?	Parris Island & Other Recruit Protocols	Correlation of antibody response (type and magnitude) to symptoms based on questionnaire/medical records.	2-4 weeks for each cohort
5	How does the magnitude of SARS-CoV-2 titers change over a month?	Parris Island & Other Recruit Protocols	Assessment of antibody levels periodically during the study until study completion.	4-22 weeks for each cohort
6	Is the antibody response protective against re-infection (generate immunity)?	Parris Island & Other Recruit Protocols	Assessment of ability of serum to neutralize virus in laboratory models.	12-24 weeks
7	What cytokine and chemokine changes occur in individuals with asymptomatic versus symptomatic infections?	Parris Island & Other Recruit Protocols	Assessment of biomarker levels in blood.	Anticipated 8-10 weeks after enrollment
8	What is the cellular immune response that develops in individuals with both symptomatic and asymptomatic infections?	Parris Island & Other Recruit Protocols	Assessment of T and B cell response to help inform countermeasure development including vaccines.	Anticipated 8-10 weeks after enrollment



DNA Vaccine Development Timeline



*Vaccine is a two-dose series



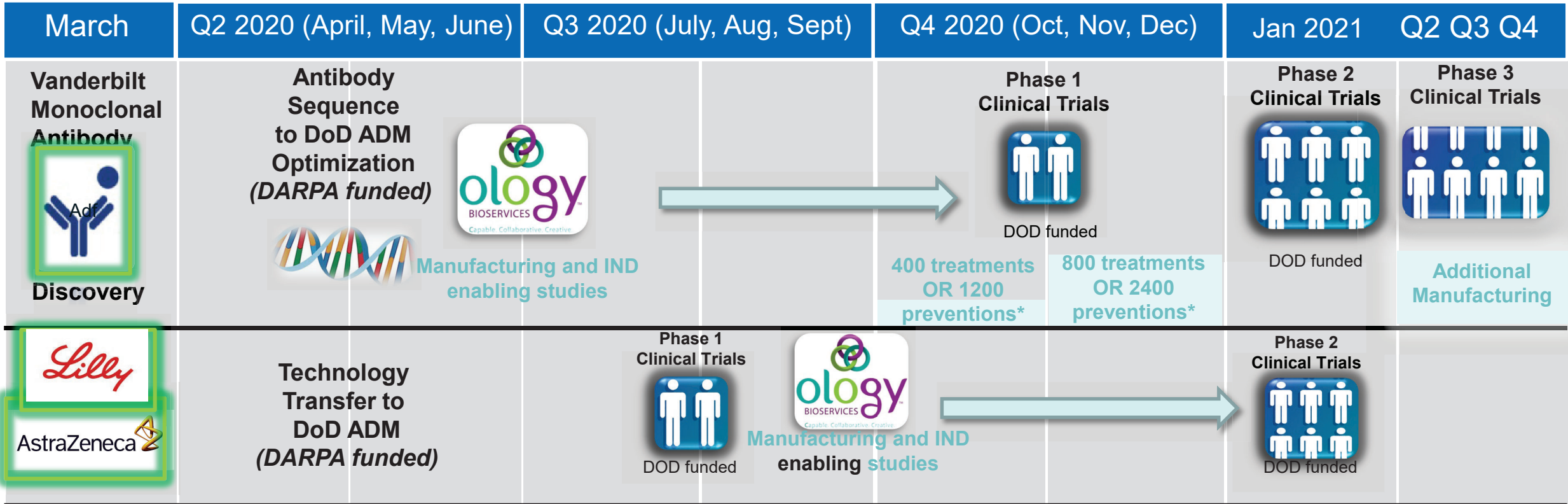
Partnership with DoD-ADM



- DoD funded efforts provide 250,000 doses by July 2021



Monoclonal Antibody Timeline



- DARPA Funding
- DoD Funding
- Currently Unfunded

*Projected # of doses is based on process assumptions. Fluctuation in numbers may occur during processing



Current COVID-19 Serology Efforts in DoD

Are You Protected?

Research Questions

- Laboratory: Assay should detect which antibodies?

Spike glycoprotein?
Hemagglutinin?
Other?



- Landscape Tracking:
Open source info
Target, sensitivity/specificity

- Cohort Studies:



Immune  Not Immune 

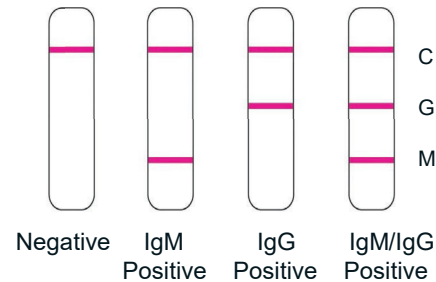
What Tools do we need?

Assess Immunity, Improve Detection

Serology



Lateral Flow Immunoassay



Goal: 1) High Volume Lab Testing
2) Point of Care Testing

Tool Evaluation

HHS Partnership for Selection of Commercial Immunoassays

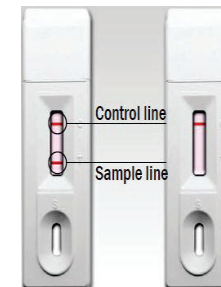
Market Research



Independent Evaluation



Downselect for Testing



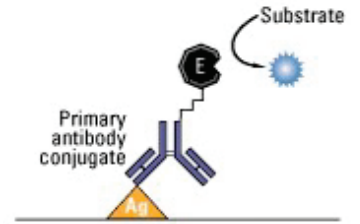
Large Scale Purchase for Field Trials

Goal: Rapid Testing and Evaluation of Immune Status



Overview of Antigen vs Antibody Based Testing

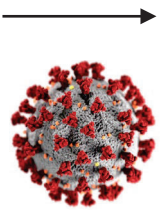
- Antibodies = Y-shaped molecules produced by the body in response to infection
 - Attach to the virus with precision (lock and key concept)
 - Can also be designed and manufactured for different purposes
- Antibody-based tests (Immunoassays) use virus-specific antibodies in a rapid, point of care tests
 - Called Lateral Flow Immunoassay (LFI) - sample runs across the test wells and causes a color change
 - Enzyme-linked Immunosorbent Assay (ELISA)- more specific and quantitative, high throughput



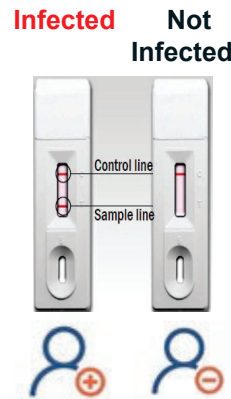
Goal:
Detect Viral Protein (Antigen) to Assess Infection (Diagnosis)



Nasal Swab

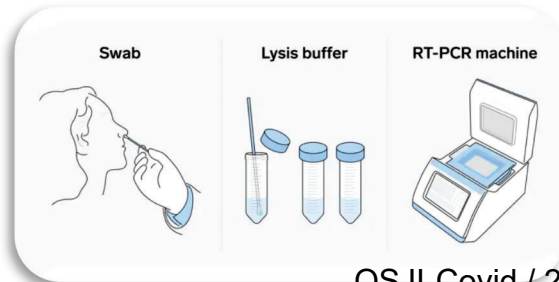


Is viral proteins present?



- Capture antibodies are anchored to test floor
- Virus shed by patient is captured
- Secondary signal antibodies attaches to virus for Color change (+)

PCR*:
Gold Standard Virus Detection
 (*Only Proven Technology)

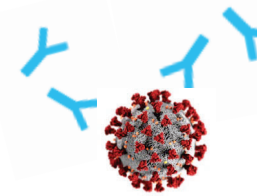


Goal:
Detect Host Antibodies to Assess Protection (Screening)

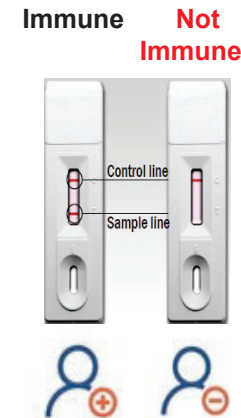
1. POC



Blood or plasma



Are antibodies to the virus present?



- Viral proteins are anchored to test floor
- Patient antibodies in sample attach
- Secondary signal antibodies attaches to patient antibodies for Color change (+)

2. Lab (CDC)

ELISA*:
Enzyme-linked immunosorbent assay
Gold Standard Antibody Test
 (*Only Proven Technology)





COMMERCIALY AVAILABLE SARS-COV-2 IMMUNOASSAYS

FDA Emergency Use Authorization SARS-CoV-2 Antibody Tests

1. Chembio Diagnostic Systems

- ✓ DPP COVID-19 System



2. Ortho Clinical Diagnostics

- ✓ VITROS® Immunodiagnostic
Anti-SARS-CoV-2

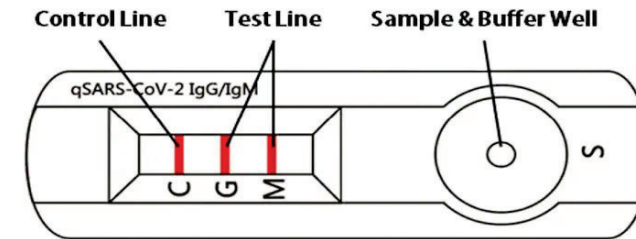


3. Cellex, Inc

- ✓ qSARS-CoV-2 IgG/IgM Rapid Test



Plus >50 non-FDA approved Immunoassays



Current Limitations of All Immunoassays (Why we are not using them yet) :

- Performance uncertain
- Interpretation (Not sure what a + means for immunity)
- Potential false positive and negative results
- Does presence of antibodies equate to long-term immunity?
- When are antibodies produced during infection?
- How long are antibodies effective after infection?

Current Efforts: HHS Interagency Serology Task Force

- Address concerns with assay limitations
- Evaluation of commercially available immunoassays
- Field Testing

From: [Fenton, Bryan LTG SD](#)
To: (b) (6)
Subject: FW: G357 Weekly Update
Date: Sunday, May 24, 2020 8:09:19 AM

From: Flynn, Charles A LTG USARMY HQDA DCS G-3-5-7 (USA)
Sent: Sunday, May 24, 2020 8:08:57 AM (UTC-05:00) Eastern Time (US & Canada)
To: Fenton, Bryan LTG SD
Subject: Re: G357 Weekly Update

Bryan

Thanks — and same to you, (b) (6) !

(b) (6)

You guys have a great weekend and thanks for all of your selfless service — you (b) (6) and the family have all proudly serve the Nation! Pray for the ones who can't — we own them and their families moments of silence this weekend for their last full measure.

I'll track you down this week for lunch — you come to my office — you get to sneak out!

Vr
Charlie

From: "Fenton, Bryan LTG SD" (b) (6)
Date: Sunday, May 24, 2020 at 7:28:30 AM
To: "Flynn, Charles A LTG USARMY HQDA DCS G-3-5-7 (USA)"
(b) (6)
Subject: RE: G357 Weekly Update

Thanks for these Charlie... always helpful

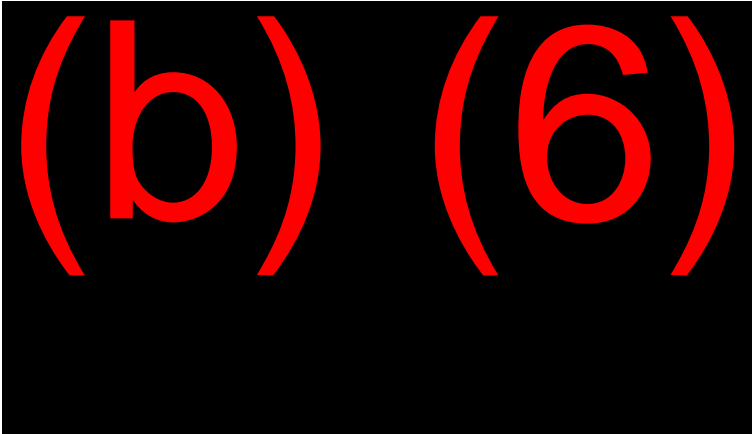
//

All the best to you, (b) (6) and the kids for a restful, reflective and reverent Memorial Day. We miss you all over here!

V/R,

Bryan

LTG Bryan P. Fenton, USA
Senior Military Assistant to the Secretary of Defense



From: Flynn, Charles A LTG USARMY HQDA DCS G-3-5-7 (USA) (b) (6)

Sent: Friday, May 22, 2020 11:30 AM

To: McCarthy, Ryan D HON USARMY HQDA SECARMY (USA) (b) (6)

McConville, James C GEN USARMY HQDA CSA (USA) (b) (6)

Cc: (b) (6)

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(b) (6) Beaudette, Francis M LTG USARMY USASOC (US)

(b) (6)

(b) (6) Benchoff, Peter N BG USARMY HQDA DCS G-3-5-7 (USA)

(b) (6) Bernabe, Sean C BG USARMY USAREUR (USA)

(b) (6); Berrier, Scott D LTG USARMY HQDA DCS G-2 (USA)

(b) (6)

(b) (6) Bills, Michael A LTG USARMY 8 ARMY (USA)

(b) (6)

(b) (6)

(b) (6)

(b) (6) Calloway, Joseph R MG USARMY HRC (USA)

(b) (6)

(b) (6) Calvert, Paul Thomas MG USARMY HQDA DCS G-3-5-7 (USA)

(b) (6); Cavoli, Christopher G LTG USARMY USAREUR (US)

(b) (6)

(b) (6) Cloutier, Roger L Jr MG USARMY USARAF (US)

(b) (6) Gingrich, Karl H MG USARMY HQDA DCS G-8 (USA)

(b) (6)

(b) (6) Cooke, Thomas M (Tom) SES USARMY HQDA DCS G-3-5-7 (USA)

(b) (6); Costanza, Charles D BG USARMY HQDA DCS G-3-5-7 (USA)
(b) (6) Crawford, Bruce T LTG USARMY HQDA CIO G-6 (US)
(b) (6); Daly, Edward M LTG USARMY USAMC (USA)
(b) (6)
Dickinson, James H LTG USARMY SMDC (US)
(b) (6) Dingle, Raymond S LTG USARMY HQDA OTSG (USA)
(b) (6) Durham-Aguilera, Karen L SES USARMY HQDA ANMC (USA)
(b) (6)
Eifler, Brian S BG USARMY HQDA OCLL (USA)
(b) (6) Evans, Jason T LTG USARMY HQDA DCS G-9 (USA)
(b) (6) Faris, Jill K BG USARMY HQDA OTSG (USA) (b) (6)
Fenton, Bryan P LTG USARMY OSD OSD (USA) (b) (6) Ferrell, Terry R LTG
USARMY USARCENT (USA) (b) (6) Fisher, Ryan A SES USARMY HQDA ASA CW
(USA) (b) (6) Fogarty, Stephen G LTG USARMY ARCYBER (USA)
(b) (6) Francis, David J MG USARMY AVNCOE (USA)
(b) (6) Funk, Paul E II GEN USARMY TRADOC (USA)
(b) (6); Gabram, Douglas M LTG USARMY IMCOM HQ (USA)
(b) (6)
Gainey, Sean A MG USARMY JS J8 (USA)
(b) (6) Gallivan, James J BG USARMY FUTURES COMMAND (USA)
(b) (6) Gamble, Duane Anthony LTG USARMY HQDA (USA)
(b) (6) Garcia, Gregory L (Greg) SES USARMY HQDA CIO G-6 (US)
(b) (6) Garrett, Michael X GEN USARMY FORSCOM (USA)
(b) (6) Gericke, Bradley T MG USARMY HQDA DCS G-3-5-7 (USA)
(b) (6) Gillis, W Jordan HON OSD OUSD A-S (USA)
(b) (6)
Green, William Jr. (Bill) BG USARMY HQDA OCCH (USA)
(b) (6); Grinston, Michael A SMA USARMY HQDA SMA (USA)
(b) (6)
Hannah, Amy E BG USARMY HQDA OCPA (USA)
(b) (6)
Hibbard, Lonnie G MG USARMY IMT (USA)
(b) (6)
Hokanson, Daniel R LTG USARMY NG NGB (US) (b) (6) Horlander,
Thomas A LTG USARMY HQDA ASA FM (USA) (b) (6) Hort, John H SES
USARMY FORSCOM (USA) (b) (6) Hovatter, Mark J BG USARMY HQDA DCS G-3-
5-7 (USA) (b) (6)
Jackson, Donald Edwin (Ed) JR MG USARMY HQDA OTIG (USA)
(b) (6); James, Rickey Dale (RD) HON USARMY HQDA ASA CW (USA)
(b) (6) James, Thomas S Jr LTG USARMY FIRST ARMY HQ (USA)
(b) (6) Jette, Bruce D HON USARMY HQDA ASA ALT (USA)
(b) (6) Johnson, John P (Pete) MG USARMY USARPAC (USA)

(b) (6) Johnston, Gary W MG USARMY HQ INSCOM (USA)
(b) (6) Jones, Omar J IV MG USARMY MDW (USA)
(b) (6) Kadavy, Timothy J LTG USARMY NG NGB ARNG (US)
(b) (6) ; Kelly, Thomas E III SES USARMY HQDA DUSA (USA)
(b) (6) Kem, John S MG USARMY AWC (USA) (b) (6)
Klein, Martin F (Marty) BG USARMY HQDA DCS G-3-5-7 (USA) (b) (6) LaNeve,
Christopher Charles BG USARMY HQDA DCS G-3-5-7 (USA) (b) (6)
(b) (6)
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Lowman, Christopher J SES USARMY HQDA DCS G-3-5-7 (USA)
(b) (6) Luckey, Charles D LTG USARMY OCAR (USA)
(b) (6)
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(b) (6) Mahoney, Michael T SES USARMY HQDA DCS G-3-5-7 (US)
(b) (6) Markowitz, David SES USARMY HQDA DCS G-8 (USA)
(b) (6)
(b) (6) Martin, Joseph M GEN USARMY HQDA VCSA (USA)
(b) (6) Martin, Theodore D LTG USARMY TRADOC (USA)
(b) (6) McCurry, Michael C (Mac) BG USARMY HQDA DCS G-3-5-7 (USA)
(b) (6) McPherson, James E HON USN (USA)
(b) (6)
(b) (6) Miller, Kathleen S SES USARMY HQDA OAA (USA)
(b) (6)
(b) (6) Miyamasu, Myles M SES USARMY CAA (USA)
(b) (6)
(b) (6) Moore, William F SES USARMY HQDA DCS G-4 (USA)
(b) (6) ; Murray, John M (Mike) GEN USARMY FUTURES COMMAND (USA)
(b) (6)
(b) (6) Nucci, Adam J SES USARMY HQDA DCS G-3-5-7 (USA)
(b) (6)
(b) (6)
(b) (6) Ostrowski, Paul A LTG USARMY HQDA ASA ALT (USA)
(b) (6) Pasquarette, James F (Jim) LTG USARMY HQDA DCS G-8 (USA)
(b) (6)
(b) (6) Pede, Charles N LTG USARMY HQDA OTJAG (USA)
(b) (6)
(b) (6) Perna, Gustave F GEN USARMY USAMC (USA)
(b) (6)
(b) (6) Piatt, Walter E LTG USARMY HQDA DAS (USA)
(b) (6)
(b) (6) Poppas, Andrew P LTG USARMY JS J3 (USA)
(b) (6)
(b) (6) Preston, Andrew D BG USARMY USARPAC (USA)
(b) (6)
(b) (6) Quintas, Leopoldo A LTG USARMY FORSCOM (USA)

(b) (6) Rainey, James E (Jim) LTG USARMY CAC (USA)
(b) (6) Randon, Diane M SES USARMY HQDA DCS G-2 (USA)
(b) (6) Redmann, Steven J (Steve) SES USARMY HQDA CSA (USA)
(b) (6) Richards, Anne L SES USARMY HQDA AAA (USA)
(b) (6) Richardson, James M LTG USARMY FUTURES COMMAND (USA)
(b) (6) Richardson, John B IV MG USARMY FORSCOM (USA)
(b) (6) Richardson, Laura J LTG USARMY ARNORTH (USA)
(b) (6) Risch, Stuart W MG USARMY HQDA OTJAG (USA)
(b) (6) Rohling, Andrew Michael MG USARMY USAREUR (USA)
(b) (6) Seamands, Thomas C LTG USARMY HQDA DCS G-1 (USA)
(b) (6) Semonite, Todd T LTG USARMY HQDA OCE (USA)
(b) (6) Smith, Leslie C LTG USARMY HQDA OTIG (USA)
(b) (6) ; Smith, Matthew D BG USARMY HQDA DCS G-3-5-7 (USA)
(b) (6) Solhjem, Thomas L MG USARMY HQDA OCCH (USA)
(b) (6) Stoddard, Steven A SES USARMY HQDA DCS G-3-5-7 (USA)
(b) (6) Swan, Robin Paul SES USARMY HQDA SECARMY (USA)
(b) (6) Thurgood, L Neil LTG USARMY HQDA ASA ALT (USA)
(b) (6) Twitty, Stephen M (Steph) LTG USARMY EUCOM DCOM (USA)
(b) (6) Tyler, Joel Keith MG USARMY ATEC (USA)
(b) (6) Vereen, Kevin MG USARMY HQDA PMG (USA)
(b) (6) Walker, Flem Bowen (Donnie) JR MG USARMY USAMC (USA)
(b) (6) Wallace, Roy A SES USARMY HQDA DCS G-1 (USA)
(b) (6) Walrath, Daniel R MG USARMY ARSOUTH (USA)
(b) (6) Wardynski, Eugene C (Casey) HON USARMY HQDA ASA MRA (USA) (b) (6) ; Wehr, Michael C MG USARMY TRANSCOM TCJ5/4 (USA) (b) (6) Weidner, John W BG USARMY STRATCOM DJ5 (USA) (b) (6) ; Wendt, Eric P LTG USARMY (USA) (b) (6) Wesley, Eric J LTG USARMY AFC-FCC (USA) (b) (6) ; White, Jeffrey S SES USARMY HQDA ASA ALT (USA) (b) (6) Whitman, Bryan G SES WHS EITSD (US) (b) (6) ; Williams, Darryl A LTG USARMY USMA (USA) (b) (6)

(b) (6)

Subject: G357 Weekly Update

Mr. Secretary and Chief

A lot of successful heavy lifting this week here in the G357, across the Army, and on the Hill. The team is reinforcing the Army's narrative on readiness, pressing our planning campaign on posture initiatives, and keeping Congressional leaders informed of our fielding and stationing developments.

Below are G357 highlights –

THIS PAST WEEK – SIX POINTS

1. **HASC-R Briefing: Impacts to Military Readiness & Training.** On Wednesday I briefed the House readiness subcommittee along with fellow Service 3s. Overall great session with very positive feedback from Chairman Garamendi (D-CO). He is most interested in gathering the military's COVID lessons learned—we'll share some of CALL's Quick Look work to-date with them. Also lots of interest in **collective training impacts**—I shared how we've adjusted CTCs and highlighted a lot of our training initiatives. They are anxious to **learn more about our depots**, which Duane Gamble and his teammates will address during a brief to this subcommittee on 28 MAY.
2. **Indo-Pacific Defense Initiative.** Thank you for inviting me to join you both during your breakfast meeting to discuss our INDOPACOM Posture efforts with SEN Perdue (R-GA) and SEN Gardner (R-CO). We'll provide you and other ASLs a comprehensive **review of IPDI next Friday.**
3. **Operation Warp Speed (OWS).** Chief, tracking your guidance to **fully support GEN Perna** in his new role as the OWS chief operating officer. The G357 team is fully prepared to support the OWS mission of **accelerating the development, manufacturing, and distribution of vaccines, therapeutics, and diagnostics** (medical countermeasures). Yesterday myself, Scotty Berrier, LTG Ostrowski, BG McCurry sat with GEN Perna on an update by the JS J2 on Global Threats. A very helpful session for GEN Perna; we'll create a battle rhythm event addressing threats that OWS will contend with.
4. **V Corps, MDTF, USAREUR/USARAF.** Pete Benchoff had a very productive and well-received phone call with HASC PSMs—he is carrying the water on a lot of key messaging. Pete provided **background on MDTF** and explained **OFSC process** all of which PSMs found extremely valuable. We'll look to provide similar updates to the SASC.
5. **HPCON Levels:** As you are both aware the **SecDef signed a memo delegating authority to change HPCON levels** to Senior Mission Commanders. Chris LaNeve's G-357 OD team has the **transition framework Base Order** ready to publish which provides amplifying guidance on **local case rate, testing, treatment, and monitoring.** Pending your further guidance.
6. **COVID-19 CUOPS:** The CAT published **FRAGOs 25, 26, and 27** which provide guidance on the distribution of BioFire Tests, leave procedures under the Families First Coronavirus Response Act, and passport/visa expedited request processing. Also of note, the **"Army PCS Move App"** that Duane Gamble's G4 team developed has proven to be a very useful information source across our formations.

G357 OPTs – SEVEN PLANNING EFFORTS TO HIGHLIGHT:

1. **Med Reform:** COVID impacts highlight major friction points and flawed assumptions in Med Reform. The Army's unique medical capabilities clearly allowed us to be agile and adaptive during COVID response. This likely would not have occurred under the DHA transition plan. Our Med Reform OPT, OTSG, and M&RA will update you next Friday.
2. **Dr. Stoddard:** My sincerest thanks to Dr. Steve Stoddard for his exceptional work as the Deputy Director of the G-357 FM team as he transitions to become the Director of CAA. We

also welcome Mr. Myles Miyamasu as the new FM Deputy.

3. **V Corps.** Pete Benchoff's G-357 FM team is drafting FRAGO 1 to EXORD 162-20 to address command relationship and establish the Forward Command Post (FCP) equipping requirements. Anticipate release for staffing on 26 May with a suspense of 15 Jun.
4. **TAA 23-27:** Our team kicked off the TAA 23-27 Force Synchronization Review (FSR) OPT last week. Initial focus is to ensure data accuracy and Force Integration Functional Area (FIFA) coordination. Outputs of the Stationing OPT will help inform the needed revisions to AR 5-10.
5. **Army Watercraft.** AWS Relocation EXORD staffing is complete and is going through legal review. The Composite Watercraft Company Force Design Update (FDU) cleared requirements determination by CAC. Kickoff meeting for the Army Watercraft FFRDC Study which was directed by the SecDef is 9 Jun.
6. **CCLTF.** Mr. Secretary, the action memo response you signed designates you as the DOD lead for the CCLTF pending SD approval. CCLTF EXORD is in DRAFT as well as a revision to the CCLTF Charter. We anticipate gaining tri-chair (Army-USMC-SOCOM) by mid to late June.

UPCOMING SECDEF MEETINGS, JCS TANKS, and OPSDEPS:

- 26 MAY (TUE) **SWPR: People** (see slides on SIPR)
- 27 MAY (WED) OPSDEPS: DRT, JF Strategic Estimate
- 28 MAY (THU) DEPOPSDEPS: Munitions II
- 29 MAY (FRI) **JCS TANK: GFMIG**

ON THE HORIZON:

- 27 MAY: **Pensacola Shooting Update to SA/CSA**; Scotty Berrier and I will host a small-group 3-Star session on 26 MAY to discuss your taskers to us regarding International Military Students attending US schools.
- 27 MAY: Med Reform Update to VCSA
- 29 MAY: **Pacific Defense Initiative Comprehensive Review to SA/CSA**
- 29 MAY: **Med Reform Options Brief to SA/CSA**
- 8-12 JUN: **Army Modernization and Equipping Conference (AMEC)**
- **Army Campaign Plan (ACP):**
 - 27 MAY: INDOPACOM Posture, Bio-Defense/CNI/CWMD Readiness, Army COVID-19 Campaign Plan (AC2P)
 - 3 JUN: Army Modernization Enterprise Working Group, C-UAS, AC2P
 - 10 JUN: AC2P
 - 17 JUN: Defender 20 Reset, MDTF, Army Watercraft Strategy, Mobilization & Power Projection Strategic Gap Analysis

EXORDs: Significant EXORDs published this past week:

- FRAGO 25, 26, & 27 to HQDA EXORD 144-20: Army Wide Preparedness and Response to COVID-19 Outbreak.
- HQDA EXORD 196-20: **COVID-19 Voluntary Recalls**
- HQDA EXORD 177-20: **The Army Strategic Readiness Assessment**
- HQDA EXORD 201-20: **Building a Stryker Training Set**

As we honor the fallen this Memorial Day, I wish also to express **my sincere thanks to all of you and your families for the selfless sacrifices in war and peace – thank all of the Soldiers we proudly serve with – and honor them all!**

Pending your questions or guidance.

People First – Winning Matters!

Vr
Charlie

From: [Fenton, Bryan LTG SD](#)
To: (b) (6)
Subject: FW: HQDA Coronavirus Update 26 MAR 20 (UNCLASSIFIED)
Date: Thursday, March 26, 2020 8:59:48 PM
Attachments: [US COVID-19 Epi Graph 26Mar 0600.pptx](#)
[Global COVID-19 Epi Graph 26Mar 0600.pptx](#)
[image001.png](#)

From: Piatt, Walter E LTG USARMY HQDA DAS (USA)
Sent: Thursday, March 26, 2020 8:59:35 PM (UTC-05:00) Eastern Time (US & Canada)
To: Stewart, Jennifer SES SD; Fenton, Bryan LTG SD
(b) (6) Redmann, Steven J
(Steve) SES USARMY HQDA CSA (USA)
Subject: FW: HQDA Coronavirus Update 26 MAR 20 (UNCLASSIFIED)

Ms. Stewart,

Good evening. Sorry to fill your in box, but the last email I sent you was not the "Army Update" but rather some actions we are working that might be of interest. Our daily update is below. If your team would like our daily update please let me know we would be happy to send. The actions I sent are simply items of interest. Not sure they are worth the SEC DEF's time but if there is something on the list you think is let me know and we will provide more.

Hope this is helpful. Thanks again for establishing a daily meeting. I find them very helpful.

V/R

Walt

Subject: HQDA Coronavirus Update 26 MAR 20 (UNCLASSIFIED)

CLASSIFICATION: UNCLASSIFIED

UPDATE: # 47

As of 26 1900 MAR 20

BLUF:

- o Confirmed Army cases: 301 (+51) (108-Soldiers, 9-Cadets, 65-DA Civilians, 52-Contractors, and 67-Dependents).
- o Vermont will exhaust COVID-19 testing capacity as of 26 MAR 20; this issue is being worked through the

Regional Response Coordination Center-National Response Coordination Center.

- o Governors of New Jersey, North Carolina, Florida, and Texas declared Major Disaster Declarations on 25 MAR 20.
- o 21 states have issued “stay-at-home” orders affecting approximately 158 million Americans.
- o Minnesota issued a shelter-in-place order in effect 27 MAR 20 to 10 APR 20.
- o Maryland Governor allowing nursing and medical technician students from Maryland universities and colleges to assist the COVID-19 response.
- o Cruise Ships COSTA MAGICA and COSTA FAVALOSA are in transit towards Miami, FL with 13 critically ill crew members, including 9 COVID-19 positives.
- o USAREUR: Significant increases over the last 24 hours: Italy 80,539 (+11,363), Spain 56,197 (+8,587), Germany 43,646 (+9,637), and France 25,624 (+2,987). Other countries of interest: Poland 1,163 (+236), Estonia 538 (+134), Latvia 244 (+23), and Lithuania 290 (+35).
- o USARPAC: Countries of interest: China 81,782 (+121), South Korea: 9,241 (+104), and Japan 1,399 (+206).

Last 24 Hours:

Army Cases (as of 26 1400 MAR 20):

ROM (quarantine or isolation)

Positive Cases

Total

Mil

CDT

DA-Civ

DA-CTR

Dep

Total

Recovered

Mil

CDT

DA-Civ

DA-CTR

Dep

Deaths

USAREUR

2093

1131

0

332

260

370

65

0

19

0

11

16

19

0

ARCENT

2002

1442

0

35

518

7

0

0

0

0

0

0

0

0

USARAF

131

90

0

6

3

32

2

0

1

0

0

0

1

0

USARPAC

775

565

0

91

3

116

7

10

1

0

5

1

0

0

ARSOUTH

63

50

0

8

5

0

0

0

0

0

0

0

0

0

ARNORTH

23287

12791

989

3880

1892

3735

227

7

87
9
49
35
47
1
Total
28351
16069
989
4352
2681
4260
301
17
108
9
65
52
67
1

- o ROK Military cases: 39 positive, 26 (+1) recovered, and 0 deaths.
- o NGB reported positive cases: 19 (1 – CA, IL, KS, MN, MO, OR; 2 – CO, KY, PA, TX, UT; 3 – NY). Under quarantine: 18 (n/c) T-10 AGR at ARNG (Arlington Hall) are due to possible exposure.
- o 58 Compo 3 SMs redeploying from S. Korea will depart on the 26 MAR 20 Patriot Express rotator with a 14-day quarantine upon arrival.

MRDC Summary:

OCLL received RFIs from the HASC and SASC PSMs reference the MRDC’s FDA priority review voucher recommendations. The PSMs queried about DoD’s position, who Army has socialized the recommendations with,

any potential waivers under the current presidential emergency and background on where the rest of government sits on the recommendations. AFC/MRDC will work with HQDA to address these questions.

Prevent:

Daily Vaccine Update: Small animal studies remain on schedule for completion by end of MAR. First human trials of the vaccine on track for JUL 20.

MRDC partnering with Inovio and Ology Industries to assess a separate DNA vaccine effort. We support this partnership as a means to get after “best pony”. More importantly, vaccine development is a cooperation that requires many parallel efforts to deliver the most effective solution.

Detect Update: Status of Diagnostic Kit Development

USAMRIID has begun testing the use of the COVID-19 diagnostic assay to detect virus in military working dog samples. The goal is to determine if the assay can be used to screen military working dogs.

Treat Update:

Distribution of Remdesivir is ongoing. The list of medical treatment facilities (MTF) that will be capable of providing Remdesivir to military personnel grew from nine this morning to 11 MTFs. These medical treatment facilities are: Naval Medical Center Portsmouth, VA, Landstuhl Regional Medical Center, Germany, RAF Lakenheath Medical Hospital, UK, Tripler Army Medical Center, HI, Madigan Army Medical Center, WA, Womack Army Medical Center, NC, Brook Army Medical Center, TX, Martin Army Community Hospital, GA, Darnall Army Medical Center, TX, Walter Reed National Military Medical Center, MD and William Beaumont Army Medical Center, TX.

Funding: MRDC refining 12 month plan of action and milestones for each line of effort (Prevent, Detect, and Treat).

Significant Events:

All states are currently supporting COVID-19 response.

- o Total National Guard in all duty statuses ISO COVID-19 response: 11,396 (+635) (10,071 ARNG and 1,325 ANG).

XX

Total Cases (as of 26 1400 MAR 20):

Global

Confirmed

Previous

Delta

US

Confirmed

Previous

Delta

Confirmed Cases

510,108

438,749

71,359

Confirmed Cases

75,233

55,243

19,990

Deaths

22,993

19,675

3,318

Deaths

1,070

802

268

Countries w/ cases

175

172

3

States w/ cases

50

50

0

As reported by Johns Hopkins University

Evacuation Support Bases

Supported Airport

Tasked Rooms

Billeted

Projected Departure Date

Travis, AFB, CA

N/A

488

0

-

-

MCAS Miramar, CA

N/A

302

63

42

24 MAR

235

25 MAR

212

26 MAR

Joint Base San Antonio (JBSA)- Lackland, TX

N/A

248

0

-

-

Dobbins ARB, GA /

Clay ARNG, GA

ATL

264

49

124

24 MAR

5

23 MAR

113

25 MAR

159

26 MAR

98

26 MAR

- o Travis AFB: 9 passengers at off base medical facilities.
- o MCAS Miramar: 3 passengers at off base medical facilities.
- o Dobbins ARB, GA: 21 passengers at off base medical facilities.
- o JBSA Lackland, TX: 0 passengers at off base medical facilities.
- o Cohort numbers not reported by HHS.
- o Cohort numbers reflect incoming passenger numbers only.
- o Number per cohort is not updated from those that departed to their home states.

Travel Advisories:

- o CDC issued a Global Level 2 (Practice Enhanced Precautions) Travel Health Notice (THN).
- o CDC issued a Level 3 THN (Avoid Non-essential Travel) for: Australia, Austria, Belgium, Brazil, Canada, Chile, China, Czech Republic, Denmark, Ecuador, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, India, Indonesia, Iran, Ireland, Israel, Italy, Japan, Latvia, Liechtenstein, Lithuania, Luxembourg, Malaysia, Malta, Monaco, Netherlands, Norway, Pakistan, Philippines, Poland, Portugal, Qatar, Romania, Russia, S. Africa, S. Korea, San Marino, Saudi Arabia, Singapore, Slovakia, Slovenia, Spain, Sweden, Switzerland, Thailand, Turkey, United Kingdom, Vatican City, and worldwide cruise ships.
- o DOS issued a Global Level 4 Health Advisory advising U.S. citizens to avoid all international travel, and in countries where commercial departure options remain available, to return immediately to the U.S.

Interagency Coordination:

- o RFA 7 (VOCO approved). For use of installations for temporary lodging through 31 MAR 20, in support of asymptomatic Grand Princess passengers and crew, (Travis, AFB, CA, Joint Base San Antonio (JBSA)- Lackland, TX, Dobbins ARB, GA, and MCAS Miramar, CA).
- o SECDEF approved extension of HHS installation support through 4 APR 20.
- o Force Health Protection Guidance #3 (PPE Request Prioritization) released 10 MAR 20.
- o Force Health Protection Guidance #4 (Department of Defense Guidance for Personnel Traveling during the Novel Coronavirus Outbreak) released 11 MAR 20.
- o USSS sent RFA for DoD support to help protect the President and Vice President from COVID-19.

MEDCOM: 9 of 9 Labs approved for testing. Current testing demand remains within inventory. Maximum daily capacity (if labs run 24hrs): 1,350 tests (9 labs x ~50 tests per shift x 3 shifts).

HQDA Crisis Action Team COVID-19 Update and Repository Link:

[https://g357.army.pentagon.mil/od/ODO/ArmyOpCenter/CAWG/CAT/SitePages/Coronavirus%20\(COVID-19\).aspx](https://g357.army.pentagon.mil/od/ODO/ArmyOpCenter/CAWG/CAT/SitePages/Coronavirus%20(COVID-19).aspx)

<https://phc.amedd.army.mil/topics/campaigns/covid19/Pages/default.aspx>

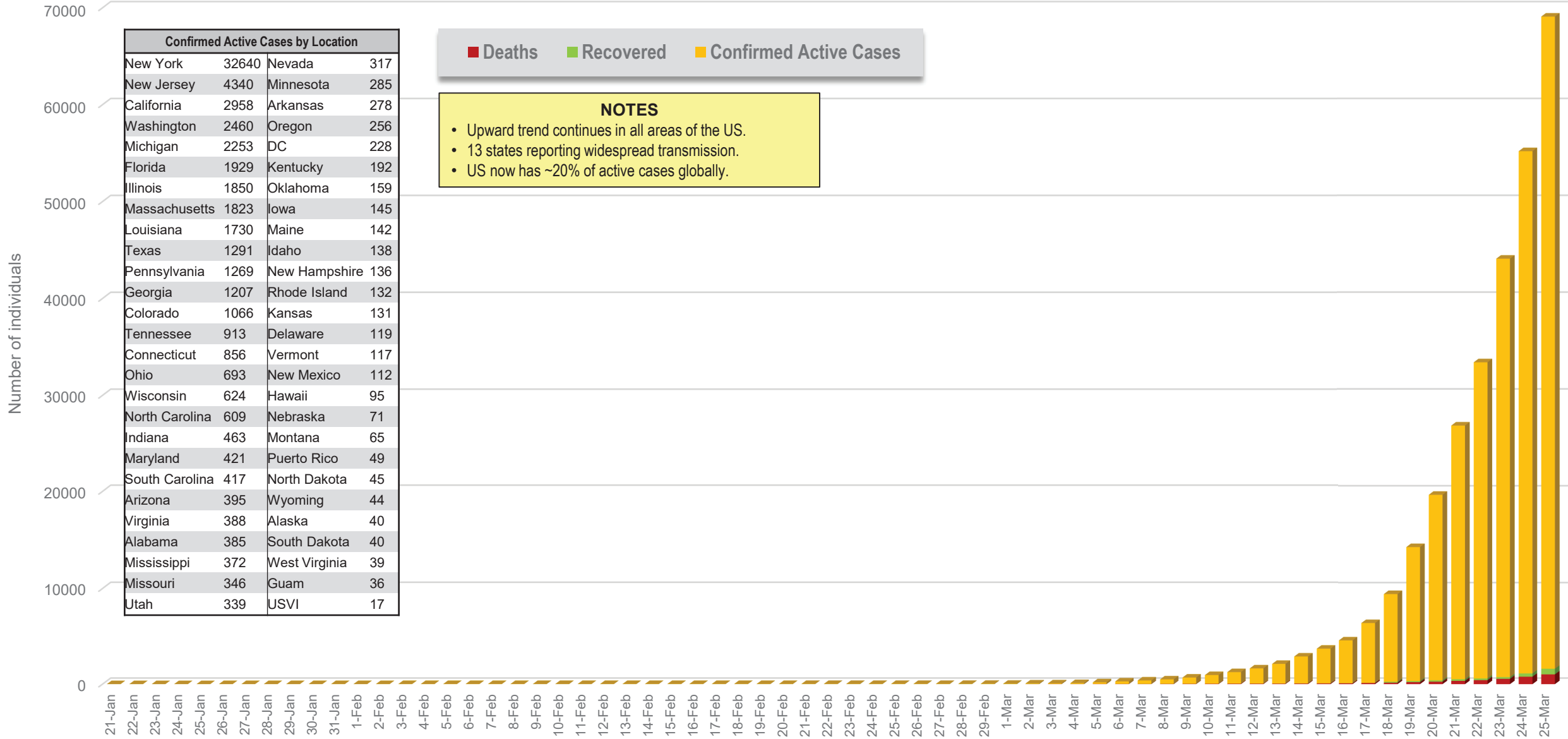
CDC issued new guidance for discontinuation of home isolation as of 16 MAR 20.

<https://www.cdc.gov/coronavirus/2019-ncov/hcp/disposition-in-home-patients.html>

CLASSIFICATION: UNCLASSIFIED



COVID-19 Cumulative U.S. Case Counts* by Status



Confirmed Active Cases by Location			
New York	32640	Nevada	317
New Jersey	4340	Minnesota	285
California	2958	Arkansas	278
Washington	2460	Oregon	256
Michigan	2253	DC	228
Florida	1929	Kentucky	192
Illinois	1850	Oklahoma	159
Massachusetts	1823	Iowa	145
Louisiana	1730	Maine	142
Texas	1291	Idaho	138
Pennsylvania	1269	New Hampshire	136
Georgia	1207	Rhode Island	132
Colorado	1066	Kansas	131
Tennessee	913	Delaware	119
Connecticut	856	Vermont	117
Ohio	693	New Mexico	112
Wisconsin	624	Hawaii	95
North Carolina	609	Nebraska	71
Indiana	463	Montana	65
Maryland	421	Puerto Rico	49
South Carolina	417	North Dakota	45
Arizona	395	Wyoming	44
Virginia	388	Alaska	40
Alabama	385	South Dakota	40
Mississippi	372	West Virginia	39
Missouri	346	Guam	36
Utah	339	USVI	17

■ Deaths
 ■ Recovered
 ■ Confirmed Active Cases

NOTES

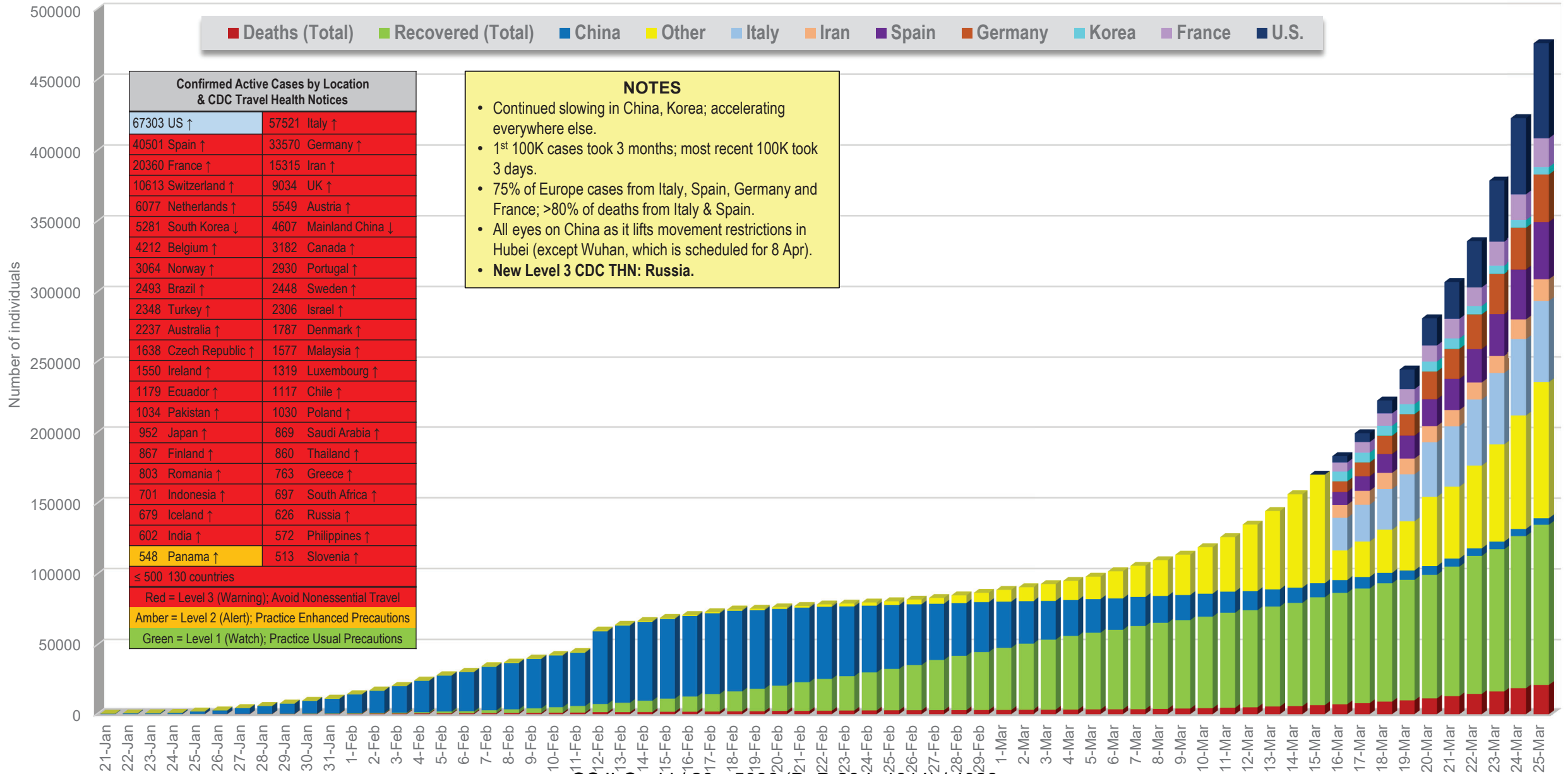
- Upward trend continues in all areas of the US.
- 13 states reporting widespread transmission.
- US now has ~20% of active cases globally.

* Does not include AMCITS from the *Diamond Princess* (47) or *Grand Princess* (22) cruise ships

Confirmed Active = total confirmed minus deaths and recovered



COVID-19 Cumulative Global Case Counts by Location & Status



OSJI-Covid / 20cv5096 (DoD 20-L-1014) / 4026

Case counts for each country and "other" are confirmed active cases (= total confirmed minus deaths and recovered)

Data current as of 25MAR20 @ 2305 EST

Source: JHU CSSE

	Type	Test Kit	Proj FDA Emerg Use Approval	Proj Avail date	Status
Clinical Diagnostic Test kits	PCR	Hologic	17 Mar	APR	Ordered a Hologic Kit for USAMRIID
	PCR	Real-Time	TBD	Late Summer	Algorithm development ongoing. TBD
	Serology	Bio-Rad	TBD	JUL 20	Partner effort. Critical kit needed to support vaccine human trials. Mid summer available for research use only
	Antigen	Bio-Rad	TBD	OCT 21	Partner effort. Handheld device for forward/deployable environments
Surveillance Diagnostic Test Kits	Serology	Bio-Rad	TBD	JAN 21	Partner effort. Same test as the Bio-Rad clinical serology test

From: [Verga, Peter SES SD](#)
To: [Hyten, John E Gen USAF JS OCJCS \(USA\)](#)
Cc: (b) (6); [Lyons, David Brig Gen SD](#); (b) (6)
Subject: FW: Input to the Stimulus Package
Date: Thursday, March 19, 2020 10:37:21 AM
Attachments: [DRAFT FY21 DEFENSE STIMULUS PACKAGE USD A&S Input as of 18 March 2020.xlsx](#)
[original Copy of DRAFT FY21 DEFENSE STIMULUS PACKAGE.xlsx](#)
[COVID coordination.docx](#)

Sir – Here is the email that DSD requested be forwarded to you. V/r Pete

Peter F Verga
Deputy Chief of Staff
Office of the Secretary of Defense

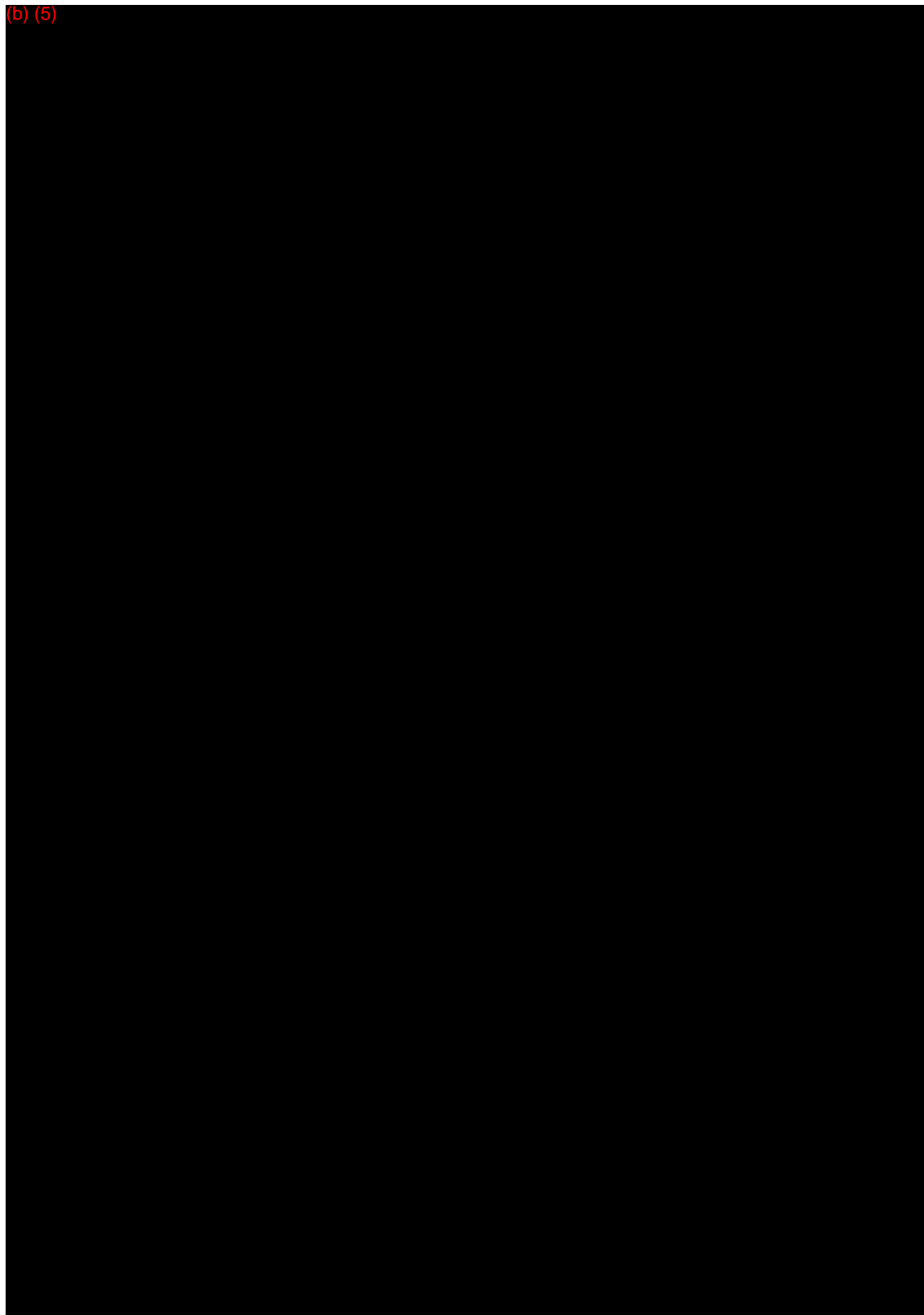
(b) (6)

From: Lord, Ellen M HON OSD OUSD A-S (USA) (b) (6)
Sent: Wednesday, March 18, 2020 13:02
To: Norquist, David HON SD (b) (6)
Cc: Henke, Robert SES SD (b) (6); Shaffer, Alan R HON OSD OUSD A-S (USA) (b) (6); Fahey, Kevin M HON (USA) (b) (6)
Subject: Input to the Stimulus Package

(b) (5)



(b) (5)



(b) (5)



We continue to work with OGC and the Services to identify broad contracting authorities that would further speed business transactions at DoD. Please let me know if you would like to discuss further.

Best,

Ellen

Ellen M. Lord

USD(A&S)

(b) (6)



Production Class	Acct	Line #	PE/SAG	Program	FY21 \$ Add	Quantity Add	Justification	Notes
AIRCRAFT	APAF	1	ATA000	F-35A	\$ 1,172	12	CSAF UFR #3 PRIORITY	Support. Added aircraft executable within existing production capacity.
AIRCRAFT	APAF	1	ATA000	F-35A	\$ 1,272	12	CSAF UFR #3 PRIORITY	Duplicate of previous row. Confirmed USAF UPL is for 12 F-35A's.
AIRCRAFT	APAF	1	ATA000	F-35A	\$ 1,272	12	CSAF UFR #3 PRIORITY	Duplicate of previous row. Confirmed USAF UPL is for 12 F-35A's.
AIRCRAFT	APAF	2		F-35A AP	\$ 171		CSAF UFR #3 PRIORITY	Support. Required if USAF +12 aircraft in row3 are funded.
AIRCRAFT	BP10			F-35 Depot Stand-up Acceleration (AF)	\$ 209		USD(A&S) Priority	Accelerates organic component level depot repair (LRU and SRU) by 2 additional years from 2025 to 2023. Establishes needed industrial capacity to accelerate fleet readiness outcomes
AIRCRAFT	APN-1			F-35 Depot Stand-up Acceleration (Navy)	\$ 104		USD(A&S) Priority	Accelerates organic component level depot repair (LRU and SRU) by 2 additional years from 2025 to 2023. Establishes needed industrial capacity to accelerate fleet readiness outcomes
AIRCRAFT	APN-1			F-35 Depot Stand-up Acceleration (USMC)	\$ 104		USD(A&S) Priority	Accelerates organic component level depot repair (LRU and SRU) by 2 additional years from 2025 to 2023. Establishes needed industrial capacity to accelerate fleet readiness outcomes
AIRCRAFT	OMAF			KC-135	\$ 40	13	TRANSCOM UFR #1 PRIORITY	Support. Reverses planned retirement of 13 KC-135s due to delays in KC-46.
AIRCRAFT	OMAF			KC-10	\$ 70	10	TRANSCOM UFR #1 PRIORITY	Support. Restores 10 KC-10s. Partially reverses AF's planned retirement of 16 KC-10s
AIRCRAFT	APAF	18		EC-37B Compass Call	\$ 256		Manufacturer will close line in 2020.	Support. Additions meet our requirements for # of a/c and do not exceed. Will accelerate procurement of a/c, but not fielding of the EC-37B fleet because still need to buy and install the PME. Additions do not go beyond our planned quantities. -Are these additions executable? Yes, per Air Force, the additional funds are executable.
AIRCRAFT	OMAF			RQ-4/MQ-4			PB21 divestment.	No details provided. Cannot tell what this line item is for
AIRCRAFT								
AIRCRAFT	APN	5		F-35B	\$ 726.00	6	CMC CPG PRIORITY	Support. Added aircraft executable within existing production capacity.
AIRCRAFT	APN	3		F-35C	\$ 526	5	CNO UFR #2 PRIORITY (+5)	Support. Added aircraft executable within existing production capacity.
AIRCRAFT	APN	15		E-2D	\$ 357	2	CNO UFR #3 PRIORITY	
AIRCRAFT	APN	13		P-8A	\$ 360	2	CONGRESSIONAL ADD	Support. Add is executable. Navy currently has 9 unfunded aircraft in PB2021 FYDP due to a program requirement increase in July 2019.
AIRCRAFT	APN	9		CMV-22B	\$ 211	2	CNO UFR #4 PRIORITY	Support. Both the CV-22 (SOCOM) and CMV-22 (Navy) make sense. CV-22 adds replace AFSOC attrited aircraft. CMV-22 UFR gets a couple of additional Navy COD replacement aircraft to the fleet sooner. All do not exceed the AO and all are executable.
AIRCRAFT								
AIRCRAFT	APAF	20		MQ-9 Reaper	\$ 108	16	CENTCOM UFR PRIORITY, PB21 divestment.	Do not Support. Quantity is above Department Requirement. Dept Terminated production in PB21
AIRCRAFT	APA	7		AH 64 NEW BUILD	\$ 238	8	CSA UFR	Support. Expected, does not exceed AO, and is executable
AIRCRAFT	APA	14		CH-47F Chinook Block IIF		5	Divestment.	Support. Divestment due to realignment of Army priorities (primarily additional funding for the FVL effort...both FLRAA and FARA). Additionally, the CH-47F Block II line is open producing the MH-47F Block II. Not in large numbers, but the line is open and there are a couple of potential FMS cases in the works (that can keep the line minimally open).
AIRCRAFT	APAF/PDW			EC-130J	\$ 100		SOCOM UFR #12 PRIORITY	
AIRCRAFT	PDW			DHC-8 (MANNED ISR)	\$ 40		SOCOM UFR #1 PRIORITY	

Production Class	Acct	Line #	PE/SAG	Program	FY21 \$ Add	Quantity Add	Justification	Notes
AIRCRAFT	APAF/PDW			CV-22 ATTRITION	\$ 246		SOCOM UFR #11 PRIORITY	Support. Both the CV-22 (SOCOM) and CMV-22 (Navy) make sense. CV-22 adds replace AFSOC attrited aircraft. CMV-22 UFR gets a couple of additional Navy COD replacement aircraft to the fleet sooner. All do not exceed the AO and all are executable.
AIRCRAFT	RDAF			Classified	\$ 256			
SHIP	SCN	5		Virginia-class submarine	\$ 2,100	1	CNO UFR #1 PRIORITY	Support. The Virginia line items are their highest priority UFRs and ARE executable if funded. The Navy would like to request ~\$685M (very ROM) in SCN to cover up to a 4-week COVID-related delay/shutdown of shipyards for ships that are currently on contract. The costs of current ships will go up if there are significant delays, and it doesn't make sense to add funding for more ships until the current ships are fully funded and moving.
SHIP	SCN	6		Virginia-class submarine AP	\$ 432		CNO UFR #1 PRIORITY	Support. The Virginia line items are their highest priority UFRs and ARE executable if funded. The Navy would like to request ~\$685M (very ROM) in SCN to cover up to a 4-week COVID-related delay/shutdown of shipyards for ships that are currently on contract. The costs of current ships will go up if there are significant delays, and it doesn't make sense to add funding for more ships until the current ships are fully funded and moving.
SHIP	SCN	17		LHA-9	\$ 650		CONGRESSIONAL ADD	Support. Executable.
SHIP	SCN	19		EPF	\$ 261	1	CONGRESSIONAL ADD	Support. Executable.
SHIP	SCN	10		DDG-51	\$ 1,900	1	Available capacity	Support. Executable.
SHIP	SCN	20		T-AO	\$ 490	1	Available capacity	Do not support. Industry does NOT have capacity for an additional T-AO until FY22, therefore it would NOT be executable as an FY20 or FY21 addition.
SHIP	SCN	16		ESB	\$ 650	1	Available capacity	Support. Executable.
SHIP	SCN	13		FFG	\$ 1,000	1	Available capacity	Support. Executable.
SHIP	OMN			Surge Ship Readiness	\$ 85	4	TRANSCOM UFR #2 PRIORITY	Support. Executable.
SHIP								The Navy would also like to propose four additional NEW line items for consideration:
SHIP								a.) Buy/Convert 1 additional "used Sealift" ship for \$31M.
SHIP								b.) Buy another LCU1700 for \$10M to address smaller shipyards.
SHIP								c.) Buy 1 additional EPF, cost TBD. Austal needs two EPFs total or 1 LCS to avoid layoffs.
SHIP								d.) Add funding for surface ship and submarine supplier base (\$200M total) to stimulate the major equipment suppliers directly in addition to the shipyards.
VEHICLE	WTCV			STRYKER DVHA1 PROC	\$ 375	60	CSA UFR # PRIORITY	Support. Concur with increase. the industrial base can handle the increased quantity. this increase was expected because the Army made a conscious decision to convert all Strykers to the double V-hull. We think this does not exceed the Ao.
VEHICLE	PDW			THAAD A2 HEMTT	\$ 30	30	Production line shutting down.	Support. I will need to reach out to the Army on this one but it may fall into the urgent theater need and support the European Defense Initiative. This has been a longstanding production line capable of handling hundreds of systems annually. The increase was not expected but would make sense if it falls into the urgent need category. We assume it would exceed the Ao and are attempting to confirm.

Production Class	Acct	Line #	PE/SAG	Program	FY21 \$ Add	Quantity Add	Justification	Notes
VEHICLE	WTCV			M1 ABRAMS MOD (APS)	\$ 170		Additional brigade of APS.	Support. - Concur with increase. The industrial base can handle the increased quantity. We were not expecting the increase but it does make sense to procure additional ECPs/kits to increase performance and lethality. I do not know if this exceeds the AO but will reach out to the DASC.
VEHICLE	PDW			NGREA (National Guard and Reserve Equipment Account)	\$ 1,300		Reprogramming source.	To the best of my knowledge this line item contains multiple light and medium tactical vehicles to include HMMWV modernization, JLTVs, and FMTVs. The FY21 request for JLTV did not include assets for the National Guard which may explain the \$1,300 however that is a substantial reprogramming consider the entire JLTV request for the Army, Navy, USMC, and USAF was \$1,364 and 4,232 units. I do believe that the request is supportable but depending on the aggregate of different systems it more than likely exceeds the original AO.
MUNITIONS	WPN			Tomahawk (USMC)	\$ 125		USMC CPG	Do not support. Risk is assessed as high for the contractor to assume additional new missile production, while conducting missile recertification activity in parallel with current FY2021 new missile procurement for the Block V configuration. We think they are operating at capacity by the documentation they've previously provided us.
MUNITIONS	PMC			GBASM NSM (USMC)	\$ 60	36	USMC UFR	Awaiting USMC response. We think this is supportable.
MUNITIONS	PDW			SM-3 Block IIA	\$ 231	10	MDA UFR #1 PRIORITY	Support: Accelerate fielding. MDA #1 UFR
MUNITIONS		37		SM-3 Block IIA production line expansion			Invests in line expansion to 36 missiles per year from current rate of 24 missiles per year. Improves solid rocket motor industrial base.	Support: This is needed in support SM3 fielding acceleration
MUNITIONS	PDW			THAAD Bty #8	\$ 320	1	THAAD requirement currently outstrips force structure. Procures 8th battery, synchronized with Saudi Arabia FMS case to include AN/TPY-2 for efficiencies.	Support: High demand system
MUNITIONS	OPN			Sonobuoys	\$ 49		CNO UFR	Support any increase. We think the industrial base can support this modest plus up.
MUNITIONS	MPA			PAC-3 MSE				There is no listed change, so we support. Industrial base can support additional missiles and we support any additions. This will give US priority over any FMS production.

RESTORE CUTS

RDDW	3		Basic research initiatives: Minerva	\$ 15		S&T PRIORITIES
OMAF			FSRM	\$ 736		CSAF UFR
OMA			FSRM	\$ 312		CSA UFR
OMARNG			FSRM	\$ 26		CSA UFR
OMARNG			FSRM	\$ 71		CSA UFR

\$ 19,225

ACCT	AC/RC	PROGRAM	FY21 \$ ADD	SOURCE	POLITICS	
Air Force	Active	Cost to Complete	\$ 166,500	UFR	ZU	
Air Force	Active	GBSD Organic Software Sustainment Center	\$ 132,000	UFR	UT	
Air Force	Active	B-21 2-Bay LO Restoration Facility	\$ 96,000	UFR	SD	
Air Force	Active	Cadet Preparatory School Dormitory	\$ 49,000	UFR	CO	
Air Force	Active	Flight Test Engineering Laboratory Complex	\$ 40,000	UFR	CA	
Air Force	Guard	Air Support Operations Complex	\$ 27,000	UFR	WA	
Air Force	Active	Crash Rescue Station #1	\$ 26,000	UFR	MD	
Air Force	Reserve	F-35 Squadron Ops / Aircraft Maintenance Unit	\$ 25,000	UFR	TX	
Air Force	Guard	Consolidated RPA Operations Facility	\$ 17,500	UFR	ND	
Air Force	Guard	Base Supply Complex	\$ 10,200	UFR	AL	
Army	Active	Engineering Center & Parking Structure	\$ 160,000	UFR	NY	
Army	Guard	Army Aviation Support Facility	\$ 89,416	UFR	VA	
Army	Active	Unaccompanied Enlisted Personnel Housing	\$ 59,000	UFR	AK	
Army	Active	Automation-Aided Instructional Building	\$ 56,000	UFR	AZ	
Army	Guard	Aircraft Maintenance Hangar	\$ 50,000	UFR	AK	
Army	Active	Ammunition Holding Facility	\$ 46,000	UFR	CA	
Army	Guard	Combined Support Maintenance Shop	\$ 44,000	UFR	GA	
Army	Active	Information Systems Facility	\$ 40,000	UFR	NM	
Army	Active	Child Development Center	\$ 39,000	UFR	HI	
Army	Active	Child Development Center	\$ 32,500	UFR	AK	
Army	Active	Ground Transport Equipment Building	\$ 30,000	UFR	AZ	
Army	Reserve	Transient Training Enlisted Barracks	\$ 29,200	UFR	WI	
Army	Reserve	Transient Enlisted Training Barracks	\$ 29,200	UFR	WI	
Army	Active	General Purpose Maintenance Shop	\$ 29,000	UFR	MD	
Army	Reserve	Army Reserve Center	\$ 28,100	UFR	PR	
Army	Active	Child Development Center - School Age	\$ 26,000	UFR	HI	
Army	Guard	Unspecified Minor Construction	\$ 25,000	UFR	WW	
Army	Active	Vehicle Maintenance Shop	\$ 25,000	UFR	KY	
Army	Reserve	Transient Training Office Quarters	\$ 24,000	UFR	WI	
Army	Active	Central Painting Complex	\$ 22,000	UFR	AL	
Army	Guard	National Guard Readiness Center	\$ 21,000	UFR	FL	
Army	Active	Vehicle Maintenance Shop	\$ 20,000	UFR	NC	
Army	Active	Defense Access Roads	\$ 20,000	UFR	TX	
Army	Reserve	Area Maintenance Support Activity	\$ 18,900	UFR	IL	
Army	Reserve	Army Reserve Center	\$ 17,500	UFR	OH	
Army	Active	Cantonment Area Roads	\$ 16,500	UFR	MD	Border Wall
Army	Reserve	Equipment Concentration Site Warehouse	\$ 16,200	UFR	WA	Border Wall
Army	Active	Railcar Holding Area	\$ 16,000	UFR	IN	Border Wall
Army	Guard	Enlisted Barracks, Transient Training	\$ 15,735	UFR	OR	Border Wall
Army	Active	Missile Assembly Support	\$ 15,500	UFR	NM	Border Wall
Army	Guard	National Guard Readiness Center	\$ 15,000	UFR	AR	Border Wall
Army	Guard	National Guard Vehicle Maintenance Shop	\$ 15,000	UFR	IL	Border Wall
Army	Guard	Maneuver Area Training Equipment Site	\$ 15,000	UFR	MS	
Army	Reserve	Area Maintenance Support Activity	\$ 11,300	UFR	OH	
Army	Reserve	Transient Training BN Headquarters	\$ 11,000	UFR	WI	
Army	Active	Access Control Point	\$ 10,200	UFR	IT	
Army	Active	Incinerator Facility	\$ 10,000	UFR	MD	

Army	Guard	National Guard Vehicle Maintenance Shop	\$ 9,800	UFR	OK	
Army	Guard	National Guard Vehicle Maintenance Shop	\$ 9,300	UFR	CA	
Army	Active	Trainee Barracks Complex 3, Ph2	\$ 7,000	UFR	SC	
Army	Active	Weapon Maintenance Shop	\$ 5,200	UFR	AL	
Army	Reserve	Transient Training Barracks	\$ 2,500	UFR	WI	
Defense-Wide	SOCOM	Battalion Operations Facility	\$ 36,000	UFR	VA	
Defense-Wide	SOCOM	Human Performance Training Center	\$ 23,200	UFR	VA	
Defense-Wide	SOCOM	Cold Water Training Austere Enviroment Facility	\$ 21,350	UFR	WA	
Defense-Wide	SOCOM	SOF Basic Training Command (Cost-to-Complete)	\$ 20,500	UFR	CA	
Defense-Wide	SOCOM	SOF Intel Training Annex (Cost-to-Complete)	\$ 15,000	UFR	NC	
Defense-Wide	SOCOM	Multi-Puopse Canine Facility	\$ 14,000	UFR	CA	
Defense-Wide	SOCOM	SOF Motor Transport Maintenance Expansion (Cost-to-Complete)	\$ 13,631	UFR	NC	
Defense-Wide	SOCOM	Operations Support Facility	\$ 12,000	UFR	CA	
INDOPACOM	Various	Restore funding for MILCON projects in Guam, Hawaii, Japan	\$ 885,000	UFR		
Marine Corps	Active	Bachelor Enlisted Quarters Replacement	\$ 99,600	UFR	AZ	
Marine Corps	Active	Fitness Center Replacement and Training Pool	\$ 51,900	UFR	NC	
Marine Corps	Active	Combat Water Survival Training Facility	\$ 25,200	UFR	CA	
Marine Corps	Active	Warehouse Consolidation and Modernization	\$ 21,800	UFR	CA	
Navy	Active	X-Ray Wharf Berth 2	\$ 94,500	UFR	GU	
Navy	Active	CMV-22 Hangar	\$ 75,800	UFR	CA	
Navy	Active	Machinery Control Development Center	\$ 74,600	UFR	PA	
Navy	Active	Ordinance Facilities	\$ 71,800	UFR	VA	
Navy	Active	CMV-22 Airfield and Hangar Improvements	\$ 56,100	UFR	VA	
Navy	Active	Magazines	\$ 46,800	UFR	CA	
Navy	Active	Combat Vehicle Maintenance Facilities	\$ 43,500	UFR	CA	
Navy	Active	E/A-18G Fleet Readiness Squadron Training Facility	\$ 29,900	UFR	WA	
Navy	Active	Directed Energy Tyest Facility	\$ 26,700	UFR	CA	
Navy	Active	Perimiter Security	\$ 26,100	UFR	ME	
Navy	Active	Consolidated Ordinance Operations Facility	\$ 14,300	UFR	FL	
Navy	Reserve	Joint Reserve Intel Center	\$ 12,800	UFR	MN	
Navy	Active	Sub Logistics Support	\$ 9,400	UFR	VA	
SOUTHCOM (Army)	Active	Planning and Design	\$ 8,000	UFR	FL	
SOUTHCOM (Navy)	Active	Long Range Maritime Patrol Aircraft Hangar and Ramp	\$ 28,000	UFR	HO	
Space Force	Active	Planning and Design	\$ 60,000	UFR	ZU	Border Wall
			\$ -			

FY20 UFR MILCON projects?

(b) (5)

(b) (5)

(b) (5)

(b) (6)

Subject: FW: NG COVID Update - 21 May 20
Date: Friday, May 22, 2020 6:58:34 PM

SA

(b) (6)

(b) (6)

OSD Exec Sec

From: Fenton, Bryan LTG SD (b) (6)
Sent: Friday, May 22, 2020 10:36 AM
To: Lengyel, Joseph L Gen USAF NG NGB (US) (b) (6); Milley, Mark A GEN USARMY JS OCJCS (USA) (b) (6)
Cc: Norquist, David HON SD (b) (6); Hyten, John E Gen USAF JS OCJCS (USA) (b) (6); Oshaughnessy, Terrence J Gen USAF NORAD-USNC CG (USA) (b) (6); Rapuano, Kenneth P HON OSD OUSD POLICY (USA) (b) (6); Hokanson, Daniel R LTG USARMY NG NGB (US) (b) (6); Rice, L Scott Lt Gen USAF NG NGB (US) (b) (6); White, Gregory T (YT) Maj Gen USAF NG NGB (USA) (b) (6); VanHerck, Glen D Lt Gen USAF JS ODJS (USA) (b) (6); Taheri, Michael R Maj Gen USAF NG NGB (USA) (b) (6); Wilz, Giselle M MG USARMY NG DNGBJS (USA) (b) (6); Nordhaus, Steven S Maj Gen USAF NG NGB (US) (b) (6); Stewart, Jennifer SES SD (b) (6); Henke, Robert SES SD (b) (6); Lyons, David Brig Gen SD (b) (6); (b) (6)

Subject: RE: NG COVID Update - 21 May 20

Sir,

Thanks for this... SD read and gave us the following task with regard to your request for assistance:

-Our EXECSEC team will craft, and pass the SD a letter that he will sign/send to the WH Chief of Staff

Our team should be reaching out to you for any additional info you

have to make the letter as powerful as we need.

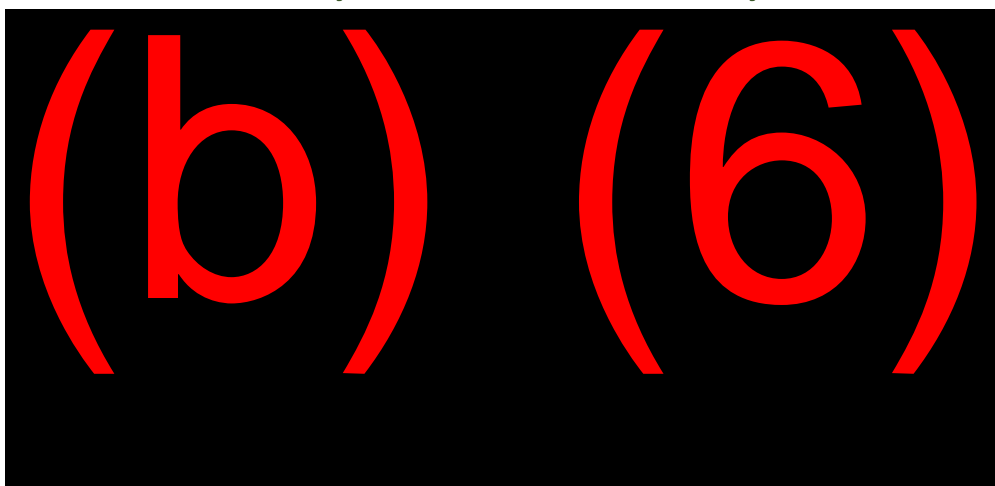
Thanks again sir—and all the best for a reflective, restful and respectful Memorial Day to you, the NGB team and you NGB families.

V/r,

Bryan

LTG Bryan P. Fenton, USA

Senior Military Assistant to the Secretary of Defense



From: Lengyel, Joseph L Gen USAF NG NGB (USA) (b) (6)
Sent: Thursday, May 21, 2020 3:58 PM
To: Fenton, Bryan LTG SD (b) (6); Milley, Mark A GEN USARMY JS OCJCS (USA)
(b) (6)
Cc: Norquist, David HON SD (b) (6); Hyten, John E Gen USAF JS OCJCS (USA)
(b) (6); Oshaughnessy, Terrence J Gen USAF NORAD-USNC CG (USA)
(b) (6); Rapuano, Kenneth P HON OSD OUSD POLICY (USA)
(b) (6); Hokanson, Daniel R LTG USARMY NG NGB (US)
(b) (6); Rice, L Scott Lt Gen USAF NG NGB (US)
(b) (6); White, Gregory T (YT) Maj Gen USAF NG NGB (USA)
(b) (6); VanHerck, Glen D Lt Gen USAF JS ODJS (USA)
(b) (6); Taheri, Michael R Maj Gen USAF NG NGB (USA)
(b) (6); Wilz, Giselle M MG USARMY NG DNGBJS (USA)
(b) (6); Nordhaus, Steven S Maj Gen USAF NG NGB (US)
(b) (6)
(b) (6); Stewart, Jennifer SES SD (b) (6); Henke,
Robert SES SD (b) (6); Lyons, David Brig Gen SD (b) (6); (b) (6)

(b) (6)

Subject: NG COVID Update - 21 May 20

Mr. Secretary and Chairman,

Total NG Activated: T32: **45,917** T10: 303

Total and % of NG on active duty worldwide: 84,305 (19%)

Total NG currently CV-19 positive: 605

Update on states/territories that have approved 32 U.S.C 502 (f)(2) MAs: 48

Request assistance: PM-10 failed to authorize extension of MAs past 24 Jun 20. In fact, ends mission on 10 June to allow for demob of the force. **This mission will not be done by 10 June.** I ask for **your support and assistance** to influence the White House/White House COVID-19 Task Force for a new Presidential Memorandum running through at least 31 JUL 20. The pandemic, and our response, did not start on the same day in each state, and it will not end on the same day in each state. This must be driven by requirements. Ending it on the 89th day to prevent attainment of benefit eligibility for soldiers and airmen is not how we do business. States have been judicious regarding growing the response versus total numbers authorized, putting only the number they need on orders. I know HD/GS is working to get it extended and work a draw down plan. The comments and concerns will get louder from Governors and from media if not resolved soon. **I advise, based on mission requirements, we extend these Mission Assignments to at least 31 July.**

National Guard response by the numbers. Over the last 69 days, National Guard Soldiers and Airmen have accomplished the following:

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- 121 million PPE products distributed
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Travel: This week I traveled to Arizona, Colorado, and Tennessee to visit Soldiers and Airmen performing COVID-19 support operations. In Flagstaff, Arizona Guardsmen are supporting local food banks with pick/pack operations, and curbside loading for **high risk members of the community—many from Navajo nation.** In Colorado, **I met with Governor Jared Polis, who supports the extension of National Guard orders** and the ability to rapidly transition NG to an operational status to support a potential second wave of COVID-19 cases, if needed. Guardsmen are caring for those experiencing homelessness, and maintaining the facilities on which they depend. **In Tennessee and met with Governor Bill Lee** and MG Jeff Holmes, the Tennessee Adjutant General, as well as Airmen from the 118th Wing.

All-Hazards Coordination Workshop: We held our **annual pre-hurricane season planning**

conference virtually last week and **identified several areas of concern** given the current crisis and anticipating what the summer will bring.

In the near term, we will see increased **challenges surrounding emergency mutual aid support agreements (EMACs)** between states and territories. COVID-19 **will likely exacerbate support operations** as individual states and territories implement testing, quarantine and Restriction of Movement (ROM) policies. State balanced budget restrictions may further constrain mutual aid support for large-scale response. Wildland fire and hurricane seasonal forecasts predict above average activity, potentially placing additional pressure on shared capabilities. We will work early and often with NC, FEMA, HD and our other DoD partners to meet the challenges this summer will bring.

VR, Joe

Joseph L. Lengyel
General USAF
Chief National Guard Bureau

From: [Fenton, Bryan LTG SD](#)
To: (b) (6)
Subject: FW: Potential note to WH CoS//NG duty extensions
Date: Tuesday, May 26, 2020 2:31:43 PM
Attachments: [Potential Letter to WH CoS from SD.docx](#)

From: Lengyel, Joseph L Gen USAF NG NGB (USA)
Sent: Tuesday, May 26, 2020 2:31:11 PM (UTC-05:00) Eastern Time (US & Canada)
To: Fenton, Bryan LTG SD
Cc: Milley, Mark A GEN USARMY JS OCJCS (USA); Norquist, David HON SD; Hyten, John E Gen USAF JS OCJCS (USA); Stewart, Jennifer SES SD; Rapuano, Kenneth P HON OSD OUSD POLICY (USA); Henke, Robert SES SD; Lyons, David Brig Gen SD; VanHerck, Glen D Lt Gen USAF JS ODJS (USA)
Subject: Potential note to WH CoS//NG duty extensions

Bryan,

Ref note below: Not sure what the timeline is for SD note to WH CoS--(b) (5)

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] VR,

Joe

Joseph L. Lengyel
General USAF
Chief National Guard Bureau

From: Fenton, Bryan LTG SD (b) (6)
Sent: Friday, May 22, 2020 10:36 AM
To: Lengyel, Joseph L Gen USAF NG NGB (USA) (b) (6); Milley, Mark A GEN USARMY JS OCJCS (USA) (b) (6)
Cc: Norquist, David HON SD (b) (6); Hyten, John E Gen USAF JS OCJCS (USA) (b) (6); Oshaughnessy, Terrence J Gen USAF NORAD-USNC CG (USA) (b) (6); Rapuano, Kenneth P HON OSD OUSD POLICY (USA) (b) (6); Hokanson, Daniel R LTG USARMY NG NGB (USA) (b) (6); Rice, L Scott Lt Gen USAF NG NGB (USA) (b) (6); White, Gregory T (YT) Maj Gen USAF NG NGB (USA) (b) (6); VanHerck, Glen D Lt Gen USAF JS ODJS (USA) (b) (6); Taheri, Michael R Maj Gen USAF NG NGB (USA) (b) (6); Wilz, Giselle M MG USARMY NG DNGBJS (USA) (b) (6); Nordhaus, Steven S Maj Gen USAF NG NGB (USA) (b) (6)

(b) (6) Stewart, Jennifer M SES OSD OSD (USA)
(b) (6) Henke, Robert J SES (USA) (b) (6); Lyons, David Brig Gen
SD (b) (6); (b) (6)
(b) (6) (b) (6)
[Redacted]
[Redacted]
[Redacted]

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Sir,

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Our team should be reaching out to you for any additional info you have to make the letter as powerful as we need.

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Bryan

**LTG Bryan P. Fenton, USA
Senior Military Assistant to the Secretary of Defense**

(b) (6)

(b) (5)

From: Lengyel, Joseph L Gen USAF NG NGB (USA) (b) (6)
Sent: Thursday, May 21, 2020 3:58 PM
To: Fenton, Bryan LTG SD (b) (6); Milley, Mark A GEN USARMY JS OCJCS (USA)
(b) (6)
Cc: Norquist, David HON SD (b) (6); Hyten, John E Gen USAF JS OCJCS (USA)
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(b) (6); Nordhaus, Steven S Maj Gen USAF NG NGB (US)
(b) (6); (b) (6)
(b) (6); Stewart, Jennifer SES SD (b) (6); Henke,
Robert SES SD (b) (6); Lyons, David Brig Gen SD (b) (6); (b) (6)

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VR, Joe

Joseph L. Lengyel
General USAF
Chief National Guard Bureau

From: [Fenton, Bryan LTG SD](#)
To: (b) (6)
Subject: FW: USS Kidd and Coronavirus
Date: Friday, April 24, 2020 7:43:12 PM

From: Rapuano, Kenneth P HON OSD OUSD POLICY (USA)
Sent: Friday, April 24, 2020 7:43:00 PM (UTC-05:00) Eastern Time (US & Canada)
To: Stewart, Jennifer SES SD; Norquist, David HON SD; Hyten, John E Gen USAF JS OCJCS (USA); Donovan, Matthew P HON OSD OUSD P-R (USA); VanHerck, Glen D Lt Gen USAF JS ODJS (USA); Taliaferro, Jeffrey B (Jeff) Maj Gen USAF JS J3 (USA)
Cc: Fenton, Bryan LTG SD; Ross, Alexis SES SD; Henke, Robert SES SD; Lyons, David Brig Gen SD
Subject: Re: USS Kidd and Coronavirus

Defer to Matt Donovan and his P&R/HA team to determine the merit of this offer.

Best,

Ken

Kenneth P. Rapuano
Assistant Secretary of Defense for Homeland Defense & Global Security

(b) (6)

From: "Stewart, Jennifer SES SD" (b) (6)
Date: Friday, April 24, 2020 at 19:07:06
To: "Norquist, David HON SD" (b) (6); "Hyten, John E Gen USAF JS OCJCS (USA)" (b) (6); "Donovan, Matthew P HON OSD OUSD P-R (USA)" (b) (6); "Rapuano, Kenneth P HON OSD OUSD POLICY (USA)" (b) (6); "VanHerck, Glen D Lt Gen USAF JS ODJS (USA)" (b) (6); "Taliaferro, Jeffrey B (Jeff) Maj Gen USAF JS J3 (USA)" (b) (6)
Cc: "Fenton, Bryan LTG SD" (b) (6); "Ross, Alexis SES SD" (b) (6); "Henke, Robert J SES (USA)" (b) (6); "Lyons, David Brig Gen SD" (b) (6)
Subject: FW: USS Kidd and Coronavirus

Deputy Secretary and Vice Chairman Hyten:

I am mindful this is not yours to action, but I am sending this to you and the COVID-19 Task Force management team first, as well as Matt, in case this is being discussed in multiple places.

Thank you.

Jen

From: Navarro, Peter K. EOP/WHO (b) (6)

Sent: Friday, April 24, 2020 6:25 PM

To: Stewart, Jennifer SES SD (b) (6)

Subject: USS Kidd and Coronavirus

Ms. Stewart,

Information indicates USS Kidd may have coronavirus on board.

(b) (6) at the Henry Ford Hospital in Detroit, who is running a large clinical trial for hydroxychloroquine, may be willing to run a trial on the USS Kidd for use of hydroxi as a prophylactic.

If DoD is interested, (b) (6) is at (b) (6). Free of charge.. (b) (6) has the medicine on hand and will fly it where needed.

Peter Navarro, Assistant to the President for Trade & Manufacturing Policy (b) (6)

The President's two simple rules: "Buy American, Hire American."

From: [Fenton, Bryan LTG SD](#)
To: (b) (6)
Subject: FW: VACCINE: 5MAY2020 : COVID-19 vaccine learnings from expert discussion
Date: Tuesday, May 5, 2020 11:46:53 AM
Attachments: [MSNA20200501861356.pdf](#)

From: (b) (6)
Sent: Tuesday, May 5, 2020 11:46:41 AM (UTC-05:00) Eastern Time (US & Canada)
To: Fenton, Bryan LTG SD
Subject: FW: VACCINE: 5MAY2020 : COVID-19 vaccine learnings from expert discussion

Both experts view live attenuated virus vaccines as having the highest odds of success to confer long-term immunity. Unfortunately the platform requires lengthy development timelines

A 6–7 month development timeline would require accepting a lot of risk.

Three key things to watch in coming months.

- 1) Animal data on neutralizing antibodies, to help establish appropriate levels of neutralizing antibody titers,
- 2) Ph 1 efficacy & safety data on various vaccine candidates, and
- 3) Structuring of US pivotal trials and prioritization of different candidates.

The experts are skeptical of anecdotal reports of BCG and MMR vaccinations being protective against COVID.

May 5, 2020 11:58 AM GMT

Global Biopharma | North America

COVID-19 vaccine learnings from expert discussion

Risinger, Harrison, and Purcell hosted two vaccine experts on May 1 to discuss SARS-COV-2 vaccine development as part of Morgan Stanley's virtual Healthcare Insight series. One expert works for the Dept of Defense and the other is a leading professor at a NYC academic institution. Replay available.

A wide range of vaccine candidates are currently in development; the fastest movers will generate initial data this summer. Dozens of companies and entities are pursuing vaccine candidates using a range of platforms and adjuvants (to boost and modulate the immune system). Initial efficacy and safety data should be generated in coming months by Moderna, AZN/Oxford, CanSino, JNJ, BioNTech/Pfizer, Sanofi, GSK, and others. It is critical that vaccine candidates are safe and do not cause antibody dependent enhancement (ADE), or risk of more severe disease. A list of COVID-19 vaccines in development can be found here [WHO's April 20 document](#).

The most critical efficacy metric to assess from forthcoming Phase 1 results is neutralizing antibodies that correlate with protection. Neutralizing antibodies (e.g., serum or mucosal) and titer ranges that are associated with protection have yet to be characterized, but forthcoming animal data in the next 1–2 months should be informative. Regarding data from various assays (e.g., wild-type, pseudovirus, and T-cell) that will be generated as part of Phase 1 results, it will be important to evaluate the entirety of the dataset. One expert specifically said that observers should be skeptical if select assay indicators are encouraging but do not correlate with levels of neutralizing antibodies.

There seems to be a broad range of opinions on the risk of ADE (antibody-dependent enhancement) associated with coronaviruses. One view is that the risk of ADE is associated with a sub-optimal immune response and a robust immune response would reduce the risk. One expert mentioned that adjuvants have the potential to boost and modulate appropriate immune response and reduce the risk of ADE seen with MERS and SARS vaccine. ADE is an induction inflammatory response that leads to hypersensitivity which was discussed in more detail on our previous vaccine call—[Global Pharma: Takeaways from COVID-19 Expert Call](#).

The experts are hopeful that most of the vaccine candidates in clinical trials will work to some extent, but they cautioned that the newer technologies are generally unvalidated. Some of the platforms have data from other viruses, and platforms with human data can be accelerated. The experts mentioned the Jenner Institute/Oxford ChAdOx1 platform (MERS, 'flu, TB, chikungunya, Zika, MenB, plague), JNJ Ad26 platform (Ebola, HIV, RSV), and the CanSino adenovirus

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Major Pharmaceuticals

North America
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Type 5 Vector platform (Ebola) as having prior validation. Given the uncertainty odds of individual vaccine candidate success, the experts feel that a multiple vaccine approach is warranted. We view this as positive for perception of BioNTech/Pfizer, which is developing four mRNA candidates formulated in lipid nanoparticles—two based on nucleoside modified mRNA (modeRNA), one on uridine containing mRNA (uRNA), and one on self-amplifying mRNA (saRNA). Two are targeting the entire spike protein and two are targeting the receptor binding domain (RBD).

A vaccine that prevents infection may be too big an ask for now; it may be more practical to develop a vaccine that reduces disease severity in the short-term.

Social distancing and declining daily COVID-19 cases could create challenges in terms of establishing efficacy in human trials (beyond correlating neutralizing antibody titres with protection in animal models). Clinical trial participants would need to be pre-screened for prior SARS-COV-2 infection that could confound the assessment of neutralizing/protective antibodies. Importantly, clinical trials to assess vaccines that prevent human infection would have to be larger and longer in duration than disease prevention trials.

Both experts view live attenuated virus vaccines as having the highest odds of success to confer long-term immunity. Unfortunately the platform requires lengthy development timelines, and there is "not much out there" candidate-wise currently.

The best current vaccines on the market for disease prevention are live attenuated virus. However, it takes a long time to go through the development process and manufacturing scale-up [which may explain the dearth of candidates]. We note that the [WHO April 20, 2020 draft landscape document of COVID-19 candidate vaccines](#) lists two preclinical candidates from Codagenix/Serum Institute of India and DZIF–German Center for Infection Research.

A 6–7 month development timeline would require accepting a lot of risk.

Dr. Fauci has been quoted as saying 12–18 months are likely needed for vaccine development, but there is a push to reduce it to 6–7 months. That requires doing many things in parallel that are normally done in sequence. For example, manufacturing would not typically be scaled up until both efficacy (neutralizing antibodies that correlate with immunity) and safety are demonstrated in a few thousand of people. There are many steps to ensure proper controls and safety guidelines are met. (one expert flagged the [Cutter incident](#) with a live attenuated polio vaccine).

Experts bullish on large cap pharma's experience in developing vaccines and large-scale manufacturing. Big pharma's experience, processes, and facilities can be applied toward this pathogen. DNA vaccines are relatively easy to manufacture and scale up but may not demonstrate the best protection. One expert noted that Sanofi has extensive experience due to flu vaccine development.

Three key things to watch in coming months. **1)** Animal data on neutralizing antibodies, to help establish appropriate levels of neutralizing antibody titers, **2)** Ph 1 efficacy & safety data on various vaccine candidates, and **3)** Structuring of US pivotal trials and prioritization of different candidates. Although the WHO has a master protocol [{Coordinated Global Research Roadmap}](#) to coordinate and accelerate the global research of multiple candidates, the US is currently

unstructured. One expert noted that he is waiting for clarity on what entity will be the US arbiter and how candidates will be prioritized. [A May 2 [NBC news report](#) indicated that the US (“Operation Warp Speed”) recently whittled the number of potential vaccine candidates from 93 to 14, and hopes to have three or four vaccines cleared for use by early 2021.]

The experts are skeptical of anecdotal reports of BCG and MMR vaccinations being protective against COVID. They believe it is possible that people not previously vaccinated may have some transient protection from innate immune response to BCG or Rubella vaccination, but very targeted approaches will be needed to develop a vaccine that confers long-lasting immunity.

Webcast [replay](#).

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(as of April 30, 2020)

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STOCK RATING CATEGORY	COVERAGE UNIVERSE		INVESTMENT BANKING CLIENTS (IBC)			OTHER MATERIAL INVESTMENT SERVICES CLIENTS (MISC)	
	COUNT	% OF TOTAL	COUNT	% OF TOTAL IBC	% OF RATING CATEGORY	COUNT	% OF TOTAL OTHER MSC
Overweight/Buy	1216	38%	300	42%	25%	533	37%
Equal-weight/Hold	1432	45%	325	46%	23%	698	48%
Not-Rated/Hold	3	0%	1	0%	33%	3	0%
Underweight/Sell	553	17%	81	11%	15%	220	15%
TOTAL	3,204		707			1454	

Data include common stock and ADRs currently assigned ratings. Investment Banking Clients are companies from whom Morgan Stanley received investment banking compensation in the last 12 months. Due to rounding off of decimals, the percentages provided in the "% of total" column may not add up to exactly 100 percent.

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INDUSTRY COVERAGE: Major Pharmaceuticals

COMPANY (TICKER)	RATING (AS OF)	PRICE* (05/04/2020)
David Risinger		
Abbie Inc. (ABBV.N)	++	\$81.86
Bristol Myers Squibb Co (BMY.N)	O (04/02/2020)	\$60.17
Eli Lilly & Co. (LLY.N)	E (04/09/2020)	\$153.28
Merck & Co., Inc. (MRK.N)	O (04/17/2018)	\$76.86
Pfizer Inc (PFE.N)	E (07/30/2019)	\$37.62

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* Historical prices are not split adjusted.

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To: [Agrella, Austin J. EOP/WHO](#)
Subject: Fwd: ESF15 Daily Briefing Points 4.26.20
Date: Sunday, April 26, 2020 3:05:22 PM
Attachments: [image002.png](#)
[ATT00001.htm](#)
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Please find attached today's briefing points.

All the best,
Kristan

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Begin forwarded message:

From: FEMA-ESF15-Coordination (b) (6)
Date: April 26, 2020 at 12:38:56 PM EDT
Subject: ESF15 Daily Briefing Points 4.26.20

Coronavirus (COVID-19) Pandemic Whole-of-America Response

Sunday, April 26, 2020

"AS STATES PREPARE TO BEGIN REOPENING THEIR ECONOMIES, WE NOW HAVE BILLIONS IN NEW RESOURCES TO SUPPLEMENT THE EXPERTISE, STAFF, AND FUNDING WE'VE ALREADY SENT TO STATES TO TRACK AND EVENTUALLY CONTAIN THE SPREAD OF THE VIRUS."

- HHS SECRETARY ALEX AZAR

Topline Briefing Points and Messages

<!--[if !supportLists]-->▪ <!--[endif]-->On April 16, President Trump released [Guidelines for Opening Up America Again](#), providing a plan for rolling back social distancing measures and reopening the country's economy in several phases, depending on location.

<!--[if !supportLists]-->□ <!--[endif]-->Vice President Pence spoke with the

Nation's governors on **April 24**, reinforcing the partnership between the federal and state governments and the continued progress to expand and implement testing to be able to reopen safely and responsibly under the phased approach.

<!--[if !supportLists]-->□ <!--[endif]-->The federal government will continue to work with governors across the country to ensure they have the equipment, supplies and testing resources.

<!--[if !supportLists]-->▪ <!--[endif]-->On April 25, FEMA announced that more than \$5.1 million dollars in crisis counseling service grants have been made available to five states.

<!--[if !supportLists]-->□ <!--[endif]-->The grants, made to Massachusetts, Michigan, New Jersey, New York and Washington, will support programs providing free, confidential counseling to assist individuals through community-based outreach and educational services.

<!--[if !supportLists]-->□ <!--[endif]-->Due to the COVID-19 nationwide emergency and the need to protect the safety and health of all Americans, the crisis counseling will be delivered by phone, internet and the media (including social media).

<!--[if !supportLists]-->▪ <!--[endif]-->As of April 25, FEMA, HHS, and the private sector combined have coordinated the delivery of or are currently shipping: 70.7 million N95 respirators, 104.5 million surgical masks, 7 million face shields, 14.7 million surgical gowns, 793.8 million gloves, 10,603 ventilators and 8,450 federal medical station beds.

<!--[if !supportLists]-->▪ <!--[endif]-->The U.S. has now processed 5.1 million samples, which is more total tests than the following nations combined: Australia, Austria, Canada, France, India, Japan, Singapore, Sweden, South Korea, and the United Kingdom.

<!--[if !supportLists]-->□ <!--[endif]-->States should be making full use of the testing resources available to them, to include leveraging the full capacity available through commercial laboratories in addition to the capability provided through state laboratories.

<!--[if !supportLists]-->□ <!--[endif]-->HHS and FEMA have expanded items supplied by the [International Reagent Resource \(IRR\)](#) to help public health labs access free diagnostics supplies and reagents.

(b) (6)

Federal Emergency Management Agency
fema.gov

<!--[if !vml]-->

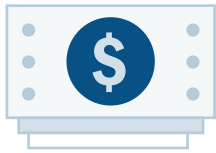
COVID-19 By the Numbers

FEMA Region 1



3
Alternate Care Facilities

808
Hospital Beds



Funding

Emergency Protective Measures

Connecticut
\$23.0 million

New Hampshire
\$17.5 million

Maine
\$12.3 million

Rhode Island
\$19.4 million

Massachusetts
\$48.9 million

Vermont
\$8.5 million

4,278

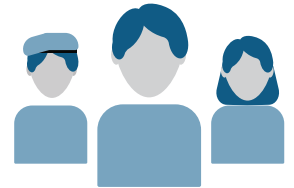
Deployed Personnel

DoD
301

Title 32 National Guard activated
3,735

FEMA
226

HHS
16



Critical Supplies Delivered

787,304



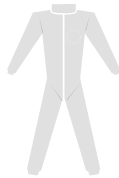
face shields

2.9 Million



surgical masks

17,753



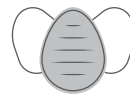
coveralls

4 Million



gloves

2.6 Million



N95 respirators

394,733



gowns

950



ventilators

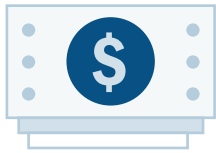
COVID-19 By the Numbers

FEMA Region 2



13
Alternate Care Facilities

7,015
Hospital Beds



Funding

Emergency protective measures

New Jersey
\$365.5 million

U.S. Virgin Islands
\$12.5 million

New York
\$1.1 billion

Puerto Rico
\$31.5 million

7,962

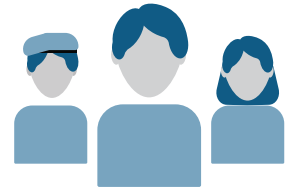
Deployed Personnel

DoD
2,833

Title 32 National Guard activated
4,674

FEMA
281

HHS
174



Critical Supplies Delivered

820,890



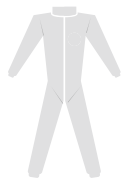
face shields

4.5 million



surgical masks

426,389



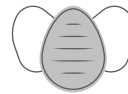
coveralls

9.8 million



gloves

12.5 million



N95 respirators

534,525



gowns

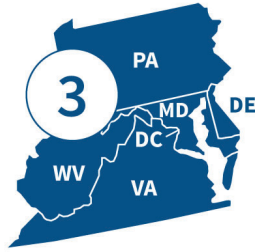
5,695



ventilators

COVID-19 By the Numbers

FEMA Region 3



7
Alternate Care Facilities
1,297
Hospital Beds



Funding

Emergency protective measures

Washington D.C.
\$60.7 million

Virginia
\$200.2 million

Maryland
\$54.9 million

Delaware
\$4.9 million

Pennsylvania
\$60.3 million

West Virginia
\$8.7 million

3,296

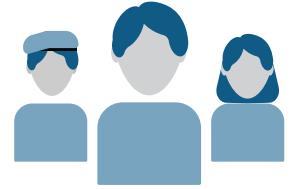
Deployed Personnel

DoD
85

Title 32 National Guard activated
2,884

FEMA
255

HHS
72



Critical Supplies Delivered

620,318



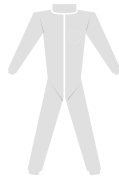
face shields

2.8 million



surgical masks

16,275



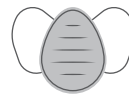
coveralls

3.7 million



gloves

7.6 million



N95 respirators

554,210



gowns

720



ventilators

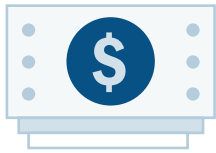
COVID-19 By the Numbers

FEMA Region 4



3
Alternate Care Facilities

1,102
Hospital Beds



Funding

Emergency protective measures

Alabama
\$18.7 million

Kentucky
\$54.0 million

Florida
\$93.4 million

North Carolina
\$29.6 million

Georgia
\$55.2 million

South Carolina
\$70.3 million

Tennessee
\$124.1 million

Mississippi
\$54.4 million

8,570

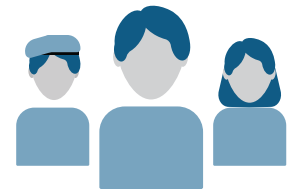
Deployed Personnel

DoD
0

Title 32 National Guard activated
8,262

FEMA
205

HHS
103



Critical Supplies Delivered

915,988



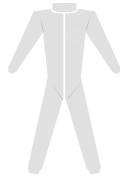
face shields

4.4 million



surgical masks

21,631



coveralls

5.8 million



gloves

6.3 million



N95 respirators

997,401



gowns

350



ventilators

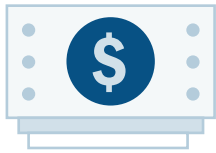
COVID-19 By the Numbers

FEMA Region 5



10
Alternate Care Facilities

6,884
Hospital Beds



Funding

Emergency protective measures

Illinois
\$262.5 million

Ohio
\$73.0 million

Indiana
\$36.8 million

Wisconsin
\$56.3 million

Michigan
\$246.0 million

Minnesota
\$354,060

4,709

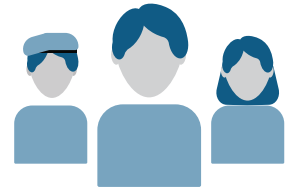
Deployed Personnel

DoD
85

Title 32 National Guard activated
4,356

FEMA
176

HHS
92



Critical Supplies Delivered

937,021



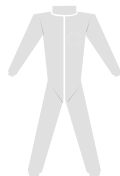
face shields

4.3 million



surgical masks

19,628



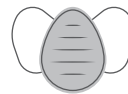
coveralls

5.4 million



gloves

10.4 million



N95 respirators

774,119



gowns

1,400



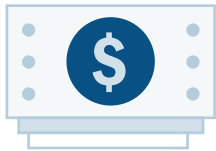
ventilators

COVID-19 By the Numbers

FEMA Region 6



9
Alternate Care Facilities
1,450
Hospital Beds



Funding

Emergency protective measures

Arkansas
\$340,664

Texas
\$378.3 million

Louisiana
\$139.3 million

Oklahoma
\$22.9 million

New Mexico
\$27.2 million

4,640

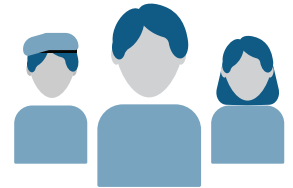
Deployed Personnel

DoD
141

Title 32 National Guard activated
4,315

FEMA
164

HHS
20



Critical Supplies Delivered

612,729



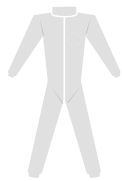
face shields

3.3 million



surgical masks

15,621



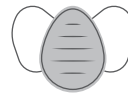
coveralls

10.1 million



gloves

2.8 million



N95 respirators

851,651



gowns

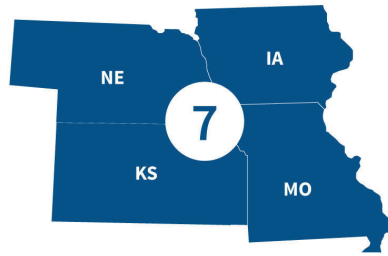
420



ventilators

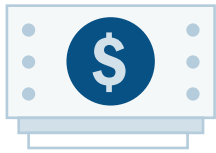
COVID-19 By the Numbers

FEMA Region 7



1
Alternate Care Facilities

118
Hospital Beds



Funding

Emergency protective measures

Iowa
\$62.2 million

Missouri
\$26.3 million

Kansas
\$18.2 million

Nebraska
\$17.4 million

2,110

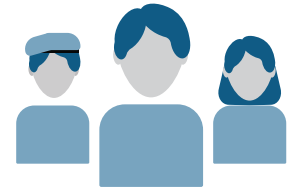
Deployed Personnel

DoD
0

Title 32 National Guard activated
1,961

FEMA
141

HHS
8



Critical Supplies Delivered

337,961



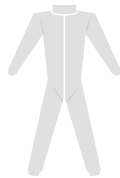
face shields

1.5 million



surgical masks

9,429



coveralls

1.5 million



gloves

1.8 million



N95 respirators

248,758



gowns

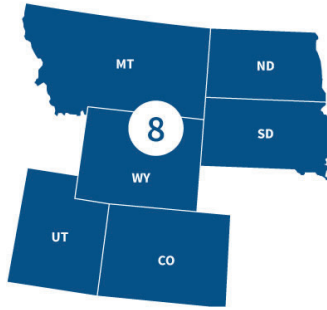
0



ventilators

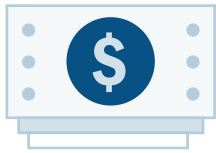
COVID-19 By the Numbers

FEMA Region 8



3
Alternate Care Facilities

1,685
Hospital Beds



Funding

Emergency protective measures

Colorado
\$193.3 million

South Dakota
\$178,935

Montana
\$13.6 million

Utah
\$336,249

North Dakota
\$197,554

Wyoming
\$30,500

678

Deployed Personnel

DoD

0

Title 32 National Guard activated

546

FEMA

126

HHS

6



Critical Supplies Delivered

313,760



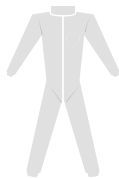
face shields

1.5 million



surgical masks

14,247



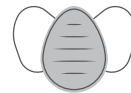
coveralls

2.6 million



gloves

1.1 million



N95 respirators

399,217



gowns

100



ventilators

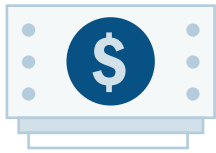
COVID-19 By the Numbers

FEMA Region 9



17
Alternate Care Facilities

3,000
Hospital Beds



Funding

Emergency protective measures

Arizona	American Somoa
\$21.6 million	\$846,563
California	CNMI
\$1.0 billion	\$4.9 million
Hawaii	Guam
\$23.7 million	\$10 million
Nevada	
\$43.8 million	

4,762

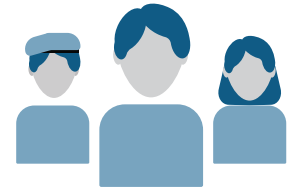
Deployed Personnel

DoD
0

Title 32 National Guard activated
4,487

FEMA
224

HHS
51



Critical Supplies Delivered

720,919



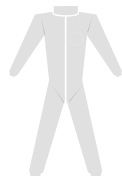
face shields

4.9 million



surgical masks

14,874



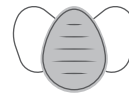
coveralls

4.1 million



gloves

4.3 million



N95 respirators

649,189



gowns

500



ventilators

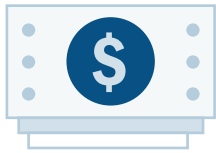
COVID-19 By the Numbers

FEMA Region 10



2
Alternate Care Facilities

93
Hospital Beds



Funding

Emergency protective measures

Alaska
\$9.8 million

Oregon
\$63.2 million

Idaho
\$478,972

Washington
\$93 million

2,289

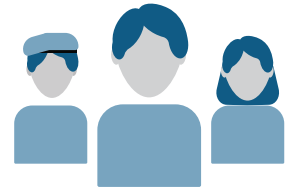
Deployed Personnel

DoD
1,130

Title 32 National Guard activated
908

FEMA
151

HHS
100



Critical Supplies Delivered

370,336



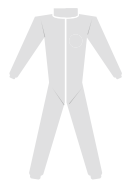
face shields

1.5 million



surgical masks

11,016



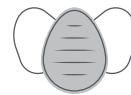
coveralls

4.9 million



gloves

1.7 million



N95 respirators

480,507



gowns

700

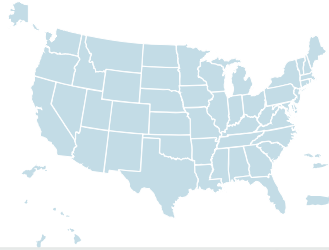


ventilators

COVID-19 By the Numbers

56 Major Disaster Declarations

approved in all 50 states, 5 territories and Washington DC



\$6.1 billion

in emergency protective measures



84

airbridge flight missions

204

messages to cell phones via the Wireless Emergency Alert System

51

messages to broadcast stations via the Emergency Alert System

critical supplies shipped

7 million



face shields

104.5 million



surgical masks

866,863



coveralls

793.8 million



gloves

70.7 million



N95 respirators

14.7 million

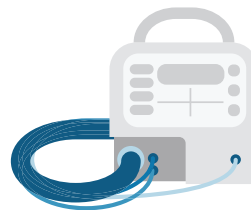
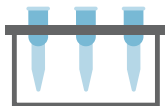


gowns

5.1 million

samples tested

122,926 people tested at Community Based Testing Sites



10,920

ventilators available

36,000

National Guard troops activated in a Title 32 duty status



Coronavirus (COVID-19) Pandemic

Whole-of-America Response

Sunday, April 26, 2020

“AS STATES PREPARE TO BEGIN REOPENING THEIR ECONOMIES, WE NOW HAVE BILLIONS IN NEW RESOURCES TO SUPPLEMENT THE EXPERTISE, STAFF, AND FUNDING WE'VE ALREADY SENT TO STATES TO TRACK AND EVENTUALLY CONTAIN THE SPREAD OF THE VIRUS.”
- HHS SECRETARY ALEX AZAR

Topline Briefing Points and Messages

- On **April 16**, President Trump released [Guidelines for Opening Up America Again](#), providing a plan for rolling back social distancing measures and reopening the country's economy in several phases, depending on location.
 - Vice President Pence spoke with the Nation's governors on **April 24**, reinforcing the partnership between the federal and state governments and the continued progress to expand and implement testing to be able to reopen safely and responsibly under the phased approach.
 - The federal government will continue to work with governors across the country to ensure they have the equipment, supplies and testing resources.
- On **April 25**, FEMA announced that more than \$5.1 million dollars in crisis counseling service grants have been made available to five states.
 - The grants, made to Massachusetts, Michigan, New Jersey, New York and Washington, will support programs providing free, confidential counseling to assist individuals through community-based outreach and educational services.
 - Due to the COVID-19 nationwide emergency and the need to protect the safety and health of all Americans, the crisis counseling will be delivered by phone, internet and the media (including social media).
- As of **April 25**, FEMA, HHS, and the private sector combined have coordinated the delivery of or are currently shipping: 70.7 million N95 respirators, 104.5 million surgical masks, 7 million face shields, 14.7 million surgical gowns, 793.8 million gloves, 10,603 ventilators and 8,450 federal medical station beds.
- The U.S. has now processed 5.1 million samples, which is more total tests than the following nations combined: Australia, Austria, Canada, France, India, Japan, Singapore, Sweden, South Korea, and the United Kingdom.
 - States should be making full use of the testing resources available to them, to include leveraging the full capacity available through commercial laboratories in addition to the capability provided through state laboratories.
 - HHS and FEMA have expanded items supplied by the [International Reagent Resource \(IRR\)](#) to help public health labs access free diagnostics supplies and reagents.

Supply Chain Task Force

- FEMA continues to expedite movement of commercially pre-sourced and commercially procured critical supplies from the global market to medical distributors in various locations across the U.S. through [Project Airbridge](#).
- As of April 26, Project Air Bridge has completed 84 flights with an additional 26 scheduled, or in transit, for a total of approximately 110 flights.
 - Two flights landed yesterday, one in Chicago and one at JFK, April 25.
 - One flight is scheduled to land at JFK today, April 26.
 - It is important to note that any number of variables can affect international flight schedules, causing unexpected delays, cancellations or variations in final cargo quantities.
- Through Project Air Bridge, the following supplies have been delivered from overseas manufacturers to the U.S. and into private sector supply chains from March 29 to April 25:
 - More than 768,000 N95 respirators
 - More than 724 million gloves
 - 70.5 million surgical masks
 - 8.5 million surgical gowns
 - More than 2.1 million thermometers
 - 562,000 face shields
- Three flights of FEMA-procured 3M masks are scheduled to land today, April 26: one in Chicago and two at JFK. The masks will be inventoried at a warehouse and then distributed to prioritized areas as determined by FEMA and HHS.
- Since Monday April 20, eight flights carrying a total of 12 million FEMA-procured masks and respirators from 3M have landed in Chicago, New York and Baltimore. The masks will be distributed to prioritized areas as determined by FEMA and HHS.
- Project Airbridge delivers PPE to the point of greatest need through prioritized distributor supply chains nine times faster than movement by sea.
 - FEMA covers the cost to fly supplies into the U.S. from overseas factories. The prices of the airbridge flights vary, but on average each flight cost is approximately \$750,000 to \$800,000, depending on the carriers and cargo being air lifted.
 - As part of the current agreement with distributors, 50 percent of supplies on each plane are directed by the distributors to customers within hotspot areas with the most critical needs. These areas are determined by HHS and FEMA based on CDC data.
 - FEMA is providing distributors with up-to-date information on the locations across the country hardest hit by COVID-19 or in most need of resources now and in the future.
 - The remaining 50 percent is fed into that distributors' normal supply chain and onto their customers across the U.S. in order to not disrupt the current supply chain system.
- The strategy to allocate medical supplies and equipment is based on COVID-19 disease activity and its effects, as well as the need to facilitate distribution of limited supplies to areas where resources are needed most urgently.
 - Leveraging quantitative data sets provided by FEMA, HHS, and Centers for Disease Control and Prevention (CDC), FEMA's National Resource Prioritization Cell combines

DAILY BRIEFING POINTS: COVID-19 WHOLE-OF-AMERICA RESPONSE

- these data streams, analyzes the available COVID-19 disease activity data to determine current and potential future areas that most urgently require resources.
 - The team of experts works through this process every 96 hours to ensure resource prioritization recommendations are driven by the best available or most current data.
- To date, 8.5 million N95 masks from the Department of Defense have been distributed to cities prioritized by the White House Task Force; an additional 1.65 million were delivered to Illinois, Michigan and New York.
- Another 3.4 million DoD N95 masks were shipped to distribution centers in five states for further movement to Veterans Affairs medical centers across the nation.
- The Defense Logistics Agency awarded a contract to Battelle for 60 N95 Critical Care Decontamination System units for the sanitation and reuse of N95 respirators.
 - Fifteen systems have been delivered: two to both New York and California and one each to Connecticut, Georgia, Illinois, Maryland, Massachusetts, Michigan, New Jersey, Ohio, Rhode Island, Washington and the District of Columbia. Systems are en route to Arkansas, Idaho, Kentucky, Missouri, New Mexico, Pennsylvania, and Texas (two units).
 - Additional units are planned for deployment across the U.S. by early May.
- The Strategic National Stockpile has begun shipping doses of hydroxychloroquine to locations in California, Florida, Kentucky, Louisiana, Michigan, Mississippi, Missouri, Nevada, New York, North Carolina, Ohio, the Seminole Tribe of Florida, South Dakota, Texas, the U.S. Virgin Islands, Virginia, and the Department of Veterans Affairs by request.

By the Numbers

- Forty-two states, four territories and more than 37 tribes have issued stay-at-home orders.
- All 50 states, five territories, and Washington, D.C. have been approved for major disaster declarations to assist with additional needs identified.
- As of **April 25**, FEMA and HHS have provided or are currently shipping 10,603 ventilators from the Strategic National Stockpile and the Defense Department to states, tribes and territories.
- The federal government has approximately 10,920 total ventilators available: 9,838 in the Strategic National Stockpile; 1,082 from the Department of Defense.
- As of **April 24**, FEMA has obligated \$6.1 billion in support of COVID-19 efforts.
- FEMA currently has 3,127 employees supporting COVID-19 pandemic response out of a total 20,605 agency employees ready to respond to other emergencies should they occur.
- As of **April 25**, 81 agencies across 28 states, the District of Columbia, one tribe and one U.S. territory have sent 204 alerts with information on COVID-19 via the Wireless Emergency Alert system; 51 alerts to broadcast stations via the Emergency Alert System.
- To date, the President has approved 47 National Guard requests for federal support for the use of National Guard personnel in a Title 32 duty status.
 - Pursuant to this approval, the federal government will fund 100 percent of the cost share for T-32 National Guard orders through May 31.
 - More than 36,000 National Guard troops have activated in T-32 duty status and 1,984 troops have activated in State Active Duty status to help with testing and other response efforts.

DAILY BRIEFING POINTS: COVID-19 WHOLE-OF-AMERICA RESPONSE

- To date, CDC, state, and local public health labs and other laboratories have tested more than 5.1 million samples.
 - As of **April 24**, the federal Community Based Testing Sites have screened more than 125,859 individuals.
- The U.S. Public Health Service deployed more than 1,500 officers in support of nation-wide efforts to mitigate the virus' potential spread.
- The U.S. Army Corps of Engineers has awarded 32 contracts for the design and build of alternate care facilities in Alaska, Arizona, California, Colorado, District of Columbia, Florida, Illinois, Maryland, Michigan, Missouri, New Jersey, New Mexico, New York, Oregon, Tennessee, U.S. Virgin Islands, and Wisconsin.
 - As of **April 25**, 1,573 USACE personnel are activated to support the COVID-19 mission, with more than 15,000 personnel engaged in additional response efforts.

FEMA and HHS Response

- FEMA and HHS have obligated \$51.1 billion to support COVID-19 response efforts from the first three emergency supplemental appropriations.
- FEMA, HHS, and our federal partners work with state, local, tribal and territorial governments to execute a whole-of-America response to COVID-19 pandemic and protect the health and safety of the American people.
- In order to help Americans return to work, the federal government will distribute cloth facial coverings for critical infrastructure workers who do not need medical-grade personal protective equipment (PPE) for their daily work.
 - The facial coverings will be delivered in a phased approach for infrastructure workers, first responders and food producers. Prioritization will also be to areas with the highest COVID-19 infection rates.
 - The first phase includes distribution of more than 19 million facial coverings, with anticipated production of 6.5 million facial coverings each week for the next month.

FEMA

- On **March 13**, President Trump declared a nationwide emergency pursuant to the Stafford Act.
 - 50 states, the District of Columbia, five territories, and 37 tribes are working directly with FEMA.
 - A tribal government may choose to be a subrecipient under a state that has chosen to be a recipient of FEMA assistance, or choose to be a direct recipient of FEMA.
 - All 10 Regional Response Coordination Centers and emergency operations centers in all states and territories are active and supporting response efforts across the country.
- Requests for assistance, especially for critical supplies, should be routed through the proper channels as soon as possible. The most efficient way to identify critical gaps and get results:
 - Consistent with the principle of locally executed, state managed, and federally supported response, requests for assistance at the local and county levels should first be routed to their respective state.
 - Any needs that cannot be met by the state or tribe should then be sent to the respective FEMA regional office. FEMA regions will direct requests to the FEMA NRCC in Washington, D.C. for fulfillment.

DAILY BRIEFING POINTS: COVID-19 WHOLE-OF-AMERICA RESPONSE

- HHS and FEMA deployment of ventilators from the stockpile have helped ensure that hospitals in states such as New York have not run out of ventilator capacity while working to save lives.
 - The federal government has adopted a process to manage allocation of federal ventilator resources to ensure the right number of ventilators are shipped to the right states to sustain life within a 72-hour window.
 - Emergency managers and public health officials submit requests for ventilators to FEMA/HHS, providing detailed data on total medical/ hospital beds; total acute care (ICU) beds; normal occupancy; predicted surge occupancy; and number of ventilators available in the state.
- On **April 23**, FEMA announced an additional \$100 million in funding for the Assistance to Firefighters Grant Program. This supplemental funding will provide financial assistance directly to eligible fire departments, non-affiliated emergency medical service organizations and State Fire Training Academies for critical PPE and supplies needed to respond to COVID-19. The application period begins April 28.
- On **April 20**, President Trump launched the Dynamic Ventilator Reserve Program, an innovative public-private partnership to access up to 65,000 additional ventilators in hospitals across the country that can be redeployed when not in use.
- On **April 15**, FEMA Administrator Pete Gaynor [issued a letter to the nation's emergency managers](#) outlining lessons learned from the first 30 days of FEMA leading the “Whole-of-America” response to the coronavirus (COVID-19) pandemic.
 - Lessons learned addressed preservation and prioritization of scarce resources; use of data-driven decision making; utilization of key federal medical staff, Federal Medical Stations and Large-Format Alternative Care Sites; mitigation efforts to flatten the curve; strengthening the supply chain; as well as the importance of busting myths.
 - This guidance is a follow-on to the Administrator's [first letter to emergency managers](#) on March 27, which requested key actions and outlined critical steps for the initial COVID-19 response
- On **April 15**, FEMA's Office of Equal Rights issued a [bulletin outlining best practices](#) to assist state, local, tribal and territorial partners in anticipating and attending to civil rights concerns during the COVID-19 response and recovery.
- On **April 13**, The Department of Homeland Security and FEMA announced the funding notice for an additional \$100 million in supplemental Emergency Management Performance Grant Program funds.
 - The money is available to all 56 states, territories and the District of Columbia as part of the Coronavirus Aid, Relief, and Economic Security (CARES) Act. All applications must be submitted on [Grants.gov](#) by April 28.
- On **April 12**, FEMA [issued guidance](#) on the framework, policy details and requirements for determining the eligibility for FEMA reimbursement of states purchasing and distributing food to meet the immediate needs of those who do not have access to food as a result of COVID-19 and to protect the public from the spread of the virus.
- On **April 9**, FEMA announced that it is [suspending rent for disaster survivors](#) living in FEMA-purchased temporary housing units in California, Florida, North Carolina and Texas. The temporary suspension means residents will not have to pay rent in April, May or June.
- On **March 26**, FEMA issued a [request for quotation](#) for vendors who have medical equipment and supplies to sell to the agency. The RFQ can be found on [www.sam.gov](#).

U.S. Department of Health and Human Services Agencies and Offices

- On **April 23**, HHS, through the Health Resources and Services Administration, [awarded nearly \\$5 million to Poison Control Centers](#) across the country to improve their capacity to respond to increased calls due to the COVID-19 pandemic.
 - As more Americans heed cleaning recommendations to combat exposure to COVID-19, the nation's Poison Control Centers are simultaneously seeing sharp increases in calls related to cleaners and disinfectants.
- On **April 22**, HHS launched [Telehealth.hhs.gov](#). The site is a central source of information on telehealth resources and tools for patients and providers.
- On **April 21**, HHS announced [\\$955 million in grants from the Administration for Community Living](#) to help meet the needs of older adults and people with disabilities. The grants will fund home-delivered meals, care services in the home, respite care and other support to families and caregivers, and other support services.
- On **April 20**, the Substance Abuse and Mental Health Services Administration under HHS began releasing \$110 million in emergency grant funding to strengthen access to treatments for substance use disorders and serious mental illnesses during the COVID-19 pandemic.
- On **April 13**, HHS announced five new contracts for ventilator production rated under the Defense Production Act (DPA), to General Electric, Hill-Rom, Medtronic, ResMed, and Vyaire, as well as two other contracts for ventilator production, to Hamilton and Zoll.
 - Combined with contracts with [General Motors](#), [Philips](#) and [GE](#) rated under the DPA issued last week, the contracts will provide a total of 187,431 ventilators by the end of 2020.
 - The thousands of ventilators delivered to the Strategic National Stockpile starting this month, continuing through the spring and summer, will provide more capacity to respond to the pandemic as it evolves.
- Beginning **April 10**, [HHS and FEMA are working with states with federal Community-Based Testing Sites](#) to clarify whether sites want to continue as they are now, or transition to full state control.
- On **April 10**, HHS began delivering the initial [\\$30 billion in relief funding](#) to providers in support of the national response to COVID-19, with \$26 of the \$30 billion expected to be delivered to providers' bank accounts the same day.
- On **April 10**, HHS Secretary Azar sent a follow up letter to hospital administrators, reinforcing the need for data to be provided daily to facilitate planning, monitoring, and resource allocation in response to COVID-19.
- On **April 8**, HHS, through the Health Resources and Services Administration [awarded more than \\$1.3 billion to 1,387 health centers](#). These centers will help communities across the country detect coronavirus; prevent, diagnose, and treat COVID-19; and maintain or increase health capacity and staffing levels to address this public health emergency.
- On **April 6**, HHS [announced it will release \\$186 million in additional CDC funding](#) to state and local jurisdictions with accelerating or rapidly accelerating COVID-19 cases to support response activities and surveillance capabilities.
- On **March 24**, HHS [announced \\$250 million in grants](#) from the Administration for Community Living to help states, territories and tribes provide meals to older adults.
- Also on **March 24**, HHS [awarded \\$100 million](#) to support HHS health resources and services administration-funded health centers across the country to address screening and testing needs, acquire medical supplies and boost telehealth capacity.

DAILY BRIEFING POINTS: COVID-19 WHOLE-OF-AMERICA RESPONSE

- HHS identified [\\$80 million dollars specifically for tribes](#), tribal organizations, and tribal health service providers.
- On **March 21**, HHS awarded contracts to five companies to purchase approximately 600 million N95 respirators over the next 18 months.

Centers for Disease Control and Prevention

- The nation's [Slow the Spread](#) campaign continues through **April 30**. CDC [recommends that everyone use a cloth face covering](#) in community settings to help reduce the spread of COVID-19.
- CDC continues to encourage use of [personal protective equipment optimization strategies](#) for healthcare providers to optimize resources, deal with limited resources, and make contingency plans or alternative strategies when supplies are limited.
- On **April 8**, CDC issued [additional guidance](#) to help ensure critical infrastructure workers can perform their jobs safely after potential exposure to the virus.
- On **April 3**, CDC launched [COVIDView](#), a weekly report that summarizes and interprets key indicators from a number of existing surveillance systems.
- On **March 28**, the Centers for Medicare and Medicaid Services sent a letter to the nation's hospitals requesting they report data to HHS, CDC, and the CDC's National Healthcare Safety Network (NHSN) COVID-19 Patient Impact and Hospital Capacity Module.
- On **March 17**, CDC issued a Level 3 [Travel Health Notice for cruise ship travel](#). CDC recommends that all people defer travel on cruise ships, including river cruises, worldwide.

Food and Drug Administration (FDA)

- FDA launched the Coronavirus Treatment Acceleration Program (CTAP) to speed approval of drugs and therapies. 72 therapies are now being tested, including hydroxychloroquine, and another 211 are in active planning for clinical trials.
- FDA published a [new blog post](#) on the [Coronavirus Treatment Acceleration Program](#). The program uses every available method to move new treatments to patients as quickly as possible, while at the same time finding out whether the treatments are helpful or harmful.
- FDA has granted more than [50 Emergency Use Authorizations](#) of commercially available diagnostic tests, including the first diagnostic test using saliva from patients in health care settings, and four antibody tests to be used in hospital laboratories.
- FDA has authorized four mask sterilizations systems to disinfect N95 masks, with one system that can [decontaminate 4 million N95 masks per day](#).
- During the **April 24** White House Press Briefing, FDA Commissioner Dr. Stephen Hahn announced [approval the first COVID-19 home collection test kit](#).
- On **April 21**, the FDA issued an emergency use authorization for IntelliVue Patient monitors intended to be used by healthcare professionals in the hospital environment for remote monitoring of adult, pediatric and neonate patients having or suspected of having COVID-19 to reduce healthcare provider exposure.
- On **April 16**, the FDA [announced an expansion of testing options](#) through use of synthetic swabs – with a design similar to Q-tips – to test patients by collecting a sample from the front of the nose.
- On **April 14**, the FDA issued a consumer update: [How You Can Make a Difference During the Coronavirus Pandemic](#), outlining ways to help such as donating blood or saving PPE for frontline workers.

DAILY BRIEFING POINTS: COVID-19 WHOLE-OF-AMERICA RESPONSE

- On **April 3**, the [FDA announced](#) a new national effort to bring blood-related therapies for COVID-19 to market as fast as possible.
 - HHS and the Assistant Secretary for Preparedness and Response's Biomedical Advanced Research and Development Authority (BARDA) will collaborate with American Red Cross and three companies on [the development of convalescent plasma and hyperimmune globulin immunotherapies](#) to make safe and effective treatments available.
- On **March 28**, FDA issued an [Emergency Use Authorization \(EUA\)](#) to allow hydroxychloroquine sulfate and chloroquine phosphate products donated to the Strategic National Stockpile to be distributed and used for certain hospitalized patients with COVID-19.
- The FDA released [food shopping information](#) to reassure consumers that there is currently no evidence of human or animal food or food packaging being associated with transmission of the coronavirus that causes COVID-19.

Other Federal Agencies

- American Red Cross and the American Association of Blood Banks (AABB) continue to seek blood and convalescent plasma donations. To find where you can donate blood, visit [aabb.org](#).
 - People who have fully recovered from COVID-19 have antibodies in their plasma that can attack the virus and may be able to help others fighting the infection [by donating plasma](#).
- On **April 24**, President Trump signed the [Paycheck Protection Program and Health Care Enhancement Act](#) to replenish the Small Business Administration's small business loan program while also providing crucial support for America's frontline medical workers.
 - The [Paycheck Protection Program](#) processed nearly \$350 billion in loans to 1.6 million small businesses from funding provided in the CARES Act. More than 4,900 lending institutions participated in making these SBA-backed loans.
- As of **April 23**, the USCG has facilitated the safe discharge of over 275,000 passengers from more than 125 cruise ships as a result of the orderly shutdown of the cruise industry. The Coast Guard will continue to work with CDC, state and local authorities to manage the cruise ships in US waters carrying crew only.
- On **April 17**, the Department of Homeland Security distributed a guide on COVID-19 funding available to law enforcement to stakeholders. This document includes descriptions of programs, eligibility requirements, applications, and application deadlines.
- On **April 17**, U.S. Department of Agriculture announced the [Coronavirus Food Assistance Program](#), an immediate relief program that provides \$19 billion in support to farmers and ranchers.
 - The funding includes \$16 billion in direct support to farmers and ranchers based on actual losses as well as funding to purchase and distribute \$3 billion in fresh produce, dairy and meat products to food banks, community and faith-based organizations and other non-profits serving people in need.
- On **April 17**, the Cybersecurity and Infrastructure Security Agency released version 3.0 of the [Essential Critical Infrastructure Workers guidance](#) to help state and local jurisdictions and the private sector identify and manage their essential workforce while responding to COVID-19.
- On **April 15**, the White House announced [a collaboration by Schema.org](#) to help Americans find the most up-to-date public health guidance through use of standard tags in website code to make webpages easier to find in online search engine results.

DAILY BRIEFING POINTS: COVID-19 WHOLE-OF-AMERICA RESPONSE

- On **April 15**, Immigration and Customs Enforcement Homeland Security Investigations launched [Operation Stolen Promise](#) to combat COVID-19 related fraud and other criminal activity.
 - On **April 20**, Immigration and Customs Enforcement Homeland Security Investigations, with assistance from Customs and Border Protection Field Intelligence Group, seized 5,300 potentially fraudulent COVID 19 test kits.
- On **April 9**, the [U.S Department of Education announced](#) more than \$6 billion from the CARES Act will be distributed to colleges and universities to provide direct emergency cash grants to college students whose lives and educations have been disrupted by the coronavirus outbreak.
 - On April 21, the Department of Education is planning to announce an additional \$6.28 billion in funding for institutions to cover costs associated with significant changes to the delivery of instruction due to COVID-19.
- On **April 3**, President Trump issued “[Memorandum on Allocating Certain Scarce or Threatened Health and Medical Resources to Domestic Use](#)” directing DHS and FEMA, in consultation with the HHS, to use the Defense Production Act to keep scarce medical resources within the United States for domestic use. CBP is assisting FEMA in temporarily detaining export shipments of PPE.
- On **March 24**, the Department of Justice created a national task force to actively look for and act on hoarding and price gouging.
- Many telecommunication companies are working with the Federal Communications Commission to “[Keep Americans Connected.](#)” This pledge is designed to ensure that Americans do not lose their broadband or telephone connectivity during the COVID-19 response.
- The U.S. Department of Labor [announced availability of up to \\$100 million for Dislocated Worker Grants](#) to help address the workforce-related impacts related to COVID-19.

Coronavirus (COVID-19) Pandemic: Daily Briefing Points Supplemental

Sunday, April 26, 2020

Regional Response

Region II

Metro New York/New Jersey

- Total medical supplies and equipment ordered or provided to New York include 13.2 million N95 respirators, 2.7 million surgical masks, 469,294 face shields, 298,810 surgical gowns, 289,820 coveralls, 2.2 million gloves, and 4,540 ventilators.
 - New York State has a sufficient ventilator supply at this time. Governor Cuomo has sent ventilators to Michigan (100), New Jersey (100), Massachusetts (400) and Maryland (50).
- Medical supplies and equipment ordered or provided to the State of New Jersey include 5.2 million N95 respirators, 2 million surgical masks, 254,143 face shields, 240,335 surgical gowns, 133,848 coveralls, 13.5 million gloves, 1,550 ventilators and 1,000 federal medical station beds.
- As of April 24, FEMA has obligated more than \$1.14 billion in federal support to the state of New York and \$365 million in federal support to the state of New Jersey.
- FEMA issues a Mission Assignment to the U.S. Army Corps of Engineers (USACE) to support design and build out of alternative medical facilities in New York and New Jersey.
 - The Jacob Javits Center is operational with a maximum capacity of 2,148 beds and has cared for more than 1,000 patients.
 - The USACE buildout of three New York state priorities for alternate care facility conversions at State University (SUNY) Stony Brook, SUNY Old Westbury, and the Westchester Community Center have been complete. These sites, including all staffing, equipment and wrap around services will be managed by the State.
 - Four FMS are being utilized to establish temporary medical facilities at three New Jersey locations: Secaucus, Edison FMS and Atlantic City.
- The USNS Comfort completed its mission in New York City. The hospital ship arrived on March 30 to relieve strains on local hospital systems. The ship cared for 182 patients.
- More than 1,200 Department of Defense (DOD) medical staff, including six Urban Augmentation Medical Task Forces (UAMTF) are supporting New York by:
 - Providing medical support for the Javits Center and USNS Comfort alternate care sites.
 - Supplementing medical staff at 10 hospitals throughout the five boroughs.
- Three UAMTFs made up of 255 medical personnel are supporting five sites in New Jersey: the Alternate Care Facility in Edison, Newark University Hospital, Salem Hospital, JFK Medical Center, and the Alternate Care Facility in Atlantic City.

DAILY BRIEFING POINTS SUPPLEMENTAL: REGIONAL RESPONSE

- New York State medical surge support includes 85,000 surge volunteers, 24,600 mental health workers and more than 200 NY National Guard members.
 - NYSDOH hired an additional 7,000 health care workers.
- New York Governor Cuomo announced that the state would allow elective outpatient treatment in hospitals around the state if they meet specific criteria including the number of available beds and the number of COVID-19 hospitalizations in that facility.
- At New York State's request, FEMA issued a \$6 million mission assignment to HHS to provide round the clock medical staff to care for non-critical patients in the state.
- FEMA contracted 525 ambulances and 1,190 emergency personnel from across the country to support New York and New Jersey. They were contracted to supplement the state medical transportation and support capabilities. The units include Advanced Life Support and Basic Life Support ambulances, and medical/support personnel necessary to operate.
 - 350 ambulances and 790 emergency personnel began arriving in New York on March 30, are providing interfacility transfer throughout the most impacted areas. To date, they have responded to more than 10,000 calls to 9-1-1 and transferred more than 4,800 patients to hospitals and alternate care facilities.
 - 175 ambulances and 400 emergency personnel began arriving in New Jersey on April 11 and are providing interfacility transfers in Hudson, Passaic, Bergen, Essex, Union, Middlesex, Ocean and Mercer counties. To date, they have responded to more than 3,900 calls to 9-1-1 and transferred more than 1,400 patients to hospitals and alternate care facilities.
- The city is operating temporary morgue facilities across the New York City. One Disaster Portable Morgue Unit (DPMU) unit is operating out of the Brooklyn Marine Terminal.
- New York National Guard, DoD and HHS have arrived and are supporting mortuary operations.
 - 50 DoD and 43 HHS personnel are supplementing local mortuary capacity.
 - 250 New York National Guard personnel are supporting collection and transport operations.
- Eighty-five refrigerated storage units have arrived and are being pre-staged on Randall's Island. As needed, the units are pushed to location identified by city officials.
- New Jersey is operating two temporary morgue facilities at centralized location. Seven of 20 storage units requested by the state have arrived.
- FEMA issued a \$350 million Mission Assignment to the U.S. Army Corps of Engineers for construction of additional alternate care facilities in New York.

Region III

Washington D.C. Metro Area (Washington, D.C., Maryland and Virginia)

- As of April 25, FEMA has obligated more than \$54.9 million in federal support for the state of Maryland, more than \$200 million to the state of Virginia, and more than \$60.7 million to the District of Columbia.
- FEMA delivered a 250-bed Federal Medical Station package to the state of Maryland.
 - Maryland National Guard deployed the FMS package to establish an alternate care site at the Baltimore Convention Center to increase state hospital capacity.

DAILY BRIEFING POINTS SUPPLEMENTAL: REGIONAL RESPONSE

- An additional 50 bed Federal Medical Station is allocated for the Metro DC area.
- As of April 25, one Battelle N95 decontamination unit is operational in Baltimore, Maryland.
- On April 23, one Battelle N95 decontamination unit has shipped to Washington, DC. It is expected to be operational by April 28.
- On April 8, FEMA obligated \$55 million for USACE assessment and construction of medical surge support alternate care facilities for the District of Columbia.
 - USACE awarded a contract for an alternate care facility at Hagerstown Correctional Facility in Hagerstown, MD. The State took over construction operations on April 24.
 - USACE awarded contracts for two alternate care facilities in the District of Columbia at United Medical Center and the Walter Washington Convention Center. The United Medical Center facility completed construction on April 22.

Region V

State of Illinois and the City of Chicago

- Medical supplies and equipment delivered to the State of Illinois from FEMA, HHS, and donations include more than 5 million N95 respirators, more than 1.5 million surgical masks, 260,330 face shields, 343,230 million surgical gowns, 7,622 coveralls, and more than 3.2 million gloves.
- As of April 25, FEMA has obligated \$262 million in federal support for the state of Illinois for the response to COVID-19.
- Through a collaborative engagement between FEMA, HHS, USACE, DOD personnel and state & city planners, FEMA has already committed more than \$125 million in federal funding for the design and build out of four alternate care sites in the Chicagoland area, to help ensure surge capacity is available for residents to continue to get the best healthcare possible.
 - The 3,000-bed ACS at McCormick Place Convention Center is currently operational.
 - The sites at Sherman Hospital in Elgin (est. 280 bed capacity) and Metro South Hospital in Blue Island (est. 300 bed capacity) were completed and turned over to the state.
 - The Westlake Hospital site in Melrose Park (est. 435 bed capacity) will be completed and turned over the state on April 25.
- One Battelle N95 decontamination unit is operational in Waukegan, Illinois, and another is pending delivery to Chicago.

State of Michigan

- Medical supplies and equipment delivered to the State of Michigan from FEMA, HHS, and donations include 2.1 million N95 respirators, 740,018 million surgical masks, 298,671 face shields, 121,703 surgical gowns, 3,888 coveralls, and 718,930 gloves.
- As of April 25, FEMA has obligated more than \$246 million to the state of Michigan.
- As of April 23, FEMA and HHS delivered 700 ventilators and 500 federal medical station beds from the Strategic National Stockpile to Michigan.
- FEMA has committed \$31 million in federal funding for the planning, design and build out of two alternate care sites in Michigan:

DAILY BRIEFING POINTS SUPPLEMENTAL: REGIONAL RESPONSE

- A 1,000-bed ACF at the TCF Convention Center in Detroit is operational.
- A second 250-bed alternative care facility at Suburban Collection Showplace in Novi, Michigan is open.

Region VI

State of Louisiana and the City of New Orleans

- As of April 25, FEMA has obligated \$139 million in federal support for the state of Louisiana, including \$55.7 million to the state to reimburse costs related to the COVID-19 response.
- Eleven Community Based Testing Sites are open and operational in New Orleans.
- An epidemiology team from the Centers for Disease Control and Prevention (CDC) arrived at the Louisiana Emergency Operations Center on March 26.
- Additional support being sent to the state to increase state hospital capacity includes two 250-bed Federal Medical Stations and USACE support for assessment and evaluation of alternative care facilities.
- As of April 21, the Ernest N. Morial Convention Center in New Orleans has seen 156 patients. Additional DoD personnel supporting Baton Rouge General Medical Center have seen 81 patients.
- 350 ventilators have been provided to the state.

State of Texas

- As of April 25, FEMA has obligated \$378 million in federal support for the state of Texas, including \$66.6 million to the state to reimburse costs related to the COVID-19 response.

Region IX

State of California

- Medical supplies and equipment delivered to the State of California include 2.8 million N95 respirators, 3.8 million surgical masks, 504,442 face shields, 472,017 surgical gowns, 7,007 coveralls, and 2.9 million gloves.
- As of April 25, FEMA had obligated more than \$1.08 billion in federal support for the state of California, including \$617.7 million to the state to reimburse costs related to the COVID-19 response.
- USACE continues assessment of eight state-selected facilities to develop large-scale, supplemental hospital space as the state works to expand existing hospital capacity by up to 50,000 beds.
 - Out of the assessed facilities, USACE completed an alternate care facility at the Porterville Development Center in Porterville, CA.
 - The first of eight Federal Medical Stations initiated operations on March 29.
- Federal and state partners are working to convert the Craneway Pavilion into a 250-bed federal medical station.
- Two Battelle N95 decontamination units have been approved for California. One is operational

DAILY BRIEFING POINTS SUPPLEMENTAL: REGIONAL RESPONSE

in Burbank and the second will be set up in Fairfield.

- FEMA approved the state of California's emergency feeding program, Restaurants Deliver: Home Meals for Seniors. The initiative leverages restaurants struggling to maintain business to deliver meals to at-risk seniors over 65 years of age.
- The USNS Mercy hospital ship is operational and receiving patients in Los Angeles. It has seen 71 patients and has 250 staffed hospital beds available to help relieve strains on local hospital systems.
 - Starting April 20, USNS Mercy will provide medical personnel support for 100 beds in a local facility and support 250 non-COVID beds aboard the ship.
- 170 ventilators from the Strategic National Stockpile were delivered to Los Angeles county.
- Through California's Emergency Management Assistance Compact, the state has loaned 500 ventilators to six states and the District of Columbia.
- The state is working on shelter space for at-risk population by providing over 11,000 hotel/motel rooms and 1,126 trailers deployed to Santa Clara, Los Angeles, and Sacramento counties. There are 12,156 units secured with 4,257 units currently occupied.
- FEMA completed the sale of 105 travel trailers to the state to support a State COVID-19 housing initiative for impacted individuals.
- On April 13, California Governor Newsom, Washington Governor Inslee and Oregon Governor Brown announced a Western States Pact to work on a shared approach for reopening their economies and controlling COVID-19.

State of Nevada

- As of April 25, FEMA has obligated \$43.8 million in federal support for the state of Nevada.

Region X

State of Alaska

- Medical supplies and equipment delivered to the State of Alaska include 74,114 N95 masks, 176,063 surgical masks, 68,605 face shields, 41,542 surgical gowns, 1,791 coveralls, 286,252 gloves and 60 ventilators.
- As of April 25, FEMA has obligated \$9.8 million in federal support for the state of Alaska.
- USACE completed construction of an alternate care site at Alaska Airlines Center. Activation date is to be determined.
- On April 21, Alaska Governor Dunleavy announced Phase One of the State's approach to reopening segments of the Alaskan economy starting on April 24.

State of Idaho

- Medical supplies and equipment delivered to the State of Idaho include 90,610 N-95 respirator masks, 215,357 surgical masks, 44,887 face shields, 36,842 surgical gowns, 223,974 gloves and 1,823 coveralls.
- As of April 19, the state of Idaho has released 300 FMS beds back to HHS for redeployment to meet other needs. Fifty were redeployed to New Mexico, 250 were redeployed to Colorado.

DAILY BRIEFING POINTS SUPPLEMENTAL: REGIONAL RESPONSE

- On April 22, a Community Based Testing Site 2.0 began conducting tests at a Rite Aid in Meridian, ID. discussions continue on potential deployment of additional CBTS 2.0.
- One Battelle Critical Care Decontamination System is being prepared for shipment to Idaho National Laboratory in Idaho Falls.
- On April 14, Governor Little announced the four phases of reopening the economy.

State of Oregon

- Medical supplies and equipment delivered to the State of Oregon include 357,920 N95 respirator masks, 319,101 surgical masks, 130,643 face shields, 138,898 surgical gowns, 3,630 coveralls, and 596,724 gloves.
- As of April 25, FEMA has obligated \$63 million in federal support for the state of Oregon.
- As of April 17, a 50-bed federal medical site was redeployed to New Mexico
- The 45-bed alternate care site at the VA clinic in Eugene is anticipated to be done May 13.
- On April 13, Governor Brown announced that the state will provide \$8 million to the Oregon Food Bank to meet urgent food assistance needs.
- On April 13, Oregon Governor Brown, Washington Governor Inslee and California Governor Newsom announced a Western States Pact to work on a shared approach for reopening their economies and controlling COVID-19.
- On April 14, Governor Brown announced the “Framework for Reopening Oregon.”

State of Washington

- Medical supplies and equipment delivered to the State of Washington include 1.1 million N95 respirator masks, 888,268 surgical masks, 126,201 face shields, 3,772 coveralls, 263,225 gowns, and 500 ventilators.
- As of April 24, FEMA has obligated \$93 million in federal support for the state of Washington.
 - The state has returned 427 ventilators to the SNS to support other states.
- Field hospital/alternate medical facility support for the COVID-19 response in Washington includes:
 - As of April 19, a 250-bed federal medical station was redeployed to New Mexico
 - As of April 15, two 50-bed federal medical stations are available for redeployment.
 - As of April 15, USACE has completed 19 alternate care site assessments.
 - On April 15, the CenturyLink Event Center field hospital closed.
 - On April 14, the alternate care site at Astria Regional Medical Center in Yakima closed.
 - On April 3, USACE conducted an assessment for the Makah Tribe; an assessment request is pending from Confederated Tribes of the Colville Reservation.
- On April 13, Washington Governor Inslee, Oregon Governor Brown and California Governor Newsom announced a Western States Pact to work on a shared approach for reopening their economies and controlling COVID-19.
- On April 21, Washington Governor Inslee announced the state’s COVID-19 Recovery Plan.

From: [Nevins, Kristan K. EOP/WHO](#)
Subject: Fwd: FEMA Daily Briefing Points_COVID19 May 16
Date: Saturday, May 16, 2020 12:31:17 PM
Attachments: [image001.png](#)
[ATT00001.htm](#)
[ESF15_DailyBriefingPoints_20200516_FINAL.pdf](#)
[ATT00002.htm](#)
[COVID-19 By the Numbers 5.16.20 \(National\).pdf](#)
[ATT00003.htm](#)

All,

Please see today's briefing points below.

Kristan

Sent from my iPhone

Begin forwarded message:

From: FEMA-ESF15-Coordination (b) (6)
Date: May 16, 2020 at 10:29:49 AM EDT
Subject: FEMA Daily Briefing Points_COVID19 May 16

Coronavirus (COVID-19) Pandemic Whole-of-America Response

Saturday, May 16, 2020

“JUST AS GENERATIONS OF AMERICANS BEFORE US FACED DOWN THE MOST DIFFICULT TRIALS, SET THEIR SIGHTS ON THE HIGHEST SUMMIT, AND OVERCAME THE BIGGEST OBSTACLES, AMERICA WILL MEET THE MOMENT. WITH UNRIVALED SPEED, UNMATCHED SCALE, AND THE UNYIELDING SPIRIT OF THE AMERICAN PEOPLE, OUR NATION WILL COME BACK STRONGER AND GREATER THAN EVER.”

– PRESIDENT DONALD TRUMP

Topline Briefing Points and Messages

<!--[if !supportLists]-->■ <!--[endif]-->On May 15, [President Trump announced](#) Operation Warp Speed. The goal of this national program is to accelerate the development, manufacturing, and distribution of COVID-19 vaccines, therapeutics, and diagnostics.

<!--[if !supportLists]-->□ <!--[endif]-->Operation Warp Speed is a public-private partnership between components of HHS, the Department of

Defense, private firms and other federal agencies.

<!--[if !supportLists]-->□ <!--[endif]-->The program aims to have substantial quantities of a safe and effective vaccine available for Americans by January 2021.

<!--[if !supportLists]-->▪ <!--[endif]-->On May 14, [President Trump announced](#) continued efforts to ensure a fully stocked, resilient national stockpile and the strong domestic industrial base needed to confront COVID-19.

<!--[if !supportLists]-->□ <!--[endif]-->These efforts will include a plan to restructure the Strategic National Stockpile, implanting lessons learned from recent pandemics.

<!--[if !supportLists]-->□ <!--[endif]-->Additionally, the President signed an executive order providing authority to ensure America is producing critical goods necessary to build up our strategic stockpiles and reduce dependency on foreign supplies.

<!--[if !supportLists]-->▪ <!--[endif]-->As of May 15, FEMA, HHS, and the private sector combined have coordinated the delivery of or are currently shipping: 83.3 million N95 respirators, 133.7 million surgical masks, 10.6 million face shields, 23.1 million surgical gowns, and 989 million gloves.

<!--[if !supportLists]-->▪ <!--[endif]-->FEMA has procured and delivered 4.1 million swabs and 2.3 million media so far in the month of May. In support of the White House Task Force's testing initiative, FEMA is supporting the procurement of specimen collection supplies to supplement the supplies states and healthcare providers are procuring from the private market.

<!--[if !supportLists]-->▪ <!--[endif]-->As of May 15, CDC, state, and local public health labs and other laboratories have tested more than 10.4 million samples.

<!--[if !supportLists]-->□ <!--[endif]-->As of May 14, the FDA has issued 98 individual [emergency use authorizations](#) (EAU) for test kit manufacturers and laboratories, including 12 antibody tests and 1 antigen test..

<!--[if !supportLists]-->▪ <!--[endif]-->On May 11, [President Trump announced](#) additional efforts to ensure that every state, territory and tribe has the resources they need to meet the robust testing plans described in the President's [Guidelines for Opening up America Again](#) and the [Testing Blueprint](#) unveiled by the President on April 27.

(b) (6)

Federal Emergency Management Agency
[fema.gov](https://www.fema.gov)

Coronavirus (COVID-19) Pandemic

Whole-of-America Response

Saturday, May 16, 2020

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- On **May 15**, [President Trump announced](#) Operation Warp Speed. The goal of this national program is to accelerate the development, manufacturing, and distribution of COVID-19 vaccines, therapeutics, and diagnostics.
 - Operation Warp Speed is a public-private partnership between components of HHS, the Department of Defense, private firms and other federal agencies.
 - The program aims to have substantial quantities of a safe and effective vaccine available for Americans by January 2021.
- On **May 14**, [President Trump announced](#) continued efforts to ensure a fully stocked, resilient national stockpile and the strong domestic industrial base needed to confront COVID-19.
 - These efforts will include a plan to restructure the Strategic National Stockpile, implanting lessons learned from recent pandemics.
 - Additionally, the President signed an executive order providing authority to ensure America is producing critical goods necessary to build up our strategic stockpiles and reduce dependency on foreign supplies.
- As of **May 15**, FEMA, HHS, and the private sector combined have coordinated the delivery of or are currently shipping: 83.3 million N95 respirators, 133.7 million surgical masks, 10.6 million face shields, 23.1 million surgical gowns, and 989 million gloves.
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- On **May 11**, [President Trump announced](#) additional efforts to ensure that every state, territory and tribe has the resources they need to meet the robust testing plans described in the President’s [Guidelines for Opening up America Again](#) and the [Testing Blueprint](#) unveiled by the President on April 27.

By the Numbers

- All 50 states, five territories, the Seminole Tribe of Florida, and Washington, D.C. have been approved for major disaster declarations to assist with additional needs identified.
 - To date, there are 71 tribes working directly with FEMA, with one tribe that is a direct recipient with a major disaster declaration and an emergency declaration, 40 tribes that are direct recipients with emergency declarations and 30 tribes that are recipients under state declarations.
 - A tribal government may choose to be a subrecipient under a state that has chosen to be a recipient of FEMA assistance, or choose to be a direct recipient of FEMA.
- As of **May 15**, 181,670 samples were processed at federally run [Community Based Testing Sites](#) and 246,151 samples were processed at public-private partnership testing sites.
 - Out of 41 original Community Based Testing Sites, 14 continue to operate as federally run sites, 20 have transitioned to state management, and 7 have closed in consultation with the states. 1 additional site is in progress.
 - HHS has established a public-private partnership with pharmacy and retail companies to accelerate testing. To find locations, visit the [COVID-19 Community-Based Testing Site page](#).
 - Under the CBTS public-private partnership, there are currently 322 live sites in 44 states and Washington, D.C. conducting testing.
- Combined, FEMA and HHS have obligated \$87.5 billion in support of COVID-19 efforts.
- The federal government has approximately 12,866 total ventilators available in the Strategic National Stockpile. HHS issued the Department of Defense a fulfillment letter for the ventilator agreement releasing 1,082 ventilators back to the Department of Defense.
- As of **May 15**, FEMA and HHS have provided 10,708 ventilators from the Strategic National Stockpile and the Defense Department to states, tribes and territories.
- In support of the U.S. Department of Veterans Affairs and our nation's veterans, FEMA has coordinated shipments of more than 6 million respirator masks, 1.5 million gloves, and 239,000 face shields to facilities across the country.
- FEMA has 3,143 employees supporting COVID-19 pandemic response out of a total 20,605 agency employees ready to respond to other emergencies should they occur.
- As of **May 15**, FEMA has obligated \$6.0 billion in support of COVID-19 efforts. This support includes:
 - Temporary Medical Facilities including medical personnel, mortuary and ambulance services: \$2.4 billion.
 - PPE including medical supplies and pharmaceuticals: \$1.5 billion.
 - National Guard: \$1.3 billion.
 - Public Assistance Emergency Protective Measures (Non-PPE): \$489 million.
 - Commodities: \$27 million.
 - Crisis Counseling: \$15 million.
- As of **May 14**, 87 agencies across 28 states, the District of Columbia, two tribes and one U.S. territory have sent a total of 255 alerts containing information on COVID-19 to cell phones and other wireless devices via the WEA system, and 59 alerts to radios/televisions via EAS.

DAILY BRIEFING POINTS: COVID-19 WHOLE-OF-AMERICA RESPONSE

- To date, the President has approved 49 National Guard requests for federal support for the use of National Guard personnel in a Title 32 duty status.
 - Through this order, the federal government will fund 100 percent of the cost for T-32 National Guard orders through June 24.
 - As of **May 14**, 40,147 National Guard troops have activated in T-32 duty status and 840 troops have activated in State Active Duty status to help with testing and other response efforts.
- The CDC has nearly 4,600 personnel supporting the outbreak response.
- The U.S. Public Health Service Commissioned Corps has deployed more than 3,470 officers in support of nation-wide efforts to mitigate the virus' potential spread.
- As of **May 15**, 754 USACE personnel are activated to support the COVID-19 mission, with more than 5,000 personnel engaged in additional response efforts.
- To date, FEMA, HHS and the Cybersecurity Infrastructure and Security Agency (CISA) along with other federal agencies have distributed over 92.8 million cloth face coverings for critical infrastructure workers as part of a multi-prong approach to re-open American economic activity while continuing to limit spread of COVID-19.

Supply Chain Task Force

- FEMA continues to expedite movement of commercially pre-sourced and commercially procured critical supplies from the global market to medical distributors in various locations across the U.S. through [Project Airbridge](#).
- As of **May 15**, Project Air Bridge has completed 141 flights with an additional 64 scheduled, or in transit, for a total of approximately 205 flights.
 - Two flights landed yesterday, May 15 in Chicago.
 - Four flights are scheduled to land today, May 16: one in Chicago, two in Los Angeles and one in New York City (JFK).
 - It is important to note that any number of variables can affect international flight schedules, causing unexpected delays or cancellations.
- Through Project Air Bridge, the following supplies have been delivered from overseas manufacturers to the U.S. and into private sector supply chains from March 29 through May 15:
 - Nearly 1.4 million N95 respirators
 - 921 million gloves
 - 97.4 million surgical masks
 - 17.8 million surgical gowns
 - More than 2.3 million thermometers
 - More than 1.3 million face shields
 - Nearly 392,000 coveralls
 - 109,000 stethoscopes
 - 370,000 oxygen masks
 - More than 160,000 cannulas
- Since April 12, 42 flights carrying nearly 42 million FEMA-procured masks and respirators from 3M have landed in the U.S. The masks are inventoried at a warehouse and then distributed to prioritized areas as determined by FEMA and HHS.

DAILY BRIEFING POINTS: COVID-19 WHOLE-OF-AMERICA RESPONSE

- The [strategy to allocate medical supplies and equipment](#) is based on COVID-19 disease activity and its effects, as well as the need to facilitate distribution of limited supplies to areas where resources are needed most urgently.
 - Leveraging quantitative data sets provided by FEMA, HHS and CDC, FEMA's National Resource Prioritization Cell combines these data streams, analyzes the available COVID-19 disease activity data to determine current and potential future areas that most urgently require resources.
 - The team of experts works through this process every seven days to ensure resource prioritization recommendations are driven by the best available or most current data.

FEMA and HHS Response

- FEMA, HHS, and our federal partners work with state, local, tribal and territorial governments to execute a whole-of-America response to COVID-19 pandemic and protect the health and safety of the American people.

FEMA

- On **March 13**, President Trump declared a nationwide emergency pursuant to the Stafford Act.
 - All 10 Regional Response Coordination Centers and emergency operations centers in all states and territories are active and supporting response efforts across the country.
- To support the Administration's [Testing Blueprint](#), FEMA is working to source and procure testing material – specifically, testing swabs and transport media. The FEMA-sourced material will be provided to states, territories and tribes for a limited duration to help increase testing capacity in support of their individualized plans.
- [FEMA is coordinating two shipments](#) totaling a 14-day supply of personal protective equipment to all 15,400 Medicaid and Medicare-certified nursing homes. The shipments are meant to supplement existing efforts to provide equipment to nursing homes.
- On **May 12**, [FEMA released guidance](#) to state, local, tribal and territorial governments that outlines how they may be able to request reimbursement through FEMA's Public Assistance Program for costs associated with keeping Alternate Care Sites open. This includes temporary and expanded facilities that may be minimally operated when COVID-19 cases decrease.
- On **May 12**, FEMA released an [Exercise Starter Kit](#) to help organizations facilitate their own internal workshops based on reconstitution planning principles and the White House's [Guidelines for Opening Up America Again](#).
- As of **May 13**, crisis counseling service grants have been made available to a total of 44 states and the District of Columbia to support programs providing free, confidential counseling through community-based outreach and educational services.
- On **May 4**, FEMA [announced](#) \$200 million in supplemental funding from the CARES act for grants through its Emergency Food and Shelter Program.
 - Combined with the \$120 million in annual funding appropriated by Congress, a total of \$320 million will be distributed beginning in early June to human service organizations assisting those in need throughout the country.
- On **April 23**, [FEMA announced](#) an additional \$100 million in funding for the Assistance to Firefighters Grant Program. This supplemental funding will provide financial assistance directly to

DAILY BRIEFING POINTS: COVID-19 WHOLE-OF-AMERICA RESPONSE

eligible fire departments, non-affiliated emergency medical service organizations and State Fire Training Academies for critical PPE and supplies needed to respond to COVID-19. The application period begins April 28.

U.S. Department of Health and Human Services Agencies and Offices

- On **May 13**, [the Substance Abuse and Mental Health Services Administration announced](#) \$40 million in emergency funding for a grant program to suicide prevention. The grant funding is intended to help with the increase in mental health needs as a result of COVID-19.
- On **May 13**, HHS, through [the Health Resources and Services Administration awarded](#) \$15 million in CARES Act funding to 159 organizations across five health workforce programs to increase telehealth capabilities in response to the COVID-19 pandemic.
- On **May 7**, HHS, through the Health Resources and Services Administration (HRSA), [awarded nearly \\$583 million](#) to 1,385 HRSA-funded health centers in all 50 states, the District of Columbia, and eight U.S. territories to expand COVID-19 testing.
- On **May 7**, [HHS announced the deployment of 50 portable kidney dialysis machines](#) and supplies to New York City and Long Island Intensive Care Units (ICU) to provide surge capacity for facilities caring for patients with COVID-19, which has caused acute kidney injury and therefore required dialysis in some ICU cases.
- On **May 5**, the Treasury Department began distributing \$4.8 billion in critical funds from the CARES act to tribal governments.
 - The CARES act provides a total of \$8 billion to address coronavirus preparedness, response, and recovery for American Indians and Alaska Natives.
 - The Administration has allocated over \$1 billion through the Indian Health Service (IHS), to support tribes, tribal organizations, and Urban Indian Organizations in their coronavirus response efforts.
- On **May 1**, HHS [announced](#) \$40 million of available funding for the development and coordination of a strategic network of national, state, territorial, tribal and local organizations to deliver important COVID-19 related information to minority, rural, and socially vulnerable communities hardest hit by the pandemic.
- On **May 1**, [HHS began processing payments](#) from the Provider Relief Fund to hospitals with large numbers of COVID-19 inpatient admissions through April 10, as well as to rural providers in support of the national response to COVID-19.
 - These payments are being distributed to healthcare providers who have been hardest hit by the virus. Facilities admitting large numbers of COVID-19 patients received \$12 billion and providers in rural areas received \$10 billion.
 - An additional \$50 billion is being distributed throughout the healthcare system to help address the impact of COVID-19 to the entire healthcare system.
 - \$61 billion has been delivered to healthcare providers within 40 days of the passage of the CARES Act.
- On **April 30**, HHS through the Health Resources and Services Administration, [awarded \\$20 million to increase telehealth access](#) and infrastructure for providers and families to help prevent and respond to COVID-19.

DAILY BRIEFING POINTS: COVID-19 WHOLE-OF-AMERICA RESPONSE

- On **April 29**, the National Institutes of Health announced positive results of a [trial using remdesivir](#); patients with advanced COVID-19 and lung involvement who received remdesivir recovered, on average, faster than similar patients who received placebo.
- On **April 29**, the [National Institutes of Health announced](#) a new initiative, Rapid Acceleration of Diagnostics; aimed at speeding innovation, development, and commercialization of COVID 19 testing technologies and funded by \$1.5 billion from federal stimulus.
- On **April 27**, HHS, through the Health Resources and Services Administration (HRSA), launched a new [COVID-19 Uninsured Program Portal](#), allowing health care providers who have conducted COVID-19 testing or provided treatment for uninsured COVID-19 individuals on or after Feb. 4 to submit claims for reimbursement.
- On **April 24**, the Substance Abuse and Mental Health Services Administration (SAMHSA) announced an additional \$250 million in emergency COVID-19 funding to increase access to and improve the quality of community mental and substance use disorder treatment services through the expansion of Certified Community Behavioral Health Clinics (CCBHC).
- As of **April 24**, the Biomedical Advanced Research and Development Authority (BARDA) within the HHS Office of the Assistant Secretary for Preparedness and Response (ASPR) has a COVID-19 Medical Countermeasure Portfolio that includes development of 26 products supported under public-private partnerships.
 - Of these, 15 are diagnostics, seven are treatments, three are vaccines, and one is a rapidly deployable capability to help protect the American people from COVID-19.
 - To date, BARDA has obligated \$39.8 million for diagnostics, \$334.9 million for treatments, more than \$979.3 million for vaccines.
- On **April 21**, HHS announced [\\$955 million in grants from the Administration for Community Living](#) to help meet the needs of older adults and people with disabilities. The grants will fund home-delivered meals, care services in the home, respite care and other support to families and caregivers, and other support services.
- On **April 20**, the [Substance Abuse and Mental Health Services Administration](#) under HHS began releasing \$110 million in emergency grant funding to strengthen access to treatments for substance use disorders and serious mental illnesses during the COVID-19 pandemic.

Centers for Disease Control and Prevention

- On **May 13**, [President Trump and the CDC released guidance](#) for colleges and universities on how to develop, implement and maintain a plan to ensure the health and safety of students, faculty and staff.
- On **May 6**, CDC [published a report](#) on COVID-19 in correctional and detention facilities.
 - CDC recommends that facility administrators, with the support of local health departments and partners, prepare for potential transmission, implement prevention measures, and [follow guidance](#) for the management of suspected and confirmed COVID-19 cases to prevent further transmission.
- The nation's [Slow the Spread](#) campaign ended **April 30**. CDC continues to [recommend that everyone use a cloth face covering](#) in public settings where other social distancing measures are difficult to maintain.
- On **April 28**, the Centers for Disease Control and the Environmental Protection Agency [issued guidance on for cleaning and disinfecting spaces](#) when reopening America; the guidance offers

DAILY BRIEFING POINTS: COVID-19 WHOLE-OF-AMERICA RESPONSE

step by step instructions on how Americans can reduce risk of exposure to COVID 19 and stay safe in public spaces, workplaces, businesses, schools, and homes.

- CDC continues to encourage use of [personal protective equipment optimization strategies](#) for healthcare providers to optimize resources, deal with limited resources, and make contingency plans or alternative strategies when supplies are limited.
- On **April 26**, CDC and the Occupational Safety and Health Administration (OSHA) [released targeted guidance](#) to help meat and poultry processing facilities implement infection control practices to reduce the risk of transmission and illness from COVID-19 in these facilities.

Food and Drug Administration (FDA)

- FDA launched the Coronavirus Treatment Acceleration Program (CTAP) to speed approval of drugs and therapies. 72 therapies are now being tested, including hydroxychloroquine, and another 211 are in active planning for clinical trials.
- FDA published a [new blog post](#) on the [Coronavirus Treatment Acceleration Program](#). The program uses every available method to move new treatments to patients as quickly as possible, while at the same time finding out whether the treatments are helpful or harmful.
- On **May 11**, the FDA [released new guidance](#) to improve the efficiency of clinical trials. These guidance documents aim to make the process for submitting applications to initiate studies for new drugs and biological products more efficient and outline recommendations for ways to design clinical trials to evaluate safety and effectiveness of these medical products for COVID-19.
- On **May 9**, the FDA [issued](#) the first emergency use authorization for a COVID-19 antigen test, a new category of tests designed for rapid detection of the virus that causes COVID-19.
 - Antigen tests can play a critical role in the fight against COVID-19 due to their ability to be produced at a lower cost than other tests. Antigen tests can also potentially scale to test millions of Americans a day due to their simpler design.
- On **May 9**, [HHS announced the allocation plan for the drug remdesivir](#). The Assistant Secretary for Preparedness and Response (ASPR) expects supplies of the drug to be delivered to all 50 states, five territories, the Veterans Health Administration and the Indian Health Service by the end of the week.
 - Gilead Sciences, Inc. is donating approximately 607,000 vials of the experimental drug over the next six weeks.
 - State health departments will distribute the doses to appropriate hospitals within their states.
- On **May 8**, the FDA [authorized](#) the first diagnostic test with the option of using home-collected saliva samples for COVID-19 testing.
- As of **May 11**, the FDA has issued 67 individual [Emergency Use Authorizations](#) (EUAs) for test kit manufacturers and laboratories
- FDA has authorized four mask sterilizations systems to disinfect N95 masks, with one system that can [decontaminate 4 million N95 masks per day](#).
- On **May 1**, the FDA issued an [emergency use authorization](#) for the investigational antiviral drug remdesivir for the treatment of suspected or laboratory-confirmed COVID-19 in adults and children hospitalized with severe disease.

DAILY BRIEFING POINTS: COVID-19 WHOLE-OF-AMERICA RESPONSE

- On **April 28**, the FDA issued a new [video resource](#) explaining Emergency Use Authorizations (EUAs), one of several tools FDA uses to help make important medical products available quickly during public health emergencies like the COVID-19 pandemic.
 - EUAs provide more timely access to drugs, diagnostic tests and/or other critical medical products that can help diagnose, treat and/or prevent COVID-19.
- On **April 27**, the [FDA released two new fact sheets](#) for the food and agriculture sector outlining guidelines on [use of disposable facemasks and cloth coverings](#), as well as summarizing [key steps employers and coworkers can take](#) to stay open, continue to slow the spread and support continuity of essential operations.
- During the **April 24** White House Press Briefing, FDA Commissioner Dr. Stephen Hahn announced [approval the first COVID-19 home collection test kit](#).
- On **April 21**, the FDA issued an emergency use authorization for IntelliVue Patient monitors intended to be used by healthcare professionals in the hospital environment for remote monitoring of adult, pediatric and neonate patients having or suspected of having COVID-19 to reduce healthcare provider exposure.

Other Federal Agencies

- On **May 13**, the [DHS Science and Technology Directorate released](#) a predictive modeling tool to estimate natural decay of the virus that causes COVID-19 under a range of temperatures and relative humidity. The tool is designed to assist response efforts and estimate the environmental persistence of the virus under certain combinations of temperatures and humidity.
- On **May 13**, [the FBI and CISA issued a warning](#) to organizations researching COVID-19 of the likely targeting and network compromise by the People's Republic of China. The guidance warned healthcare, pharmaceutical and research sectors working on COVID-19 response that they are the prime targets of activity and should protect their systems.
- On **May 9**, the U.S. Department of Agriculture [announced](#) \$3 billion in contracts to buy dairy, meat, and produce from U.S. farmers, ranchers, and specialty growers; the goods will be provided to support food lines and kitchens and the Farmers to Families Food Box Program.
- On **May 6**, the Department of Labor [awarded an additional \\$10 million in Dislocated Worker Grants](#) in response to the coronavirus public health emergency. The funding is from the CARES Act and is intended to help address the workforce-related impacts of COVID-19. This brings the total amount of Dislocated Worker Grants awarded to states and territories to \$171 million.
- On **May 5**, CISA, along with the United Kingdom's National Cyber Security Centre (NCSC), [released a joint advisory](#) to international healthcare and medical research organizations providing an update on ongoing malicious cyber activity and new cyber threats related to COVID-19.
- On **May 4**, the [Small Business Administration \(SBA\) announced](#) that agricultural businesses are now eligible for the SBA Economic Injury Disaster Loans as part of the Paycheck Protection Program and Healthcare Enhancement Act.
- On **May 3**, the U.S. Department of Treasury and the SBA [announced](#) that the second round of funding for the Paycheck Protection Program processed 2.2 million loans to small businesses [since it launched on April 27](#). Including the previous funding bill, more than \$670 billion is available for the loan program in total.

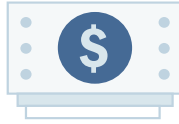
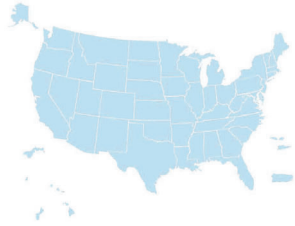
DAILY BRIEFING POINTS: COVID-19 WHOLE-OF-AMERICA RESPONSE

- On **April 28**, President Trump signed an [executive order to keep meat processing plants open](#) to ensure the continued supply of beef, pork, and poultry to the American people. The order uses the Defense Production Act to classify meat processing as critical infrastructure.
- On **April 20**, President Trump launched the Dynamic Ventilator Reserve Program, an innovative public-private partnership to access up to 65,000 additional ventilators in hospitals across the country that can be redeployed when not in use.
- On **April 17**, U.S. Department of Agriculture announced the [Coronavirus Food Assistance Program](#), an immediate relief program that provides \$16 billion in direct support to farmers and ranchers as well as \$3 billion to purchase and distribute fresh produce, dairy and meat products to food banks, community and faith-based organizations and other non-profits.
- On **April 17**, the Cybersecurity and Infrastructure Security Agency released version 3.0 of the [Essential Critical Infrastructure Workers guidance](#) to help state and local jurisdictions and the private sector identify and manage their essential workforce while responding to COVID-19.

COVID-19 By the Numbers

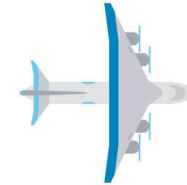
57 Major Disaster Declarations

Approved in all 50 states, 5 territories, Washington DC, and 1 tribe



\$6.0 billion

Emergency protective measures



141

Airbridge flight missions

255

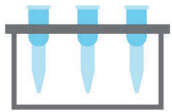
text messages via the Wireless Emergency Alert system

59

messages to broadcast stations via the Emergency Alert System

40,147

National Guard troops activated in a Title 32 duty status



10.4 million

samples tested

181,670 samples tested at Community-Based Testing Sites
246,151 private partner site samples

Critical Supplies Delivered

10.6 million



face shields

133.7 million



surgical masks

3.0 million



coveralls

989.0 million



gloves

83.3 million



N95 respirators

23.1 million



gowns



12,866

Ventilators available

Numbers as of 5/16/2020



From: (b) (6)
To: [Rapuano, Kenneth P HON OSD OUSD POLICY \(USA\)](#); [VANHERCK, GLEN D Lt Gen USAF ACC USAFWC/CC](#); [Taliaferro, Jeffrey B \(Jeff\) Maj Gen USAF JS J3 \(USA\)](#)
Cc: (b) (6); [Salesses, Robert G SES OSD OUSD POLICY \(USA\)](#); (b) (6); (b) (6); [Lyons, David Brig Gen SD](#); [Henke, Robert SES SD](#)
Subject: Fwd: For Quick Review: Draft PM providing Italy COVID Assistance
Date: Wednesday, April 1, 2020 9:14:13 PM
Attachments: [3. Italy assistance memorandum 2020 04 01 2041 - clean copy.docx](#)

Sirs, request COVID TF review and clear the updated PM for US support to Italy. Suspense is firm and for critical comments only by 1100, tomorrow, April 2nd.

Very respectfully,

(b) (6)

From: "Staff Secretary" (b) (6)
Date: Wednesday, April 1, 2020 at 9:06:27 PM
To: "Staff Secretary" (b) (6), "Kudlow, Larry A. EOP/WHO"
(b) (6), "Pottinger, Matthew F. EOP/WHO"
(b) (6), "Boehler, Adam" (b) (6), "Kushner, Jared
C. EOP/WHO" (b) (6), (b) (6), (b) (6), "Ueland,
Eric M. EOP/WHO" (b) (6), "Vought, Russell T. EOP/OMB"
(b) (6), "Liddell, Christopher P. EOP/WHO"
(b) (6), "White House Clearances"
(b) (6), (b) (6), (b) (6)
"Philbin, Patrick F. EOP/WHO" (b) (6), "Gountanis, John"
(b) (6), "Eisenberg, John A. EOP/WHO"
(b) (6), "Pinkos, Stephen M. EOP/OVP"
(b) (6), "Short, Marc T. EOP/OVP"
(b) (6), "Conway, Kellyanne E. EOP/WHO" (b) (6)
(b) (6), (b) (6), "Lighthizer, Robert E.
EOP/USTR" (b) (6), "Greer, Jamieson L. EOP/USTR"
(b) (6), (b) (6), (b) (6)
"Harrison, Brian (HHS/IOS)" (b) (6), "Grogan, Joseph J. EOP/WHO"
(b) (6), "Pataki, Tim A. EOP/WHO"
(b) (6), "Hoelscher, Douglas L. EOP/WHO"
(b) (6), "DL Chief of Staff Office"
(b) (6), [gov](#)>, "Navarro, Peter K. EOP/WHO"
(b) (6), "Miller, Stephen EOP/WHO"
(b) (6)
Cc: "Staff Secretary" (b) (6)
Subject: RE: For Quick Review: Draft PM providing Italy COVID Assistance

All,

Attached is a further updated draft. Affirmative clearance is requested from **OVP, WHCO, NEC, OMB, State/USAID, DFC, EXIM, Treasury, DOD, DOC, DHS, and HHS** Please send any critical edits and clearances to Staff Secretary by **11am tomorrow morning**.

Thank you,
Staff Secretary

From: Staff Secretary
Sent: Monday, March 30, 2020 5:25 PM
To: Kudlow, Larry A. EOP/WHO (b) (6); Pottinger, Matthew F. EOP/WHO (b) (6); 'Boehler, Adam' (b) (6); Kushner, Jared C. EOP/WHO (b) (6); Ueland, Eric M. EOP/WHO (b) (6); Vought, Russell T. EOP/OMB (b) (6); Liddell, Christopher P. EOP/WHO (b) (6); 'White House Clearances' (b) (6); Philbin, Patrick F. EOP/WHO (b) (6); Eisenberg, John A. EOP/WHO (b) (6); Pinkos, Stephen M. EOP/OVP (b) (6); Short, Marc T. EOP/OVP (b) (6) Conway, Kellyanne E. EOP/WHO (b) (6); Lighthizer, Robert E. EOP/USTR (b) (6); Greer, Jamieson L. EOP/USTR (b) (6); 'Harrison, Brian (HHS/IOS)' (b) (6); Grogan, Joseph J. EOP/WHO (b) (6); Pataki, Tim A. EOP/WHO (b) (6); Hoelscher, Douglas L. EOP/WHO (b) (6); DL Chief of Staff Office (b) (6); Navarro, Peter K. EOP/WHO (b) (6); Miller, Stephen EOP/WHO (b) (6)
Cc: Staff Secretary (b) (6)
Subject: RE: For Quick Review: Draft PM providing Italy COVID Assistance

All,

Attached is an updated draft with outstanding policy and other flags for your consideration. Due to the significant number of changes, we would appreciate the review and affirmative clearance from **OVP, WHCO, NEC, OMB, State/USAID, DFC, EXIM, Treasury, DOD, DOC, and HHS**. All others are welcome to comment as well. Please send all comments and clearances to Staff Secretary by **noon tomorrow**. If you need more time, please let us know.

Thank you,
Staff Secretary

From: Staff Secretary
Sent: Sunday, March 29, 2020 3:43 PM
To: Kudlow, Larry A. EOP/WHO (b) (6); Pottinger, Matthew F. EOP/WHO (b) (6); Boehler, Adam (b) (6); Kushner, Jared

C. EOP/WHO (b) (6); (b) (6) Ueland, Eric M. EOP/WHO
(b) (6); Vought, Russell T. EOP/OMB (b) (6)
Liddell, Christopher P. EOP/WHO (b) (6); 'White House Clearances'
(b) (6); (b) (6); (b) (6); Philbin,
Patrick F. EOP/WHO (b) (6); Eisenberg, John A. EOP/WHO
(b) (6); Pinkos, Stephen M. EOP/OVP
(b) (6); Short, Marc T. EOP/OVP (b) (6); Conway,
Kellyanne E. EOP/WHO (b) (6) (b) (6)
(b) (6); Lighthizer, Robert E. EOP/USTR (b) (6)
Greer, Jamieson L. EOP/USTR (b) (6)
(b) (6) 'Harrison, Brian
(HHS/IOS)' (b) (6); Grogan, Joseph J. EOP/WHO
(b) (6) Pataki, Tim A. EOP/WHO (b) (6);
Hoelscher, Douglas L. EOP/WHO (b) (6) DL Chief of Staff Office
(b) (6); Navarro, Peter K. EOP/WHO
(b) (6); Miller, Stephen EOP/WHO (b) (6)
Cc: Staff Secretary (b) (6)

Subject: For Quick Review: Draft PM providing Italy COVID Assistance

Importance: High

All,

Attached for your quick review is a draft Presidential Memorandum providing up to \$100M in COVID-19 assistance to Italy. Affirmative clearance is requested from **OVP, WHCO, NEC, OMB, State/USAID, DFC, EXIM, Treasury, DOD, DOC, HHS, and USTR**. We understand the desire is to present this to the President for his consideration and signature as early as tomorrow; thus, please send any feedback you may have by **9:30am tomorrow morning, Monday, March 30**.

Thank you,
Staff Secretary

(b) (5)

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(b) (5)

(b) (5)

(b)

(5)

From:
To:
Cc:

Flynn, Charles A LTG USARMY HODA DCS G-3-5-7 (USA)
McCarthy, Ryan D HON USARMY HODA SECARMY (USA); McConville, James C GEN USARMY HODA CSA (USA)
(b) (6); Adrian, Anthony H BG USARMY NG NGB ARNG (USA);
(b) (6);
Austin, Stephen D SES USARMY OCAR (USA); Averill, Mark F SES USARMY HODA OAA (USA);
(b) (6);
Beaudette, Francis M LTG USARMY USASOC (US);
Beehler, Alex A HON USARMY HODA ASA IEE (USA); Benchoir, Peter N BG USARMY HODA DCS G-3-5-7 (USA);
Bernabe, Sean C BG USARMY USAREUR (USA); Berrier, Scott D LTG USARMY HODA DCS G-2 (USA); Bertolini,
(b) (6); Bills, Michael A LTG USARMY 8 ARMY (USA); (b) (6)
; Calloway, Joseph R MG USARMY HRC (USA); (b) (6)
; Calvert, Paul Thomas MG USARMY HODA DCS G-3-5-7 (USA); Cavoli, Christopher G
LTG USARMY USAREUR (US); (b) (6); Cloutier, Roger L Jr MG
USARMY USARAF (US); Gingrich, Karl H MG USARMY HODA DCS G-8 (USA); (b) (6)
; Cooke, Thomas M (Tom) SES USARMY HODA DCS G-3-5-7 (USA); Costanza, Charles
D BG USARMY HODA DCS G-3-5-7 (USA); Crawford, Bruce T LTG USARMY HODA CIO G-6 (USA); Daly, Edward M
LTG USARMY USAMC (USA); (b) (6); Dickinson, James H
LTG USARMY SMDC (US); Dingle, Raymond S LTG USARMY HODA OTSG (USA); Durham-Aguilera, Karen L SES
USARMY HODA ANMC (USA); (b) (6); Eifler, Brian S BG
USARMY HODA OCLL (USA); Evans, Jason T LTG USARMY HODA DCS G-9 (USA); Faris, Jill K BG USARMY HODA
OTSG (USA); Fenton, Bryan P LTG USARMY OSD OSD (USA); Ferrell, Terry R LTG USARMY USARCEN (USA);
Fisher, Ryan A SES USARMY HODA ASA CW (USA); Fogarty, Stephen G LTG USARMY ARCYBER (USA); Francis,
David J MG USARMY AVNCOE (USA); Funk, Paul E II GEN USARMY TRADOC (USA); Gabram, Douglas M LTG
USARMY IMCOM HQ (USA); (b) (6); Gainey, Sean A MG USARMY JS
J8 (USA); Gallivan, James J BG USARMY FUTURES COMMAND (USA); Gamble, Duane Anthony LTG USARMY
HODA (USA); Garcia, Gregory L (Greg) SES USARMY HODA CIO G-6 (US); Garrett, Michael X GEN USARMY
FORSCOM (USA); Gericke, Bradley T MG USARMY HODA DCS G-3-5-7 (USA); Gillis, W Jordan HON OSD OUSD A-
S (USA); Graves, Ronald J CSM USARMY HODA DCS G-3-5-7 (USA); Gibson, John G LTC USARMY HODA DCS G-
3-5-7 (USA); Green, William Jr. (Bill) BG USARMY HODA OCCH (USA); Grinston, Michael A SMA USARMY HODA
SMA (USA); (b) (6)
; Hannah, Amy E BG USARMY HODA OCPA (USA); (b) (6)
; Hibbard, Lonnie G MG
USARMY IMT (USA); (b) (6); Hokanson, Daniel K LTG USARMY NG NGB (US);
Horlander, Thomas A LTG USARMY HODA ASA FM (USA); Hort, John H SES USARMY FORSCOM (USA); Hovatter,
Mark J BG USARMY HODA DCS G-3-5-7 (USA); (b) (6); Jackson,
Donald Edwin (Ed) JR MG USARMY HODA OTIG (USA); James, Rickey Dale (RD) HON USARMY HODA ASA CW
(USA); James, Thomas S Jr LTG USARMY FIRST ARMY HQ (USA); Jette, Bruce D HON USARMY HODA ASA ALT
(USA); Johnson, John P (Pete) MG USARMY USARPAC (USA); Johnston, Gary W MG USARMY HQ INSCOM (USA);
Jones, Omar J IV MG USARMY MDW (USA); Kadavy, Timothy J LTG USARMY NG NGB ARNG (US); Kelly, Thomas
E III SES USARMY HODA DUSA (USA); Kem, John S MG USARMY AWC (USA); Klein, Martin F (Marty) BG
USARMY HODA DCS G-3-5-7 (USA); LaNeve, Christopher Charles BG USARMY HODA DCS G-3-5-7 (USA); (b) (6)
; Lowman, Christopher J SES USARMY HODA DCS G-3-5-7 (USA); Luckey, Charles D LTG USARMY OCAR
(USA); (b) (6)
; Manoney, Michael T SES USARMY HODA DCS G-3-5-7 (US); Markowitz, David SES USARMY HODA
DCS G-8 (USA); (b) (6); Martin, Joseph M GEN USARMY
HODA VCSA (USA); Martin, Theodore D LTG USARMY TRADOC (USA); McCurry, Michael C (Mac) BG USARMY
HODA DCS G-3-5-7 (USA); McPherson, James E HON USN (USA); (b) (6)
; Miller, Kathleen S SES USARMY HODA OAA (USA); (b) (6)
; Miyamasu, Myles M SES USARMY CAA (USA); (b) (6)
; Moore, William F SES USARMY HODA DCS G-4 (USA); Murray, John M (Mike) GEN USARMY FUTURES COMMAND
(USA); (b) (6); Nucci, Adam J SES USARMY HODA DCS G-3-5-7 (USA); (b) (6)
; Ostrowski, Paul A LTG USARMY HODA ASA ALT (USA); Pasqualette, James F (Jim) LTG USARMY HODA DCS G-8
(USA); (b) (6); Pede, Charles N LTG USARMY HODA OTJAG (USA); (b) (6)
; Perna, Gustave F GEN USARMY USAMC (USA); (b) (6)
; Platt, Walter E LTG USARMY HODA DAS (USA); (b) (6)
; Poppas, Andrew P LTG USARMY JS J3 (USA); (b) (6)
; Preston, Andrew D BG USARMY USARPAC (USA); (b) (6); Quintas,
Leopoldo A LTG USARMY FORSCOM (USA); Rainey, James E (Jim) LTG USARMY CAC (USA); Randon, Diane M
SES USARMY HODA DCS G-2 (USA); Redmann, Steven J (Steve) SES USARMY HODA CSA (USA); Renner,
Thomas R LTC USARMY HODA DCS G-3-5-7 (USA); Richards, Anne L SES USARMY HODA AAA (USA); Richardson,
James M LTG USARMY FUTURES COMMAND (USA); Richardson, John B IV MG USARMY FORSCOM (USA);
Richardson, Laura J LTG USARMY ARNORTH (USA); Risch, Stuart W MG USARMY HODA OTJAG (USA); (b) (6)
; Rohling, Andrew Michael MG USARMY USAREUR (USA);
(b) (6)
; Seamands, Thomas C LTG USARMY HODA DCS G-
I (USA); (b) (6); Semonite, Todd T LTG USARMY HODA OCE (USA);
(b) (6); Smith, Leslie C LTG USARMY HODA OTIG
(USA); Smith, Matthew D BG USARMY HODA DCS G-3-5-7 (USA); Solhjem, Thomas L MG USARMY HODA OCCH
(USA); (b) (6); Stoddard, Steven A SES USARMY HODA DCS G-3-
5-7 (USA); (b) (6); Swan, Robin Paul SES USARMY HODA SECARMY
(USA); (b) (6); Thurgood, L Neil LTG USARMY HODA ASA

ALT (USA); Twitty, Stephen M (Steph) LTG USARMY EUCOM DCOM (USA); Tyler, Joel Keith MG USARMY ATEC (USA); Vereen, Kevin MG USARMY HQDA PMG (USA); (b) (6); Walker, Flem Bowen (Donnie) JR MG USARMY USAMC (USA); Wallace, Roy A SES USARMY HQDA DCS G-1 (USA); Walrath, Daniel R MG USARMY ARSOUTH (USA); (b) (6); (b) (6); Wardynski, Eugene C (Casey) HON USARMY HQDA ASA MIRA (USA); Wenf, Michael C MG USARMY TRANSCOM TCJ5/4 (USA); Weidner, John W BG USARMY STRATCOM DJ5 (USA); Wendt, Eric P LTG USARMY (USA); Wesley, Eric J LTG USARMY AFC-FCC (USA); White, Jeffrey S SES USARMY HQDA ASA ALT (USA); Whitman, Bryan G SES WHS EITSD (US); Williams, Darryl A LTG USARMY USMA (USA); (b) (6)

Subject: G357 Weekly Update
Date: Friday, May 22, 2020 11:30:23 AM

Mr. Secretary and Chief

A lot of successful heavy lifting this week here in the G357, across the Army, and on the Hill. The team is reinforcing the Army's narrative on readiness, pressing our planning campaign on posture initiatives, and keeping Congressional leaders informed of our fielding and stationing developments.

Below are G357 highlights –

THIS PAST WEEK – SIX POINTS

- HASC-R Briefing: Impacts to Military Readiness & Training.** On Wednesday I briefed the House readiness subcommittee along with fellow Service 3s. Overall great session with very positive feedback from Chairman Garamendi (D-CO). He is most interested in gathering the military's COVID lessons learned—we'll share some of CALL's Quick Look work to-date with them. Also lots of interest in collective training impacts—I shared how we've adjusted CTCs and highlighted a lot of our training initiatives. They are anxious to learn more about our depots, which Duane Gamble and his teammates will address during a brief to this subcommittee on 28 MAY.
- Indo-Pacific Defense Initiative.** Thank you for inviting me to join you both during your breakfast meeting to discuss our INDOPACOM Posture efforts with SEN Perdue (R-GA) and SEN Gardner (R-CO). We'll provide you and other ASLs a comprehensive review of IPDI next Friday.
- Operation Warp Speed (OWS).** Chief, tracking your guidance to fully support GEN Perna in his new role as the OWS chief operating officer. The G357 team is fully prepared to support the OWS mission of accelerating the development, manufacturing, and distribution of vaccines, therapeutics, and diagnostics (medical countermeasures). Yesterday myself, Scotty Berrier, LTG Ostrowski, BG McCurry sat with GEN Perna on an update by the JS J2 on Global Threats. A very helpful session for GEN Perna; we'll create a battle rhythm event addressing threats that OWS will contend with.
- V Corps, MDTF, USAREUR/USARAF.** Pete Benchoff had a very productive and well-received phone call with HASC PSMs—he is carrying the water on a lot of key messaging. Pete provided background on MDTF and explained OFSC process all of which PSMs found extremely valuable. We'll look to provide similar updates to the SASC.
- HPCON Levels:** As you are both aware the SecDef signed a memo delegating authority to change HPCON levels to Senior Mission Commanders. Chris LaNeve's G-357 OD team has the transition framework Base Order ready to publish which provides amplifying guidance on local case rate, testing, treatment, and monitoring. Pending your further guidance.
- COVID-19 CUOPS:** The CAT published FRAGOs 25, 26, and 27 which provide guidance on the distribution of BioFire Tests, leave procedures under the Families First Coronavirus Response Act, and passport/visa expedited request processing. Also of note, the "Army PCS Move App" that Duane Gamble's G4 team developed has proven to be a very useful information source across our formations.

G357 OPTs – SEVEN PLANNING EFFORTS TO HIGHLIGHT:

1. **Med Reform:** COVID impacts highlight major friction points and flawed assumptions in Med Reform. The Army's unique medical capabilities clearly allowed us to be agile and adaptive during COVID response. This likely would not have occurred under the DHA transition plan. Our Med Reform OPT, OTSG, and M&RA will update you next Friday.
2. **Dr. Stoddard:** My sincerest thanks to Dr. Steve Stoddard for his exceptional work as the Deputy Director of the G-357 FM team as he transitions to become the Director of CAA. We also welcome Mr. Myles Miyamasu as the new FM Deputy.
3. **V Corps.** Pete Benchoff's G-357 FM team is drafting FRAGO 1 to EXORD 162-20 to address command relationship and establish the Forward Command Post (FCP) equipping requirements. Anticipate release for staffing on 26 May with a suspense of 15 Jun.
4. **TAA 23-27:** Our team kicked off the TAA 23-27 Force Synchronization Review (FSR) OPT last week. Initial focus is to ensure data accuracy and Force Integration Functional Area (FIFA) coordination. Outputs of the Stationing OPT will help inform the needed revisions to AR 5-10.
5. **Army Watercraft.** AWS Relocation EXORD staffing is complete and is going through legal review. The Composite Watercraft Company Force Design Update (FDU) cleared requirements determination by CAC. Kickoff meeting for the Army Watercraft FFRDC Study which was directed by the SecDef is 9 Jun.
6. **CCLTF.** Mr. Secretary, the action memo response you signed designates you as the DOD lead for the CCLTF pending SD approval. CCLTF EXORD is in DRAFT as well as a revision to the CCLTF Charter. We anticipate gaining tri-chair (Army-USMC-SOCOM) by mid to late June.

UPCOMING SECDEF MEETINGS, JCS TANKS, and OPSDEPS:

- 26 MAY (TUE) **SWPR: People** (see slides on SIPR)
- 27 MAY (WED) OPSDEPS: DRT, JF Strategic Estimate
- 28 MAY (THU) DEPOPSDEPS: Munitions II
- 29 MAY (FRI) **JCS TANK: GFMIG**

ON THE HORIZON:

- 27 MAY: **Pensacola Shooting Update to SA/CSA;** Scotty Berrier and I will host a small-group 3-Star session on 26 MAY to discuss your taskers to us regarding International Military Students attending US schools.
- 27 MAY: Med Reform Update to VCSA
- 29 MAY: **Pacific Defense Initiative Comprehensive Review to SA/CSA**
- 29 MAY: Med Reform Options Brief to SA/CSA
- 8-12 JUN: **Army Modernization and Equipping Conference (AMEC)**
- **Army Campaign Plan (ACP):**
 - 27 MAY: INDOPACOM Posture, Bio-Defense/CNI/CWMD Readiness, Army COVID-19 Campaign Plan (AC2P)
 - 3 JUN: Army Modernization Enterprise Working Group, C-UAS, AC2P
 - 10 JUN: AC2P
 - 17 JUN: Defender 20 Reset, MDTF, Army Watercraft Strategy, Mobilization & Power Projection Strategic Gap Analysis

EXORDs: Significant EXORDs published this past week:

- FRAGO 25, 26, & 27 to HQDA EXORD 144-20: Army Wide Preparedness and Response to COVID-19 Outbreak.
- HQDA EXORD 196-20: **COVID-19 Voluntary Recalls**
- HQDA EXORD 177-20: The Army Strategic Readiness Assessment
- HQDA EXORD 201-20: **Building a Stryker Training Set**

As we honor the fallen this Memorial Day, I wish also to express **my sincere thanks to all of you and your families for the selfless sacrifices in war and peace – thank all of the Soldiers we proudly**

serve with – and honor them all!

Pending your questions or guidance.

People First – Winning Matters!

**Vr
Charlie**

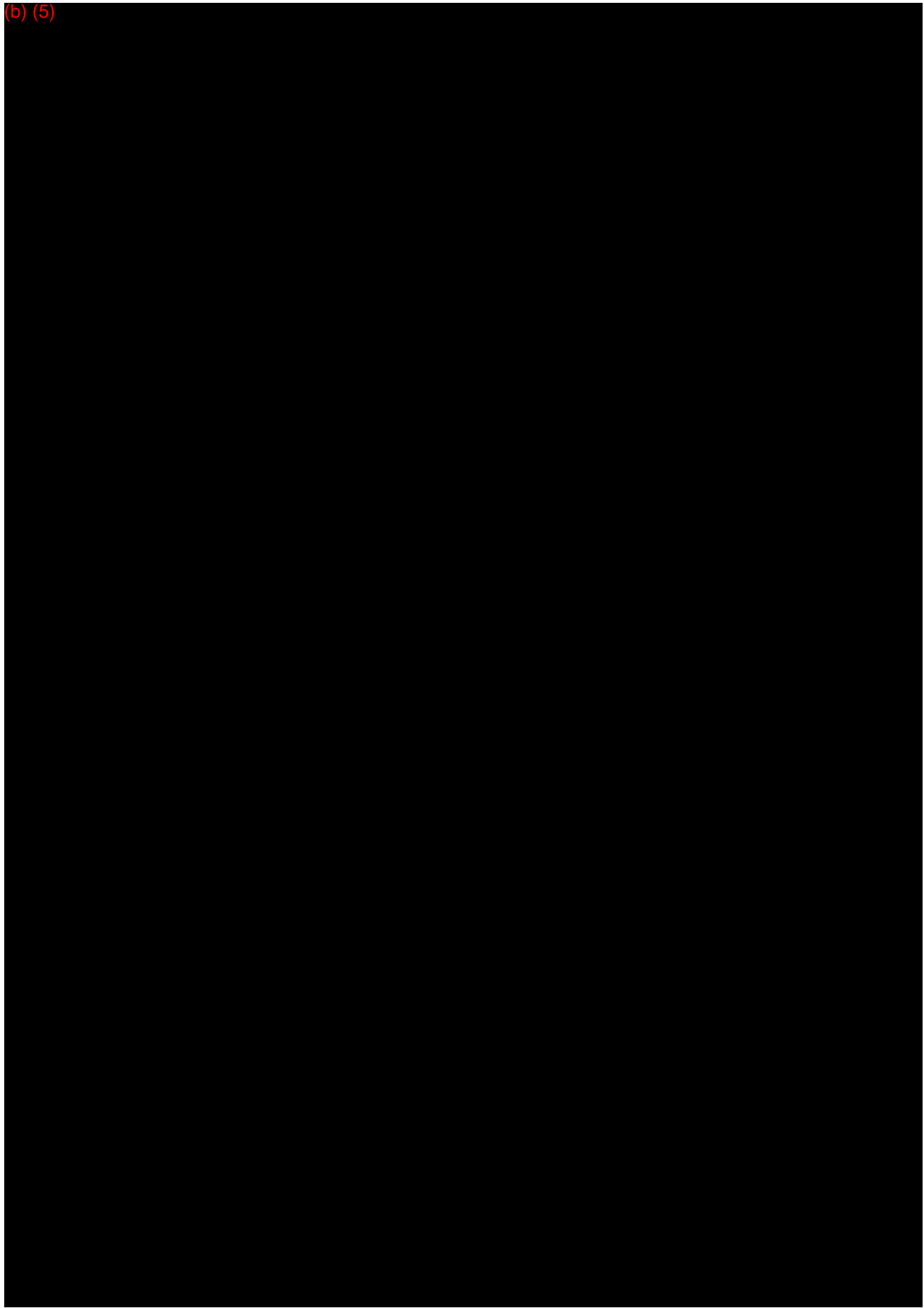
From: [Lord, Ellen M HON OSD OUSD A-S \(USA\)](#)
To: [Norquist, David HON SD](#)
Cc: [Henke, Robert SES SD](#); [Shaffer, Alan R HON OSD OUSD A-S \(USA\)](#); [Fahey, Kevin M HON \(USA\)](#)
Subject: Input to the Stimulus Package
Date: Wednesday, March 18, 2020 1:09:05 PM
Attachments: [DRAFT FY21 DEFENSE STIMULUS PACKAGE USD A&S Input as of 18 March 2020.xlsx](#)
[original Copy of DRAFT FY21 DEFENSE STIMULUS PACKAGE.xlsx](#)

Sir,

(b) (5)



(b) (5)



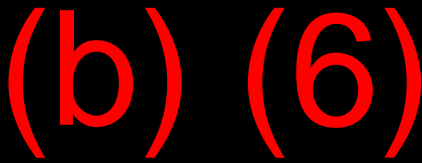
(b) (5)



We continue to work with OGC and the Services to identify broad contracting authorities that would further speed business transactions at DoD. Please let me know if you would like to discuss further.

Best,
Ellen

Ellen M. Lord
USD(A&S)
Pentagon 3E1010



(b) (6)

Production Class	Acct	Line #	PE/SAG	Program	FY21 \$ Add	Quantity Add	Justification	Notes
AIRCRAFT	APAF	1	ATA000	F-35A	\$ 1,172	12	CSAF UFR #3 PRIORITY	Support. Added aircraft executable within existing production capacity.
AIRCRAFT	APAF	1	ATA000	F-35A	\$ 1,272	12	CSAF UFR #3 PRIORITY	Duplicate of previous row. Confirmed USAF UPL is for 12 F-35A's.
AIRCRAFT	APAF	1	ATA000	F-35A	\$ 1,272	12	CSAF UFR #3 PRIORITY	Duplicate of previous row. Confirmed USAF UPL is for 12 F-35A's.
AIRCRAFT	APAF	2		F-35A AP	\$ 171		CSAF UFR #3 PRIORITY	Support. Required if USAF +12 aircraft in row3 are funded.
AIRCRAFT	BP10			F-35 Depot Stand-up Acceleration (AF)	\$ 209		USD(A&S) Priority	Accelerates organic component level depot repair (LRU and SRU) by 2 additional years from 2025 to 2023. Establishes needed industrial capacity to accelerate fleet readiness outcomes
AIRCRAFT	APN-1			F-35 Depot Stand-up Acceleration (Navy)	\$ 104		USD(A&S) Priority	Accelerates organic component level depot repair (LRU and SRU) by 2 additional years from 2025 to 2023. Establishes needed industrial capacity to accelerate fleet readiness outcomes
AIRCRAFT	APN-1			F-35 Depot Stand-up Acceleration (USMC)	\$ 104		USD(A&S) Priority	Accelerates organic component level depot repair (LRU and SRU) by 2 additional years from 2025 to 2023. Establishes needed industrial capacity to accelerate fleet readiness outcomes
AIRCRAFT	OMAF			KC-135	\$ 40	13	TRANSCOM UFR #1 PRIORITY	Support. Reverses planned retirement of 13 KC-135s due to delays in KC-46.
AIRCRAFT	OMAF			KC-10	\$ 70	10	TRANSCOM UFR #1 PRIORITY	Support. Restores 10 KC-10s. Partially reverses AF's planned retirement of 16 KC-10s
AIRCRAFT	APAF	18		EC-37B Compass Call	\$ 256		Manufacturer will close line in 2020.	Support. Additions meet our requirements for # of a/c and do not exceed. Will accelerate procurement of a/c, but not fielding of the EC-37B fleet because still need to buy and install the PME. Additions do not go beyond our planned quantities. -Are these additions executable? Yes, per Air Force, the additional funds are executable.
AIRCRAFT	OMAF			RQ-4/MQ-4			PB21 divestment.	No details provided. Cannot tell what this line item is for
AIRCRAFT								
AIRCRAFT	APN	5		F-35B	\$ 726.00	6	CMC CPG PRIORITY	Support. Added aircraft executable within existing production capacity.
AIRCRAFT	APN	3		F-35C	\$ 526	5	CNO UFR #2 PRIORITY (+5)	Support. Added aircraft executable within existing production capacity.
AIRCRAFT	APN	15		E-2D	\$ 357	2	CNO UFR #3 PRIORITY	
AIRCRAFT	APN	13		P-8A	\$ 360	2	CONGRESSIONAL ADD	Support. Add is executable. Navy currently has 9 unfunded aircraft in PB2021 FYDP due to a program requirement increase in July 2019.
AIRCRAFT	APN	9		CMV-22B	\$ 211	2	CNO UFR #4 PRIORITY	Support. Both the CV-22 (SOCOM) and CMV-22 (Navy) make sense. CV-22 adds replace AFSOC attrited aircraft. CMV-22 UFR gets a couple of additional Navy COD replacement aircraft to the fleet sooner. All do not exceed the AO and all are executable.
AIRCRAFT								

Production Class	Acct	Line #	PE/SAG	Program	FY21 \$ Add	Quantity Add	Justification	Notes
AIRCRAFT	APAF	20		MQ-9 Reaper	\$ 108	16	CENTCOM UFR PRIORITY, PB21 divestment.	Do not Support. Quantity is above Department Requirement. Dept Terminated production in PB21
AIRCRAFT	APA	7		AH 64 NEW BUILD	\$ 238	8	CSA UFR	Support. Expected, does not exceed AO, and is executable
AIRCRAFT	APA	14		CH-47F Chinook Block IIF		5	Divestment.	Support. Divestment due to realignment of Army priorities (primarily additional funding for the FVL effort...both FLRAA and FARA). Additionally, the CH-47F Block II line is open producing the MH-47F Block II. Not in large numbers, but the line is open and there are a couple of potential FMS cases in the works (that can keep the line minimally open).
AIRCRAFT	APAF/PDW			EC-130J	\$ 100		SOCOM UFR #12 PRIORITY	
AIRCRAFT	PDW			DHC-8 (MANNED ISR)	\$ 40		SOCOM UFR #1 PRIORITY	
AIRCRAFT	APAF/PDW			CV-22 ATTRITION	\$ 246		SOCOM UFR #11 PRIORITY	Support. Both the CV-22 (SOCOM) and CMV-22 (Navy) make sense. CV-22 adds replace AFSOC attrited aircraft. CMV-22 UFR gets a couple of additional Navy COD replacement aircraft to the fleet sooner. All do not exceed the AO and all are executable.
AIRCRAFT	RDAF			Classified	\$ 256			
SHIP	SCN	5		Virginia-class submarine	\$ 2,100	1	CNO UFR #1 PRIORITY	Support. The Virginia line items are their highest priority UFRs and ARE executable if funded. The Navy would like to request ~\$685M (very ROM) in SCN to cover up to a 4-week COVID-related delay/shutdown of shipyards for ships that are currently on contract. The costs of current ships will go up if there are significant delays, and it doesn't make sense to add funding for more ships until the current ships are fully funded and moving.
SHIP	SCN	6		Virginia-class submarine AP	\$ 432		CNO UFR #1 PRIORITY	Support. The Virginia line items are their highest priority UFRs and ARE executable if funded. The Navy would like to request ~\$685M (very ROM) in SCN to cover up to a 4-week COVID-related delay/shutdown of shipyards for ships that are currently on contract. The costs of current ships will go up if there are significant delays, and it doesn't make sense to add funding for more ships until the current ships are fully funded and moving.
SHIP	SCN	17		LHA-9	\$ 650		CONGRESSIONAL ADD	Support. Executable.
SHIP	SCN	19		EPF	\$ 261	1	CONGRESSIONAL ADD	Support. Executable.
SHIP	SCN	10		DDG-51	\$ 1,900	1	Available capacity	Support. Executable.
SHIP	SCN	20		T-AO	\$ 490	1	Available capacity	Do not support. Industry does NOT have capacity for an additional T-AO until FY22, therefore it would NOT be executable as an FY20 or FY21 addition.
SHIP	SCN	16		ESB	\$ 650	1	Available capacity	Support. Executable.
SHIP	SCN	13		FFG	\$ 1,000	1	Available capacity	Support. Executable.
SHIP	OMN			Surge Ship Readiness	\$ 85	4	TRANSCOM UFR #2 PRIORITY	Support. Executable.

Production Class	Acct	Line #	PE/SAG	Program	FY21 \$ Add	Quantity Add	Justification	Notes
SHIP								The Navy would also like to propose four additional NEW line items for consideration:
SHIP								a.) Buy/Convert 1 additional "used Sealift" ship for \$31M.
SHIP								b.) Buy another LCU1700 for \$10M to address smaller shipyards.
SHIP								c.) Buy 1 additional EPF, cost TBD. Austal needs two EPFs total or 1 LCS to avoid layoffs.
SHIP								d.) Add funding for surface ship and submarine supplier base (\$200M total) to stimulate the major equipment suppliers directly in addition to the shipyards.
VEHICLE	WTCV			STRYKER DVHA1 PROC	\$ 375	60	CSA UFR # PRIORITY	Support. Concur with increase. the industrial base can handle the increased quantity. this increase was expected because the Army made a conscious decision to convert all Strykers to the double V-hull. We think this does not exceed the Ao.
VEHICLE	PDW			THAAD A2 HEMTT	\$ 30	30	Production line shutting down.	Support. I will need to reach out to the Army on this one but it may fall into the urgent theater need and support the European Defense Initiative. This has been a longstanding production line capable of handling hundreds of systems annually. The increase was not expected but would make sense if it falls into the urgent need category. We assume it would exceed the Ao and are attempting to confirm.
VEHICLE	WTCV			M1 ABRAMS MOD (APS)	\$ 170		Additional brigade of APS.	Support. - Concur with increase. The industrial base can handle the increased quantity. We were not expecting the increase but it does make sense to procure additional ECPs/kits to increase performance and lethality. I do not know if this exceeds the AO but will reach out to the DASC.
VEHICLE	PDW			NGREA (National Guard and Reserve Equipment Account)	\$ 1,300		Reprogramming source.	To the best of my knowledge this line item contains multiple light and medium tactical vehicles to include HMMWV modernization, JLTVs, and FMTVs. The FY21 request for JLTV did not include assets for the National Guard which may explain the \$1,300 however that is a substantial reprogramming consider the entire JLTV request for the Army, Navy, USMC, and USAF was \$1,364 and 4,232 units. I do believe that the request is supportable but depending on the aggregate of different systems it more than likely exceeds the original AO.
MUNITIONS	WPN			Tomahawk (USMC)	\$ 125		USMC CPG	Do not support. Risk is assessed as high for the contractor to assume additional new missile production, while conducting missile recertification activity in parallel with current FY2021 new missile procurement for the Block V configuration. We think they are operating at capacity by the documentation they've previously provided us.

Production Class	Acct	Line #	PE/SAG	Program	FY21 \$ Add	Quantity Add	Justification	Notes
MUNITIONS	PMC			GBASM NSM (USMC)	\$ 60	36	USMC UFR	Awaiting USMC response. We think this is supportable.
MUNITIONS	PDW			SM-3 Block IIA	\$ 231	10	MDA UFR #1 PRIORITY	Support: Accelerate fielding. MDA #1 UFR
MUNITIONS		37		SM-3 Block IIA production line expansion			Invests in line expansion to 36 missiles per year from current rate of 24 missiles per year. Improves solid rocket motor industrial base.	Support: This is needed in support SM3 fielding acceleration
MUNITIONS	PDW			THAAD Bty #8	\$ 320	1	THAAD requirement currently outstrips force structure. Procures 8th battery, synchronized with Saudi Arabia FMS case to include AN/TPY-2 for efficiencies.	Support: High demand system
MUNITIONS	OPN			Sonobuoys	\$ 49		CNO UFR	Support any increase. We think the industrial base can support this modest plus up.
MUNITIONS	MPA			PAC-3 MSE				There is no listed change, so we support. Industrial base can support additional missiles and we support any additions. This will give US priority over any FMS production.

RESTORE CUTS

RDDW	3		Basic research initiatives: Minerva	\$ 15		S&T PRIORITIES
OMAF			FSRM	\$ 736		CSAF UFR
OMA			FSRM	\$ 312		CSA UFR
OMARNG			FSRM	\$ 26		CSA UFR
OMARNG			FSRM	\$ 71		CSA UFR

\$ 19,225

ACCT	AC/RC	PROGRAM	FY21 \$ ADD	SOURCE	POLITICS	
Air Force	Active	Cost to Complete	\$ 166,500	UFR	ZU	
Air Force	Active	GBSD Organic Software Sustainment Center	\$ 132,000	UFR	UT	
Air Force	Active	B-21 2-Bay LO Restoration Facility	\$ 96,000	UFR	SD	
Air Force	Active	Cadet Preparatory School Dormitory	\$ 49,000	UFR	CO	
Air Force	Active	Flight Test Engineering Laboratory Complex	\$ 40,000	UFR	CA	
Air Force	Guard	Air Support Operations Complex	\$ 27,000	UFR	WA	
Air Force	Active	Crash Rescue Station #1	\$ 26,000	UFR	MD	
Air Force	Reserve	F-35 Squadron Ops / Aircraft Maintenance Unit	\$ 25,000	UFR	TX	
Air Force	Guard	Consolidated RPA Operations Facility	\$ 17,500	UFR	ND	
Air Force	Guard	Base Supply Complex	\$ 10,200	UFR	AL	
Army	Active	Engineering Center & Parking Structure	\$ 160,000	UFR	NY	
Army	Guard	Army Aviation Support Facility	\$ 89,416	UFR	VA	
Army	Active	Unaccompanied Enlisted Personnel Housing	\$ 59,000	UFR	AK	
Army	Active	Automation-Aided Instructional Building	\$ 56,000	UFR	AZ	
Army	Guard	Aircraft Maintenance Hangar	\$ 50,000	UFR	AK	
Army	Active	Ammunition Holding Facility	\$ 46,000	UFR	CA	
Army	Guard	Combined Support Maintenance Shop	\$ 44,000	UFR	GA	
Army	Active	Information Systems Facility	\$ 40,000	UFR	NM	
Army	Active	Child Development Center	\$ 39,000	UFR	HI	
Army	Active	Child Development Center	\$ 32,500	UFR	AK	
Army	Active	Ground Transport Equipment Building	\$ 30,000	UFR	AZ	
Army	Reserve	Transient Training Enlisted Barracks	\$ 29,200	UFR	WI	
Army	Reserve	Transient Enlisted Training Barracks	\$ 29,200	UFR	WI	
Army	Active	General Purpose Maintenance Shop	\$ 29,000	UFR	MD	
Army	Reserve	Army Reserve Center	\$ 28,100	UFR	PR	
Army	Active	Child Development Center - School Age	\$ 26,000	UFR	HI	
Army	Guard	Unspecified Minor Construction	\$ 25,000	UFR	WW	
Army	Active	Vehicle Maintenance Shop	\$ 25,000	UFR	KY	
Army	Reserve	Transient Training Office Quarters	\$ 24,000	UFR	WI	
Army	Active	Central Painting Complex	\$ 22,000	UFR	AL	
Army	Guard	National Guard Readiness Center	\$ 21,000	UFR	FL	
Army	Active	Vehicle Maintenance Shop	\$ 20,000	UFR	NC	
Army	Active	Defense Access Roads	\$ 20,000	UFR	TX	
Army	Reserve	Area Maintenance Support Activity	\$ 18,900	UFR	IL	
Army	Reserve	Army Reserve Center	\$ 17,500	UFR	OH	
Army	Active	Cantonment Area Roads	\$ 16,500	UFR	MD	Border Wall
Army	Reserve	Equipment Concentration Site Warehouse	\$ 16,200	UFR	WA	Border Wall
Army	Active	Railcar Holding Area	\$ 16,000	UFR	IN	Border Wall
Army	Guard	Enlisted Barracks, Transient Training	\$ 15,735	UFR	OR	Border Wall
Army	Active	Missile Assembly Support	\$ 15,500	UFR	NM	Border Wall
Army	Guard	National Guard Readiness Center	\$ 15,000	UFR	AR	Border Wall
Army	Guard	National Guard Vehicle Maintenance Shop	\$ 15,000	UFR	IL	Border Wall
Army	Guard	Maneuver Area Training Equipment Site	\$ 15,000	UFR	MS	

Army	Reserve	Area Maintenance Support Activity	\$ 11,300	UFR	OH	
Army	Reserve	Transient Training BN Headquarters	\$ 11,000	UFR	WI	
Army	Active	Access Control Point	\$ 10,200	UFR	IT	
Army	Active	Incinerator Facility	\$ 10,000	UFR	MD	
Army	Guard	National Guard Vehicle Maintenance Shop	\$ 9,800	UFR	OK	
Army	Guard	National Guard Vehicle Maintenance Shop	\$ 9,300	UFR	CA	
Army	Active	Trainee Barracks Complex 3, Ph2	\$ 7,000	UFR	SC	
Army	Active	Weapon Maintenance Shop	\$ 5,200	UFR	AL	
Army	Reserve	Transient Training Barracks	\$ 2,500	UFR	WI	
Defense-Wide	SOCOM	Battalion Operations Facility	\$ 36,000	UFR	VA	
Defense-Wide	SOCOM	Human Performance Training Center	\$ 23,200	UFR	VA	
Defense-Wide	SOCOM	Cold Water Training Austere Environment Facility	\$ 21,350	UFR	WA	
Defense-Wide	SOCOM	SOF Basic Training Command (Cost-to-Complete)	\$ 20,500	UFR	CA	
Defense-Wide	SOCOM	SOF Intel Training Annex (Cost-to-Complete)	\$ 15,000	UFR	NC	
Defense-Wide	SOCOM	Multi-Purpose Canine Facility	\$ 14,000	UFR	CA	
Defense-Wide	SOCOM	SOF Motor Transport Maintenance Expansion (Cost-to-Complete)	\$ 13,631	UFR	NC	
Defense-Wide	SOCOM	Operations Support Facility	\$ 12,000	UFR	CA	
INDOPACOM	Various	Restore funding for MILCON projects in Guam, Hawaii, Japan	\$ 885,000	UFR		
Marine Corps	Active	Bachelor Enlisted Quarters Replacement	\$ 99,600	UFR	AZ	
Marine Corps	Active	Fitness Center Replacement and Training Pool	\$ 51,900	UFR	NC	
Marine Corps	Active	Combat Water Survival Training Facility	\$ 25,200	UFR	CA	
Marine Corps	Active	Warehouse Consolidation and Modernization	\$ 21,800	UFR	CA	
Navy	Active	X-Ray Wharf Berth 2	\$ 94,500	UFR	GU	
Navy	Active	CMV-22 Hangar	\$ 75,800	UFR	CA	
Navy	Active	Machinery Control Development Center	\$ 74,600	UFR	PA	
Navy	Active	Ordinance Facilities	\$ 71,800	UFR	VA	
Navy	Active	CMV-22 Airfield and Hangar Improvements	\$ 56,100	UFR	VA	
Navy	Active	Magazines	\$ 46,800	UFR	CA	
Navy	Active	Combat Vehicle Maintenance Facilities	\$ 43,500	UFR	CA	
Navy	Active	E/A-18G Fleet Readiness Squadron Training Facility	\$ 29,900	UFR	WA	
Navy	Active	Directed Energy Test Facility	\$ 26,700	UFR	CA	
Navy	Active	Perimeter Security	\$ 26,100	UFR	ME	
Navy	Active	Consolidated Ordinance Operations Facility	\$ 14,300	UFR	FL	
Navy	Reserve	Joint Reserve Intel Center	\$ 12,800	UFR	MN	
Navy	Active	Sub Logistics Support	\$ 9,400	UFR	VA	
SOUTHCOM (Army)	Active	Planning and Design	\$ 8,000	UFR	FL	
SOUTHCOM (Navy)	Active	Long Range Maritime Patrol Aircraft Hangar and Ramp	\$ 28,000	UFR	HO	
Space Force	Active	Planning and Design	\$ 60,000	UFR	ZU	Border Wall
			\$	-		

FY20 UFR MILCON projects?

From: [U.S. Department of Defense](#)
To: (b) (6)
Subject: Kings Bay Unit Makes PPE for Employees, Health Care Providers
Date: Monday, May 18, 2020 12:27:23 PM

Features: Feature stories from around the Defense Department [<https://www.defense.gov/Explore/Features/?source=GovDelivery>]

[<https://www.defense.gov/Explore/Features/Story/Article/2189892/kings-bay-unit-makes-ppe-for-employees-health-care-providers/?source=GovDelivery>]

Kings Bay Unit Makes PPE for Employees, Health Care Providers May 18, 2020 | By Kimberly Menzies When Navy officials heard about shortages in the personal protective equipment required to fight COVID-19, they offered the services and talents of Kings Bay, Georgia, sailors to help fill the need.

Read More [<https://www.defense.gov/Explore/Features/Story/Article/2189892/kings-bay-unit-makes-ppe-for-employees-health-care-providers/?source=GovDelivery>]

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1400 Defense Pentagon Washington, DC 20301-1400

From: [Hood, Robert R HON OSD OASD LA \(USA\)](#)
To: [Stewart, Jennifer SES SD](#); [Johnson, Justin SES SD](#); [Hoffman, Jonathan R SES OSD OSD \(USA\)](#); [Henke, Robert SES SD](#); (b) (6) [Ney, Paul C Jr HON OSD OGC \(USA\)](#); [Johnston, Ann G SES OSD OASD LA \(USA\)](#)
Cc: (b) (6)
Subject: LA Weekly Report for 2-24 April
Date: Friday, April 24, 2020 2:13:57 PM
Attachments: [LA Weekly Report for 20 - 24 APR.pdf](#)

20 APR - 24 APR: Both the House and Senate were mostly in recess this week, returning only to vote to pass the Phase 3.5 COVID stimulus bill. Both chambers will return to, and remain in, recess until at least 4 MAY.

OF NOTE:

- Phase 3.5 COVID-19 Stimulus Bill Passed: On Tuesday, 21 APR, the Senate approved a bipartisan deal by voice vote that will pump another \$310 billion into the CARES Act Paycheck Protection Program (PPP), roughly \$75 billion more to fund hospitals and healthcare providers; \$60 billion for additional Economic Injury Disaster Loans; and an additional \$25 billion for state-led COVID-19 testing plans and for research, development, and other testing support from key federal agencies. The overall deal tops \$484 billion. The House returned on Thursday, 23 APR to pass the bill 388-5. It now heads to President Trump's desk for signature.

- House Select Subcommittee on the Coronavirus Crisis Created: On Thursday, 23 APR the House voted 212-182 on a near party line vote to approve H.Res.935, to create a Select Subcommittee on the Coronavirus Crisis to be led by House Majority Whip James Clyburn (D-SC), under the auspices of the House Oversight and Reform Committee (HORC). While ostensibly created to investigate and oversee the federal response to the coronavirus crisis, Rep. Jim Jordan (R-OH), the top Republican on the HORC, said the select panel is “just a continuation of the attack that the Democrats have had on the president for the past four years,” adding that it will be led by the “biggest supporter of the Democrats' nominee for president.” The 12-member panel (seven Democrats and five Republicans) is supposed to conduct “a full and complete investigation” of the effectiveness of taxpayer relief that is provided; reports of waste, fraud, abuse, or other abusive practices related to the pandemic; the economic impact of the crisis on individuals, communities, small businesses, health care providers, and state and local governments; and the government's preparedness for and response to the current crisis.

- COVID-19 Congressional Outreach: This week DoD officials continued to work diligently to respond to requests for information from Members of Congress and their staff regarding COVID-19 as quickly as possible. To date, nearly 500 Requests for Information (RFIs) have been submitted to OSD alone, with nearly 350 RFIs now answered. OASD(LA) continued to send daily 24 / 48 DoD

COVID-19 email updates to congressional offices, and held multiple well-attended conference call briefs:

<!--[if !supportLists]-->○ <!--[endif]-->21 APR The COVID-19 Task Force provided an update to Defense Committee Staff: Approximately 14 staffers participated in the call from all four defense committees, including Liz King, Minority Staff Director for SASC, and Becky Leggieri, Majority Clerk for HAC-D. Carolyn Chuhta (SASC) expressed concern for disparities in DoD's reporting of COVID-19 cases, hospitalizations and deaths and that she doesn't have confidence in the numbers. There was also some confusion from the PSMs regarding testing numbers (capacity vs. processed) as well as whether tests, and how many, from the USS Roosevelt were sent to South Korea. Other topics included DoD medical support to civil authorities, equitable adjustments, reserve component missions, and the extension of Title 32 activations.

<!--[if !supportLists]-->○ <!--[endif]-->22 APR - The COVID-19 Task Force provided an update to SASC Members: 14 members participated in the call and 12 members asked questions. Chairman James Inhofe (R-OK) asked about DoD's testing and contract tracing abilities while Ranking Member Jack Reed (D-RI) asked if the DoD has noticed an increase in suicides as a result of the increased pressures caused by social isolation and the global pandemic. Sen. Dan Sullivan (R-AK) also asked about suicides, as he is particularly concerned with the challenges installations such as Fort Wainwright, which has experienced 11 suicides in 18 months, already face. Multiple senators on both sides of the aisle were concerned with the DoD's plan for testing and their perceived lack of a clear goal and metrics. Sen. Mike Rounds (R-SD) specifically asked for the plan to be presented to the committee "with real metrics and real numbers." Other topics included hazard pay for medical professionals, concerns for military spouses & families, protection of civilian workers on bases, readiness, and training.

-

- 23 APR HASC Member Afghanistan Briefing: AMB Phee, A/ASD Helvey, and BGen Benedict provided a unclassified Member update on Afghanistan given we have had no engagement with the committee on this topic since the 10 MAR CENTCOM Posture hearing, as previously scheduled engagements had to be canceled. 20 plus Members participated with 10 asking questions. Primary focus was on the terms of the deal, Taliban compliance to date, anticipated next steps by both sides, the current status of the withheld \$1B in security assistance, and the ROE's governing U.S. forces ability to support their Afghan partners. A great deal of bipartisan skepticism regarding the agreement remains.

- Key Senior Leader Calls:

<!--[if !supportLists]-->○ <!--[endif]-->SD Esper Calls: Teleconferences on 20 APR with Senate Majority Leader McConnell (R-KY) and House Minority Leader McCarthy (R-CA) on DoD support for COVID-19 response efforts and the COVID Phase 3.5 bill, on 21 APR with Rep. Stefanik regarding DoD

COVID-19 support to New York, on 22 APR with HAC-D Chairwoman Rep. Nita Lowey (D-NY) regarding DoD COVID-19 support to New York (specifically the USNS Comfort), and on 23 APR with Sen. David Perdue (R-GA) to discuss the upcoming confirmation of Ambassador Kenneth Braithwaite to be Secretary of the Navy.

<!--[if !supportLists]-->○ <!--[endif]-->CIO Deasy Calls: On 20 APR, CIO Dana Deasy met with Senator Inhofe (R-OK) and SASC Staff Director John Bonsell to discuss the FCC vote to grant Ligado a license that would interfere with GPS signals. Mr. Deasy informed the Chairman that Ligado's most current mitigation plan would still interfere with GPS receivers.

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<!--[if !supportLists]-->○ <!--[endif]-->CMO Hershman Calls: CMO Hershman met with various members to discuss CMO role in DoD's management of COVID, particularly on the Pentagon Reservation, as well as the President's interagency council sharing best practices with the rest of the Federal government. Ms. Hershman also used this opportunity to discuss the CMO's leadership of the ongoing Defense-wide reform effort. Held calls on 22 APR with Sen. Rounds (R-SD), Rep. Rogers (R-AL), Rep. Turner (R-OH), and Rep. Langevin, and on 23 APR with Sen. Kaine (D-VA).

THE WEEK AHEAD:

Congress will be in recess, with most remaining engagements currently scheduled to over via teleconference.

For updates on:

- 1) This week's hearings, Member engagements, and significant non-Member engagements;
- 2) Correspondence received for the Secretary of Defense; and
- 3) Congressional Travel

Please see attached LA Weekly Report.

LA WEEKLY REPORT

20 - 24 APR 2020

LAY OF THE LAND

PENDING CIVILIAN PAS NOMINATIONS

Nom Date	Nominee	Position	Status
02 MAR 20	Kenneth Braithwaite	SECNAV	Awaiting hearing date
02 MAR 20	Victor Mercado	ASD(SPC)	Awaiting SASC vote
16 MAR 20	James Anderson	DUSD(P)	Awaiting hearing date

COMPLETED THIS PAST WEEK

HEARINGS

Date	Committee	Topic
N/A	N/A	N/A

MEMBER ENGAGEMENTS

Date	Component/Principal	Member	Topic
20 APR	CIO	Sen. Inhofe (R-OK)	5G
22 APR	CMO	Sen. Rounds (R-SD)	COVID-19; DoD Reform
22 APR	CMO	Rep. Rogers (R-AL)	COVID-19; DoD Reform
22 APR	CMO	Rep. Turner (R-OH)	COVID-19; DoD Reform
22 APR	CMO	Rep. Langevin (D-RI)	COVID-19; DoD Reform
23 APR	CMO	Sen. Kaine (D-VA)	COVID-19; DoD Reform
22 APR	P&R	SASC Member Brief	COVID-19 Task Force Update ON Force Resiliency/ Military Community/ Accessions/ Civilian Telework- Leave Options/ Force Health Protection

SIGNIFICANT NON-MEMBER ENGAGEMENTS

Date	Component/Principal	Staff	Topic
21 APR	A&S	HAC-D/SAC-D PSMs	DPA Update
21 APR	P&R	HASC / SASC PSMs	DOD COVID Support
22 APR	A&S	HASC / SASC PSMs	Thornberry Acquisition Reform Language Discussion

OASD LA HILL ENGAGEMENT METRICS

Component	Member Briefing	Office Calls	Staff Briefing	Hearings	Other	Grand Total
OUSD(A&S)			7			7*
OUSD(I)			2			2
OUSD(P&R)	1		5			6*
OUSD(P)						0
OUSD(R&E)			1		2	3

CAPE						0
CMO		5				5
DOT&E						0
	1	5	15*	0	2	23*

NOTE: The grand totals marked with an asterisk include engagements with multiple components.

CONSTITUENT INQUIRIES

	New Inquiries	Email Updates	Phone Requests	RFIs	Grand Total
Constituent Inquiries Handled	29	52	6	1	88

CORRESPONDENCE RECEIVED FOR THE SECRETARY OF DEFENSE

24 APR	Sen. Rubio (R-FL)	China's Exercises And Maritime Militia Confrontations
23 APR	Rep. Escobar (D-TX) HASC	Reports Of Accelerated Border Wall Construction During Coronavirus Pandemic
23 APR	Sen. Ernst (R-IA) SASC	Continued Training And Readiness While Mitigating Risk Of Exposure To Covid-19
23 APR	Rep. Cicilline (D-RI)	Covid-19 Testing Stationed Abroad And Protocol For Servicemembers That Feel Ill
21 APR	Rep. Lynch (D-MA)	Environmental Hazard And Health Assessments Conducted In Karsh-Khanabad Air Base In Uzbekistan
20 APR	Rep. Banks (R-IN) HASC	Confirmation Of U.S. Participation In 5g Standards-Setting Is Not Restricted By Export Control Regulations
20 APR	Rep. Kilmer (D-WA) HAC-D	Civilian Personnel Guidance On Weather And Safety Leave Authorization For Non-Telework Eligible Employees
20 APR	Rep. Meng (D-NY)	Deployment Iron Dome Batteries
20 APR	Rep. Bustos (D-IL) HAC-D	Dod Manufacturing Base And Guidance And Direction To Military Installation On How To Use Personnel Expertise And Capabilities To Address Critical Personal Protective Equipment And Medical Equipment Shortages

CONGRESSIONAL TRAVEL

N/A – All travel currently canceled.

From: [Lengyel, Joseph L Gen USAF NG NGB \(US\)](#)
To: [Fenton, Bryan LTG SD](#); [Milley, Mark A GEN USARMY JS OJCS \(USA\)](#)
Cc: [Norquist, David HON SD](#); [Hyten, John E Gen USAF JS OJCS \(USA\)](#); [Oshaughnessy, Terrence J Gen USAF NORAD-USNC CG \(USA\)](#); [Rapuano, Kenneth P HON OSD OUSD POLICY \(USA\)](#); [Hokanson, Daniel R LTG USARMY NG NGB \(US\)](#); [Rice, L Scott Lt Gen USAF NG NGB \(US\)](#); [White, Gregory T \(YT\) Maj Gen USAF NG NGB \(USA\)](#); [VanHerck, Glen D Lt Gen USAF JS ODJS \(USA\)](#); [Taheri, Michael R Maj Gen USAF NG NGB \(USA\)](#); [Wilz, Giselle M MG USARMY NG DNGBJS \(USA\)](#); [Nordhaus, Steven S Maj Gen USAF NG NGB \(US\)](#); (b) (6)
[Stewart, Jennifer SES SD](#); [Henke, Robert SES SD](#); [Lyons, David Brig Gen SD](#); (b) (6)
Subject: NG COVID Update - 21 May 20
Date: Thursday, May 21, 2020 3:58:51 PM
Attachments: [202005021 CNGB Update.pdf](#)

Mr. Secretary and Chairman,

Total NG Activated: T32: **45,917** T10: 303

Total and % of NG on active duty worldwide: 84,305 (19%)

Total NG currently CV-19 positive: 605

Update on states/territories that have approved 32 U.S.C 502 (f)(2) MAs: 48

Request assistance: PM-10 failed to authorize extension of MAs past 24 Jun 20. In fact, ends mission on 10 June to allow for demob of the force. **This mission will not be done by 10 June.** I ask for **your support and assistance** to influence the White House/White House COVID-19 Task Force for a new Presidential Memorandum running through at least 31 JUL 20. The pandemic, and our response, did not start on the same day in each state, and it will not end on the same day in each state. This must be driven by requirements. Ending it on the 89th day to prevent attainment of benefit eligibility for soldiers and airmen is not how we do business. States have been judicious regarding growing the response versus total numbers authorized, putting only the number they need on orders. I know HD/GS is working to get it extended and work a draw down plan. The comments and concerns will get louder from Governors and from media if not resolved soon. **I advise, based on mission requirements, we extend these Mission Assignments to at least 31 July.**

National Guard response by the numbers. Over the last 69 days, National Guard Soldiers and Airmen have accomplished the following:

- 5,269 facilities disinfected
- 1.46 million tests/screenings
- 121 million PPE products distributed
- 92.8 million meals provided

Travel: This week I traveled to Arizona, Colorado, and Tennessee to visit Soldiers and Airmen performing COVID-19 support operations. In Flagstaff, Arizona Guardsmen are supporting local food banks with pick/pack operations, and curbside loading for **high risk members of the community—many from Navajo nation.** In Colorado, **I met with Governor Jared Polis, who supports the extension of National Guard orders** and the ability to rapidly transition NG to an operational status to support a potential second wave of COVID-19 cases, if needed. Guardsmen are caring for those

experiencing homelessness, and maintaining the facilities on which they depend. **In Tennessee and met with Governor Bill Lee** and MG Jeff Holmes, the Tennessee Adjutant General, as well as Airmen from the 118th Wing.

All-Hazards Coordination Workshop: We held our **annual pre-hurricane season planning** conference virtually last week and **identified several areas of concern** given the current crisis and anticipating what the summer will bring.

In the near term, we will see increased **challenges surrounding emergency mutual aid support agreements (EMACs)** between states and territories. COVID-19 **will likely exacerbate support operations** as individual states and territories implement testing, quarantine and Restriction of Movement (ROM) policies. State balanced budget restrictions may further constrain mutual aid support for large-scale response. Wildland fire and hurricane seasonal forecasts predict above average activity, potentially placing additional pressure on shared capabilities. We will work early and often with NC, FEMA, HD and our other DoD partners to meet the challenges this summer will bring.


VR, Joe

Joseph L. Lengyel
General USAF
Chief National Guard Bureau

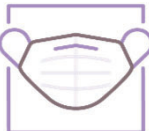
National Guard COVID-19 Response

211000MAY2020




 **22K Constructed**
11K Hibernation
460 In-Use
 Hospital Beds


54
States, Territories and DC

 **121M**
 PPE Products
 Distributed


 **5,269**
 Facilities
 Disinfected

45.9K
*National Guard Service
 Members Supporting*

 **17K**
 Pallets
 Transported

 **1.46M**
 Tests or Screenings
 Administered

69
*Days Since National
 Emergency Declared*

 **92.8M**
 Meals Provided

National Guard COVID-19 Response

211000MAY2020



NGB COVID-19 Portal: <https://gko.portal.ng.mil/joint/J3/J33/domres/SitePages/Home.aspx>

COVID-19 Lessons Learned Portal: <https://gko.portal.ng.mil/joint/J3/D05/SitePages/CoronavirusResponse.aspx>

Johns Hopkins University COVID-19 Virus Stats (As of: 210900ZMAY20)		
	Total Cases	Deaths
US	1,551,853	93,439
Last 24 hrs	+23,192	+1,501
NG Cases	605	1

Non-Federalized NG C-19 PERSTAT (210400ZMAY20)	
ARNG	38,512
ANG	7,405
TOTAL	45,917

Federalized NG C-19 Support	
263rd AAMDC*	150
46 MP CMD	150
126th Mil Hist	3
TOTAL	303



Arizona National Guard service members are directing visitor check-in at a temporary COVID-19 testing site on the Navajo Nation in Tonalea, Arizona. The AZNG is assisting the Department of Health Services with a statewide testing blitz with hopes of testing up to 60,000 Arizonans this month.

The Vermont Army National Guard is assisting the Vermont Food Bank "Farmers to Families" Program, and Vermont Emergency Management, with distributing fresh produce, dairy, and prepared meals to Vermonters in need at Bromley Mountain in Peru, Vermont.

The North Carolina National Guard is assisting the North Carolina Emergency Management with a Personal Protective Equipment distribution in Central North Carolina. Additionally, the NCNG is working with N.C. Emergency Management, N.C. Department of Health and Human Services and local food banks to help support COVID-19 relief efforts.

COVID-19 testing and screening continues as the priority effort in most states. A variety of logistical supporting tasks are the most widespread.

*263rd AAMDC is released but will be on orders until 07JUN 20 IOT demobilize

- GANG plans to transition Medical Support Teams to testing, and continue foodbank operations, Infection Control Teams, and SOC LNO / planner support
- IANG is planning and synchronizing efforts with IDPH for drive thru testing (Test Iowa), and will continue support to state run testing sites & PPE distribution
- NCNG plans continued support to prisons, food & PPE Distribution, and COVID-19 sampling at poultry and pork manufacturers
- SCNG is planning mask decontamination operations, N-95 mask containerized system training, and to provide bus drivers & food distribution for school districts

Presidential Memorandums;

- Approved: (48)

FEMA Major Disaster Declarations

- Approved: (57) (Seminole Tribe of Florida)

Dual Status Commander (DSC) requests

- Active: (7) CT, GU, LA, MA, NJ, NY, PA
- Approved: (40)
- Requested: (1) DC
- Deactivated: (2) MI, WA
- **PA Deactivates 22 May, per Governor letter

T32 U.S.C §502(f) authorizations

- OSD Approved: (48)
- SecArmy Approved: (1) DCNG

COVID-19 NG Current Operations

211000MAY2020



NG Operations Summary: The National Guard continues to support civilian authorities in the war on COVID-19. Major LOEs are Testing and Screening, and Food Bank operation and meal distribution. Warehousing and distribution of PPE as well as local missions are widespread. A variety of other missions including staffing call centers and augmenting State EOCs with NG planners are also being conducted.

Region I

CT, MA, ME, NH, RI, VT

CT: Long Term Care Facility (LTCF) inspections, Test Kit delivery

MA: Deliver PPE to first responders and hospitals, Support for Springfield PD Homeless shelter, Holyoke Soldiers Home Support

ME: Conducts N95 Fit Test/ PPE training at Long Term Care Facilities and Congregated Housing Facilities

NH: Conducting drive-thru testing at National Guard Armory in Manchester

RI: Conducting Rapid Swab Sampling and Mobile PPE Training Teams

VT: Continuing to support Strategic National Stockpile Warehouse operations and meal distribution throughout state; 186th BSB having distributed over 650,000 meals to date

Region II

NJ, NY, PR, USVI

NJ: Mortuary affairs, Veteran home, hospital, and long term care facility support, and supporting COVID testing sites

NY: Assisting at five antibody testing stations established by the New York Department of Health to determine who may have already had COVID-19 and developed antibodies to the disease

PR: Conducting COVID-19 screening operations to all passengers, employees, truck drivers and others at all air and seaports of entry as well as testing for first responders throughout the island

VI: Airport Screening, Assisting with planning at Virgin Islands Territorial Emergency Management Agency, Acute Care Facility Buildout

Region III

DC, DE, MD, PA, VA, WV

DC: Conducting 2 social distancing patrols supporting DC MPD at 12 sites and providing personnel to assist with warehouse operations

DE: Supporting the Food of Delaware at Sussex Central High School

MD: Nursing Home Assessment Team Operations, testing site support statewide – 5 Sites, Food Distribution - Baltimore County, Baltimore City Public Schools

PA: Assisting the Mountain View Care and Rehabilitation Center in Scranton, PA with PPE, Sanitizing resources and support for resident care

VA: Provide point prevalence testing at long term care facilities and other congregate care sites, foodbank support, warehousing support

WV: DECON Training: retail locations, sanitization of protective masks

Region IV

AL, FL, GA, KY, MS, NC, SC, TN

AL: Providing personnel to test and inspect medical ventilators, Medical and Logistics planners

FL: Teamed up with the Baltimore Orioles to serve at the All Faiths Food Bank event in Sarasota

GA: Providing 52 Infection Control Teams to support Georgia Emergency Management Agency

KY: Supporting additional drive-through testing sites

MS: Supporting 2 long term care facility testing sites, 5 planned, 11 mission complete

NC: Providing interpretation services for non-English speaking individuals at the Second Harvest Food Bank

SC: Conducting rural testing site support operations at multiple sites across state

TN: Conducting Housing Authority testing and ACS support in Memphis

Region V

IL, IN, MI, MN, OH, WI

IL: Supporting the operation of 9 Community Based Testing Sites and actively planning to establish 2 additional sites

IN: Providing medical support to correctional facilities across the state

MI: Specimen testing, Detroit Detention Center Warehouse Support

MN: Augmenting MN Department of Health staff conducting testing at long term care facilities across the state

OH: Conducting decontamination, tear down, & transportation of Disaster Relief Bed-down System at Pickaway Correctional Institution

WI: Providing support to Medical Examiners and County Coroner and conducting medical monitoring and admin support at three locations

COVID-19 NG Current Operations

211000MAY2020



NG Operations Summary: The National Guard continues to support civilian authorities in the war on COVID-19. Major LOEs are Testing and Screening, and Food Bank operation and meal distribution. Warehousing and distribution of PPE as well as local missions are widespread. A variety of other missions including staffing call centers and augmenting State EOCs with NG planners are also being conducted.

Region VI

AR, LA, NM, OK, TX

AR: [Medical pre-screening cell at University of Arkansas Medical Sciences](#)

LA: Conducting Warehouse and Logistics Support by distributing over 25 million PPE items and making over 2,000 deliveries

NM: Assisting the state's COVID-19 response by conducting coronavirus testing site at the Wellesley Health Center

OK: [Providing logistical support to Strategic National Stockpile warehouse assisting with warehouse operations](#)

TX: Supporting the North Texas Food bank in Dallas, the N95 mask factory in Fort Worth, and the North Central Texas Trauma Rgnl Advisory Council; operating mobile testing sites throughout the state collected over 33,000 samples since mid April

Region VII

IA, KS, MO, NE

IA: Providing manpower from the 185th Air Refueling Wing and 334th Brigade Support Battalion as well as logistical support to the Storm Lake community COVID-19 testing site

KS: Conducting decontamination of N95 masks for state and local officials, [established a community based test site in Jackson County to support the meat processing community in the area](#)

MO: Supporting multiple partner organizations with decontamination of the N95 masks using the BATTELLE system

NE: [Operating at 30 PPE distribution sites, isolation housing Operations, food bank support operations, alternate quarantine housing operations](#)

Region VIII

CO, MT, ND, SD, UT, WY

CO: Testing at Life Care Center of Pueblo and providing shelter support in 11 locations in the Denver Metro Area

MT: [Conducting temperature screening operations at 11 Airports and Train stations](#)

ND: [NDDoH Microbiology Lab support and analysis, mobile community Screening](#)

SD: Assisting SDHD with the testing of all nursing homes and long term care facility residents in state

UT: 85th CST is conducting sample testing in support of Utah United Public Health Lab in Taylorsville

WY: COVID-19 Interagency Group (CIG) developing strategic plans for WY in coordination with interagency partners to execute recovery phase operations IOT achieve normal operations

Region IX

AZ, CA, GU, HI, NV

AZ: Supporting 15 food banks in communities such as Nogales, Flagstaff, Tucson, Payson, Yuma, Snowflake and multiple locations within the Phoenix valley

CA: Continuing to support federal, state, and local mission partners in the battle against COVID-19 while also remaining vigilant in other missions such as wildfire support

GU: Providing DECON training to GOVGUAM

HI: [Provide medical monitoring for TF Oahu Airport Screeners, PPE Warehouse Management, and MED Planning](#)

NV: [Community Based Collection Sites, PPE donation management, warehouse logistics, homeless center COVID testing/logistics](#)

Region X

AK, ID, OR, WA

AK: [Sourcing equipment to multiple municipal EOCs, NG supporting AK health dep warehouse/PPE logistic](#)

ID: Working priorities established as their key state efforts of Future/Current Operations planning and plans/SOP development

OR: Helping consolidate and distribute critical personal protective equipment (PPE) to medical and assisted living facilities and tribal nations throughout the state, especially in underserved communities which have been especially strained financially by the virus response

WA: Providing Food Bank and Testing Site support as well as multiple transportation and LNO missions throughout Washington

(b) (6)

Subject: NHSN Daily Summary MAIN 6/1
Date: Monday, June 1, 2020 2:34:08 PM
Attachments: [Daily Summary_01JUN2020MAIN.pdf](#)

All,

NHSN COVID-19 Summary – MAIN attached.

- Acute-care, national crude percentages:
 - 10% of inpatients have COVID-19 (crude percent) (down from about 22% at peak)
 - 17% of COVID-19 inpatients are on a ventilator (crude percent)(had been quite consistent at about 18%)
 - 23% of in-use ventilators are occupied by covid-19 patients (crude percent)
 - 14% of facilities have more than 80% of their ICU beds filled (crude percent) (has been pretty consistent)
 - 43% reporting facilities are reporting not able to obtain N95 masks

Here are the SharePoint links for the PBI dashboards:

PowerBI link for nonCDC users who have worked with NHSN to get a login (otherwise contact

(b) (6) to request login):

<https://protect2.fireeye.com/url?k=8728c364-db7cea4f-8728f25b-0cc47a6d17cc-6c74feada588efc9&u=https://cdcpartners.sharepoint.com/sites/NHSNCOVID19/>

Respectfully,

(b) (6)

"Fortune favors the prepared mind" – Louis Pasteur

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under the Freedom of Information Act U.S.C 552.



National Healthcare Safety Network (NHSN), CDC Daily Summary for June 1st, 2020 COVID-19 Modules Data MAIN





Key Points

- Long-term care: overall 44% have had one or more cases of COVID-19
- Acute-care, national crude percentages:
 - 10% of inpatients have COVID-19 (crude percent) (down from about 22% at peak)
 - 17% of COVID-19 inpatients are on a ventilator (crude percent)(had been quite consistent at about 18%)
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Hyperlink Table of Contents

- [Long-term care: Early Analysis](#)
- [Hospital: Supplies and Staffing Pathways](#)
- [Hospital: Patient Impact & Hospital Capacity Pathway](#)
- [Daily Occupancy, Hospitals](#)
- [Detail Slides](#)

Long-term care: Early Analysis



Long-term Care Facility Enrollment and Participation

Enrollment Status

	Skilled Nursing Facility	Assisted Living	Developmentally Disabled Facility
Previously Enrolled before 4/25	2,973	1	4
Newly enrolled since 4/25	12,716	523	74
Pending enrollments in process	314	54	17
Total	16,003	578	95

Reporting Status

Number of Reporting Facilities by Facility Type	
Data Reported to Date as of May 31	
LTC Assisted Living	479
LTC Developmentally Disabled	69
LTC Skilled Nursing Homes (SNFs)	14,044
Number of SNFs with unique CCN	13,991
Number of SNFs with unique CCN matched to our list of CMS Certified SNFs	13,640
Total	14,592

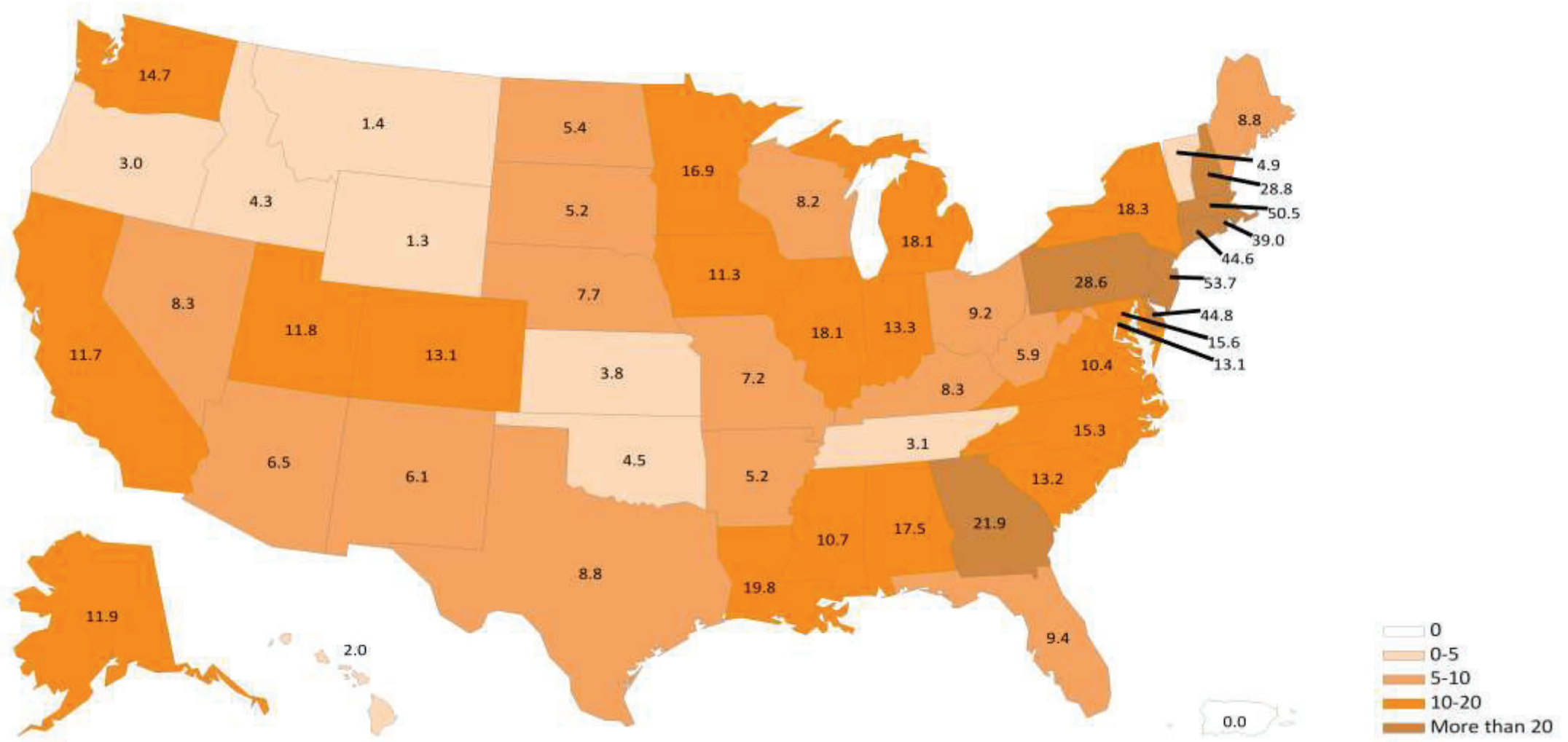


Long-term Care...Things to know

- CMS will soon begin publicly reporting data for the subset of reporting nursing homes that are registered with CMS and have an identifier called a CCN
- That public data will have slight differences from what NHSN reports to the response for a few reasons:
 - Timing will differ: NHSN will have data that is about 1 week ahead of the public report & also facilities can change their data in NHSN at any time
 - Facilities are grouped a little differently by the programs: CMS must group together any facilities that share a CCN whereas for public health reasons NHSN keeps physically separate facilities separate
 - Data cleaning is active: Because NHSN has onboarded 16,000 facilities in only a few weeks, NHSN is telephoning facilities with data that appears incorrect & NHSN is actively collaborating with CMS on data cleaning rules. Data that do not pass quality checks are flagged and suppressed by CMS so that facilities will know that they need to update their data in NHSN.
 - Some facilities reporting to NHSN are not registered with CMS with CCNs
- Data entered to date should not be used for analyzing time-series or trends because of how the data-entry is set-up. Facilities have been entering cumulative data as they come onboard. CMS is including these instructions with the public report. Moving forward we expect to be able to show information over time.



Reported Cumulative Confirmed and Suspected Cases per 1,000 Occupied Residents Beds Among NHSN LTC Facilities to Date



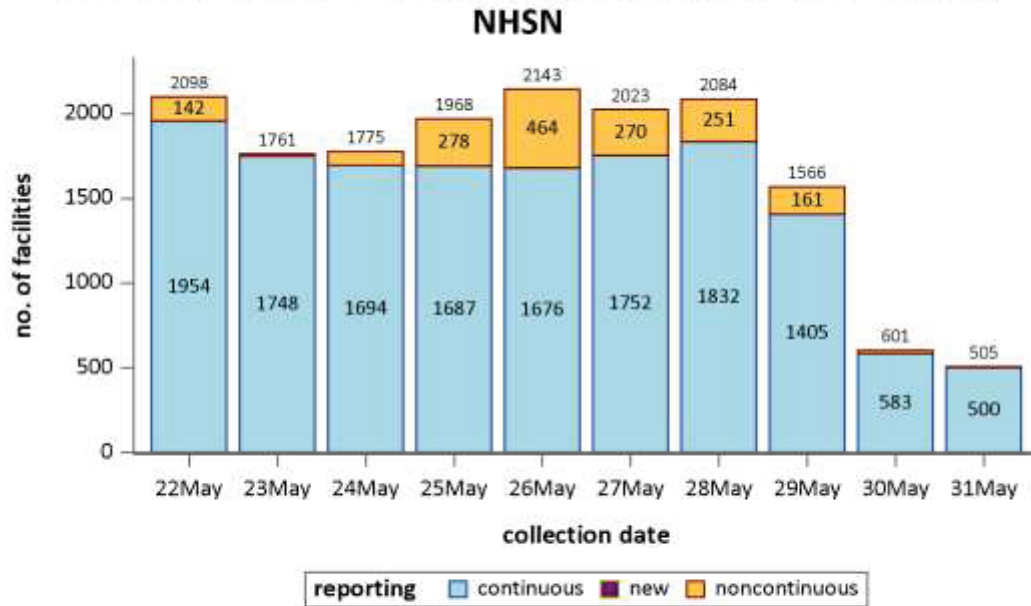
Hospital: Supplies and Staffing Pathways



NHSN COVID-19 Supplies Pathway

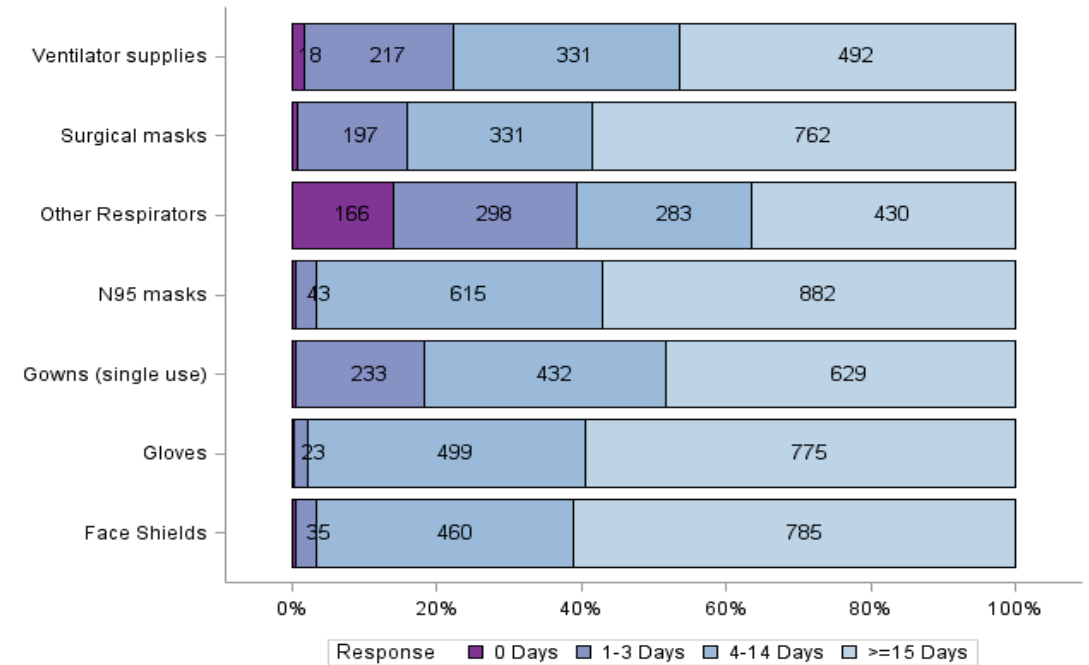
2,878 facilities from 52 states have reported for at least one day

Number of facilities by reporting pattern, Supplies Pathway, NHSN



continuous=reporting continuously within past 3 days, which include collection date
 noncontinuous=reporting noncontinuously within past 3 days, which include collection date
 new=facility reporting first time to Supplies Pathway

National: On-hand Supply



Ventilator supplies excludes hospitals that reported having no ventilators available. 7 Critical Access Hospitals and 11 Acute Care Hospitals are reporting zero days of on-hand Ventilator Supplies.

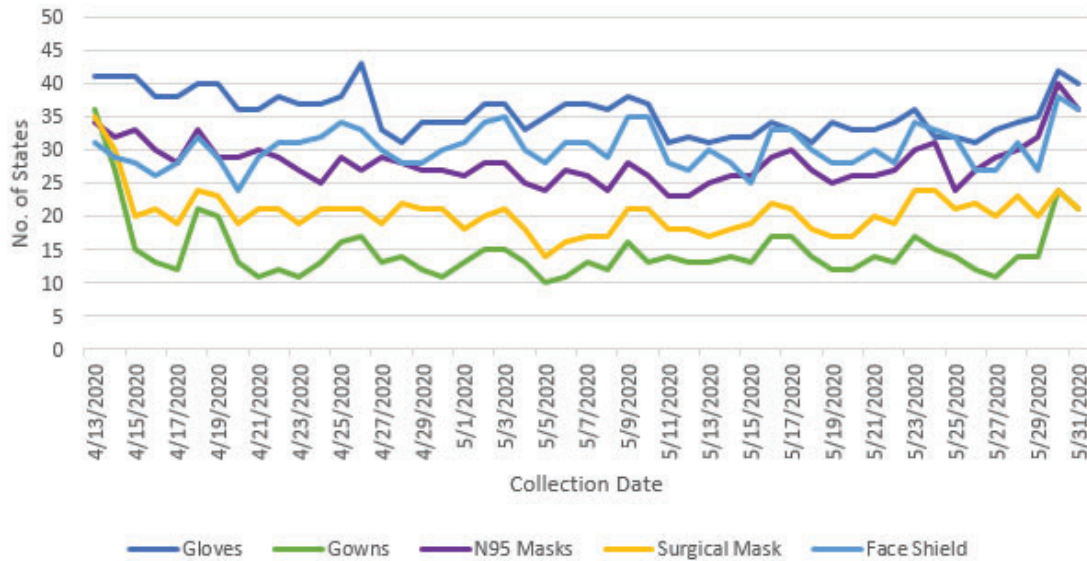
Includes the most recent data for every facility that reported for most recent three days.

<https://www.cdc.gov/nhsn/acute-care-hospital/covid19/index.html>

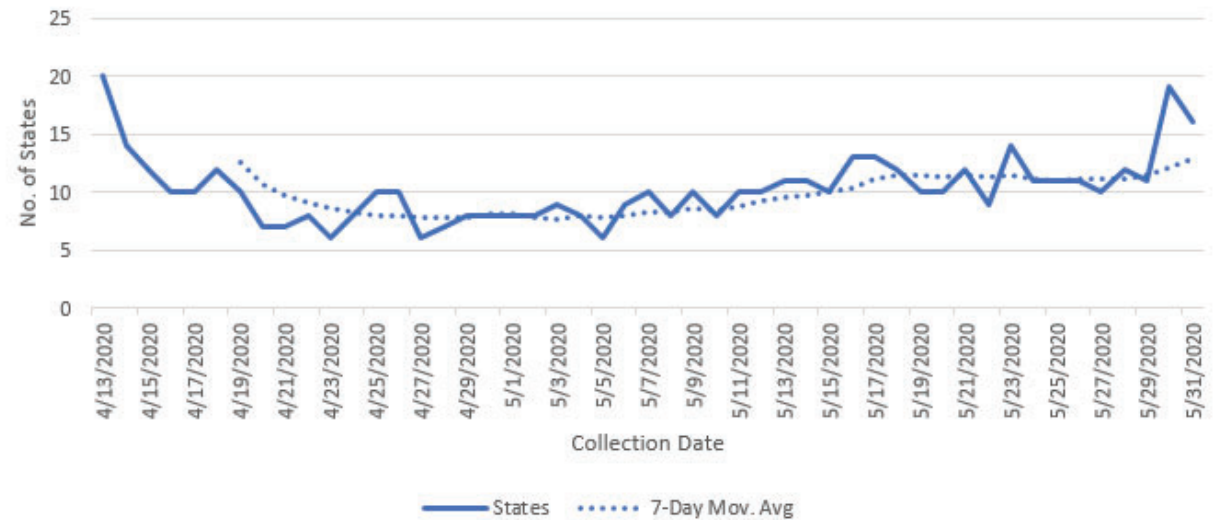


NHSN COVID-19 Supplies Pathway

Number of States with All Reporting Facilities that have 4 or More Days of Select PPE



Number of States with All Facilities Reporting No Shortages of Select PPE Overall



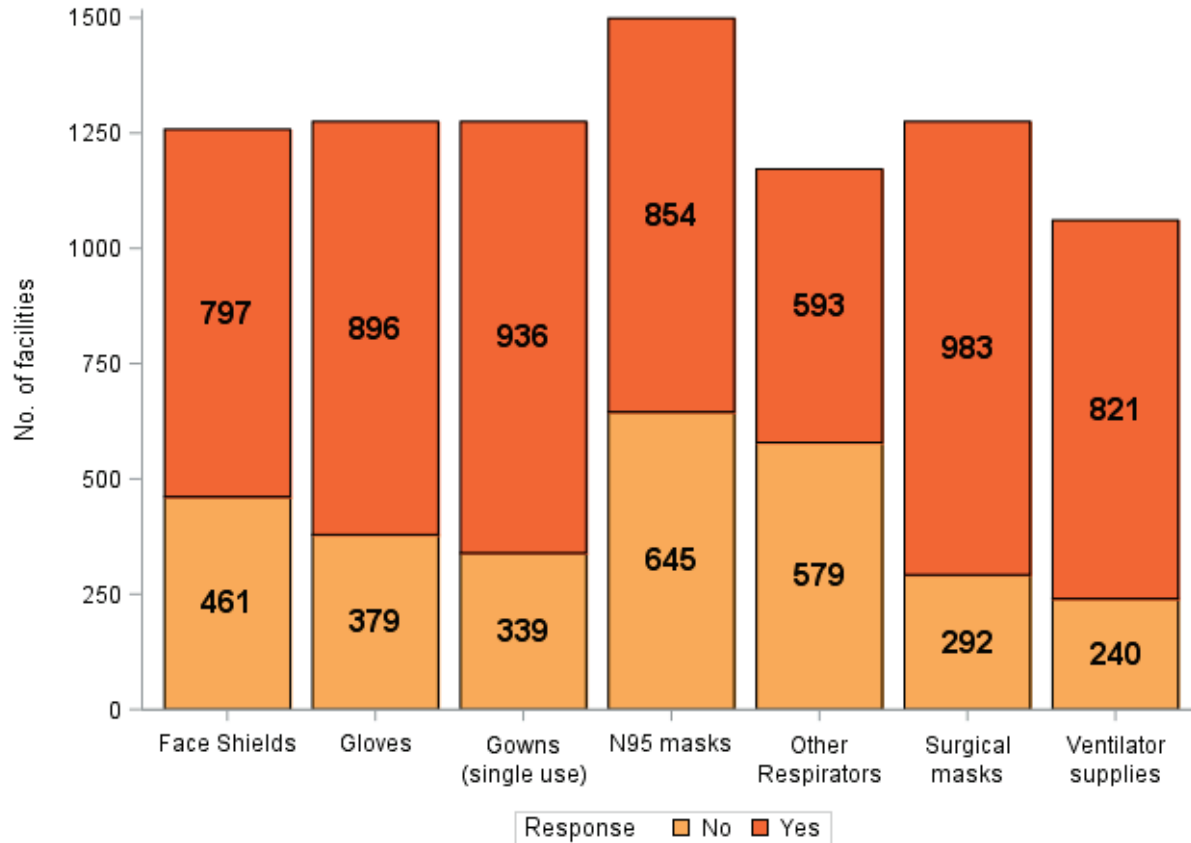
<https://www.cdc.gov/nhsn/acute-care-hospital/covid19/index.html>



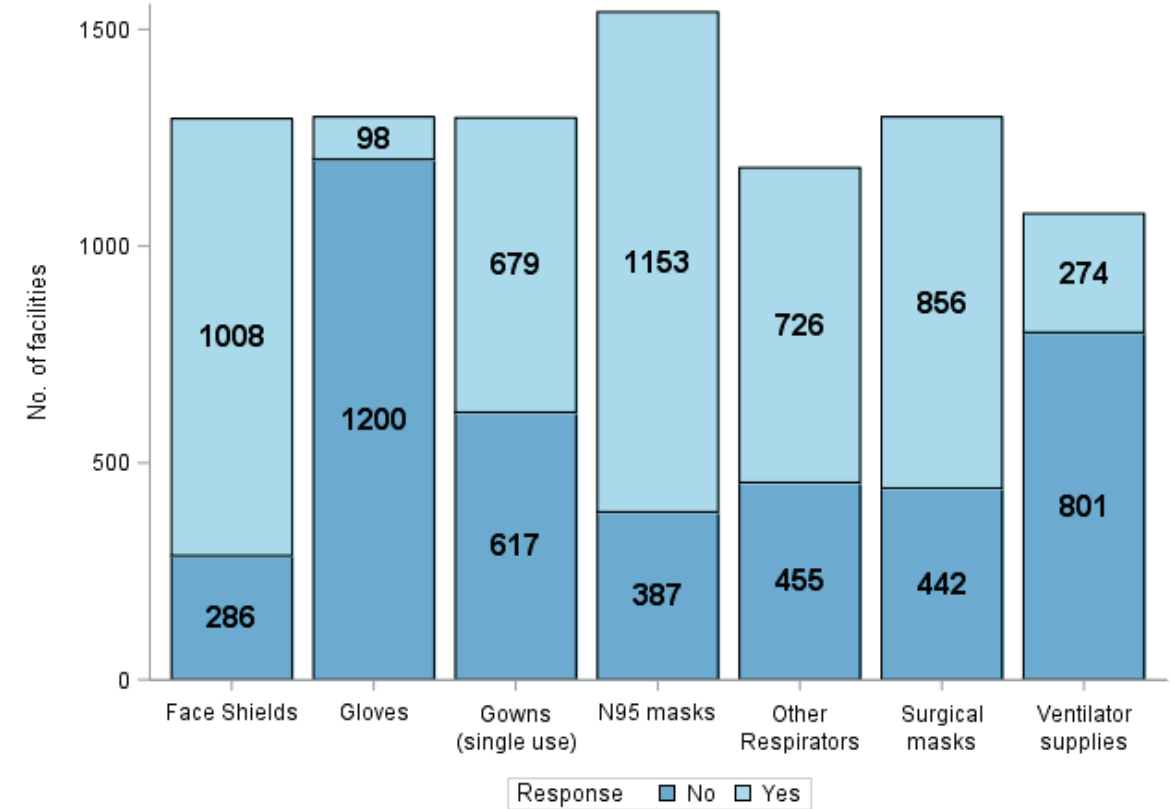


NHSN COVID-19 Supplies Pathway

Are you able to obtain this item?



Are you currently reusing this item or implementing extended use?



YES includes disinfection

Includes the most recent data for every facility that reported for most recent three days.

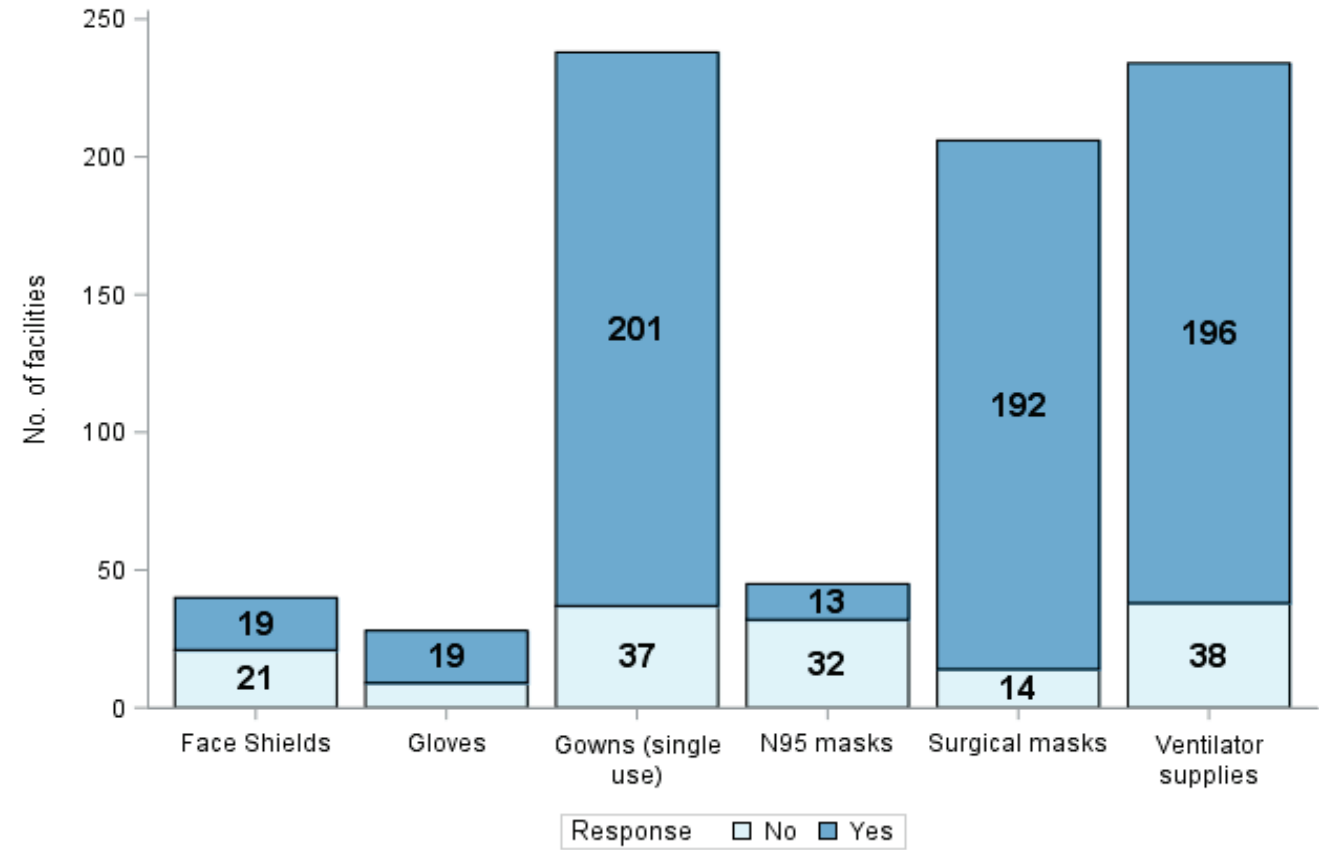
<https://www.cdc.gov/nhsn/acute-care-hospital/covid19/index.html>

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Facilities reporting 3 or fewer days of on-hand supply, ability to obtain the item

Facilities reporting 3 or fewer days of on-hand supply, ability to obtain the item
Are you able to obtain this item?



*Includes facilities that reported 3 or fewer days of on-hand supply

Includes the most recent data for every facility that reported for most recent three days.



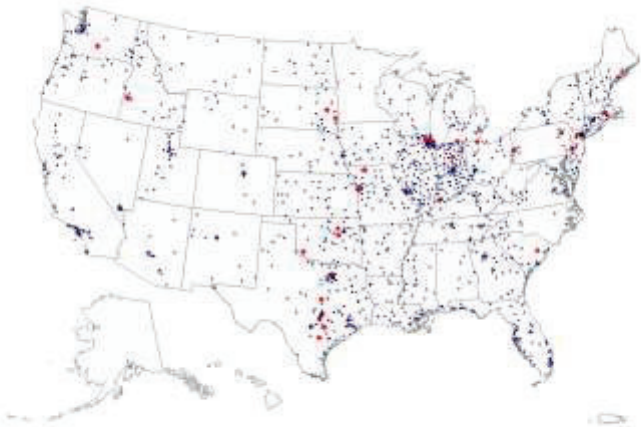
Shortages by Location, NHSN

Data as of June 1, 2020 at 5:30 AM



N95 Masks

Shortage of N95 masks, NHSN, 06/01/20



Total # facilities reporting of N95 masks to COVID-19 module (Healthcare supply pathway): 1494
Red=Facilities reporting 3 or fewer days of on-hand N95 masks and not able to obtain: 32
Blue=Other facilities

Red dots=facilities reporting 3 or fewer days of on-hand supply and reporting that they are not able to obtain item

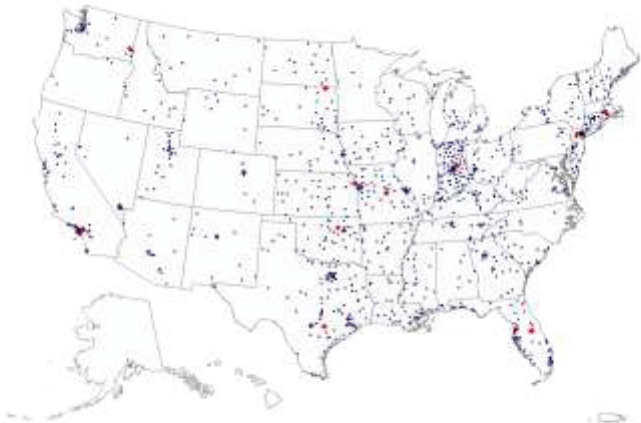
Shortage of gowns, NHSN, 06/01/20



Gowns

Total # facilities reporting of gowns to COVID-19 module (Healthcare supply pathway): 1271
Red=Facilities reporting 3 or fewer days of on-hand gowns and not able to obtain: 37
Blue=Other facilities

Shortage of surgical masks, NHSN, 06/01/20

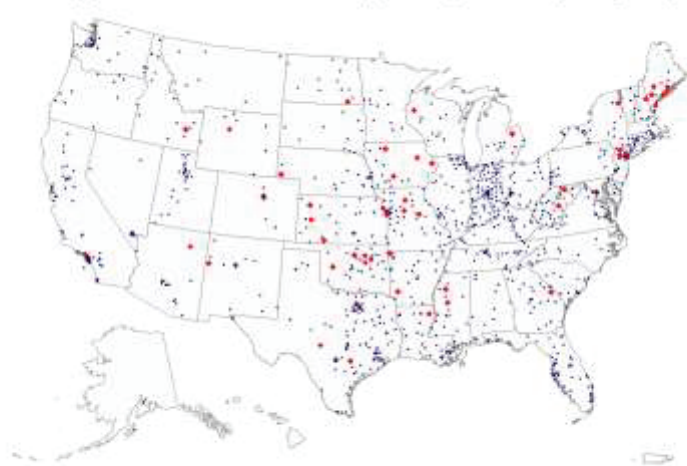


Surgical Masks

Blue dots=other facilities

Total # facilities reporting of surgical masks to COVID-19 module (Healthcare supply pathway): 1269
Red=Facilities reporting 3 or fewer days of on-hand surgical masks and not able to obtain: 15
Blue=Other facilities

Shortage of ventilator supplies, NHSN, 06/01/20



Ventilator Supplies

Total # facilities reporting of ventilator supplies to COVID-19 module: 1248
Red=Facilities reporting 3 or fewer days of on-hand ventilator supplies and reporting that they are not able to obtain them: 53
Blue=Other facilities



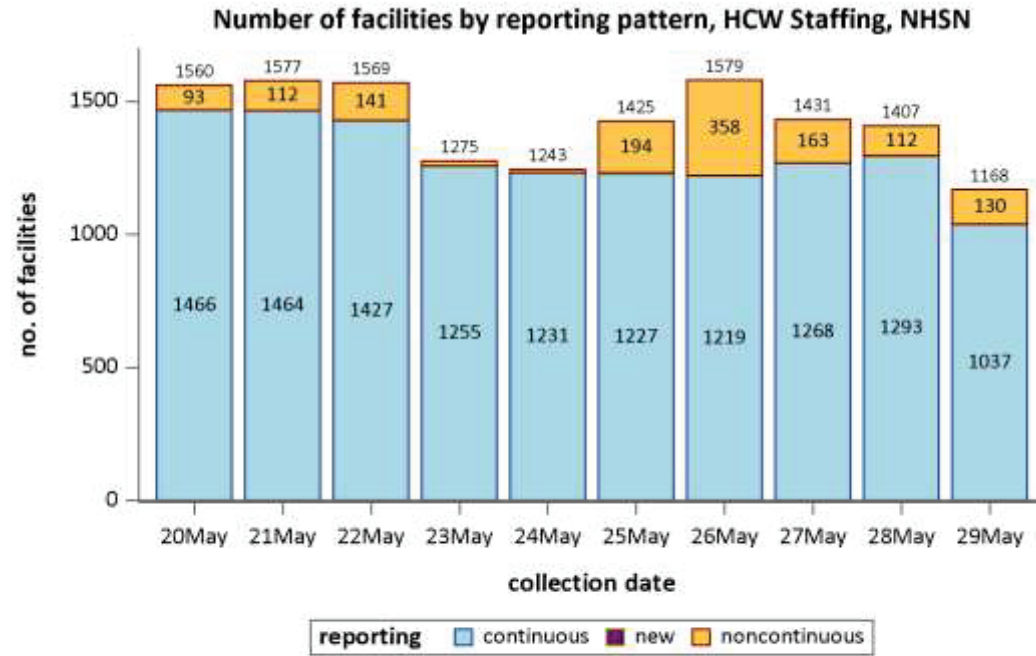
OSJI-Covid / 20cv5096 (DoD 20-L-1014) / 4146

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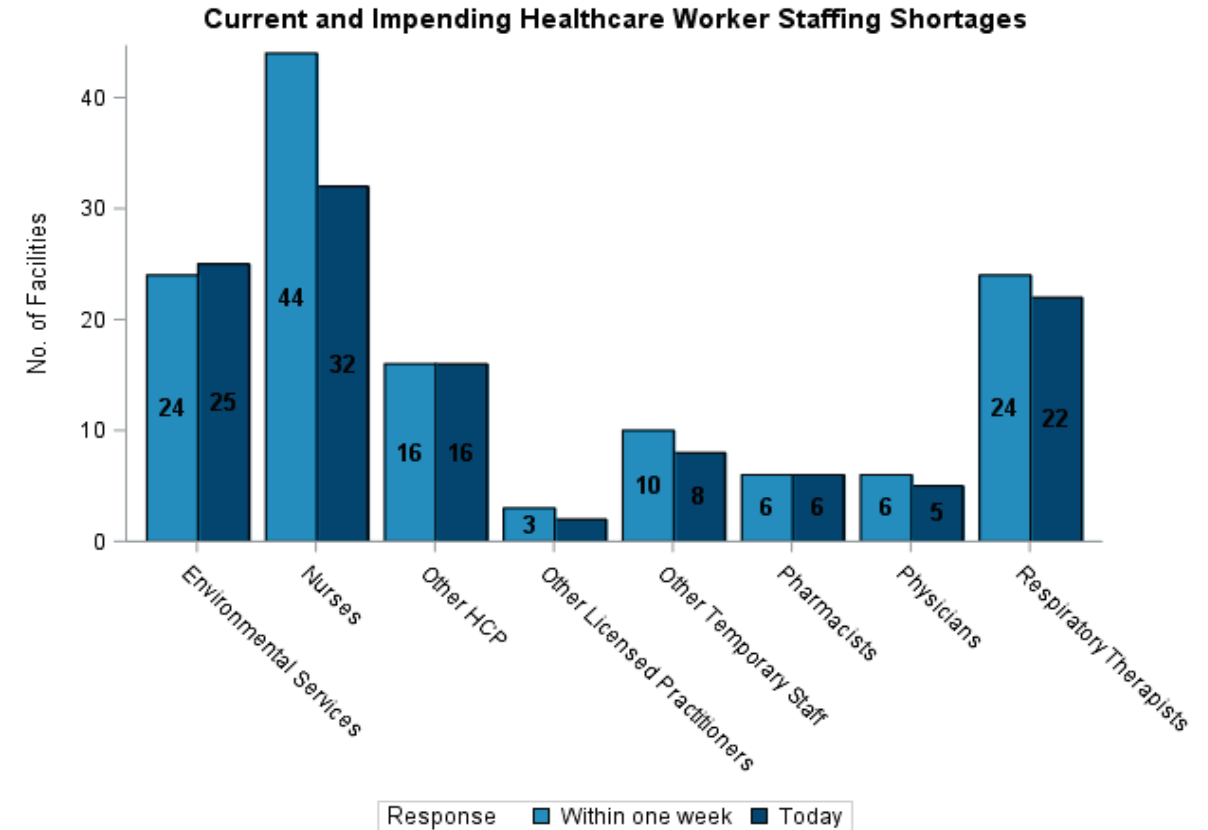


NHSN COVID-19 Healthcare Worker Pathway

2,261 facilities from 52 states have reported for at least one day



continuous=reporting continuously within past 3 days, which include collection date
 noncontinuous=reporting noncontinuously within past 3 days, which include collection date
 new=facility reporting first time to HCW Staffing Pathway



*No. of facilities reporting for the most recent three days=1,260

Includes the most recent data for every facility that reported for most recent three days.

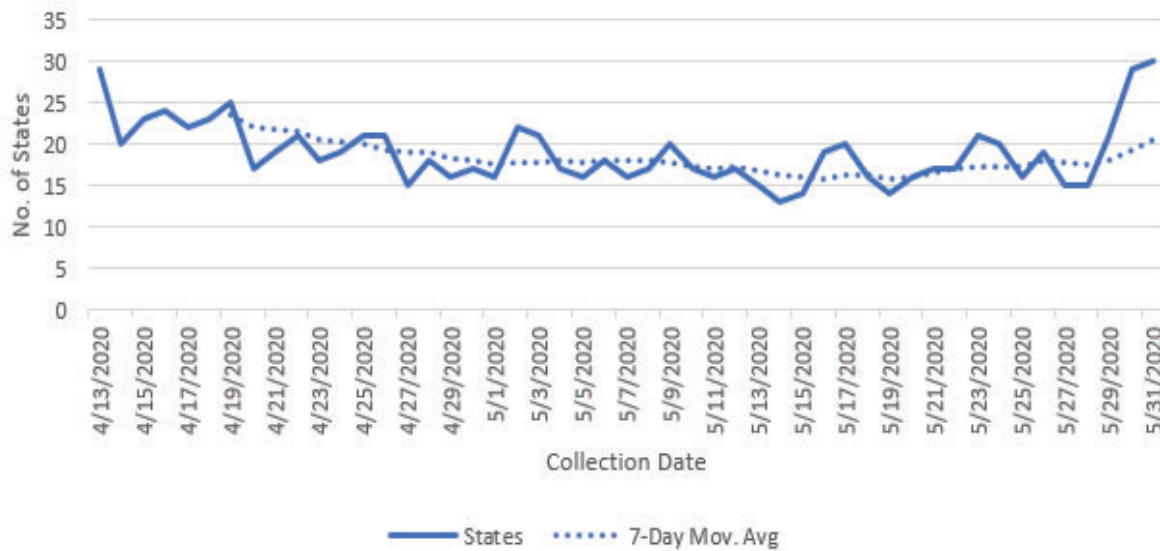
<https://www.cdc.gov/nhsn/acute-care-hospital/covid19/index.html>

OSJI-Covid / 20cv5096 (DoD 20-L-1014) / 4147

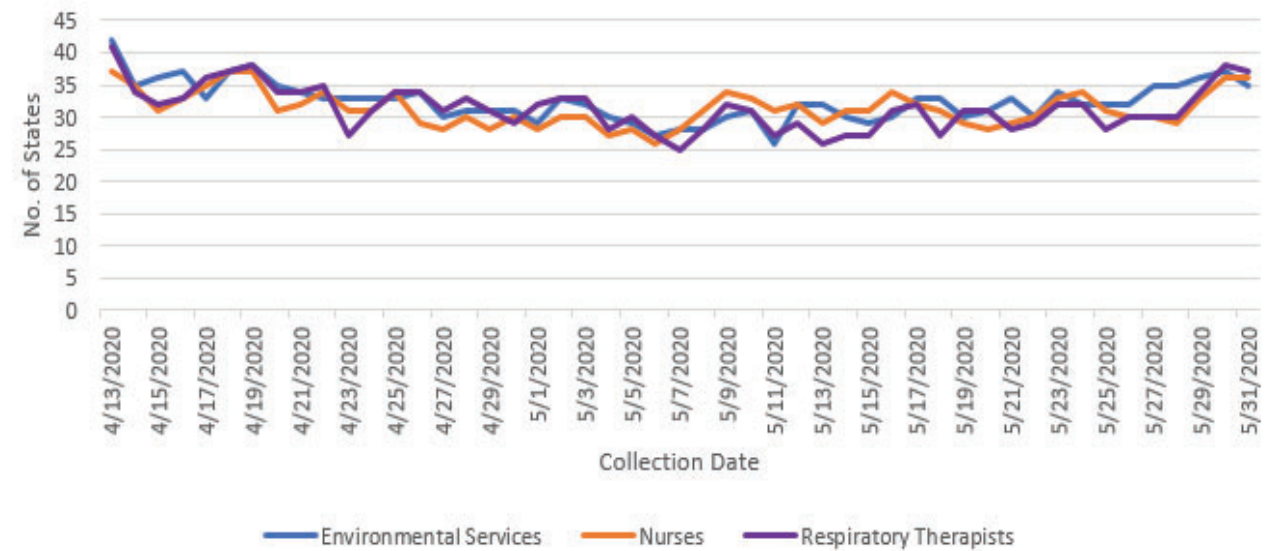


NHSN COVID-19 Healthcare Worker Pathway

Number of States with All Reporting Facilities Indicating No Current HCW Shortages in All HCW Groups



Number of States with All Reporting Facilities Indicating No Current HCW Shortages in Select HCW Groups



<https://www.cdc.gov/nhsn/acute-care-hospital/covid19/index.html>

OSJI-Covid / 20cv5096 (DoD 20-L-1014) / 4148





Nurses

Current healthcare worker shortages by location, NHSN

Data as of June 1, 2020 at 5:30 AM



Current shortage of nurses



Total # reporting facilities in the most recent 3 days: 1254
red= Facilities reporting current shortage of nurses: 32
gray=Other facilities

Current shortage of respiratory therapists



Total # reporting facilities in the most recent 3 days: 1227
purple= Facilities reporting current shortage of respiratory therapists: 23
gray=Other facilities



Respiratory therapist

Current shortage of environmental services staff



Total # reporting facilities in the most recent 3 days: 1251
orange= Facilities reporting current shortage of environmental services staff: 26
gray=Other facilities



Environmental services staff

Current shortage of other types of healthcare workers



Total # reporting facilities in the most recent 3 days: 1221
blue= Facilities reporting current shortage of other types of healthcare workers: 30
gray=Other facilities



Other types of healthcare worker



OSJI-Covid / 20cy5096 (DoD 20-L-1014) / 4149

Data are provisional until officially released from CDC – For Internal Use Only (FIUO) – For Official Use Only (FOUO) – Sensitive But Unclassified (SBU)

Impending healthcare worker shortages within a week



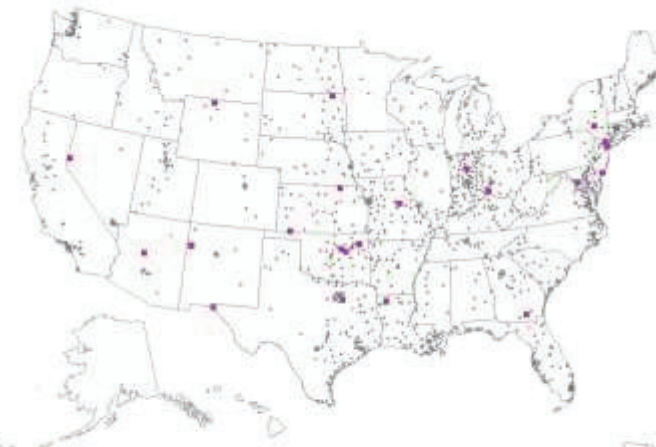
Nurses

Shortage of nurses within a week



Total # reporting facilities in the most recent 3 days: 1238
red= Facilities reporting shortage of nurses within a week: 44
gray=Other facilities

Shortage of respiratory therapists within a week



Total # reporting facilities in the most recent 3 days: 1216
purple= Facilities reporting shortage of respiratory therapists within a week: 25
gray=Other facilities



Respiratory therapist

Shortage of environmental services staff within a week



Total # reporting facilities in the most recent 3 days: 1240
orange= Facilities reporting shortage of environmental services staff within a week: 25
gray=Other facilities



Environmental services staff

Shortage of other types of healthcare workers within a week



Total # reporting facilities in the most recent 3 days: 1209
blue= Facilities reporting shortage of other types of healthcare workers within a week: 33
gray=Other facilities



Other types of healthcare worker



Healthcare Worker Shortage By State

Data as of: 6/1/2020 6:16:00 AM



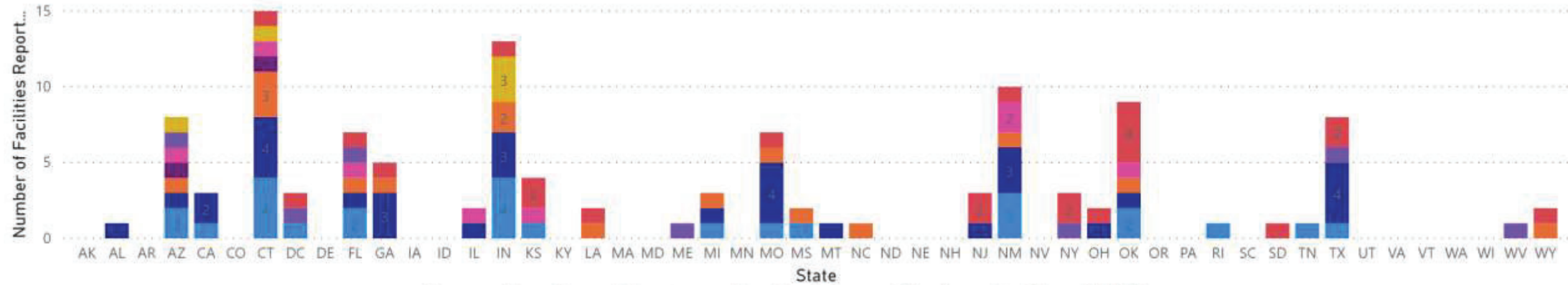
Filter by State

All

29-May-20 to 31-May-20

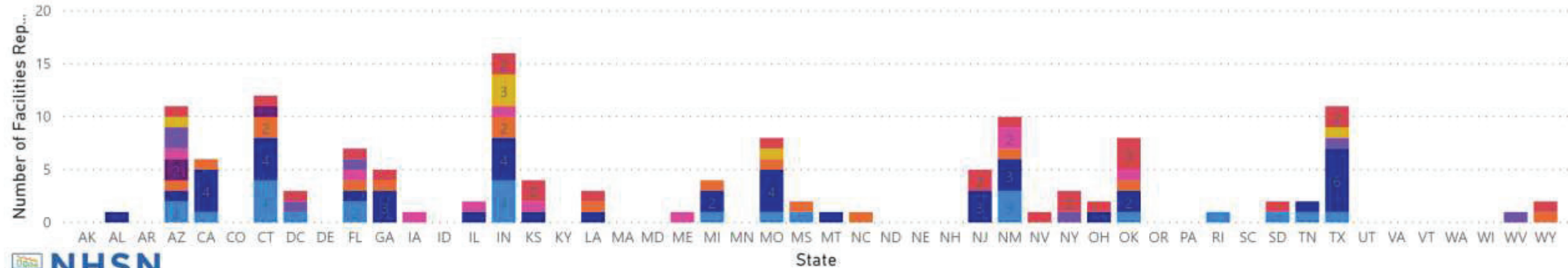
Current State Shortages by Healthcare Worker Staffing, NHSN

Staffing Type: Environmental Services, Nurses, Other HCP, Other Licensed Practit, Other Temporary Staff, Pharmacists, Physicians, Respiratory Therapists



Impending State Shortages by Healthcare Worker Staffing, NHSN

Staffing Type: Environmental Services, Nurses, Other HCP, Other Licensed Practit, Other Temporary Staff, Pharmacists, Physicians, Respiratory Therapists



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OSJI-Covid / 20cv5096 (DoD 20-L-1014) / 4151

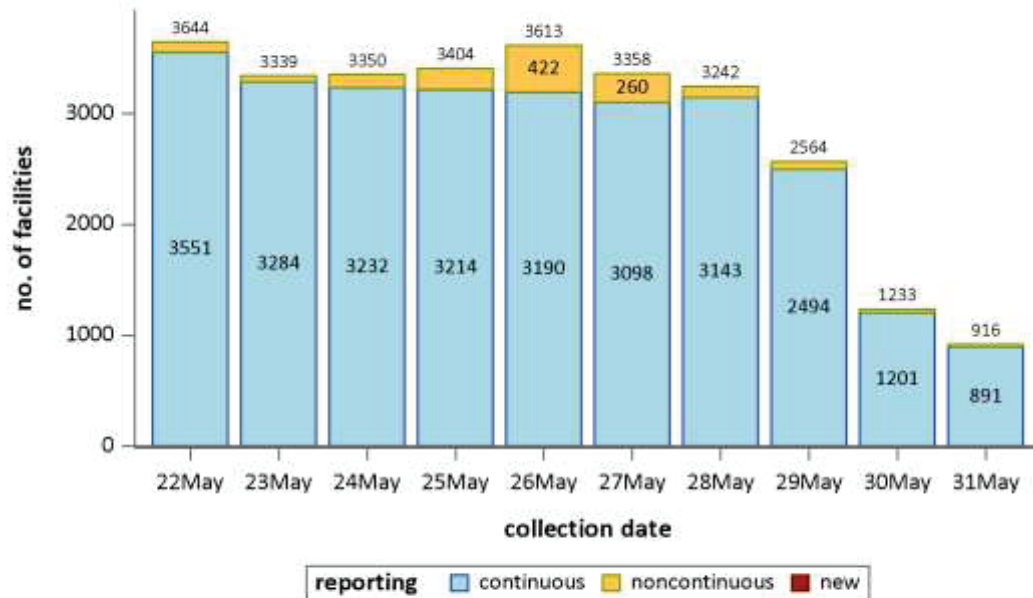
Hospital: Patient Impact & Hospital Capacity Pathway



Overall Patient Impact and Hospital Capacity

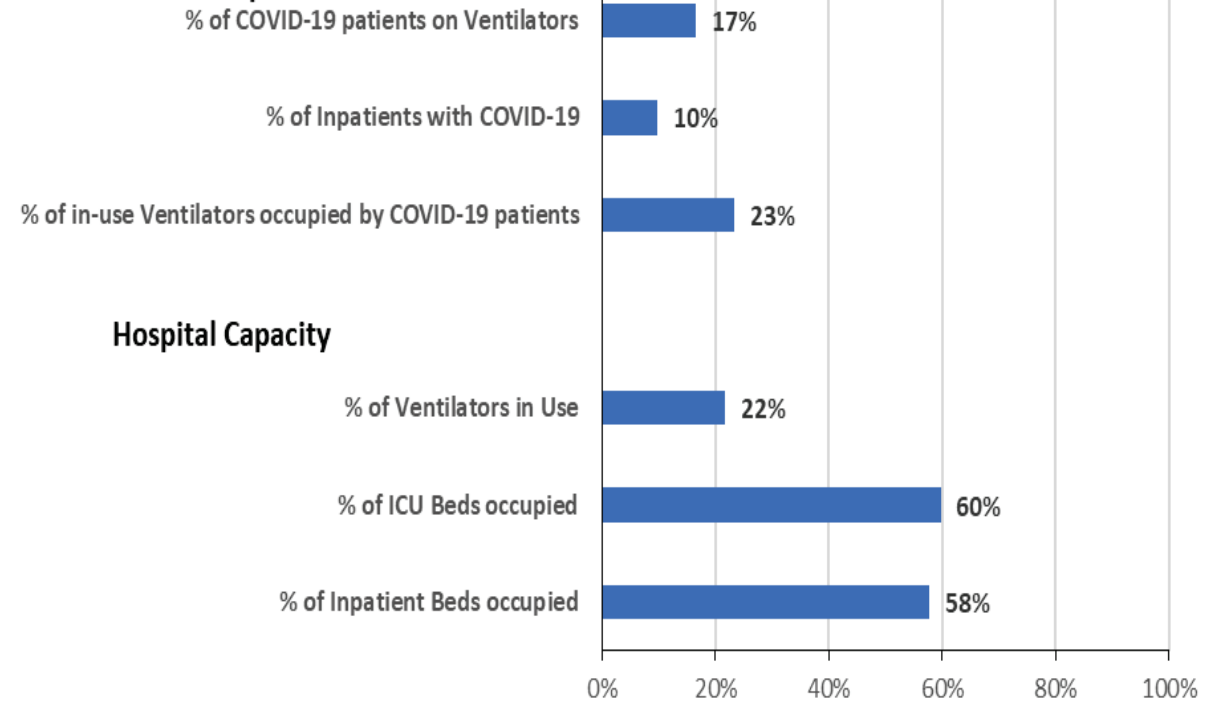
4,450 facilities have reported for at least one day

Number of facilities by reporting pattern, NHSN

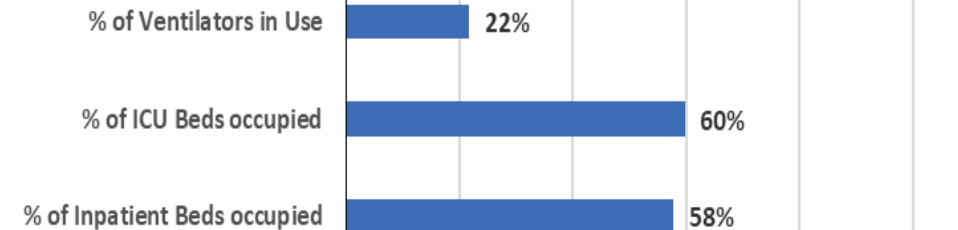


continuous=reporting continuously within past 3 days, which include collection date
 noncontinuous=reporting noncontinuously within past 3 days, which include collection date
 new=facility reporting first time to PIHC module

Patient Impact



Hospital Capacity



Includes the most recent data for every facility that reported for most recent three days.

<https://www.cdc.gov/nhsn/acute-care-hospital/covid19/index.html>

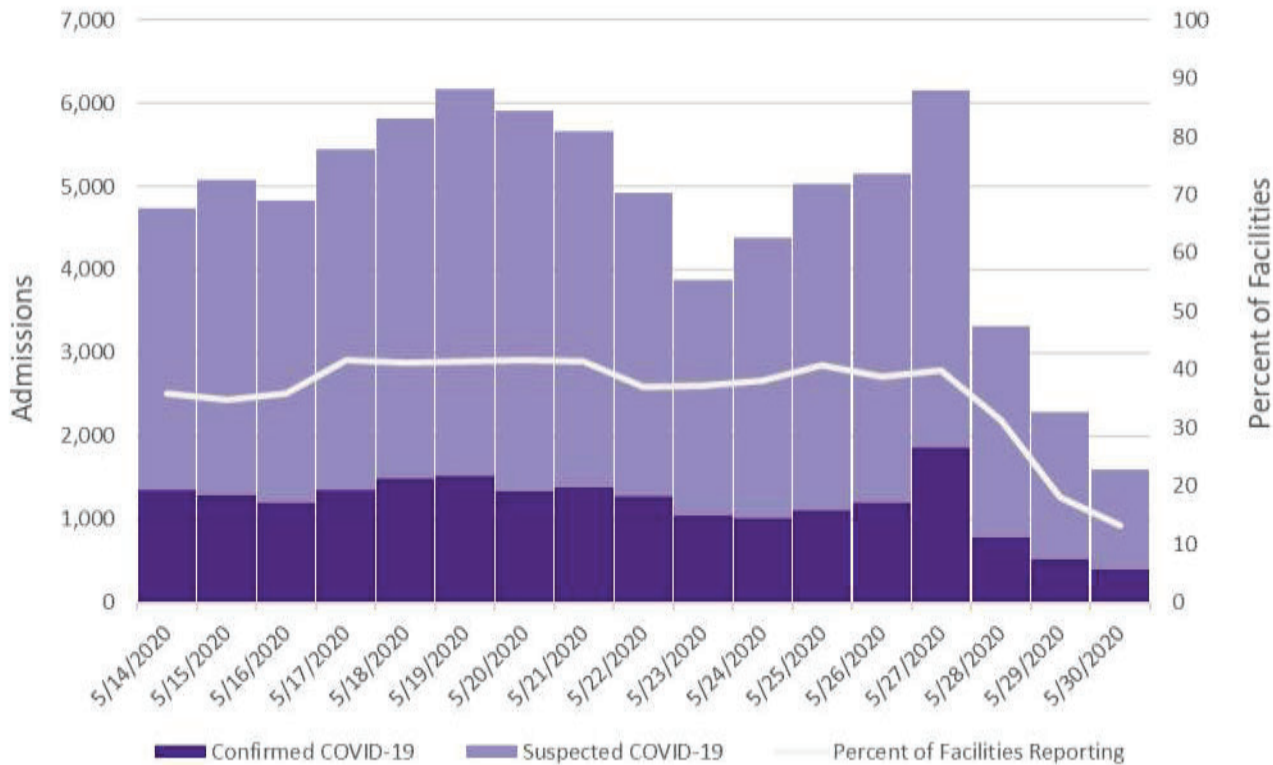
OSJI-Covid / 20cv5096 (DoD 20-L-1014) / 4153

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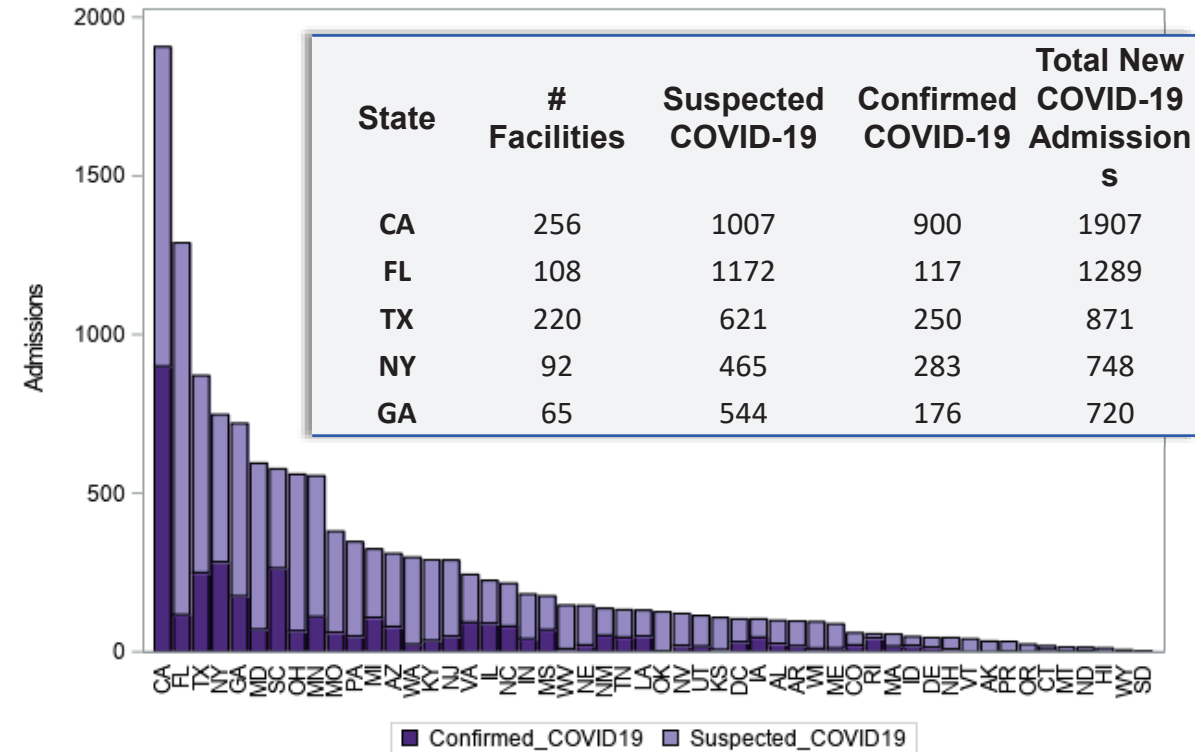


New Admissions with COVID-19, by Day

New Admissions with Suspected and Confirmed COVID-19 (Incident)



New Admissions with Suspected and Confirmed COVID-19 (Incident) By State 5/27 - 5/30



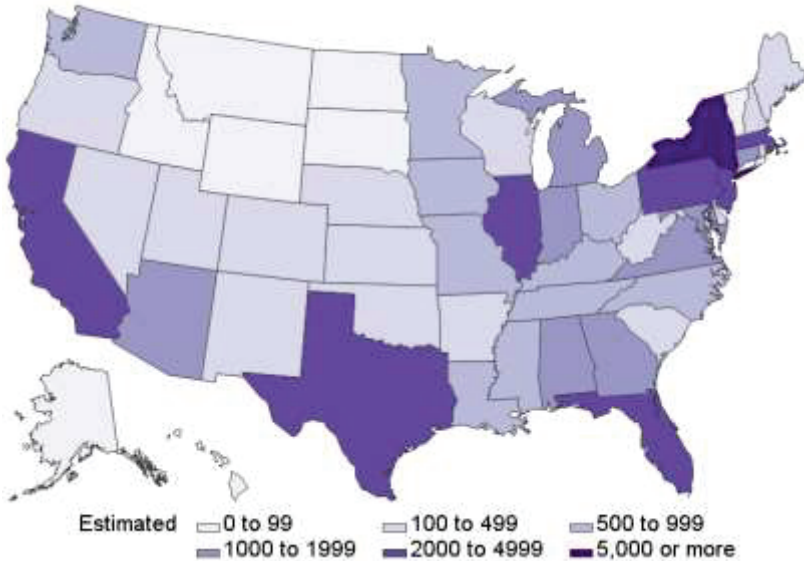


National and State Estimates, NHSN

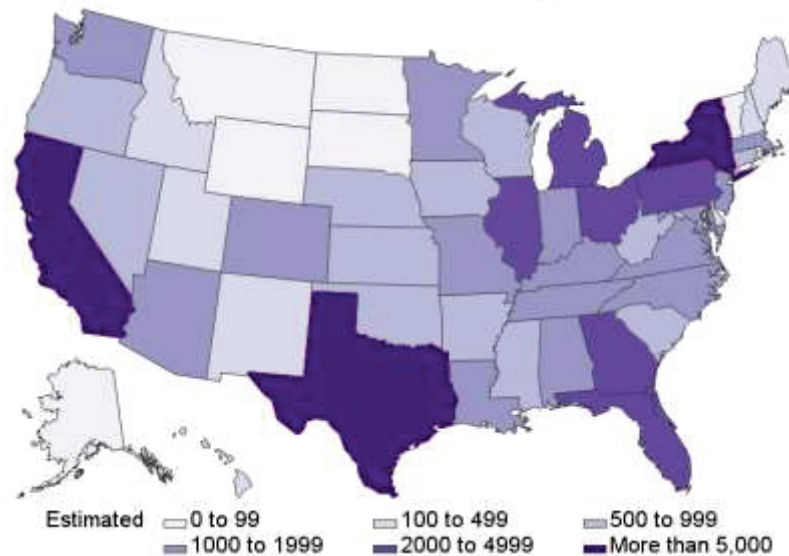
- Used reported NHSN COVID-19 data to calculate state- and nationally-weighted estimates with error estimates (95% confidence interval)
- Applied multiple imputation and survey weighting adjusting for facility characteristics

Estimates 5/28	National estimate (95% CI)
Total inpatient beds occupied	514,591 (482,468-546,713)
Inpatient beds occupied by COVID-19 patients	51,278 (46,673-55,883)
ICU beds occupied	71,606 (66,141-77,072)
Ventilators used	36,436 (33,135-39,737)

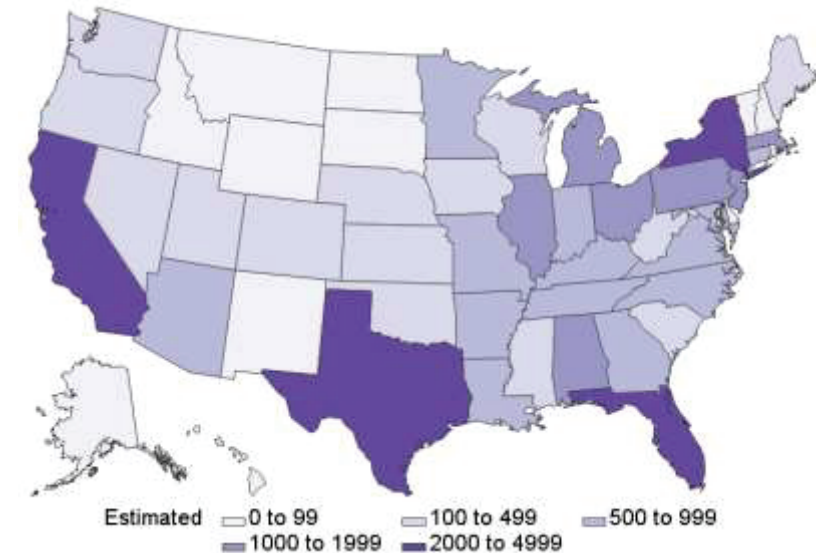
Estimate of inpatient beds occupied by COVID-19 patients, 5/28



Estimate of ICU beds occupied, 5/28



Estimate of ventilators used, 5/28



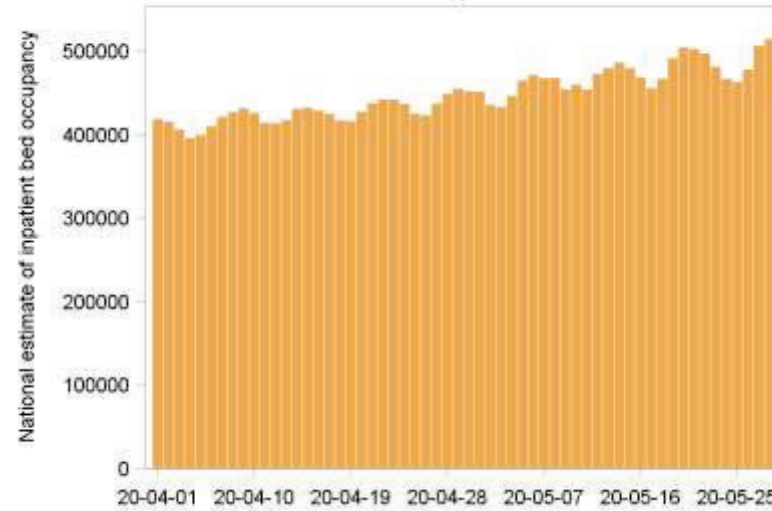
Ventilators include anesthesia machines, portable/transport ventilators, & neonatal ventilators available in the facility. BiPAP included if the hospital uses BiPAP to deliver positive pressure ventilation via artificial airways.



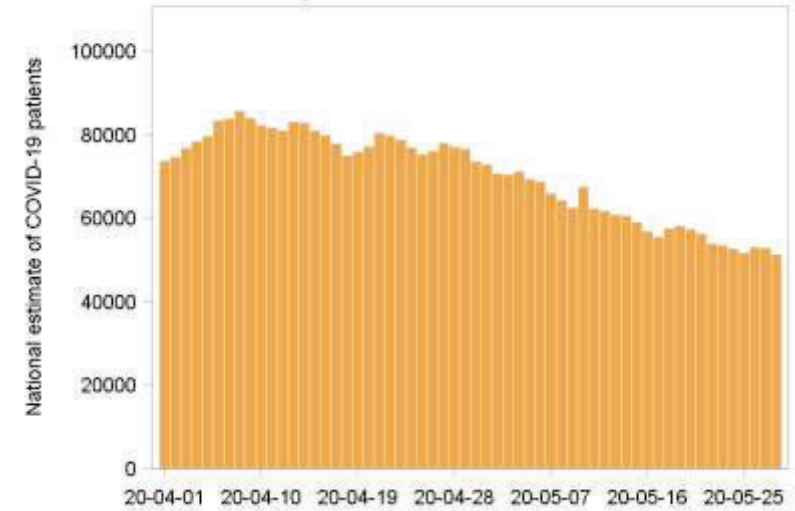
National Estimates by Day, NHSN (Apr 1st-May 27th)

- National estimates based on data reported to NHSN
- Estimates use weighting for non-response and multiple imputation for missing data
- Total inpatients increased, while decrease in total inpatients with COVID-19 seems to continue
- Total ventilator use has declined

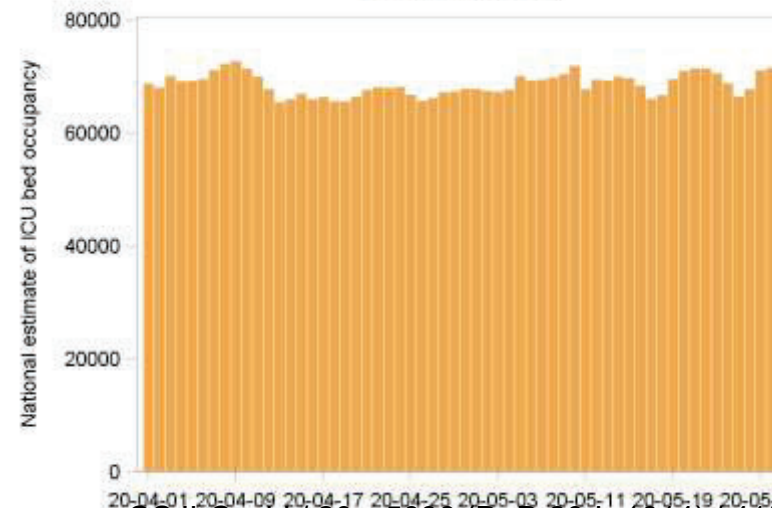
Total inpatients



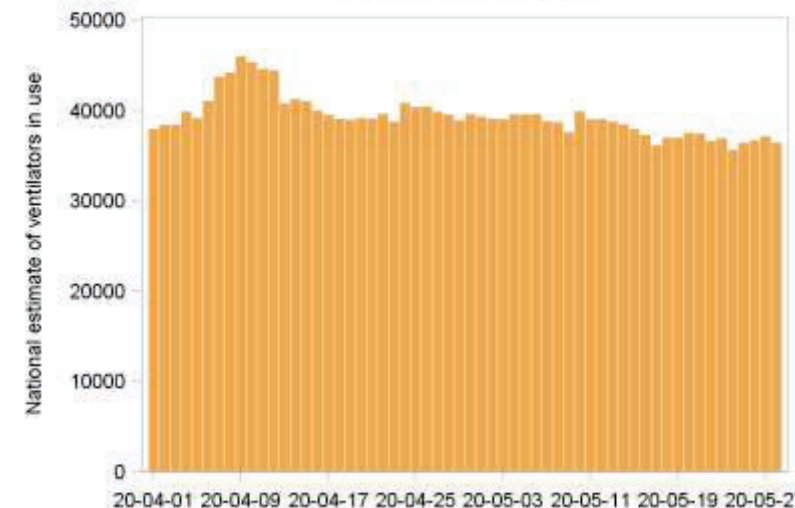
Inpatients with COVID-19



ICU Patients

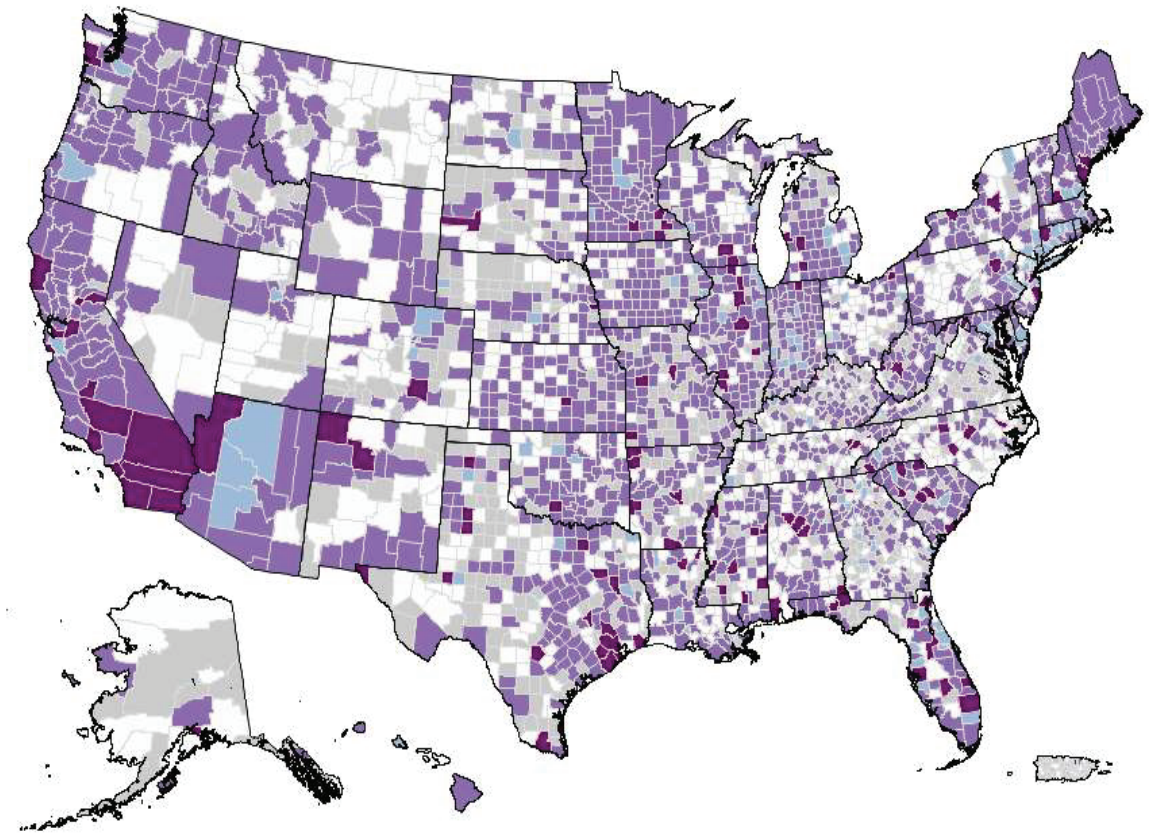
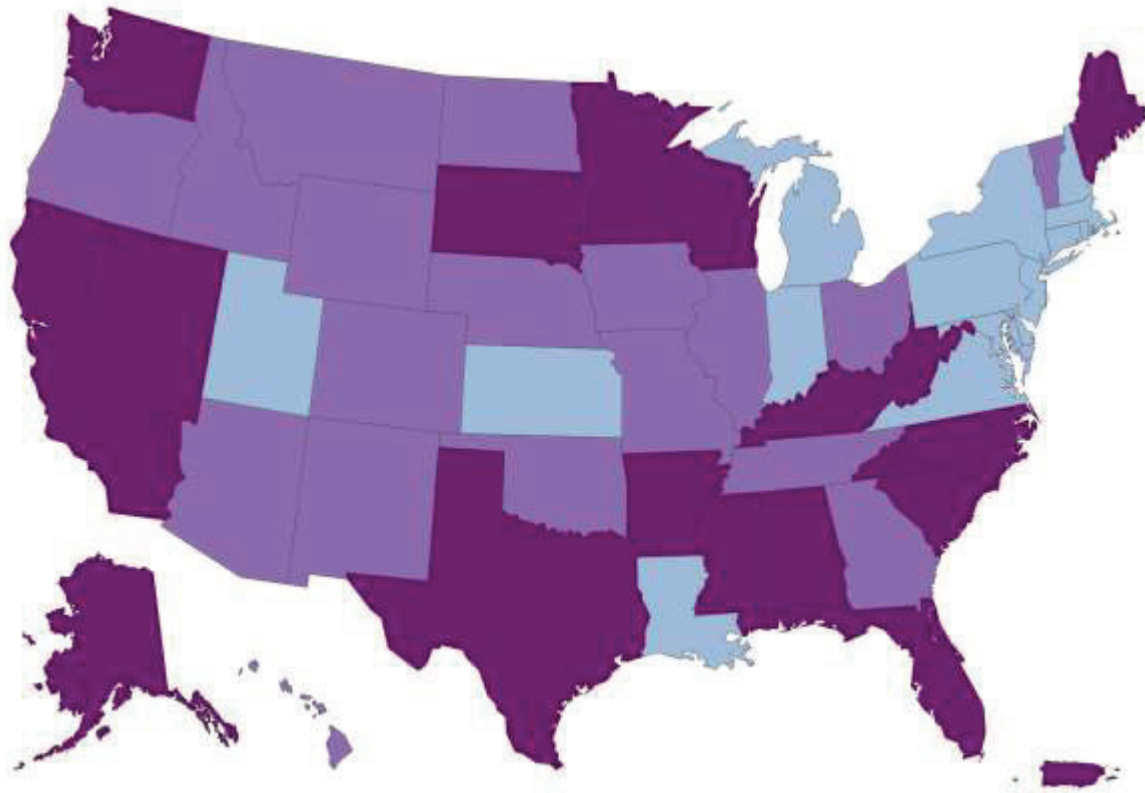


Total ventilators





Change* in Percent of Inpatient Beds Occupied by COVID-19 Patients over 14-day Period (May 13-26, 2020)



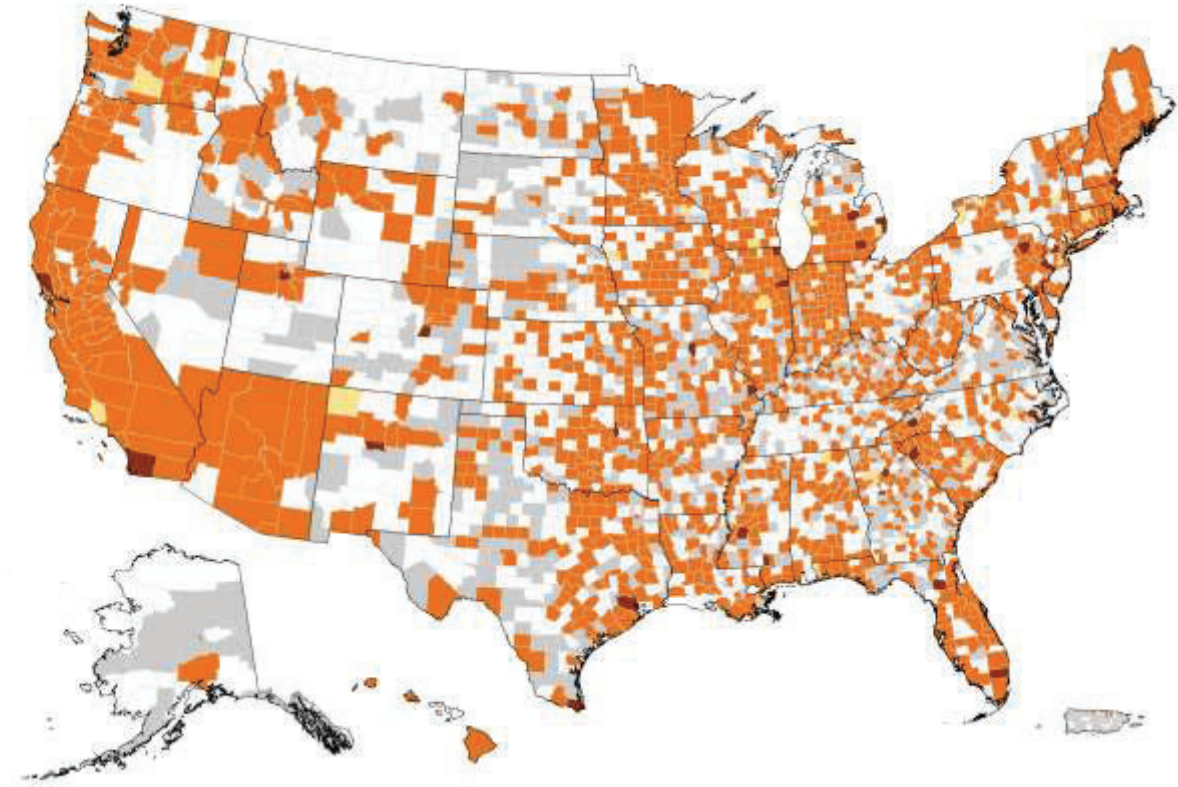
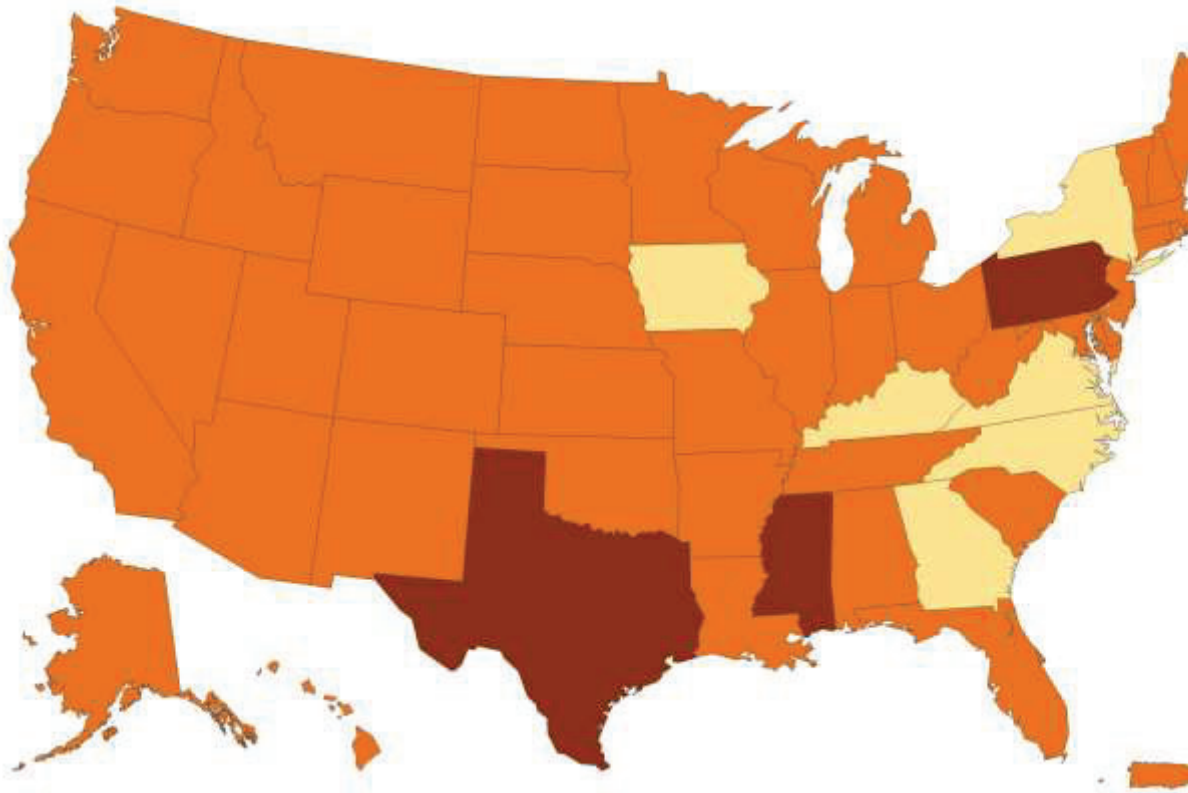
*measured as the slope of random coefficient model to 3 day-moving average of percent of inpatient beds occupied by COVID-19 patients. Model adjusted for bed size, facility type, % daily facility participation in PIHC module, and county-specific cumulative confirmed COVID-19 cases per 100,000 population (source: Johns Hopkins CSSE).

- no facilities
- facilities not reporting
- decreasing
- stable
- increasing






OSJI-Covid / 20cy5096 (DoD 20-L-1014) / 4157

Y

Change* in Percent of COVID-19 Patients on Ventilators over 14-day Period (May 13-26, 2020)

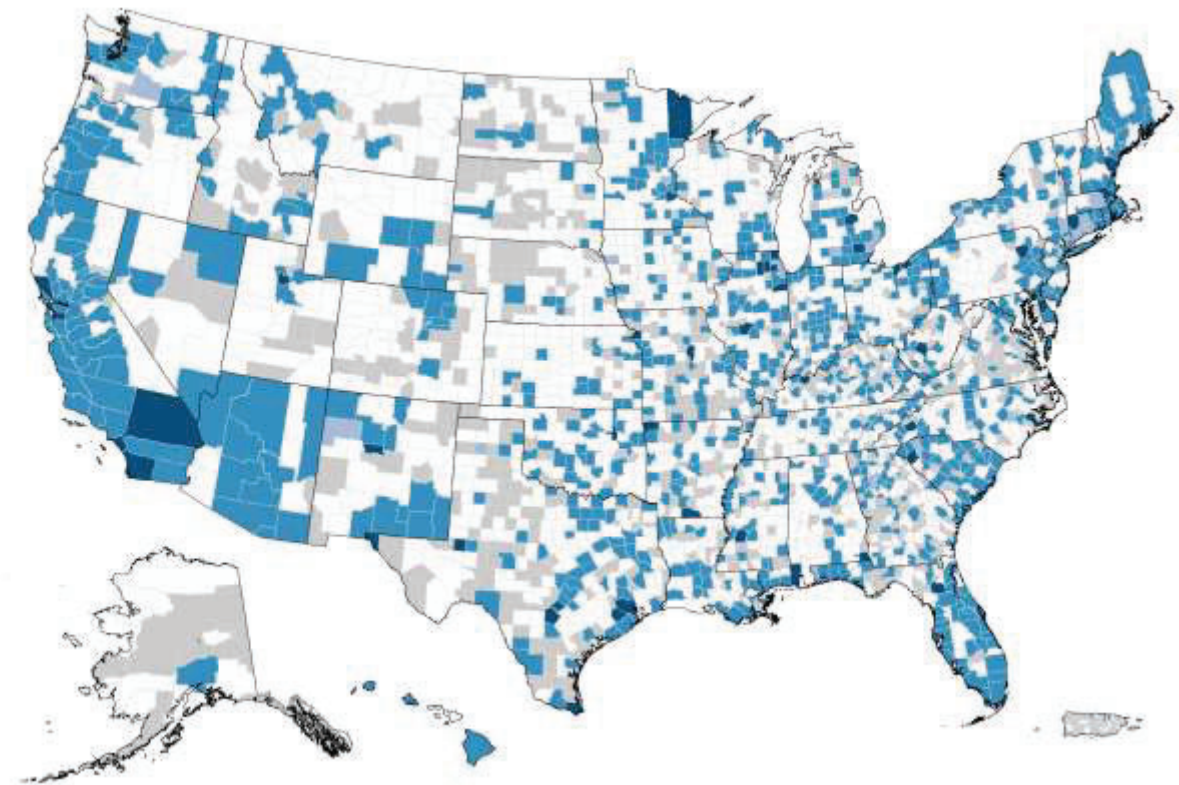
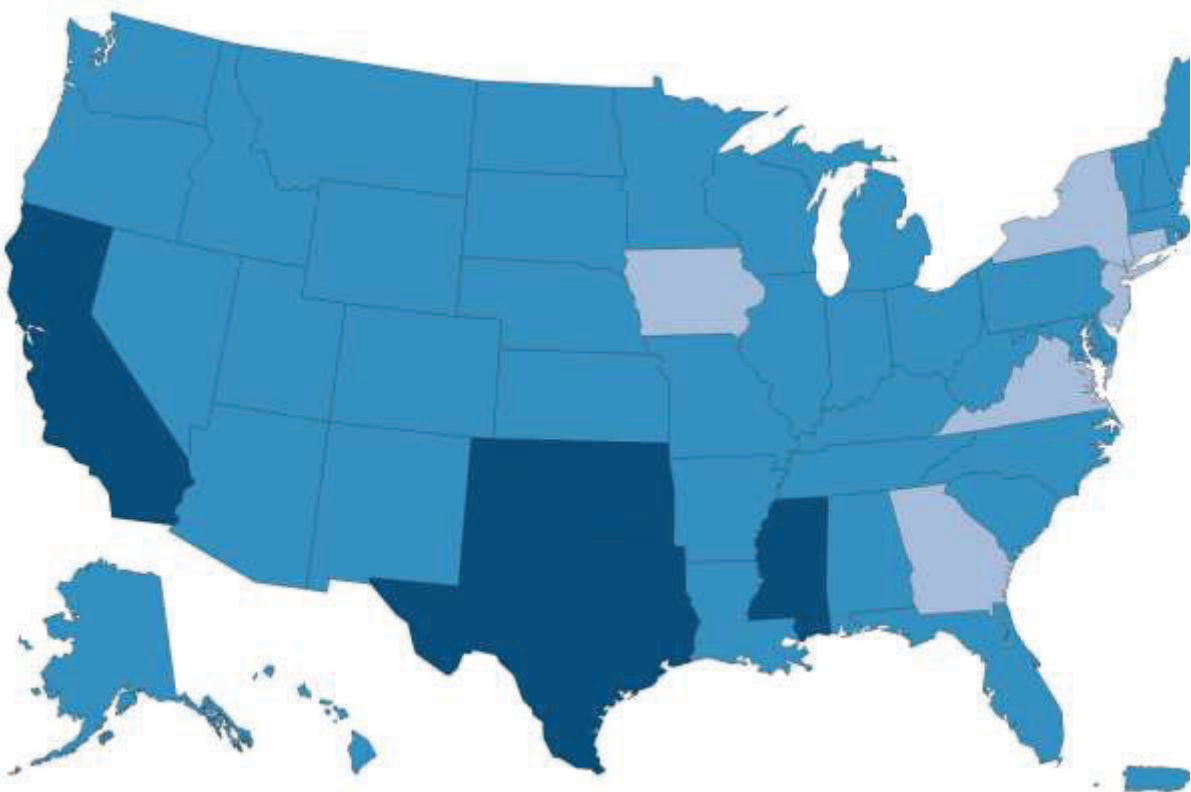


*measured as the slope of random coefficient model to 3 day-moving average of percent of COVID-19 patients on ventilators. Model adjusted for bed size, facility type, % daily facility participation in PIHC module, and county-specific cumulative confirmed COVID-19 cases per 100,000 population (source: Johns Hopkins CSSE).

-  no facilities
-  facilities not reporting
-  decreasing
-  stable
-  increasing

Y

Change* in Percent of In-use Ventilators Occupied by COVID-19 Patients over 14-day Period (May 13-26, 2020)



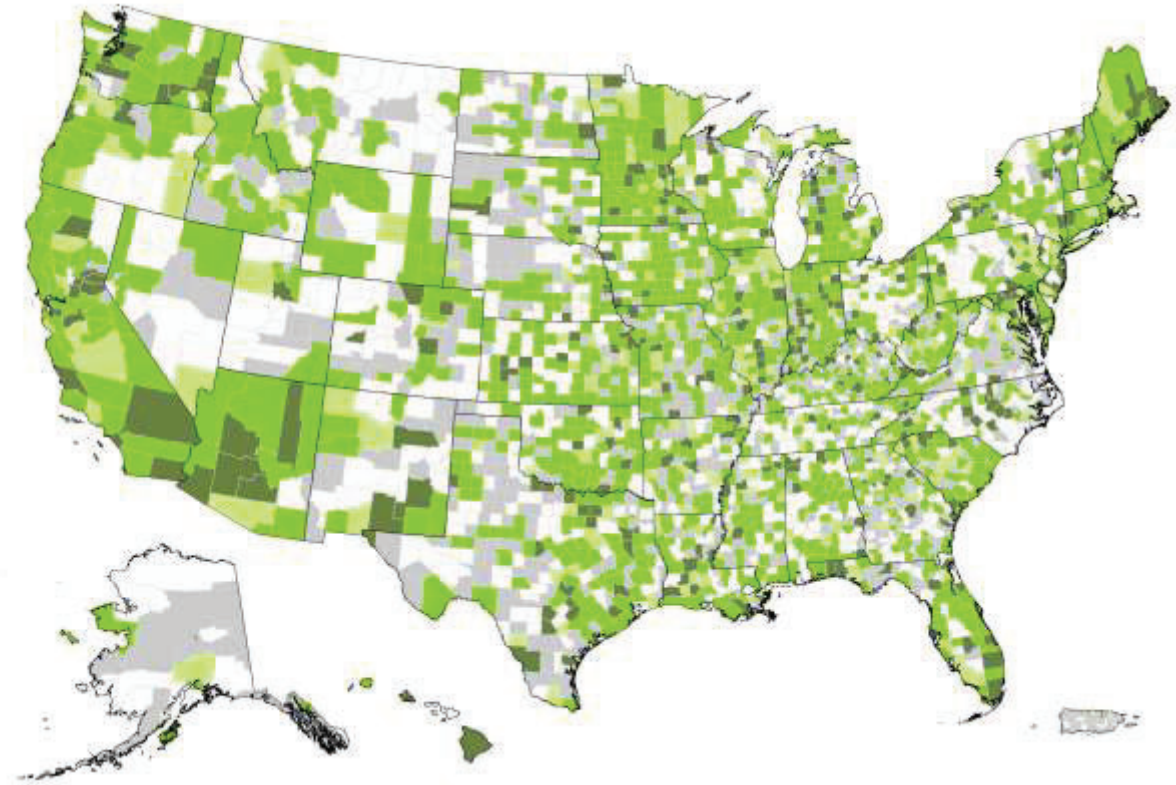
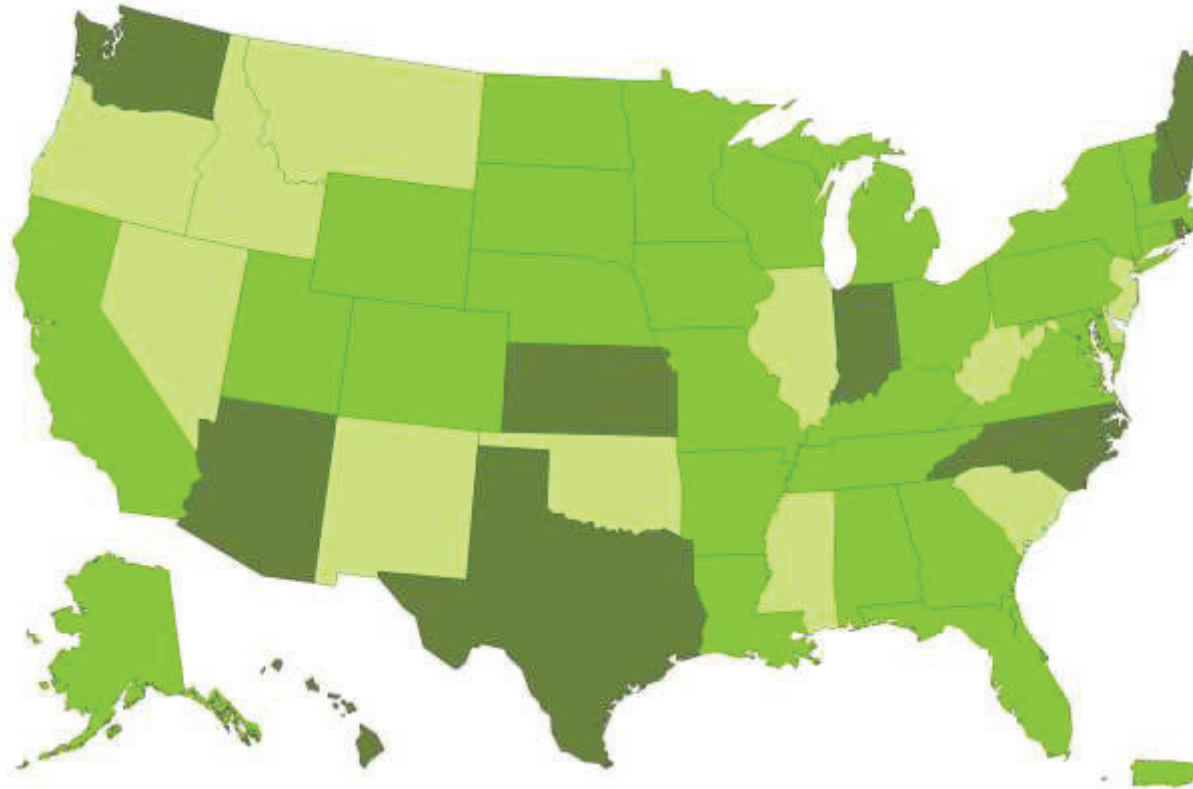
*measured as the slope of random coefficient model to 3 day-moving average of percent of in-use ventilators occupied by COVID-19 patients. Model adjusted for bed size, facility type, % daily facility participation in PIHC module, and county-specific cumulative confirmed COVID-19 cases per 100,000 population (source: Johns Hopkins CSSE).

- no facilities
- facilities not reporting
- decreasing
- stable
- increasing

OSJI-Covid / 20cy5096 (DoD 20-L-1014) / 4159

Y

Change* in Percent of Inpatient Beds Occupied over 14-day Period (May 13-26, 2020)

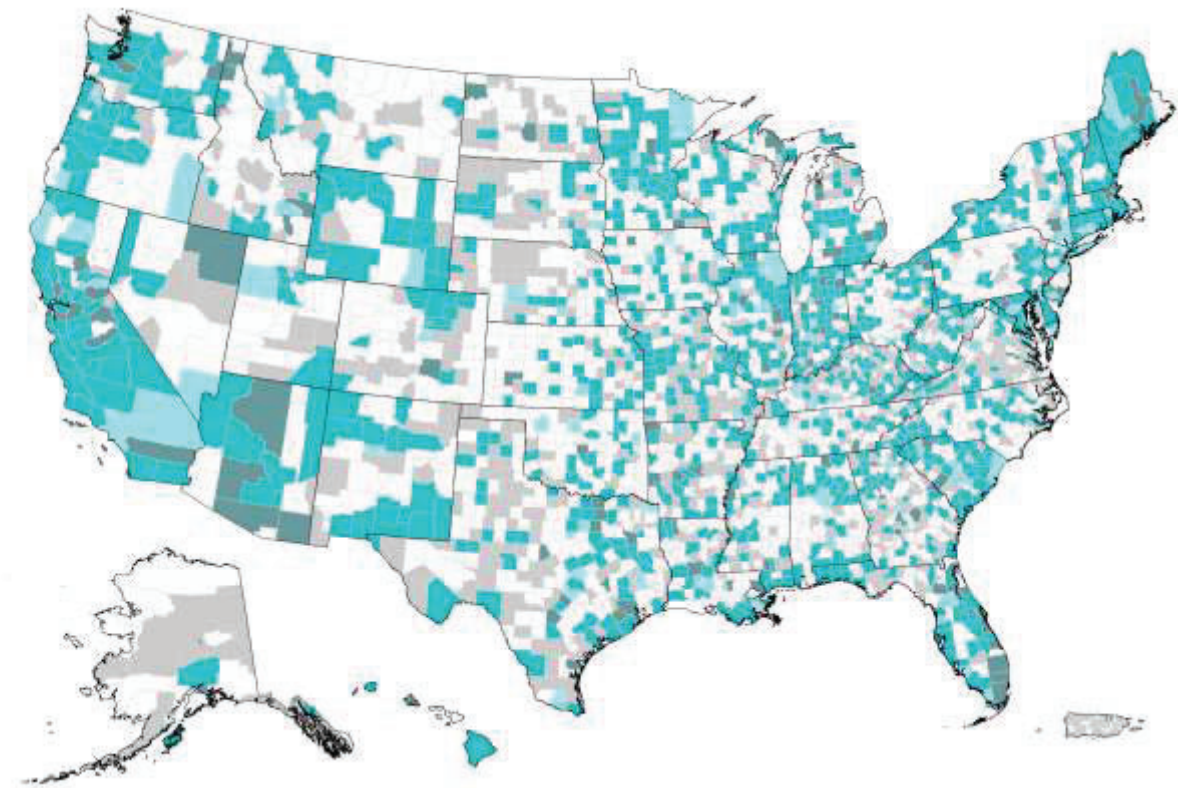
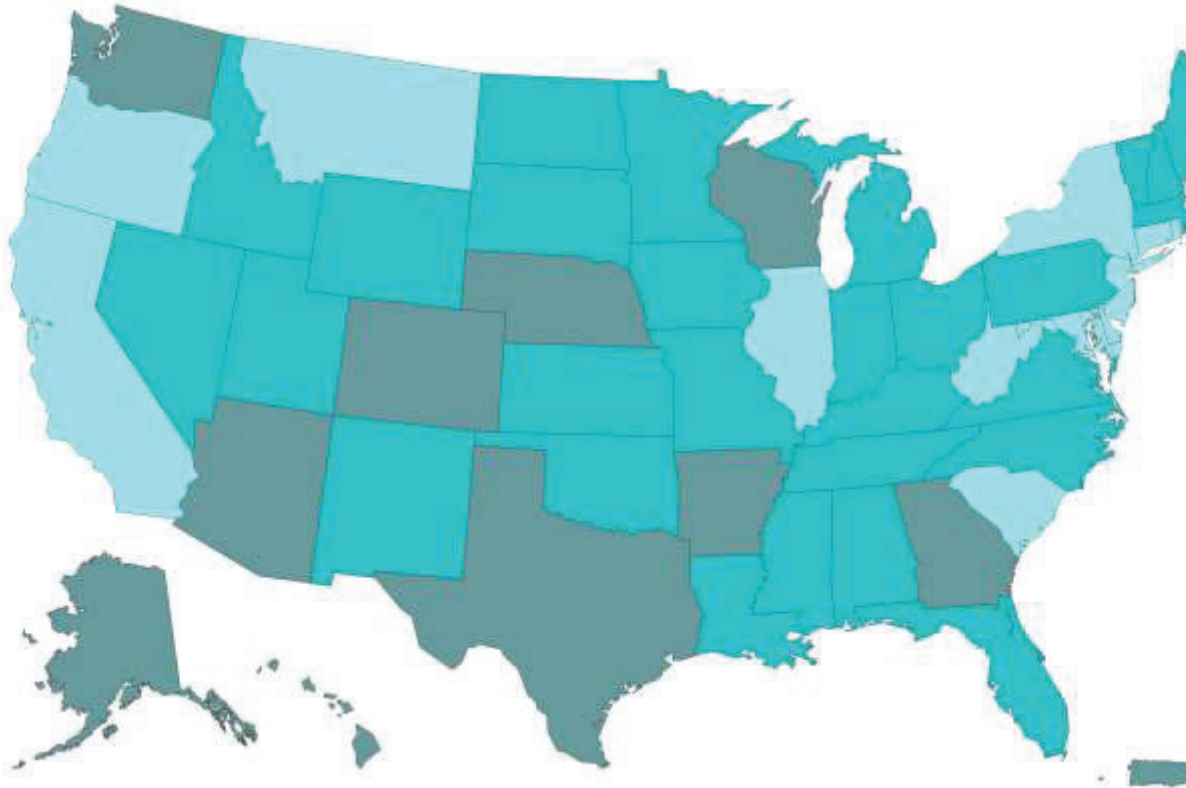


*measured as the slope of random coefficient model to 3 day-moving average of percent of inpatient beds occupied. Model adjusted for bed size, facility type, % daily facility participation in PIHC module, and county-specific cumulative confirmed COVID-19 cases per 100,000 population (source: Johns Hopkins CSSE).






- no facilities
- facilities not reporting
- decreasing
- stable
- increasing

Y

Change* in Percent of ICU Beds Occupied over 14-day Period (May 13-26, 2020)

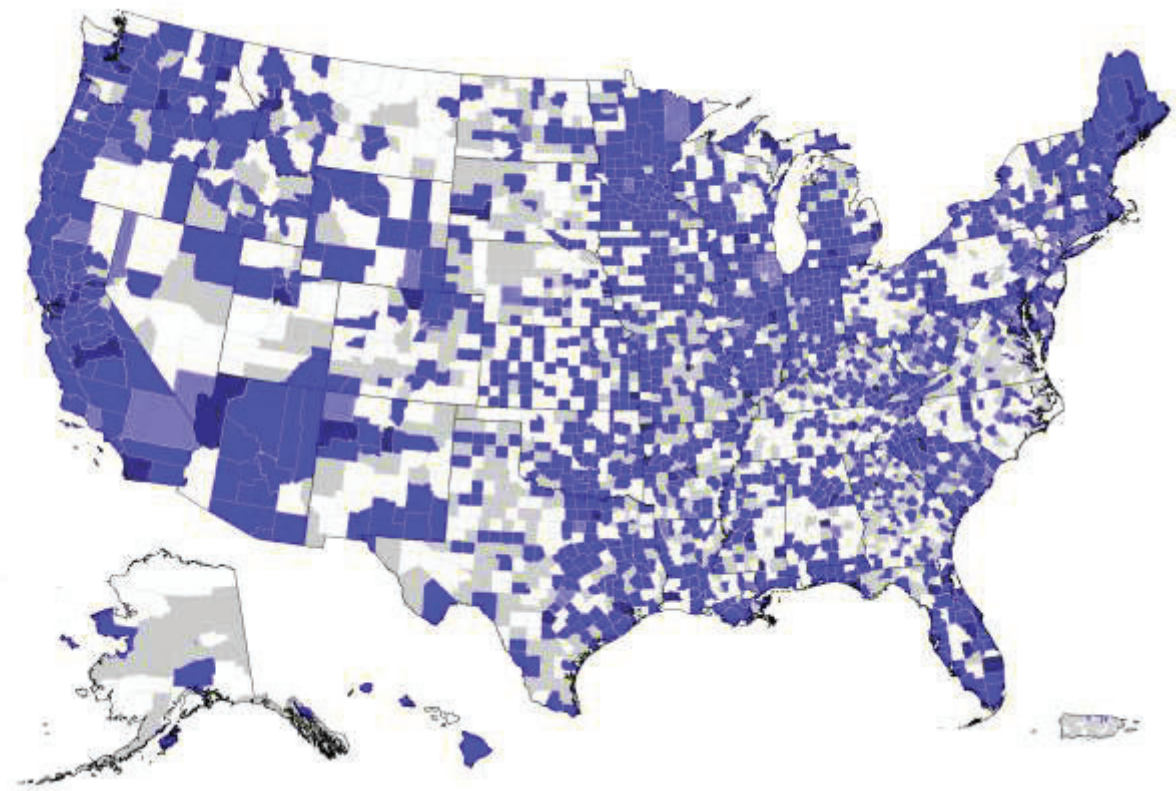
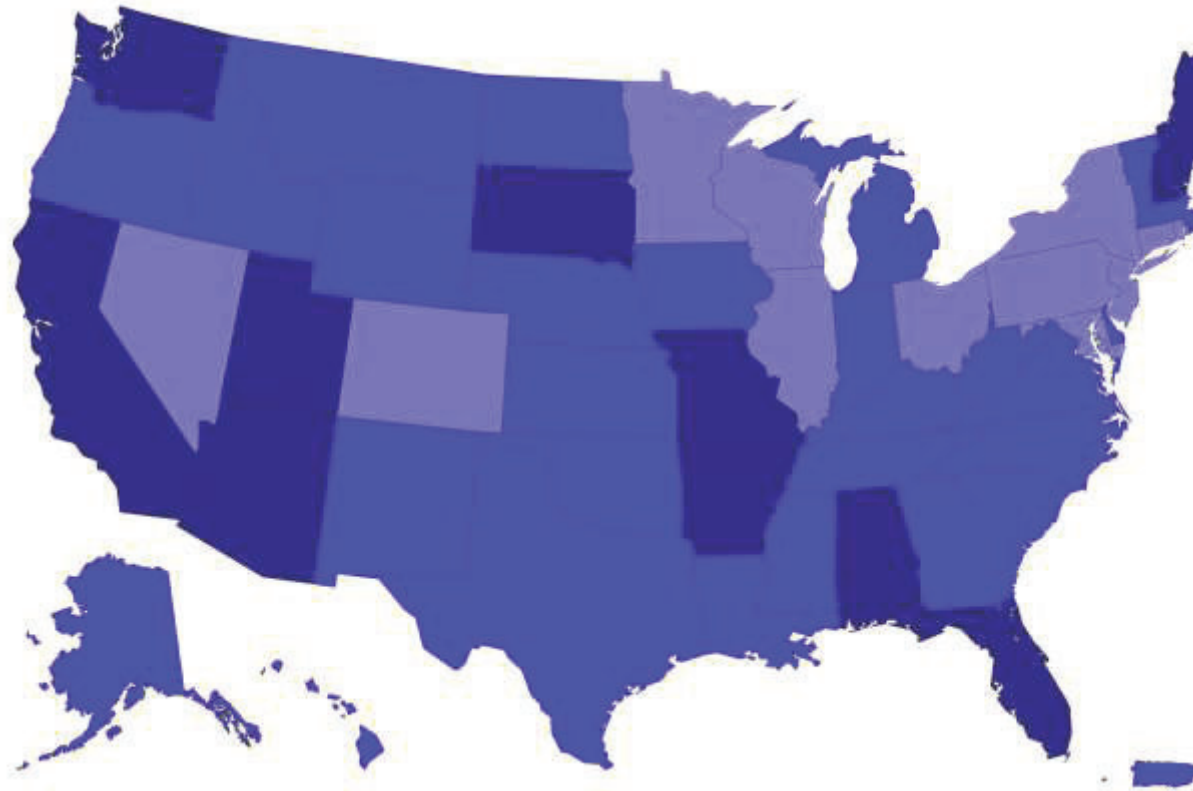


*measured as the slope of random coefficient model to 3 day-moving average of percent of ICU beds occupied. Model adjusted for bed size, facility type, % daily facility participation in PIHC module, and county-specific cumulative confirmed COVID-19 cases per 100,000 population (source: Johns Hopkins CSSE).

-  no facilities
-  facilities not reporting
-  decreasing
-  stable
-  increasing

Y

Change* in Percent of Ventilator Use over 14-day Period (May 13-26, 2020)



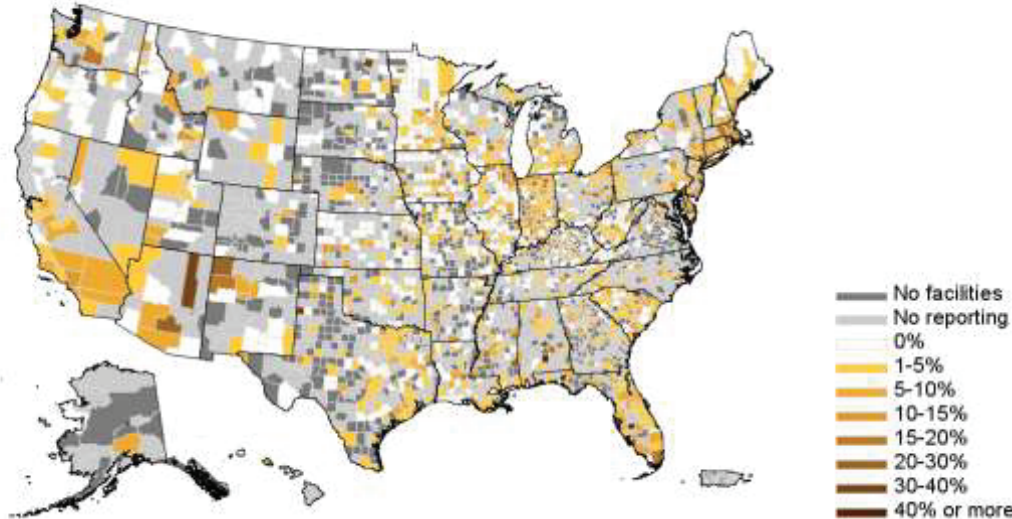
*measured as the slope of random coefficient model to 3 day-moving average of percent of ventilator use. Model adjusted for bed size, facility type, % daily facility participation in PIHC module, and county-specific cumulative confirmed COVID-19 cases per 100,000 population (source: Johns Hopkins CSSE).

- no facilities
- facilities not reporting
- decreasing
- stable
- increasing

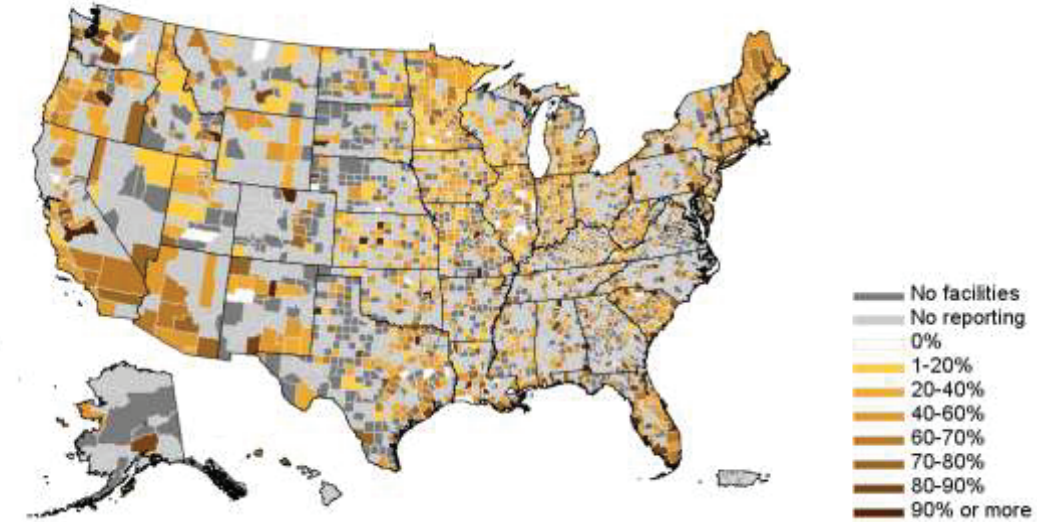


NHSN Data by County for Most Recent 3 Days

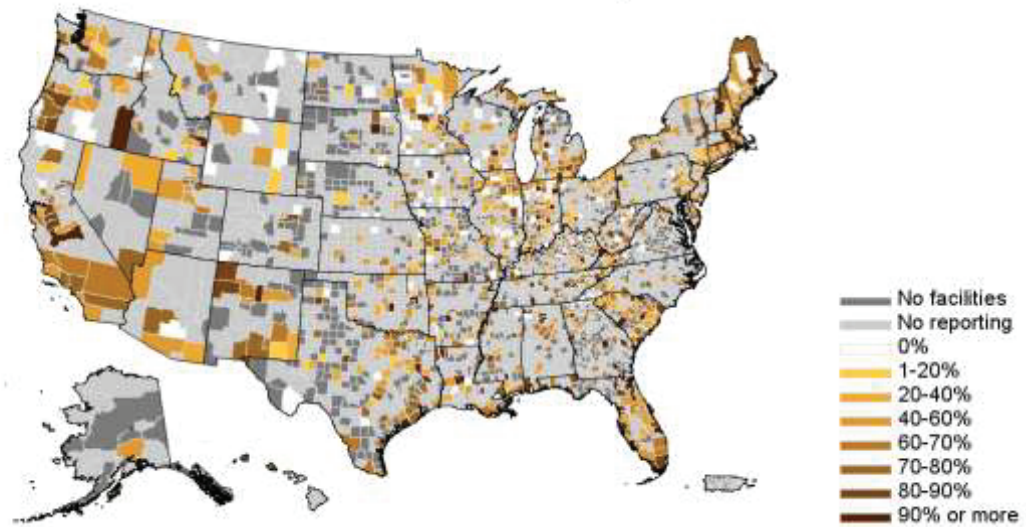
Percent of inpatient beds occupied by COVID-19 patients



Percent of inpatient beds occupied (all inpatients)

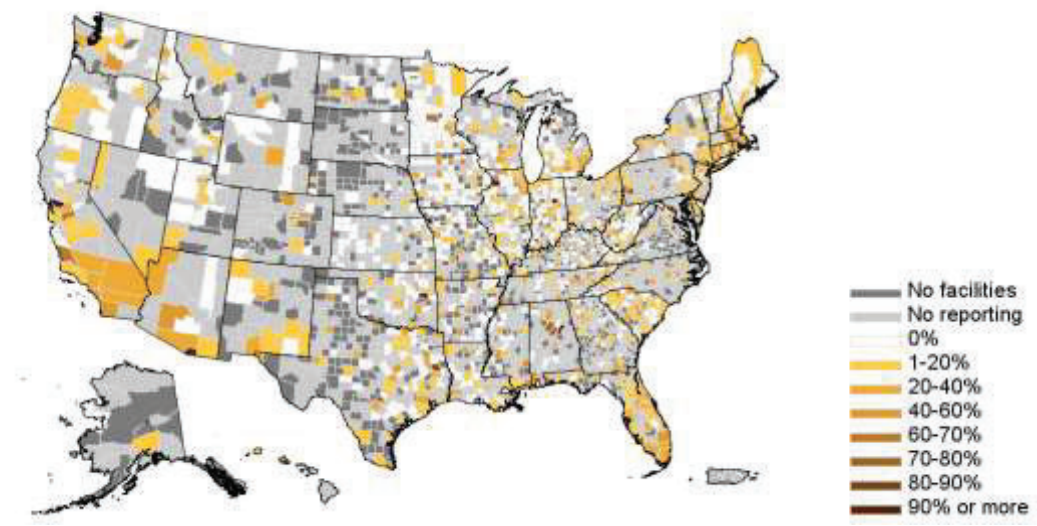


Percent of ICU Beds occupied



Ventilators include anesthesia machines, portable/transport ventilators, & neonatal ventilators available in the facility. BiPAP included if the hospital uses BiPAP to deliver positive pressure ventilation via artificial airways.

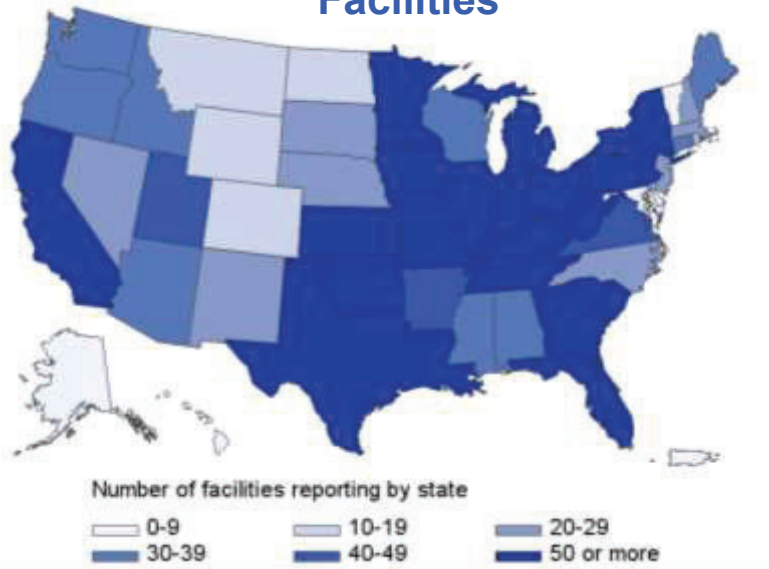
Percent of ventilators in use





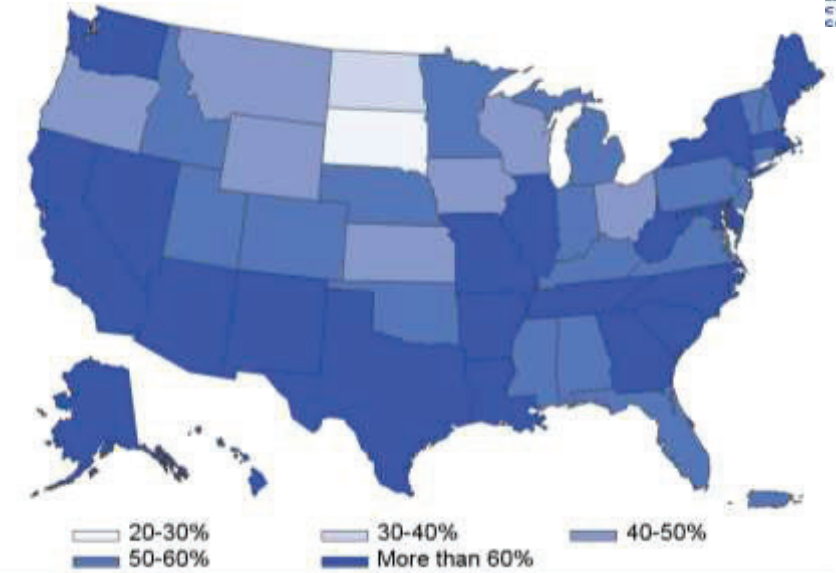
Patient Impact and Hospital Capacity Summary by State

Participation by State, Number of Facilities

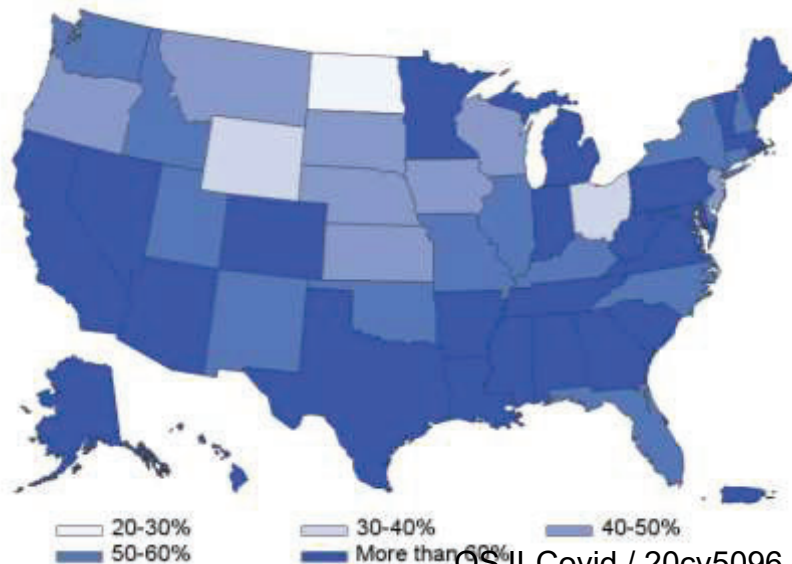


Data as of June 1, 2020 at 5:30 AM

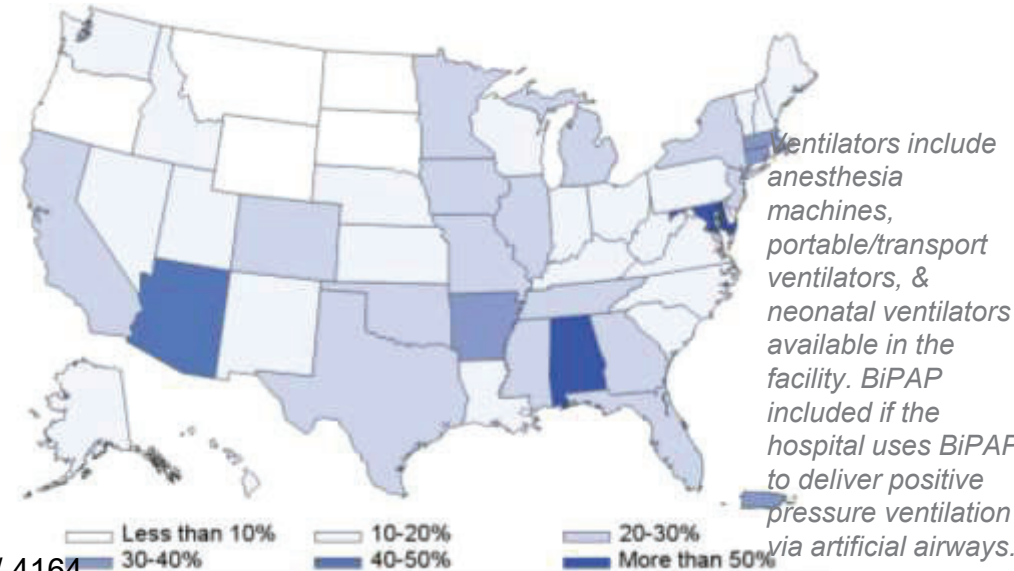
Percent of Inpatient Bed Use by State



Percent of ICU Bed Use by State



Percent of Ventilators in Use by State



Includes the most recent data for every facility that reported for the most recent three days.





National Capacity by Specific Cut-points, 5/29-5/31

	Number	Total Number Facilities Reporting	Percent
Facilities with 60+% of ventilators in use¹	126	2481	5.1%
Facilities with 30+% of inpatients having COVID19²	37	2515	1.5%
Facilities with 80+% of ICU beds used³	358	2485	14.4%
Facilities with 80+% of all inpatient beds used⁴	382	2514	15.2%

¹419 facilities reported 0 denominator

²8 facilities reported 0 denominator

³828 facilities reported 0 denominator

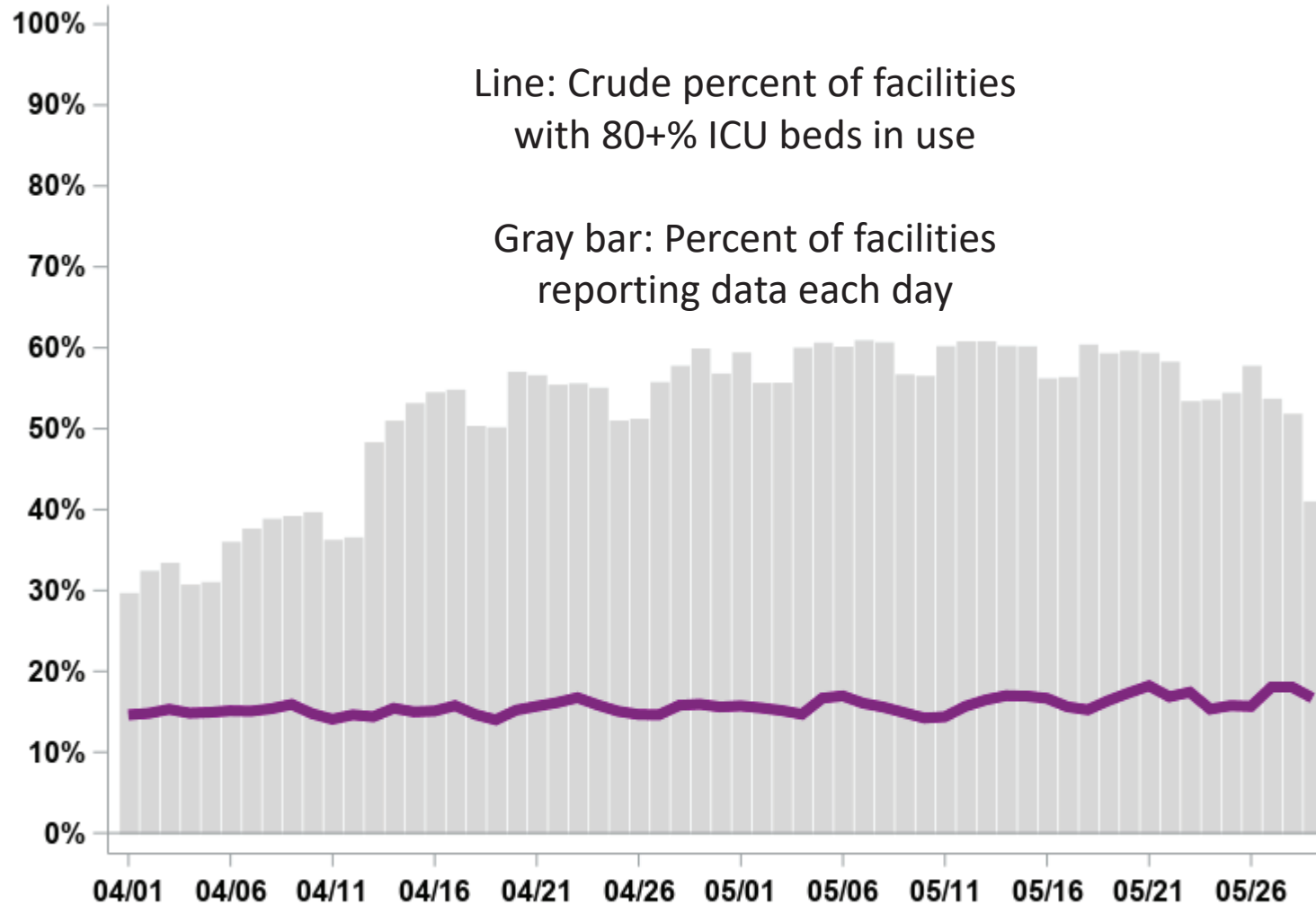
⁴8 facilities reported 0 denominator

Ventilators include anesthesia machines, portable/transport ventilators, & neonatal ventilators available in the facility. BiPAP included if the hospital uses BiPAP to deliver positive pressure ventilation via artificial airways.



NHSN Daily Percent ICU Beds Occupancy

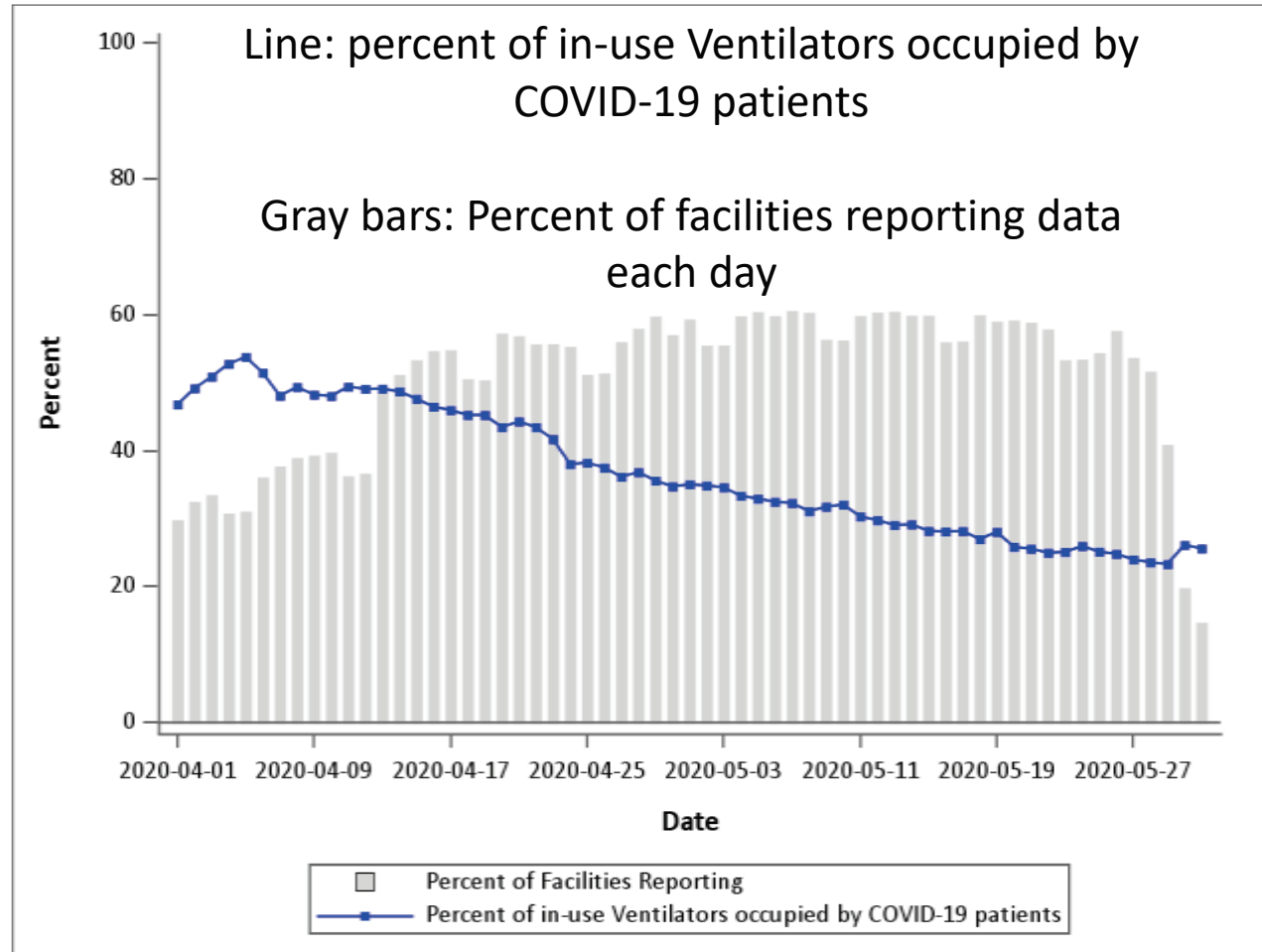
Crude percentage of reported facilities with 80% or more ICU beds used





Percent Ventilators Occupied by COVID-19 Patients

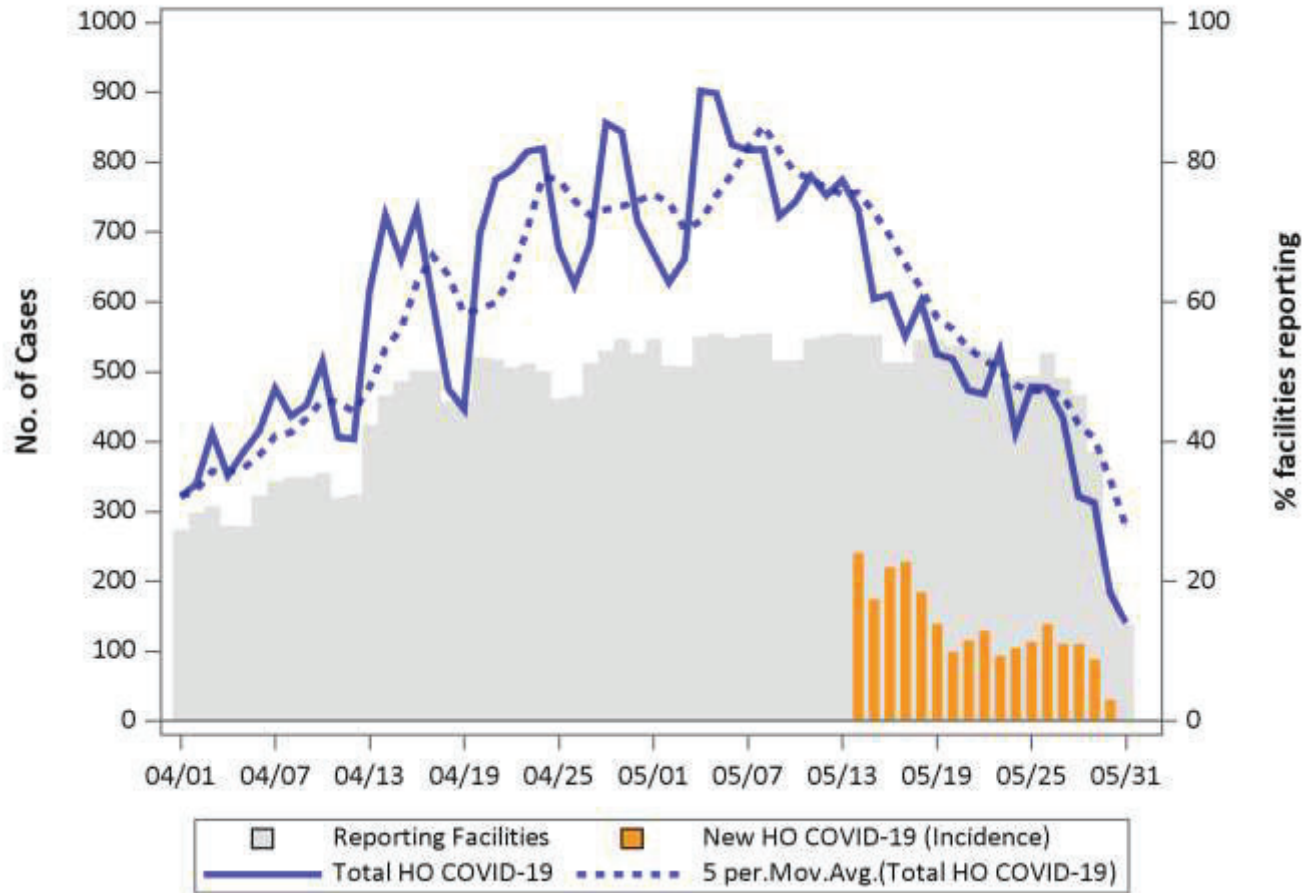
Crude percentage of in-use ventilators occupied by COVID-19 patients





Number of Hospital-Onset COVID-19 Patients, Reported to NHSN

Inpatients with Hospital Onset COVID-19



- 91 facilities reporting 5% or more of total HO cases among their hospitalized COVID-19 patients



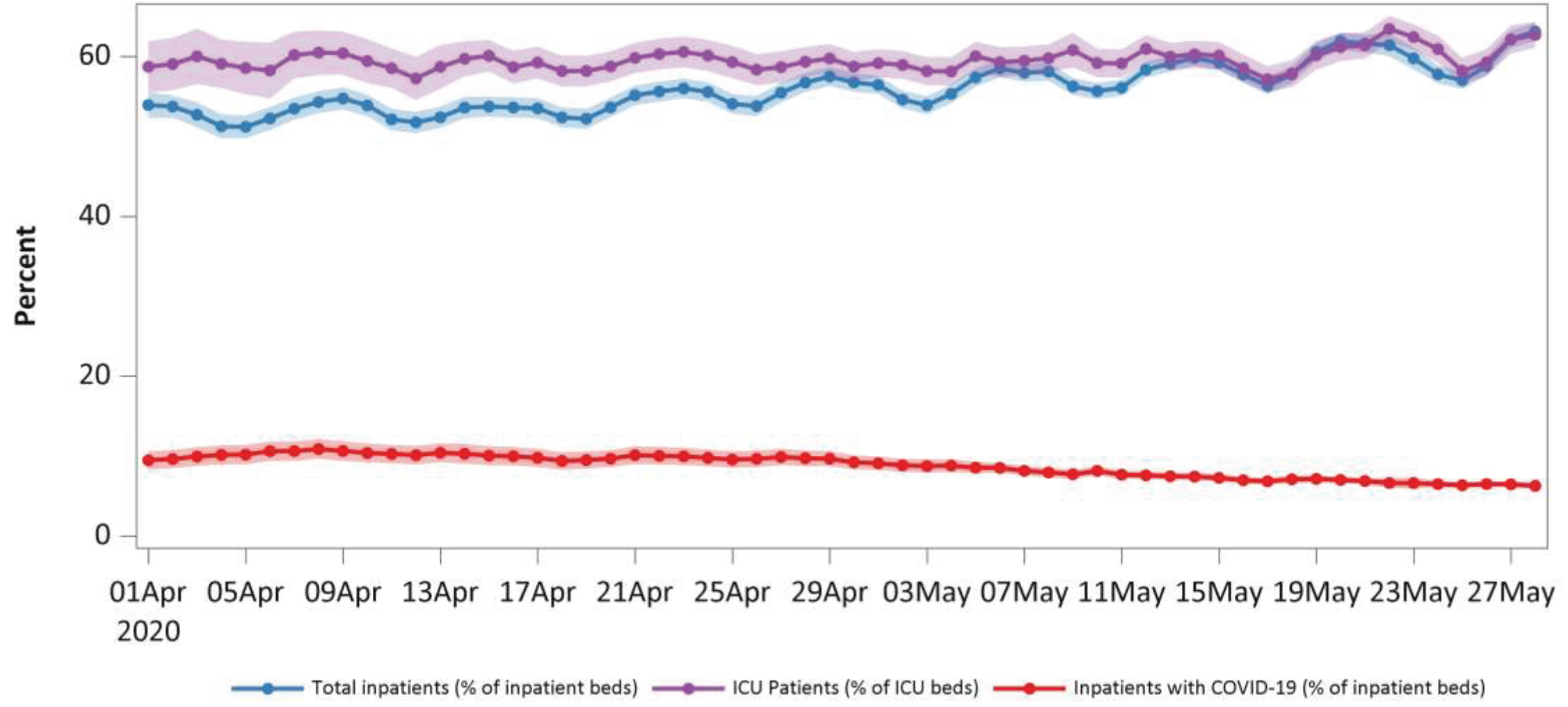
Acute-Care Hospitals, Total Beds Reported 5/31

- 671 hospitals reporting more beds open than baseline
 - Total additional beds 33,682
 - Top 12 states: TX, CA, IL, MI, OH, LA, SC, MS, IN, NY, FL, MO: 21,115
- 491 hospitals reporting fewer beds open than baseline
 - Total fewer beds: 30,109
 - Top 10 states: FL, IL, CT, NY, MN, MI, VA, TX, MO, CA: 18,140

Daily Occupancy, Hospitals

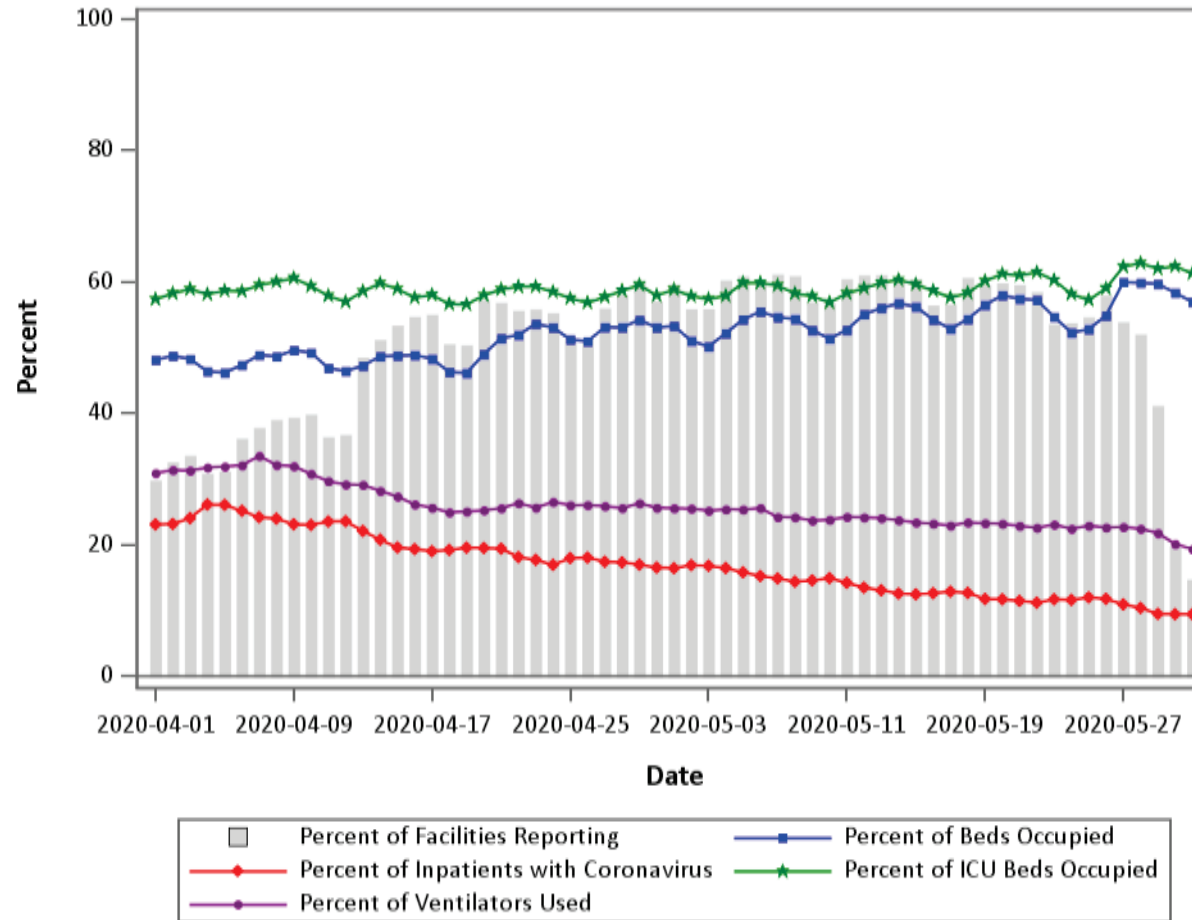


NHSN Nationally Representative Estimates, United States



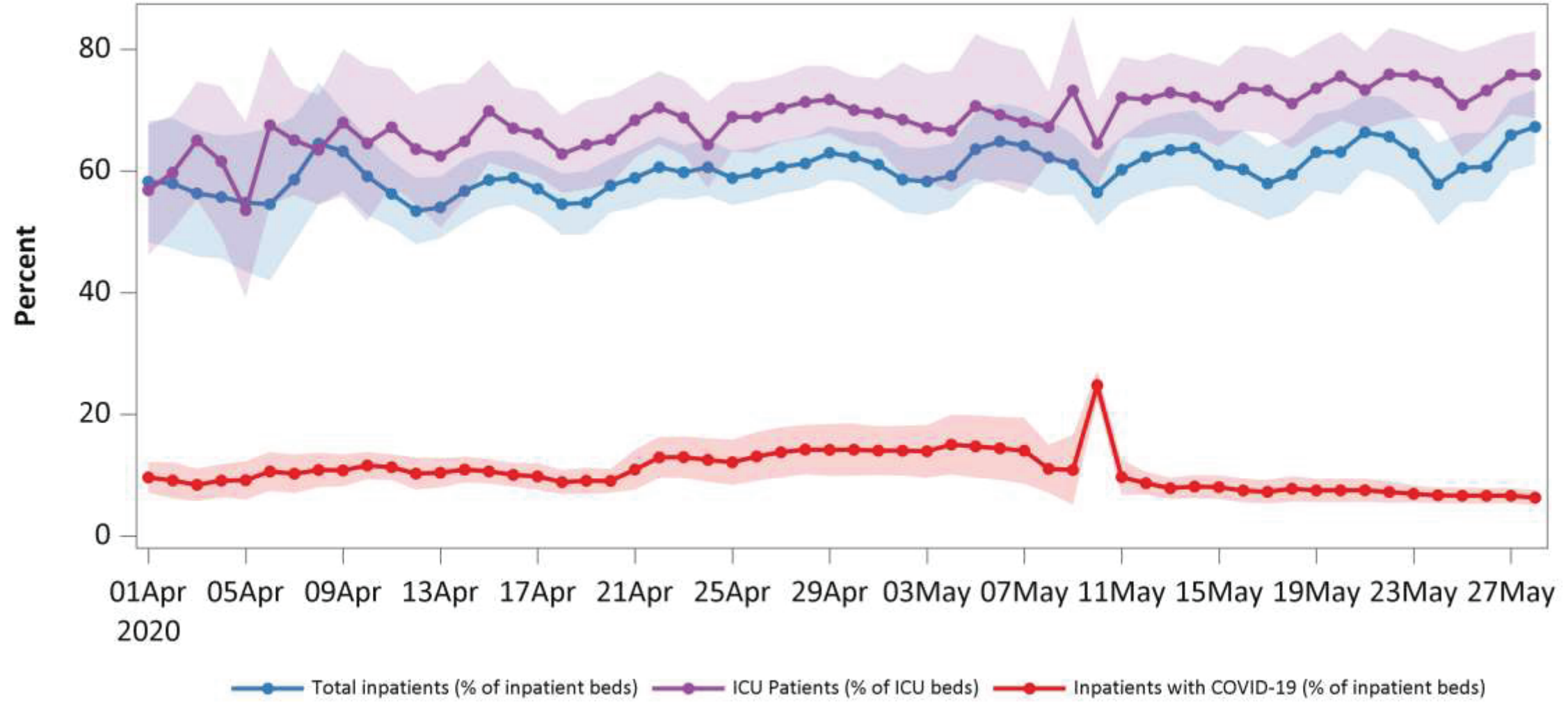


NHSN Daily Crude Percent Occupancy, United States



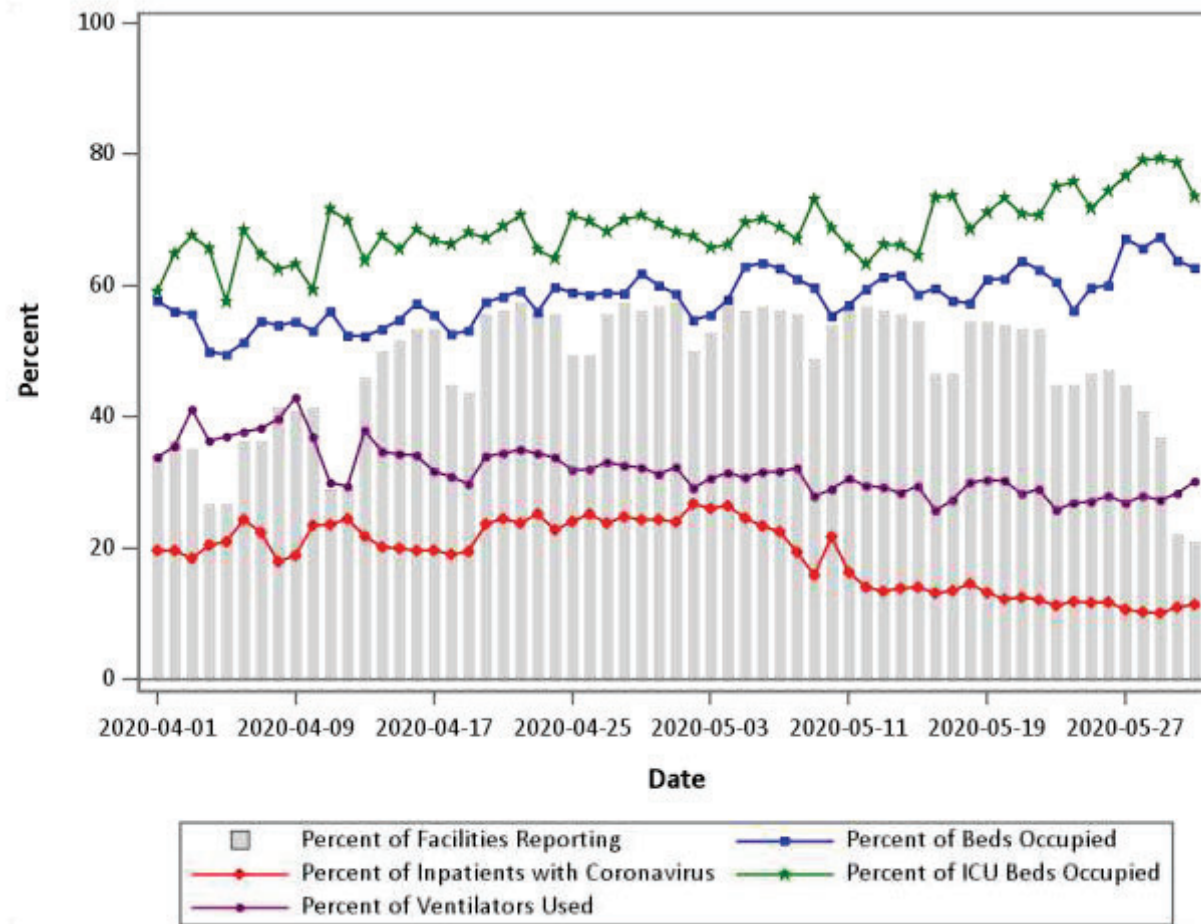


NHSN State Representative Estimates, Georgia



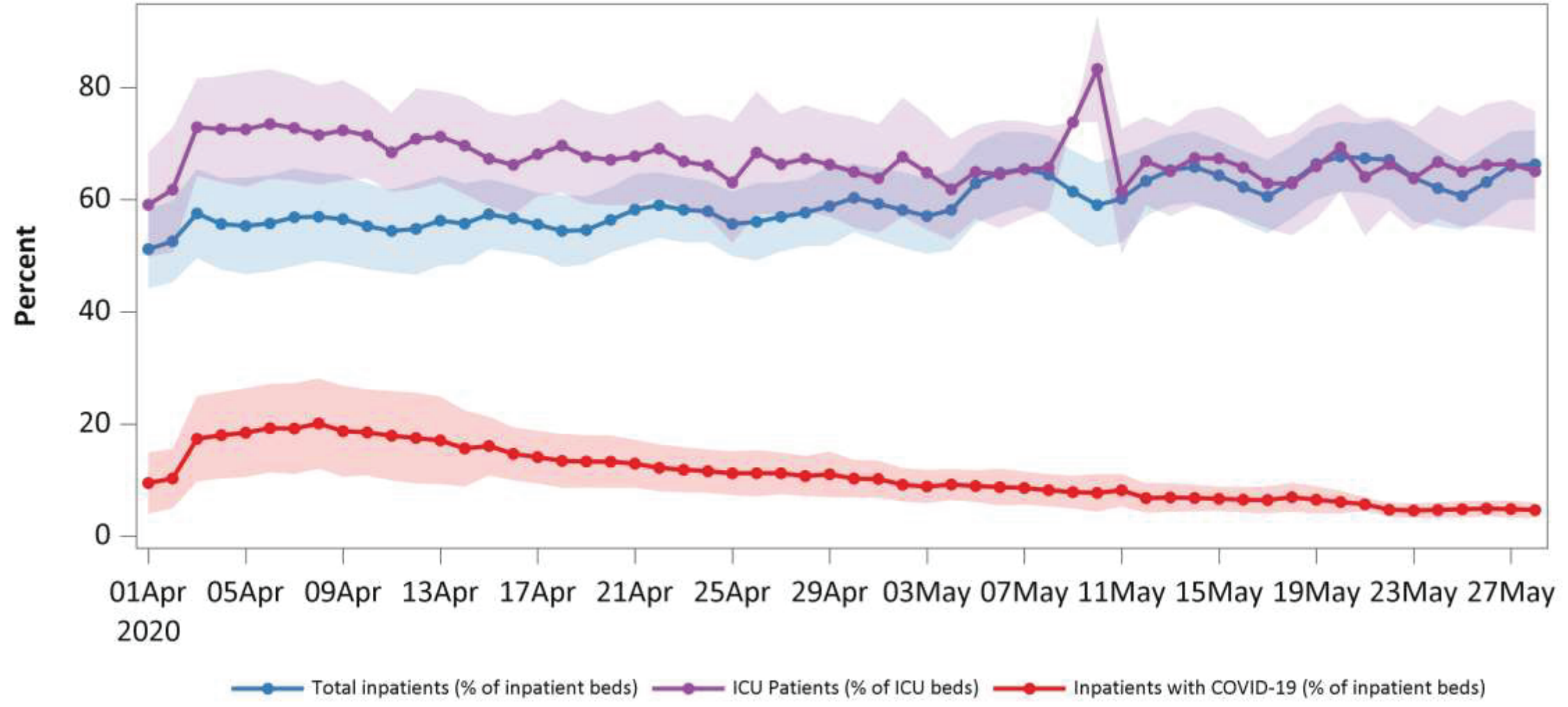


NHSN Daily Crude Percent Occupancy, Georgia



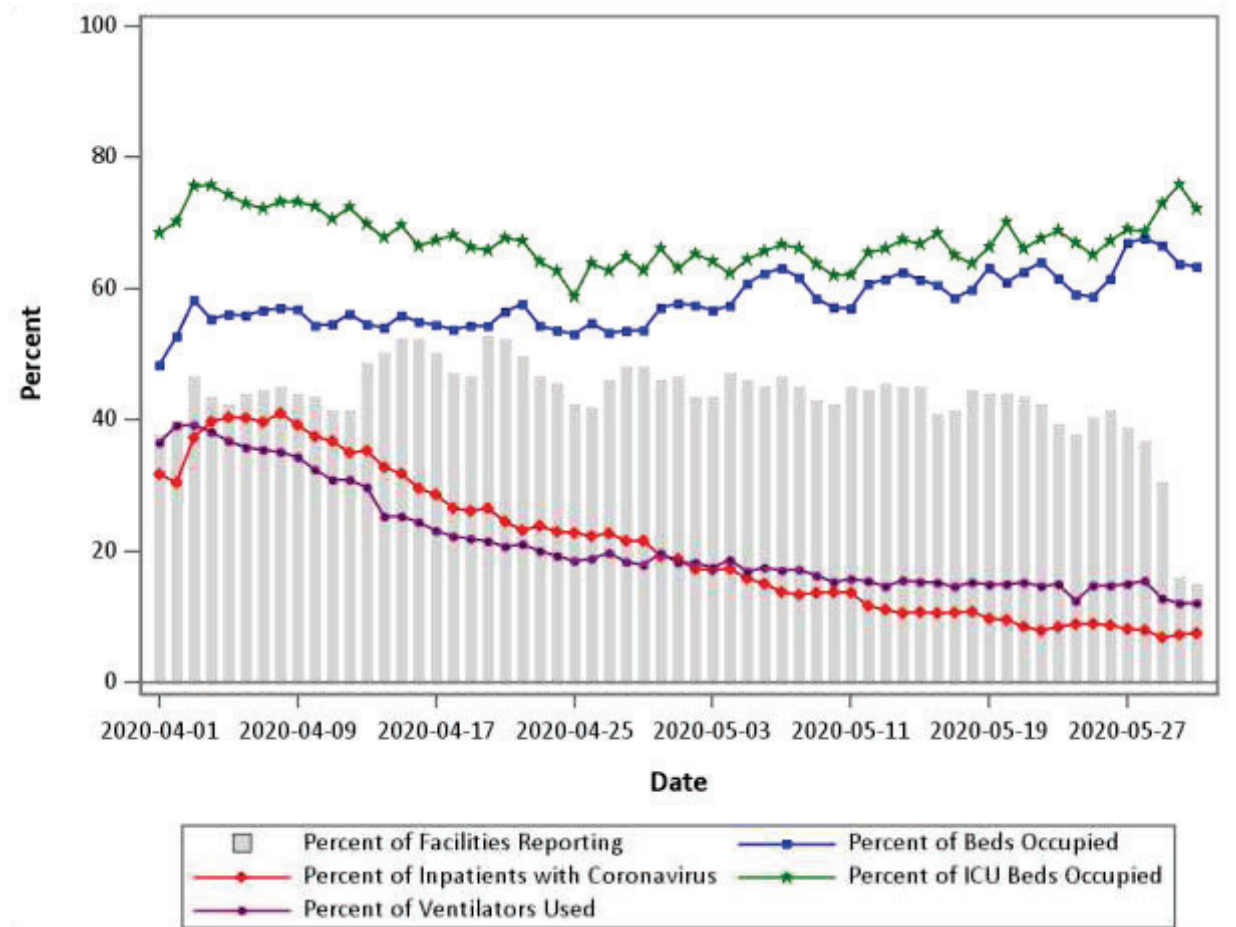


NHSN State Representative Estimates, Louisiana



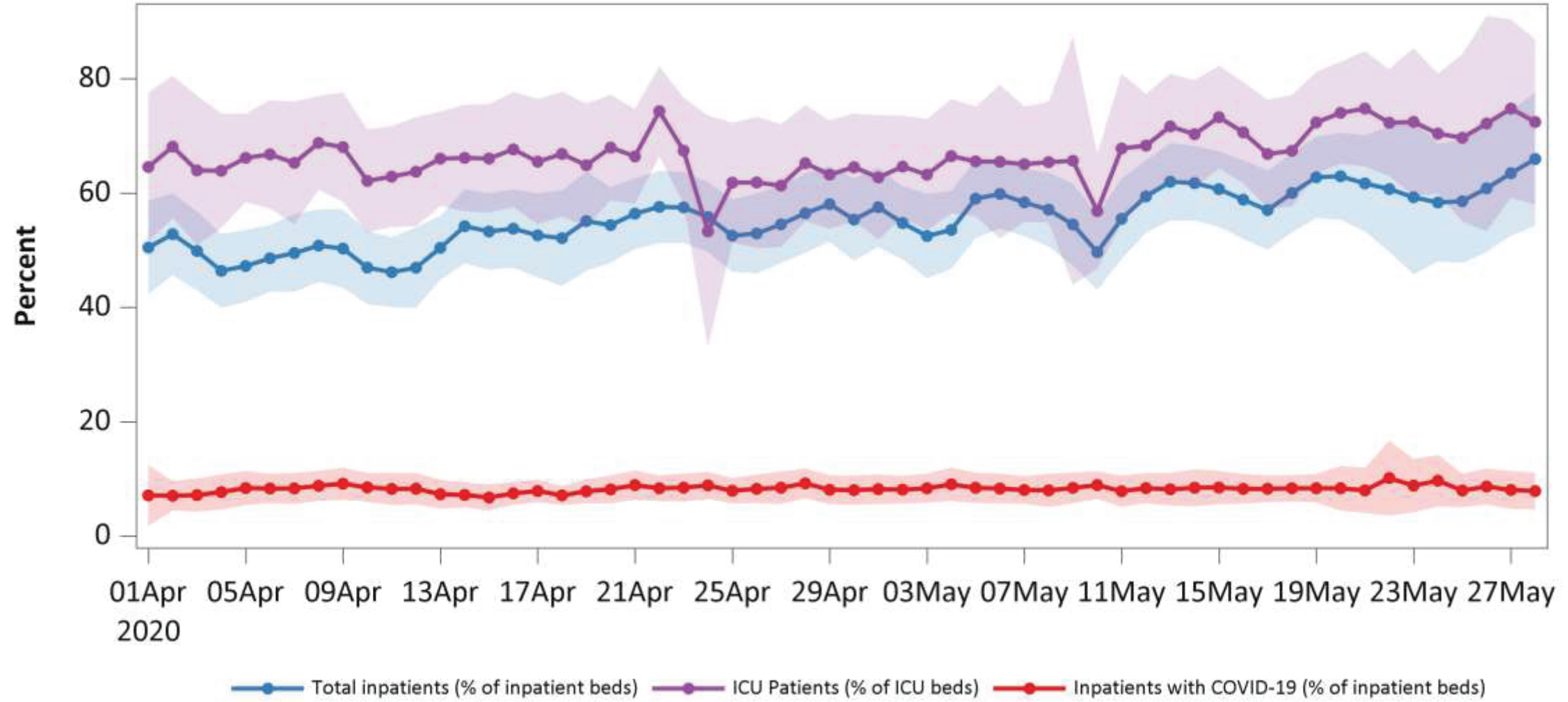


NHSN Daily Crude Percent Occupancy, Louisiana



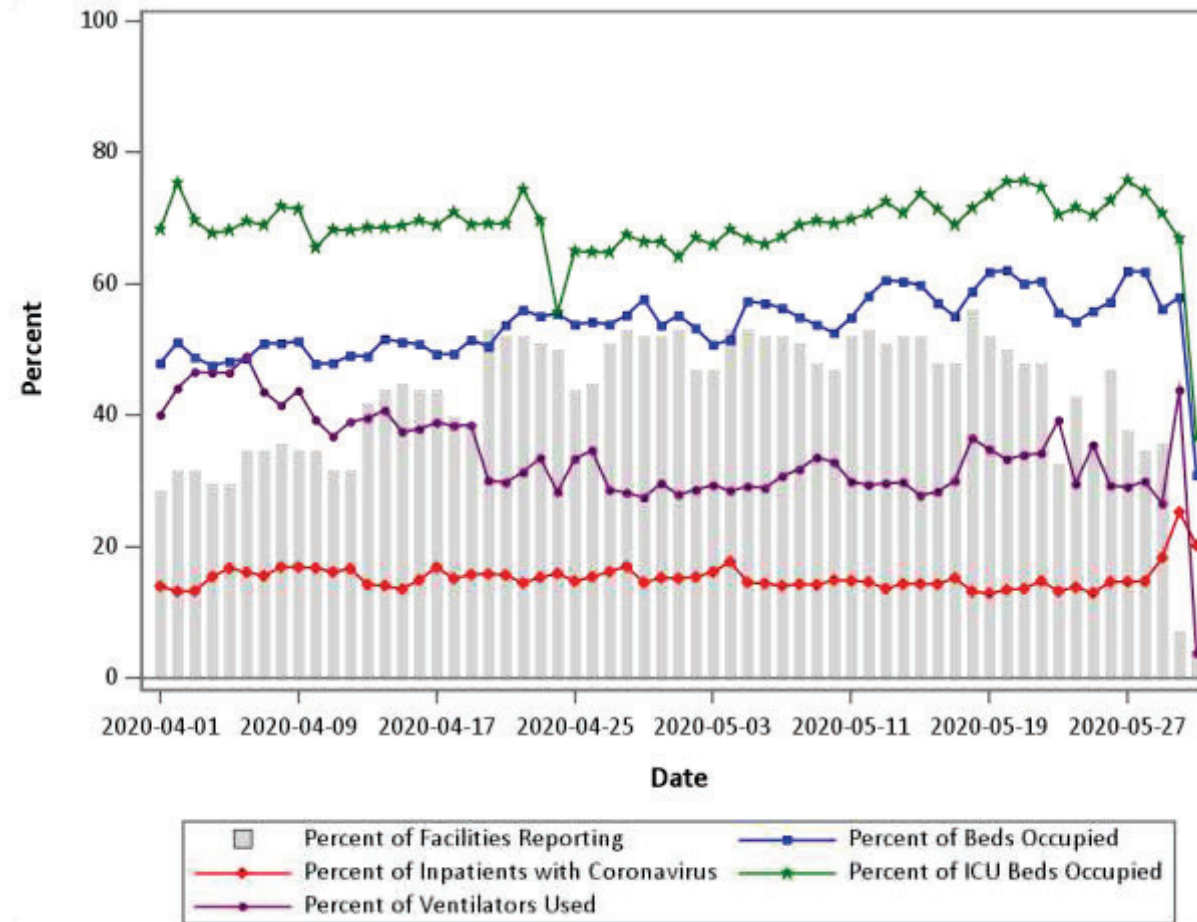


NHSN State Representative Estimates, Mississippi



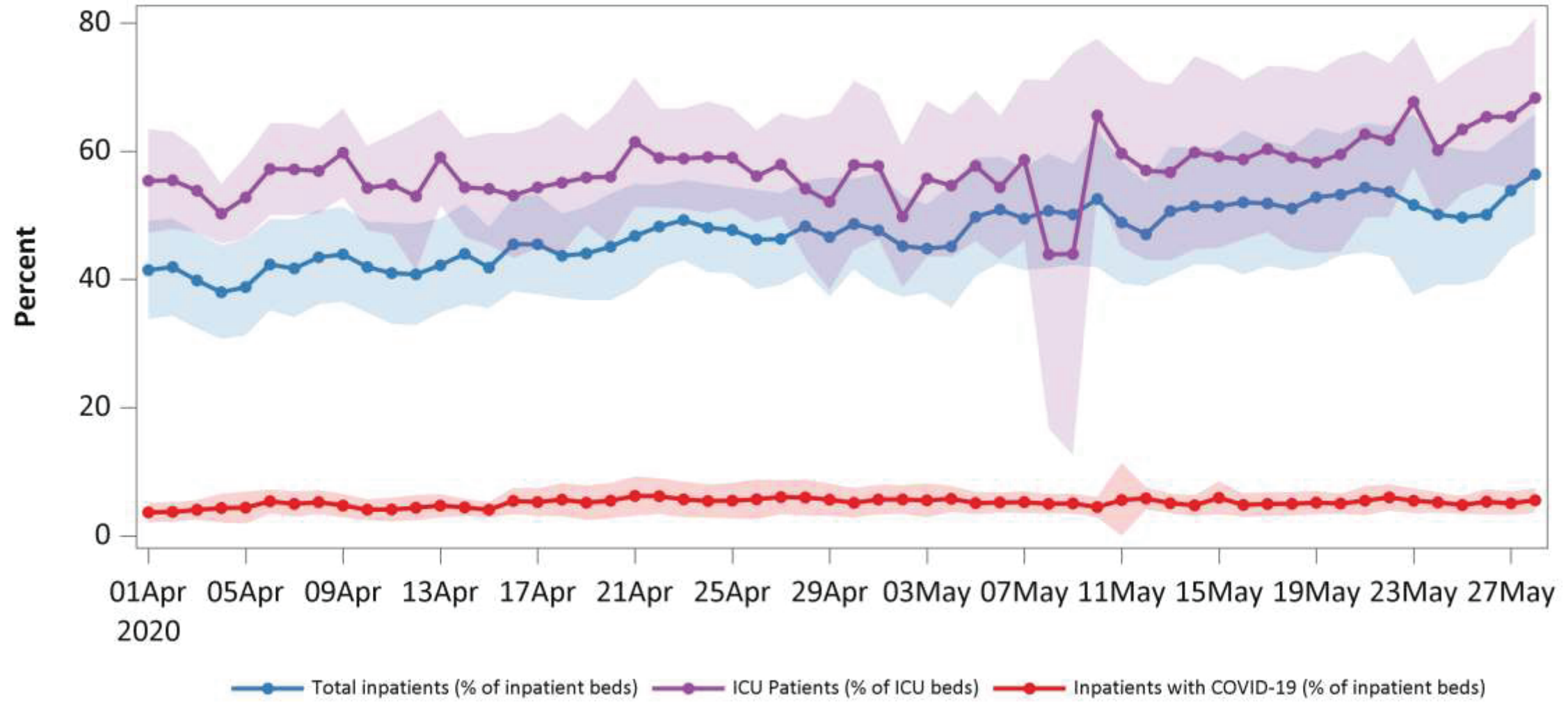


NHSN Daily Crude Percent Occupancy, Mississippi

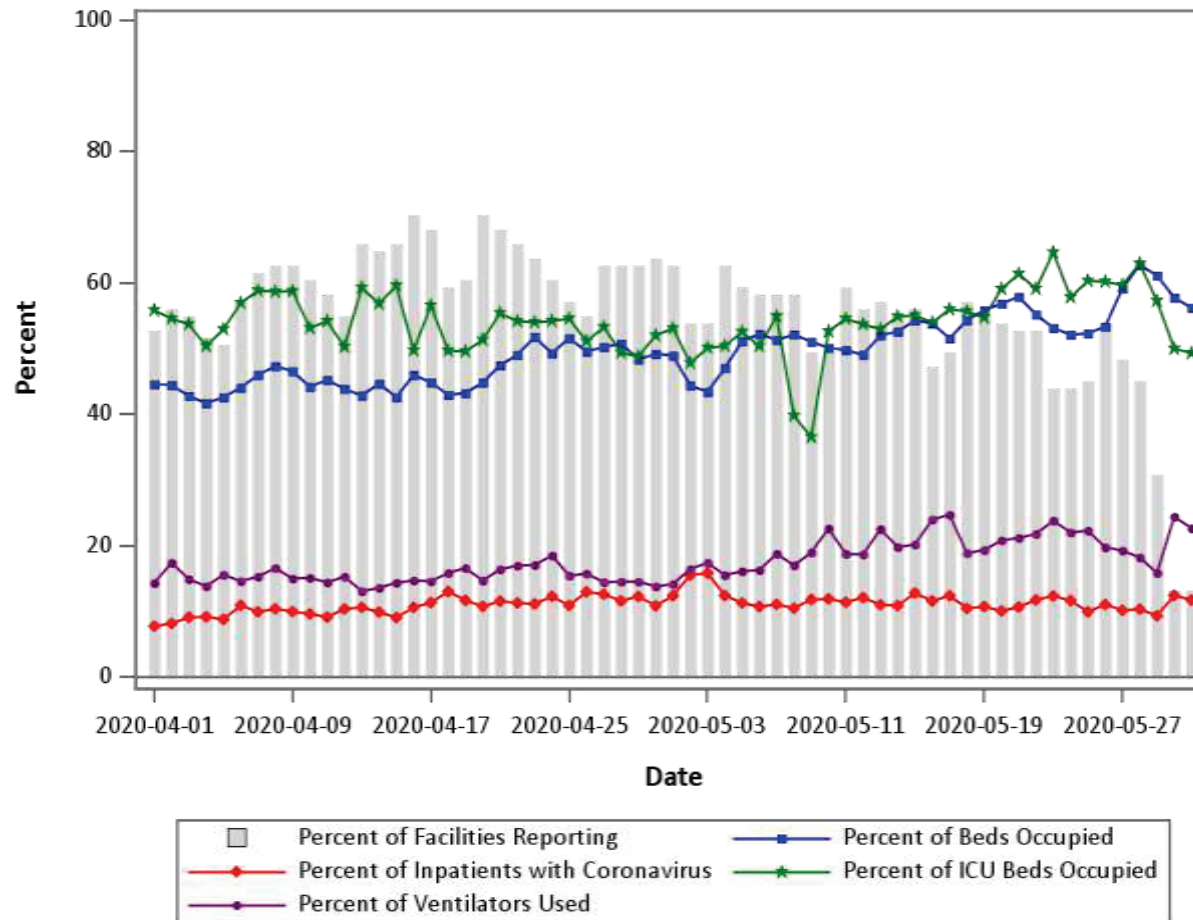




NHSN State Representative Estimates, Nebraska

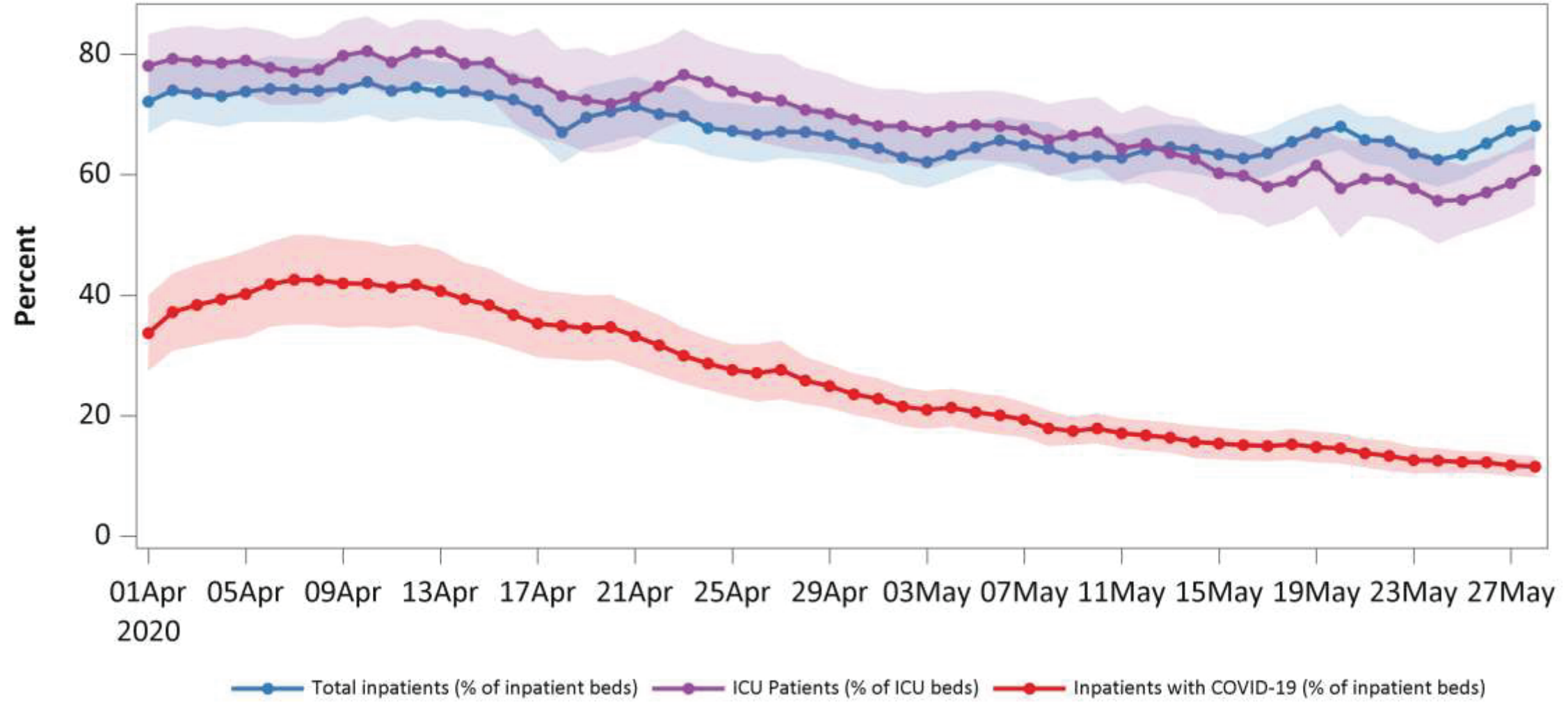


Y NHSN Daily Crude Percent Occupancy, Nebraska



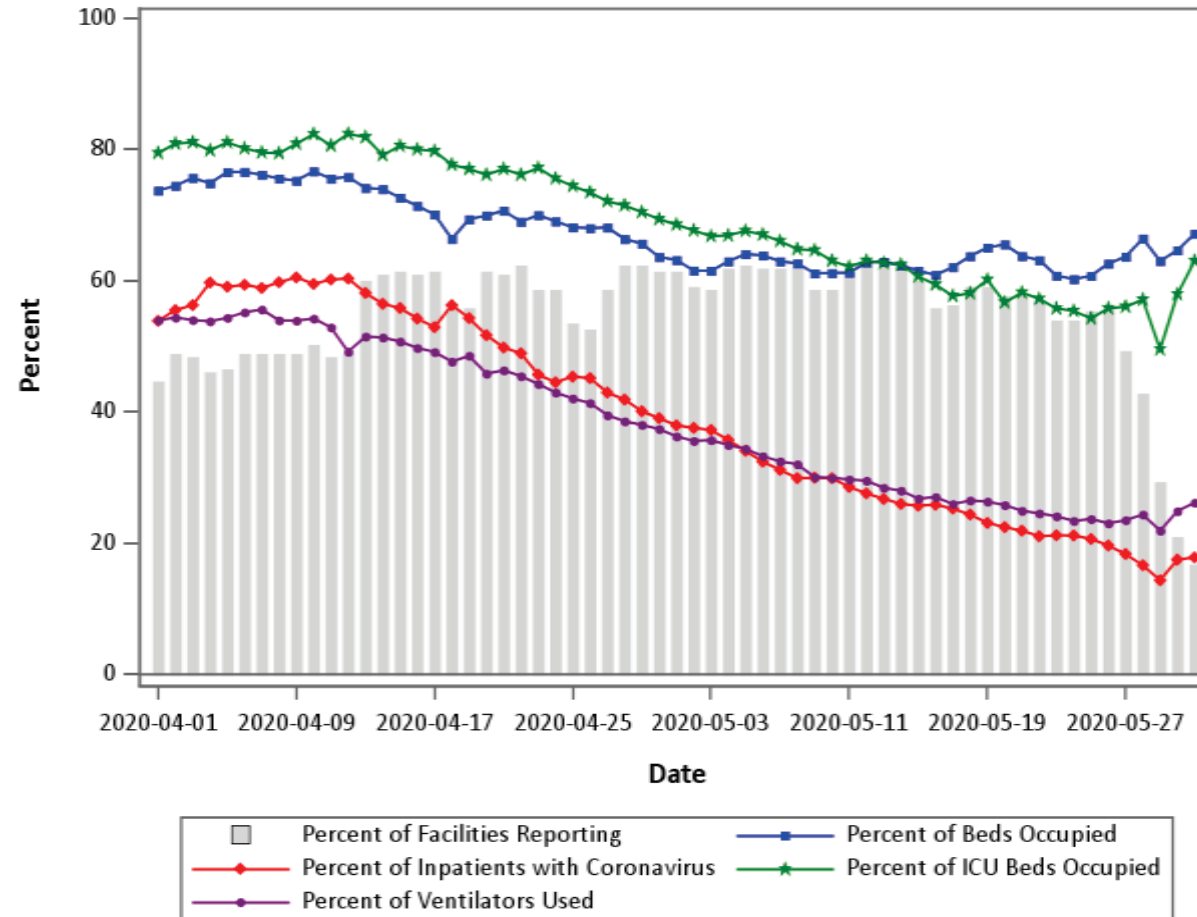


NHSN State Representative Estimates, New York



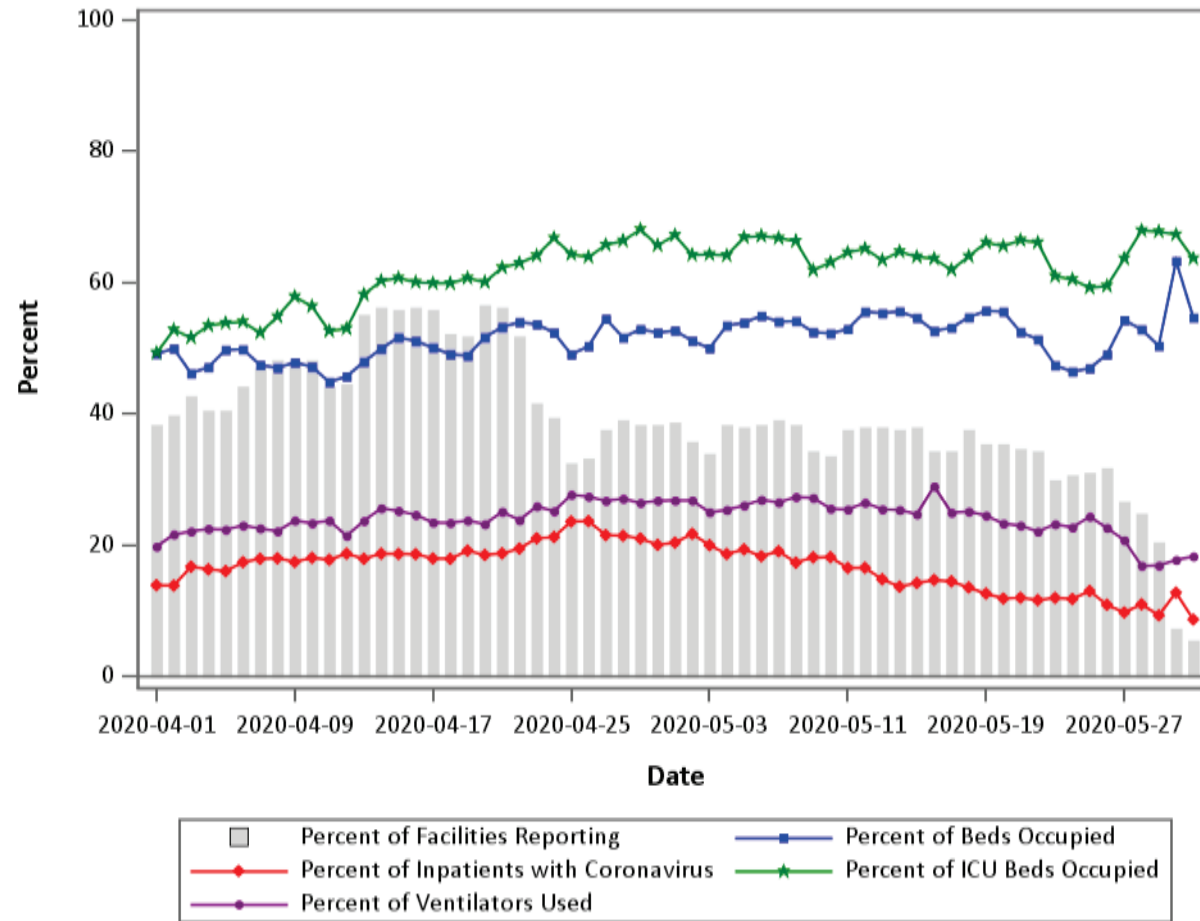


NHSN Daily Crude Percent Occupancy, New York



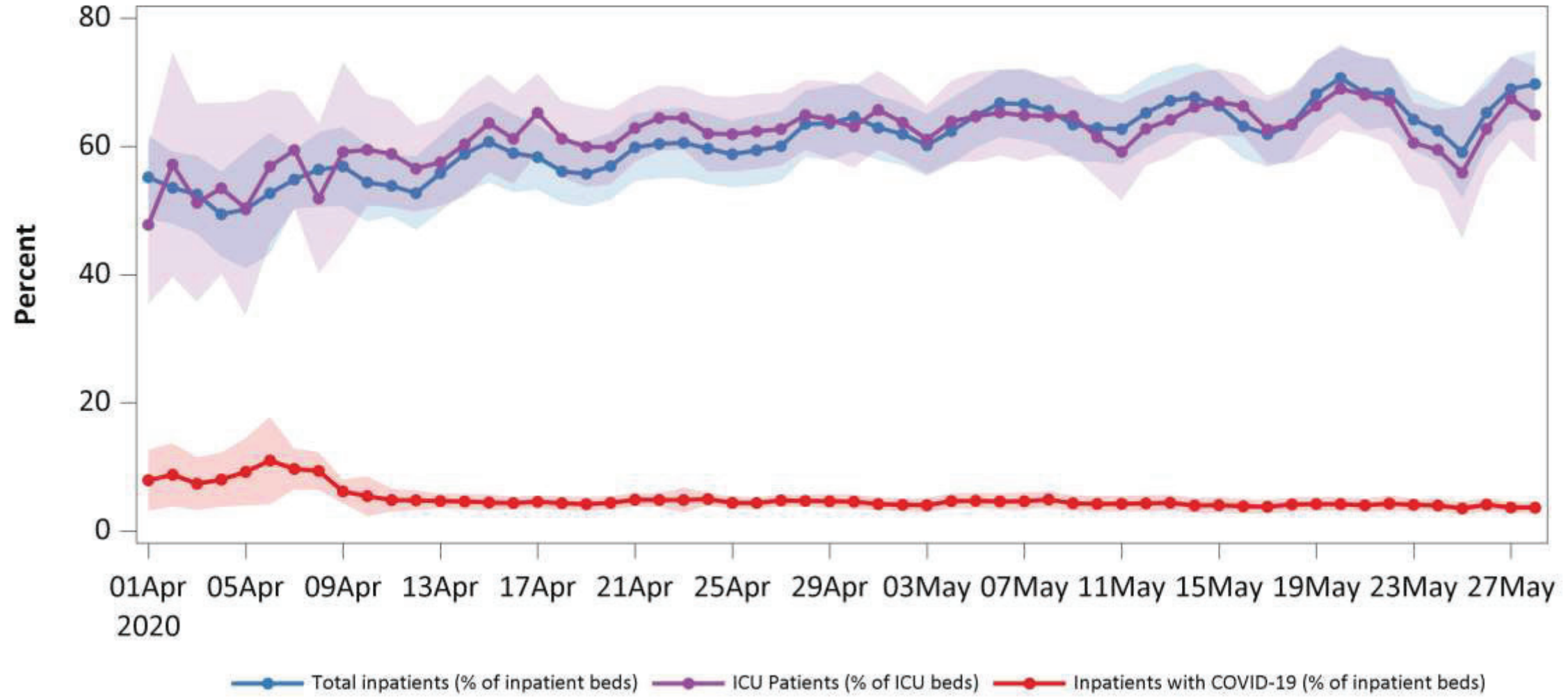


NHSN Daily Crude Percent Occupancy, Pennsylvania



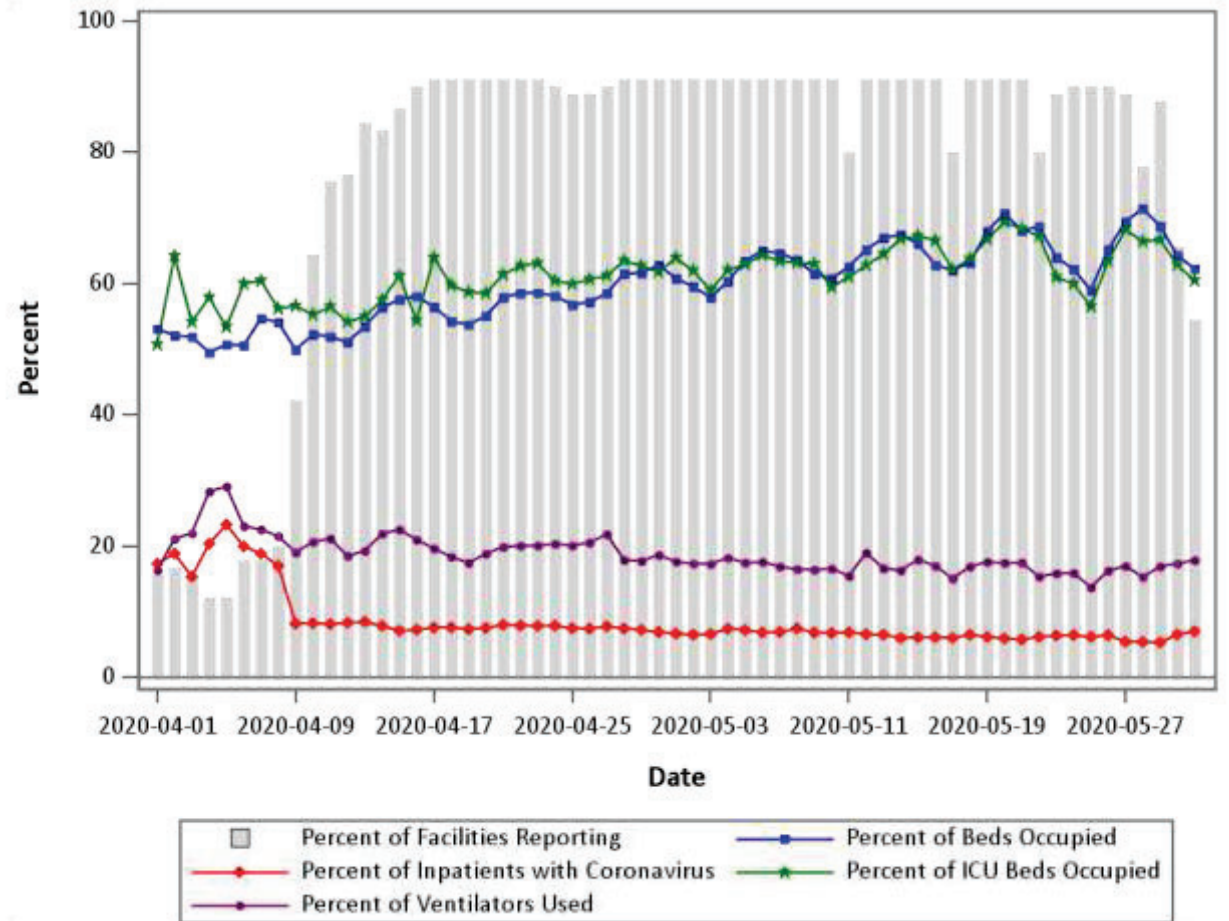


NHSN State Representative Estimates, South Carolina



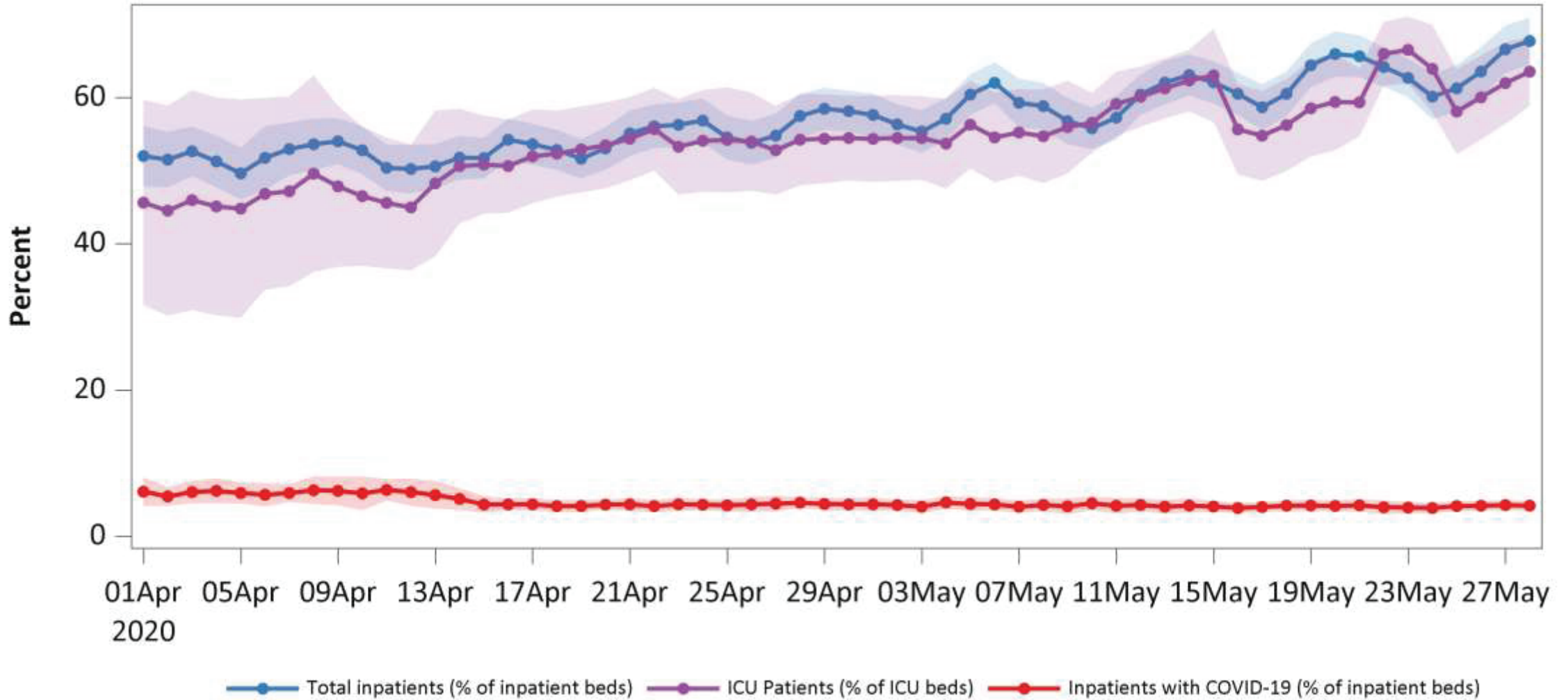


NHSH Daily Crude Percent Occupancy, South Carolina



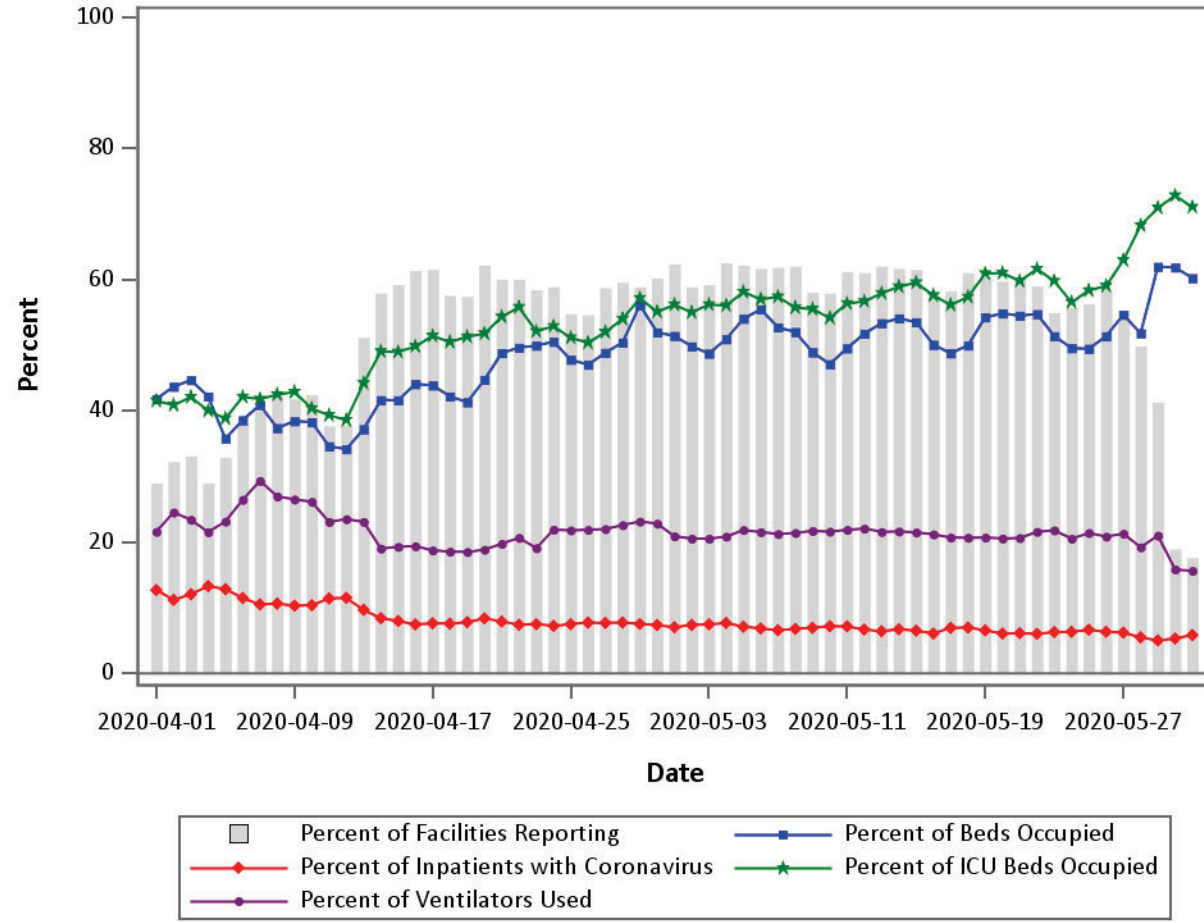


NHSN State Representative Estimates, Texas





NHSN Daily Crude Percent Occupancy, Texas



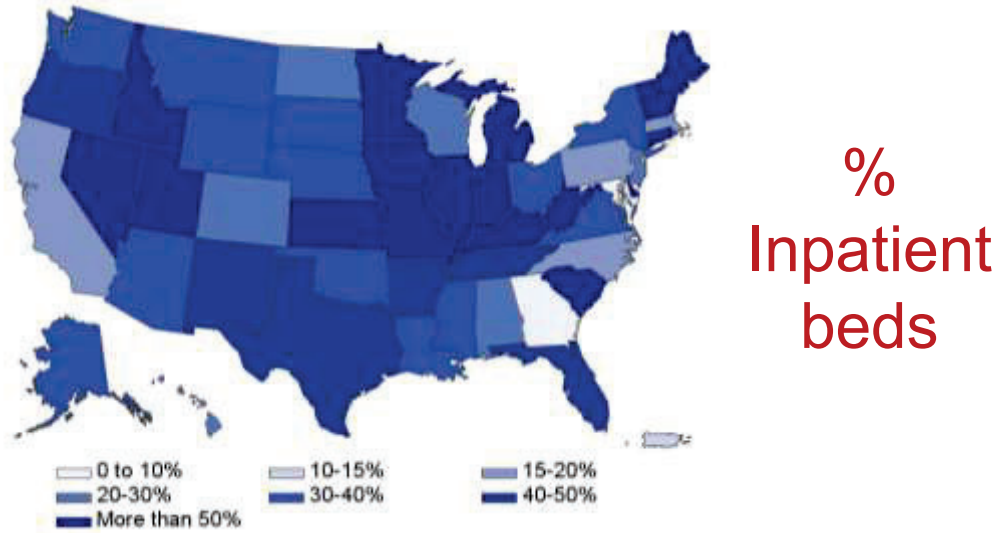
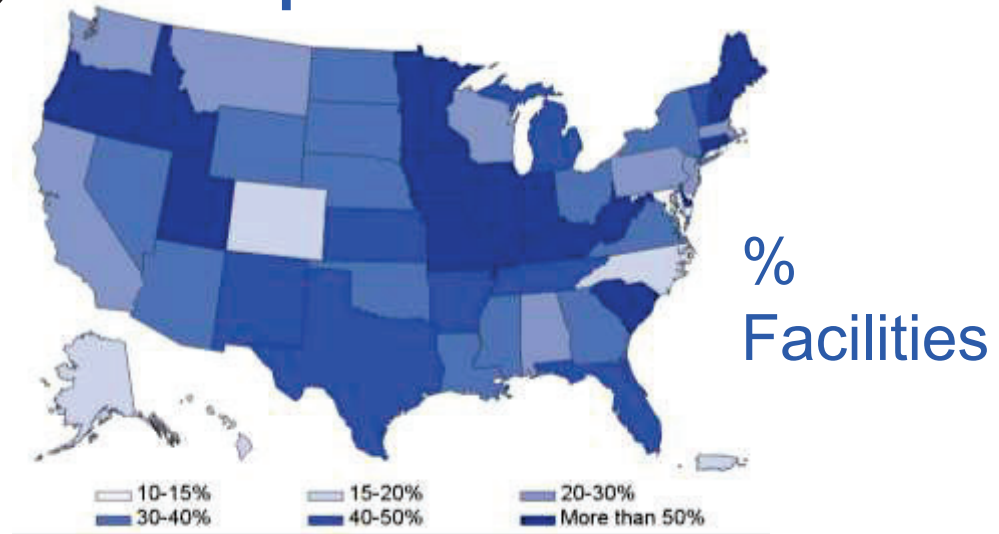
Detail Slides



Reporting to NHSN, Patient Impact & Hospital Capacity

Participation 5/29 to 5/31

- Reporting patterns are similar looking at % facilities reporting or % inpatient beds reporting by state

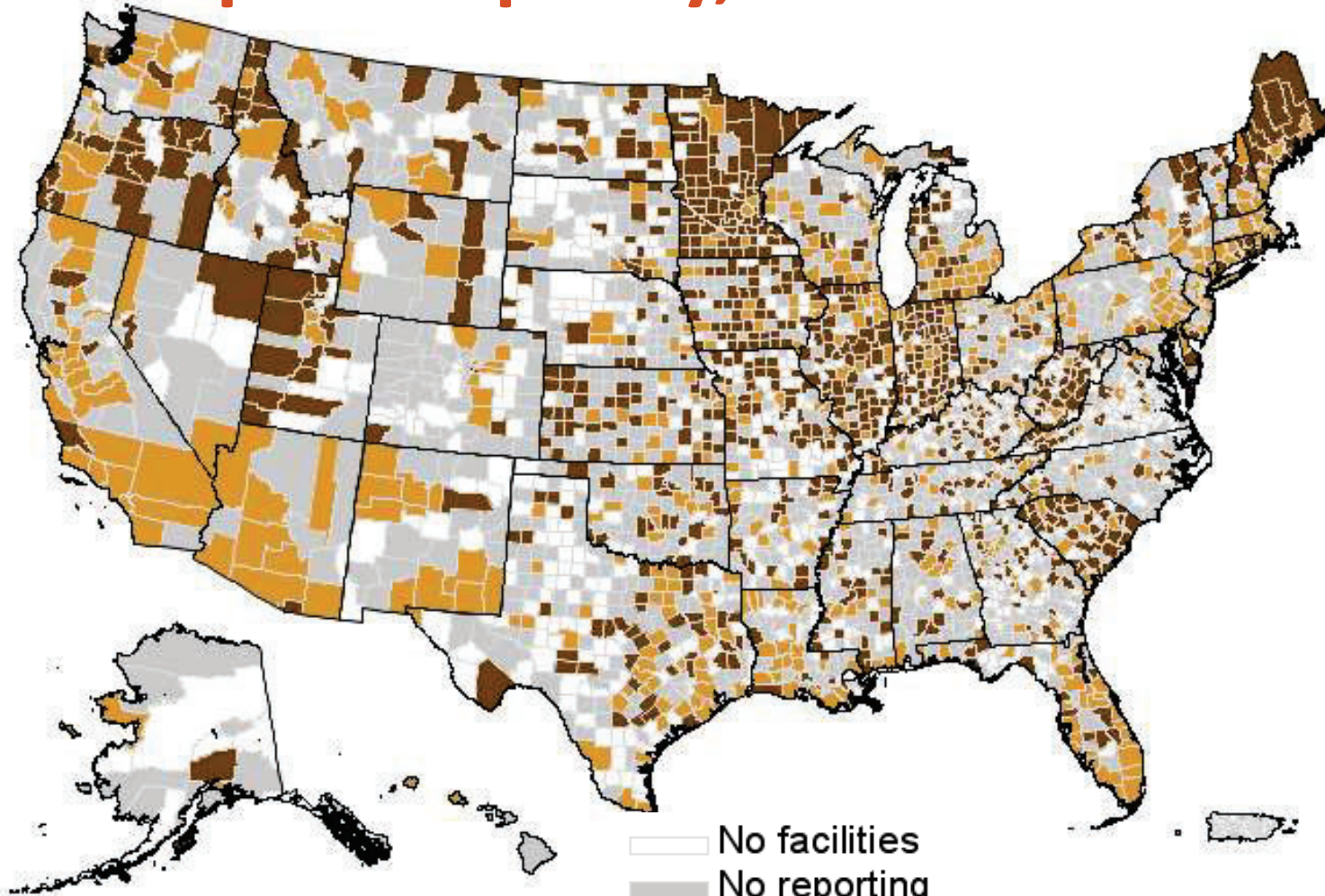


Hospital type	Reporting	Total	%
General acute care	1587	3534	44.9
175 inpatient beds or more	631	1425	44.3
75-174 inpatient beds	482	984	49.0
25-74 inpatient beds	393	874	45.0
24 inpatient beds or less	81	251	32.3
Critical access	567	1247	45.5
Surgical	47	127	37.0
Children's	43	107	40.2
Orthopedic	8	32	25.0
Long-term acute care	81	451	18.0
Other*	251	754	33.3

Includes all facilities reporting to PIHCM between 5/29 and 5/31
 * Other: HOSP-PSYCH, HOSP-ONC, HOSP-REHAB, HOSP-WOM, HOSP-WOMCHILD, HOSP-MIL, HOSP-VA



Status of Reporting by County, Patient Impact and Hospital Capacity, Most Recent 3 Days



No facilities
 No reporting
 Partial reporting
 Complete reporting

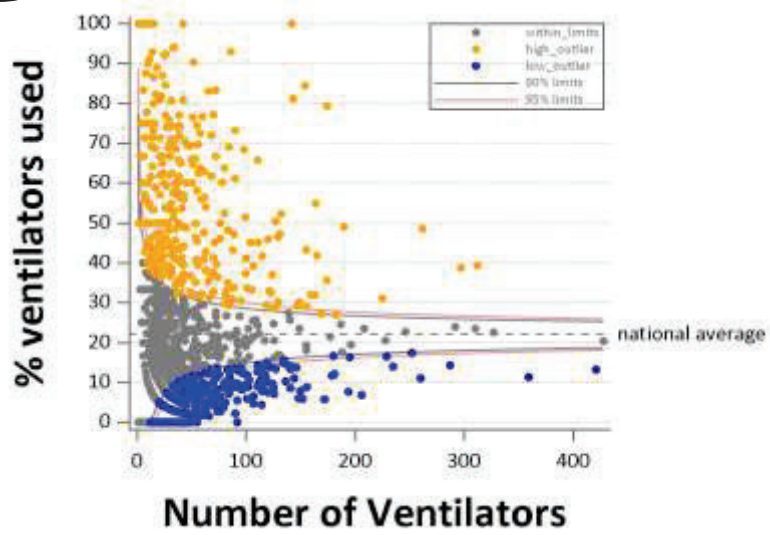
- Around a quarter of all counties with >1 facility have not reported in last 3 days
- 24% of counties have no NHSN facility

	N Counties	%
No facilities	778	24.2
No reporting	1048	32.5
Partial reporting	553	17.2
Complete reporting	842	26.1
Total	3221	100

Y

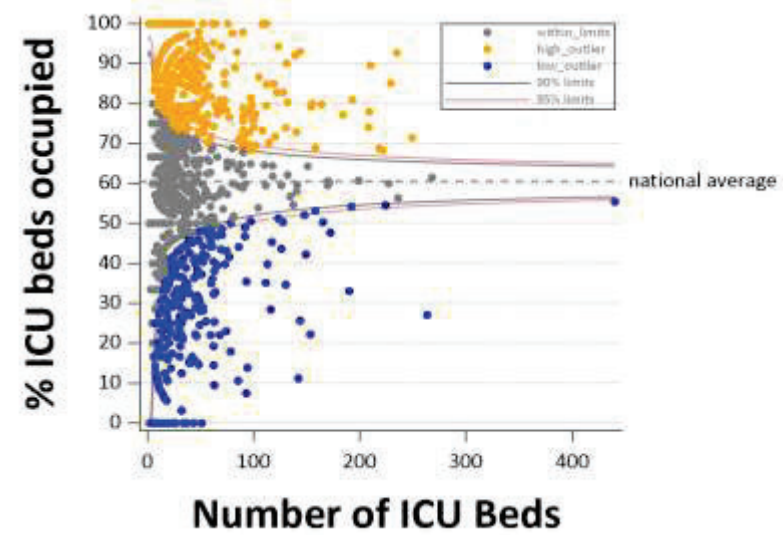
Outlier Facilities, Most Recent 3 days NHSN

Ventilators

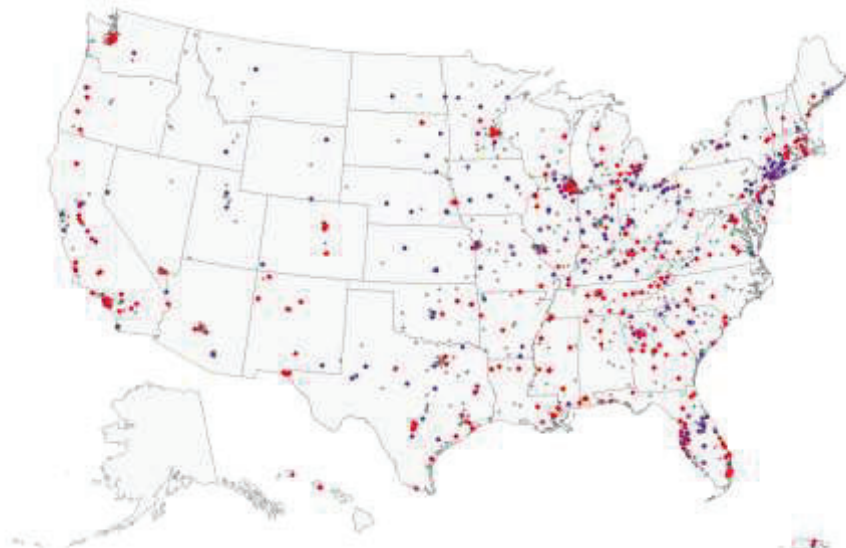
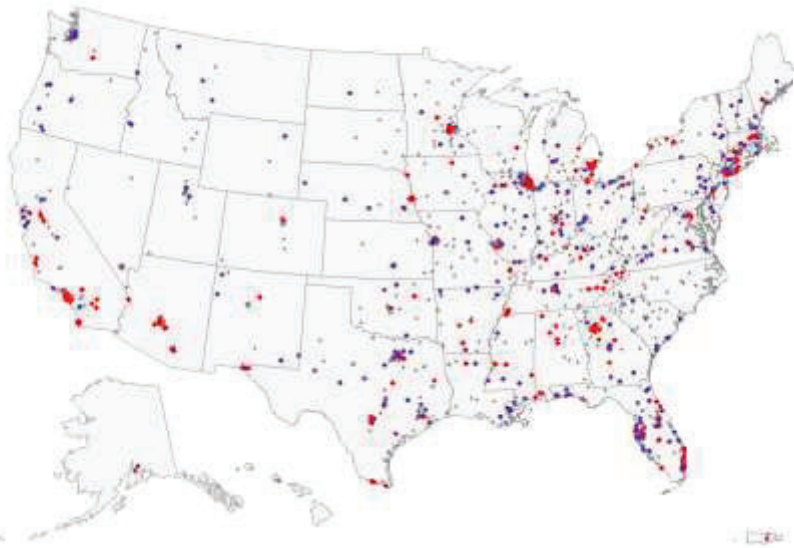


Control limits are the inverse of binomial cumulative distribution function with continuity correction

ICU Beds



Facilities with 50+ inpatient beds are mapped.
 Yellow/red = above 90% control limit of national average
 Purple = below 90% control limit of national average
 Gray = within 90% control limit of national average





Crisis Care Cut-points Reported 05/31

Cut-point		Number	Total Reporting	Percent
Occupancy	States with less than 80% of ICU beds used	52	52	100
	States with less than 75% of ICU beds used	51	52	98.1
	States with less than 70% of ICU beds used	47	52	90.4
	States with less than 80% of all inpatient beds used	51	52	98.1
	States with less than 75% of all inpatient beds used	49	52	94.2
	States with less than 70% of all inpatient beds used	48	52	92.3
Staffing	States with no hospital reporting any staffing shortages	21	43	48.8
	States with all hospitals reporting 4 or more days on-hand supply of gloves, gowns, N95 masks, face shields, and surgical masks	16	44	36.4
Supplies	States with all hospitals reporting 15 or more days on-hand supply of gloves, gowns, N95 masks, face shields, and surgical masks	8	44	18.2

About the National Healthcare Safety Network, NHSN

- NHSN is the largest surveillance system for healthcare-associated conditions in the country. Includes regular reporting by ~25,000 healthcare facilities. Began in 2005.
 - Detailed data definitions and rigorous approach to developing metrics.
 - Robust technical and user-support infrastructure. Data is used for public health & quality improvement as well as for major CMS payment programs.
- Beginning in March 2020, CDC added new reporting pathways to support the government wide response to COVID-19.
 - Hospitals now report key indicators of hospital capacity, including available hospital beds, ICU beds, and ventilators—and the percentage of COVID-19 patients using these resources. It also monitors shortages of healthcare personnel and personal protective equipment.
 - Long-term care facilities are also reporting COVID-19 data beginning May 2020.

NHSN COVID-19 Module

<https://www.cdc.gov/nhsn/acute-care-hospital/covid19/index.html>

NHSN LTCF COVID-19 Module

<https://www.cdc.gov/nhsn/ltc/covid19/index.html>

(b) (6)

Subject: NHSN Summary - 5/29
Date: Friday, May 29, 2020 2:02:09 PM
Attachments: [Daily Summary 29MAY2020MAIN.pdf](#)

All,

Highlights of information – much greater detail in the slides.

- Long-term care: 45% have had one or more cases of COVID-19
- Acute care: National estimate of inpatients with COVID-19 51,278 (95% CI 46,673-55,883)
- Acute-care, national crude percentages:
 - 10% of inpatients have COVID-19 (crude percent) (down from about 22% at peak)
 - 16% of COVID-19 inpatients are on a ventilator (crude percent)(had been quite consistent at about 18%)
 - 23% of in-use ventilators are occupied by covid-19 patients (crude percent)
 - 17% of facilities have more than 80% of their ICU beds filled (crude percent) (has been pretty consistent)
 - 43% reporting facilities are reporting not able to obtain N95 masks

Here are the SharePoint links for the PBI dashboards:

PowerBI link for nonCDC users who have worked with NHSN to get a login (otherwise contact

(b) (6) to request login):

<https://protect2.fireeye.com/url?k=ff130553-a3472c78-ff13346c-0cc47a6d17cc-b3bd9fad29c27d3a&u=https://cdcpartners.sharepoint.com/sites/NHSNCOVID19/>

Respectfully,

(b) (6)

"Fortune favors the prepared mind" – Louis Pasteur

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National Healthcare Safety Network (NHSN), CDC Daily Summary for May 29, 2020 COVID-19 Modules Data MAIN





Key Points

- Long-term care: 45% have had one or more cases of COVID-19
- Acute care: National estimate of inpatients with COVID-19 51,278 (95% CI 46,673-55,883)
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Hyperlink Table of Contents

- [Long-term care: Early Analysis](#)
- [Hospital: Supplies and Staffing Pathways](#)
- [Hospital: Patient Impact & Hospital Capacity Pathway](#)
- [Indian Health Service and Tribal Drill Down](#)
- [Daily Occupancy, Hospitals](#)
- [Detail Slides](#)

Long-term care: Early Analysis



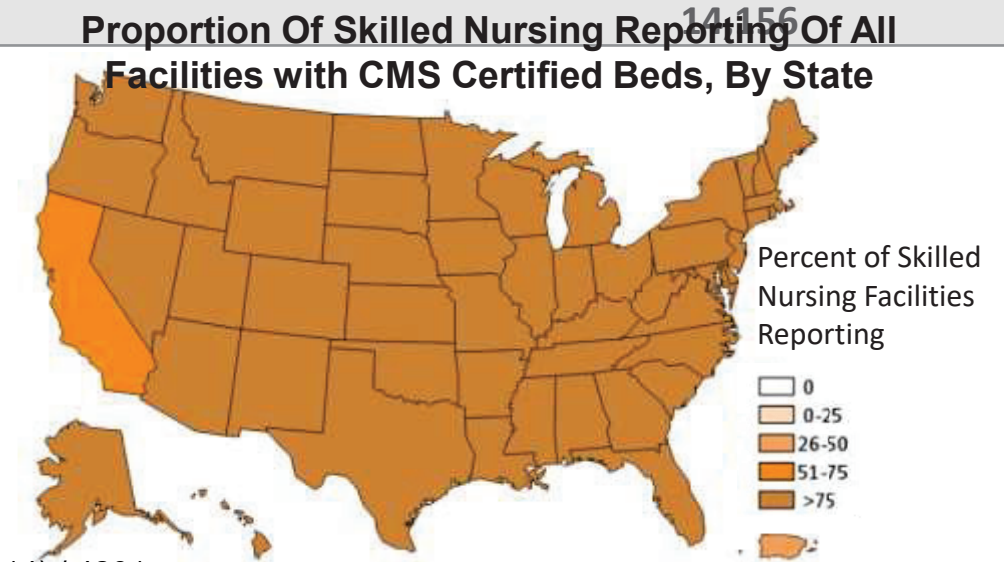
Long-term Care Facility Enrollment and Participation

Enrollment Status

	Skilled Nursing Facility	Assisted Living	Developmentally Disabled Facility
Previously Enrolled before 4/25	2,973	1	4
Newly enrolled since 4/25	12,378	509	73
Pending enrollments in process	438	53	17
Total	15,789	563	94

Reporting Status

Number of Reporting Facilities by Facility Type	
Data Reported to Date as of May 28	
LTC Assisted Living	367
LTC Developmentally Disabled	67
LTC Skilled Nursing Homes	13,722
Total	14,156



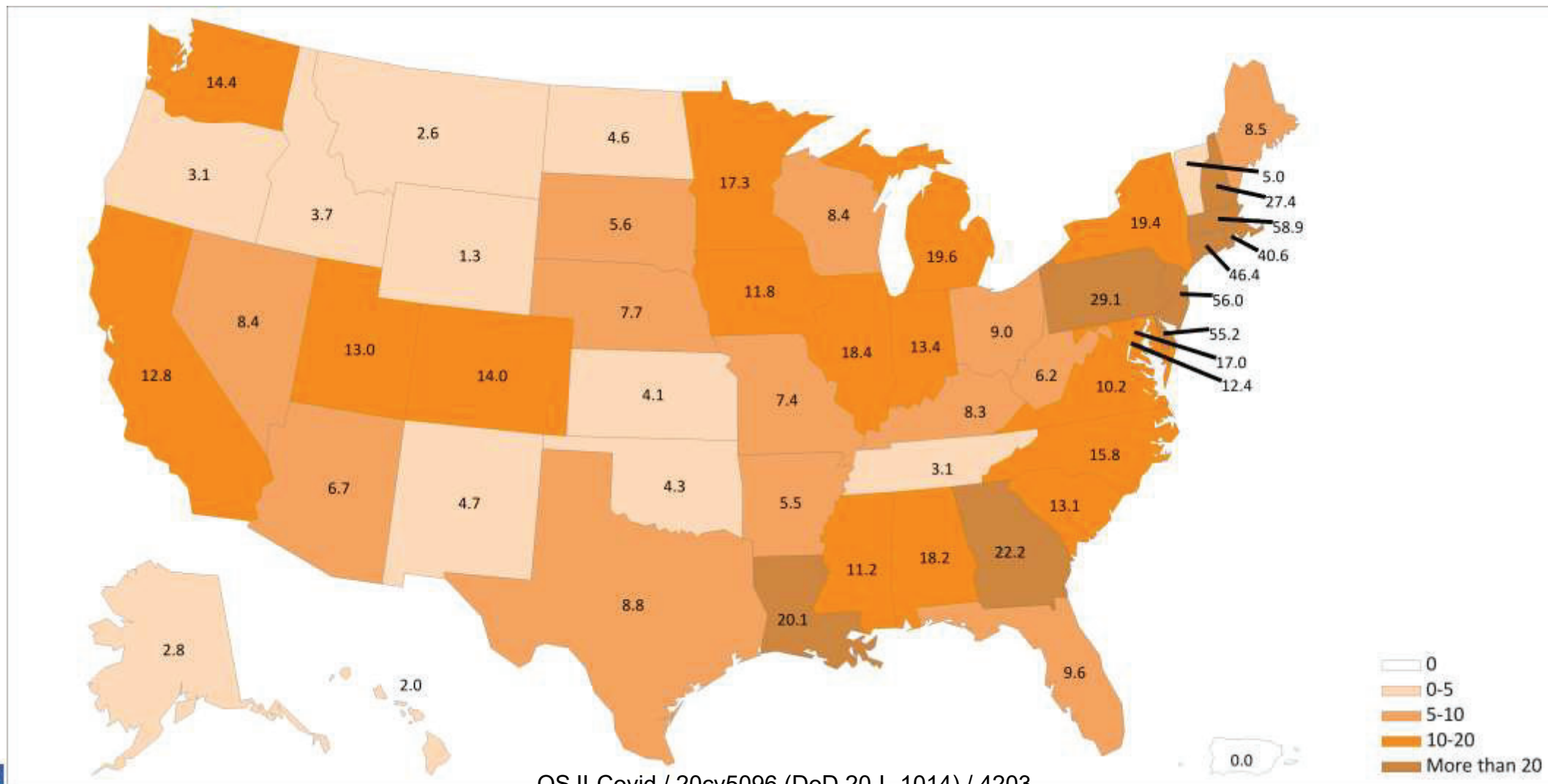
NHSN LTC COVID-19 Module – Data Reported to Date

- Total resident-beds being reported-on (total capacity): **1,450,520**
 - Facility: Mean: 104.7, Median: 99.0, IQR: 64.0, Range: 0 - 815

- Facilities which have reported at least 1 case (confirmed + suspected): **6,348/14,143 (44.9%)**

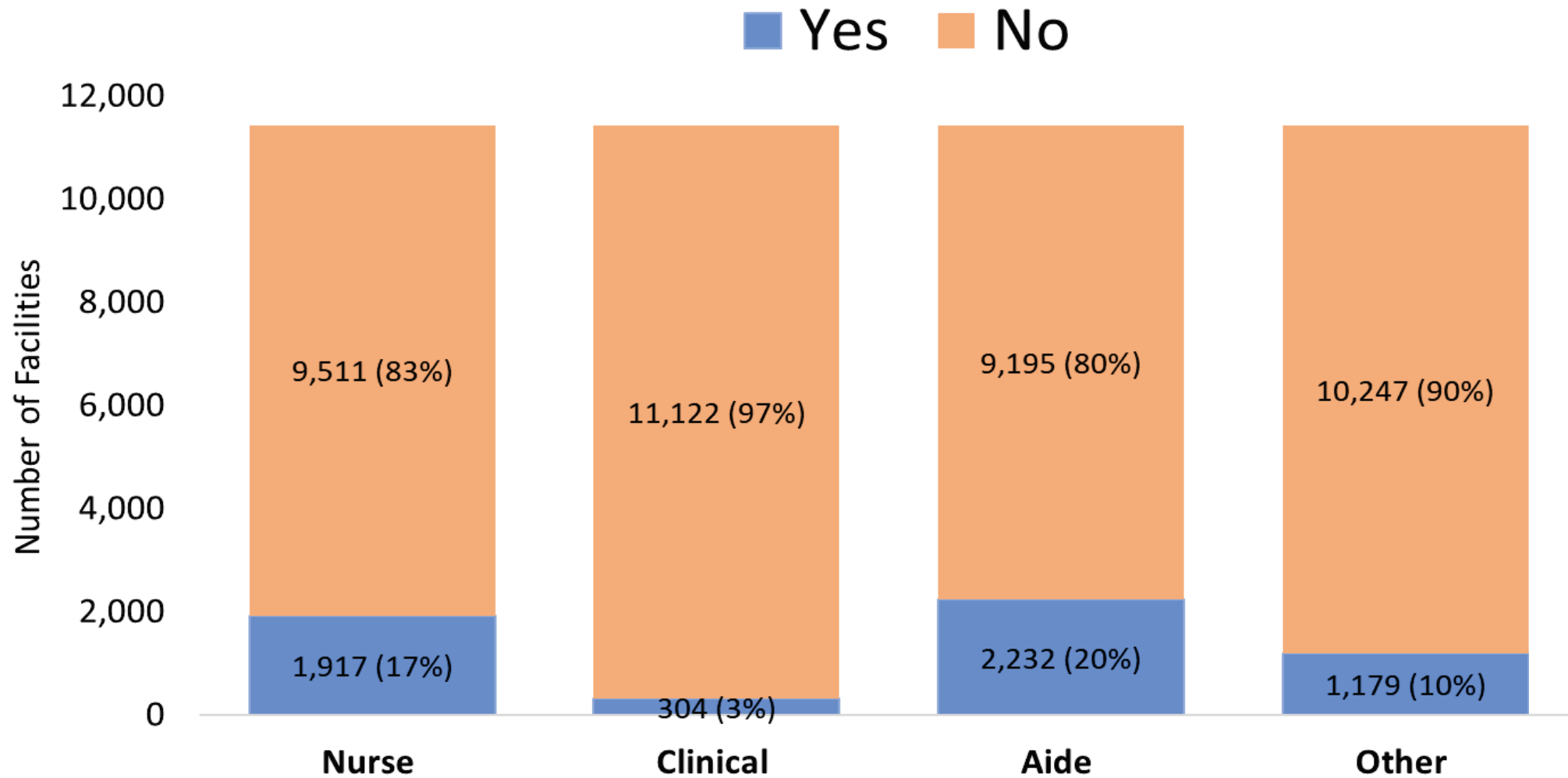
- Number of cumulative cases (confirmed + suspected) from January 2020 to first date reporting (April 25-May 28) for the reporting facilities:
 - **Among Residents: 64,920**
 - Mean: 4.6, Median: 0.0, IQR: 1.0, Range: 0 – 245
 - **Among Staff: 43,493**
 - Mean: 3.1, Median: 0.0, IQR: 2.0, Range: 0 – 500

Reported Cumulative Confirmed and Suspected Cases per 1,000 Occupied Residents Beds Among NHSN LTC Facilities to Date





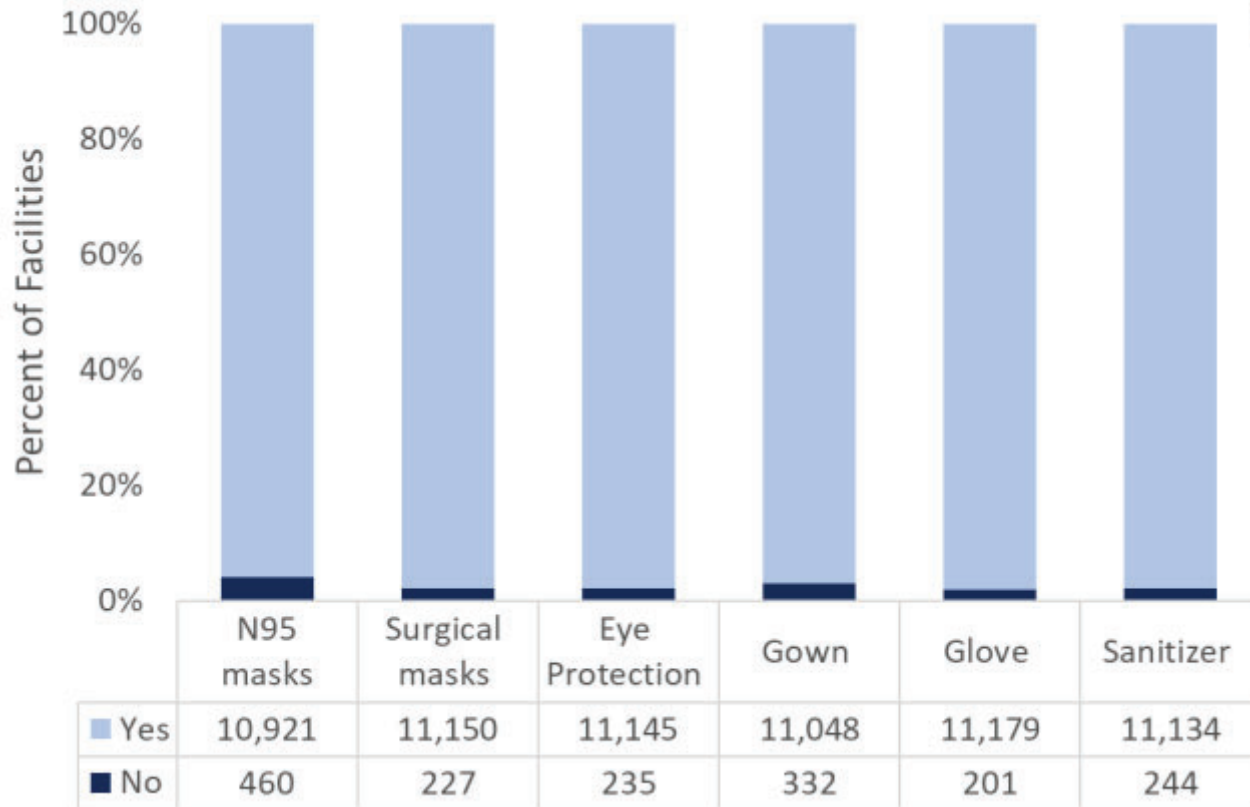
Staffing Shortage, Skilled Nursing Facilities, May 22 – 28, 2020 (N = 11,445)



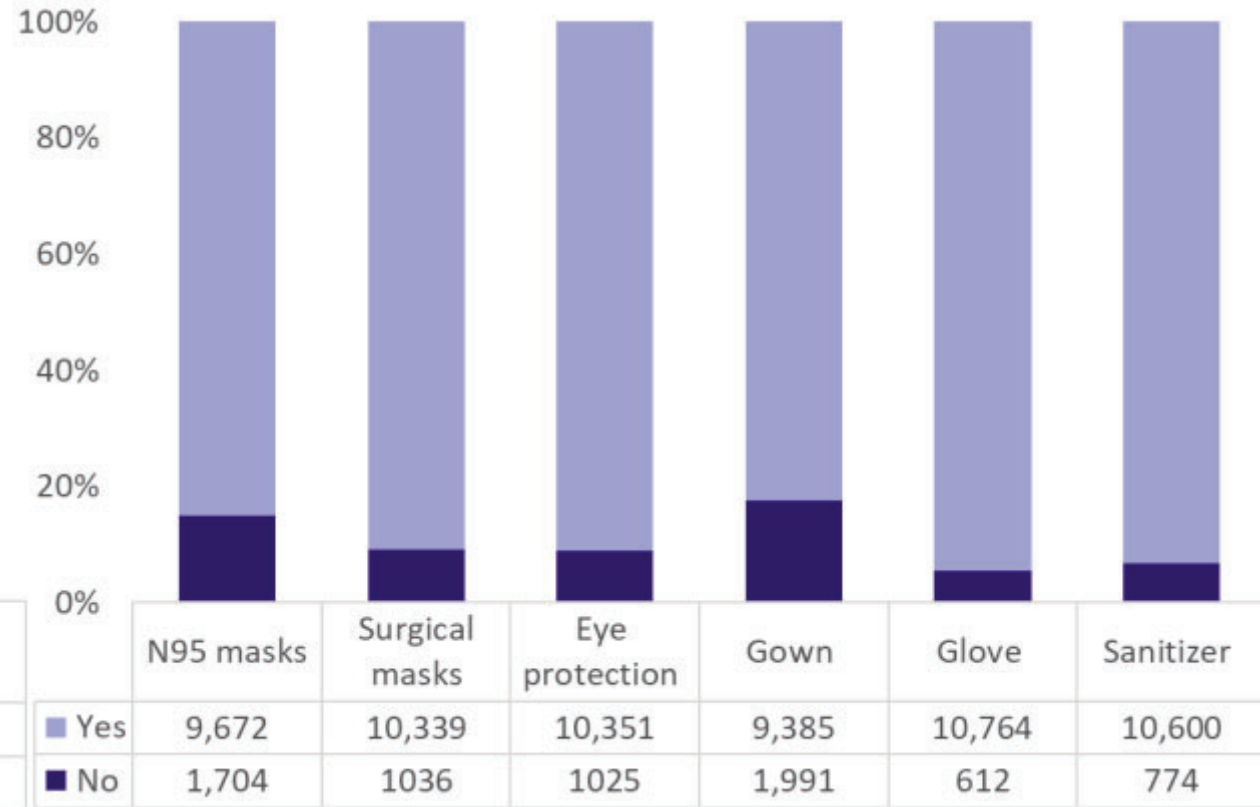


Supply Shortage, Skilled Nursing Facilities, May 22 – 28, 2020 (N =11,381)

Supplies Available for Today



Supplies Available for the Next 7 Days



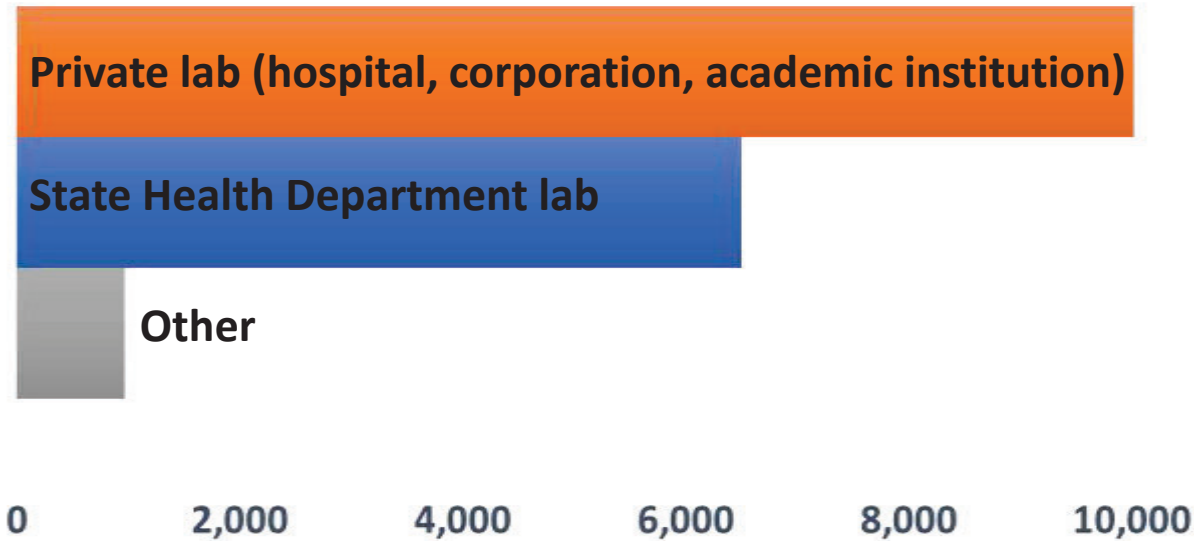


Does Your Facility Have Access To COVID-19 Testing While Resident Is In Facility? April 25 – May 28, 2020

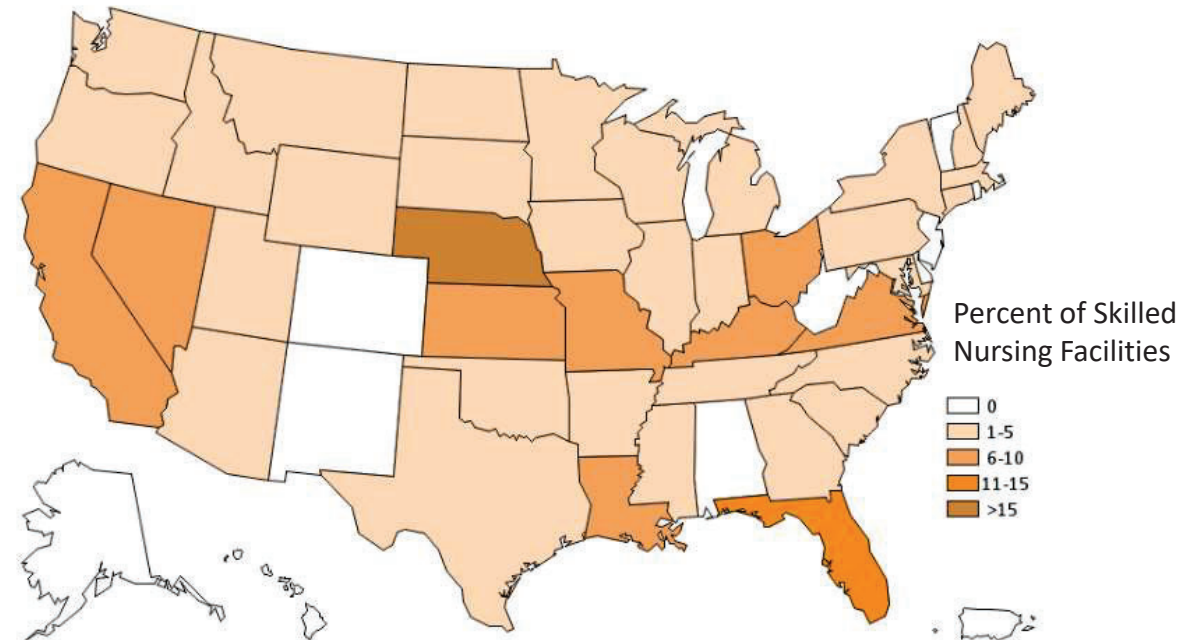
Number Of Skilled Nursing Facilities Reporting: **13,692**

Number Of Skilled Nursing Facilities Without Access To COVID-19 Testing: **590 (4.3%)**

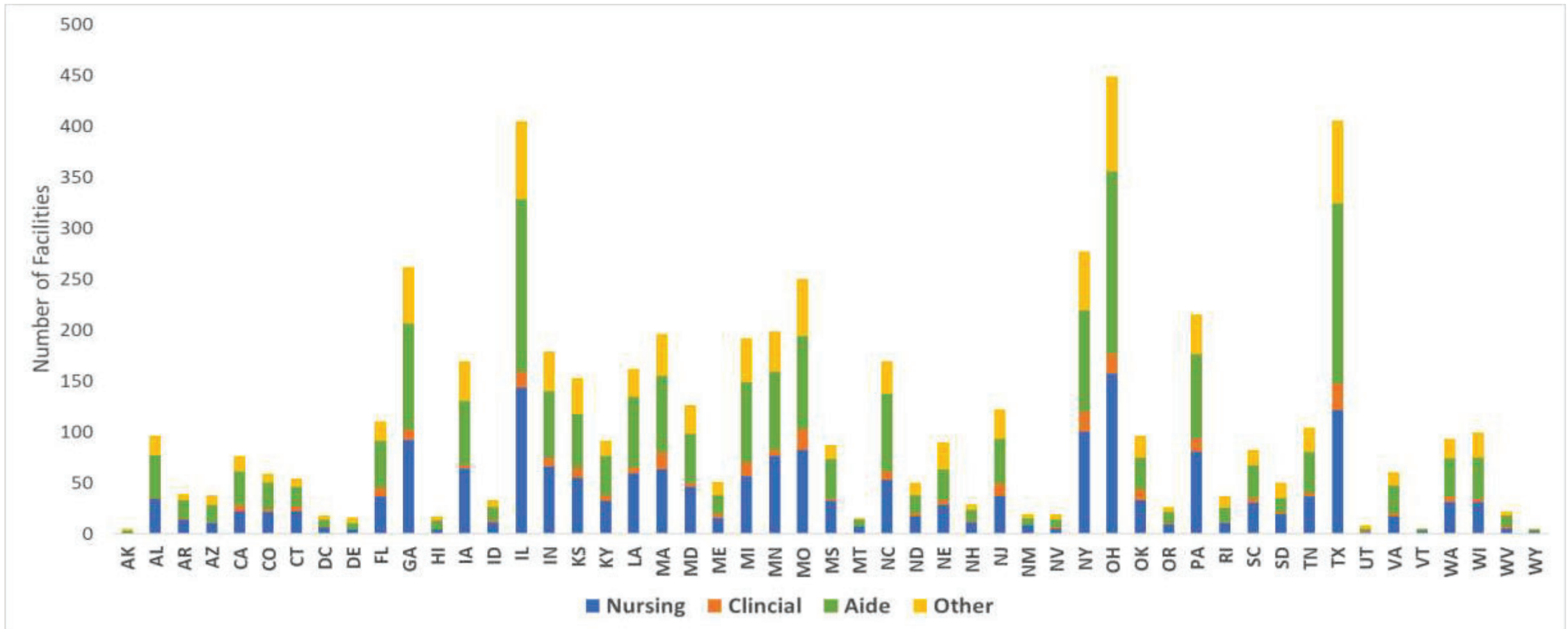
If Testing Available, What Laboratory Type?
Select all that Apply



Percent Of Skilled Nursing Reporting No Access To COVID-19 Testing, By State



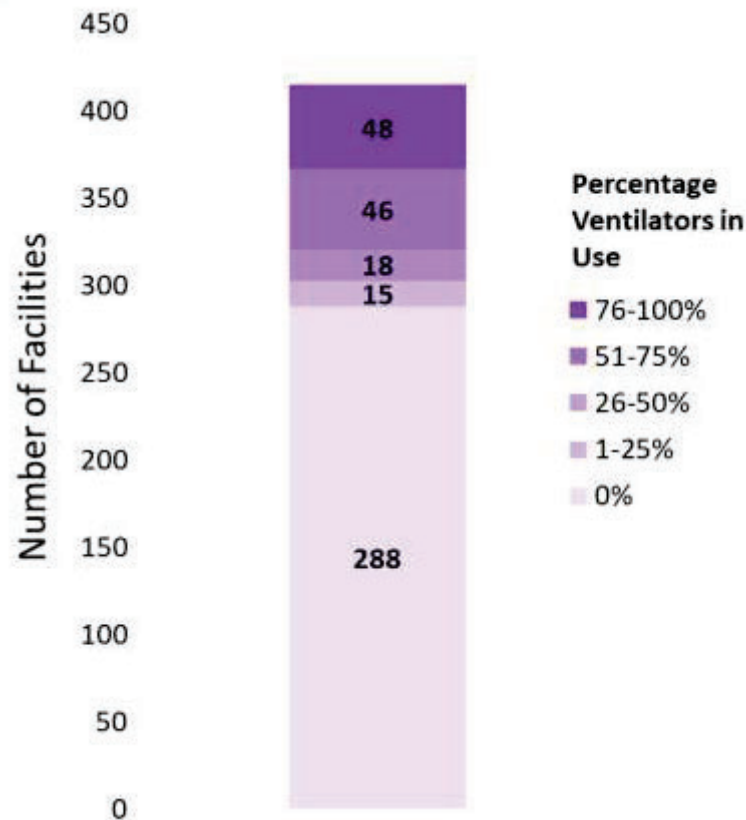
Skilled Nursing Facility Healthcare Worker Shortage, by State May 22 – 28, 2020 (N = 11,445)



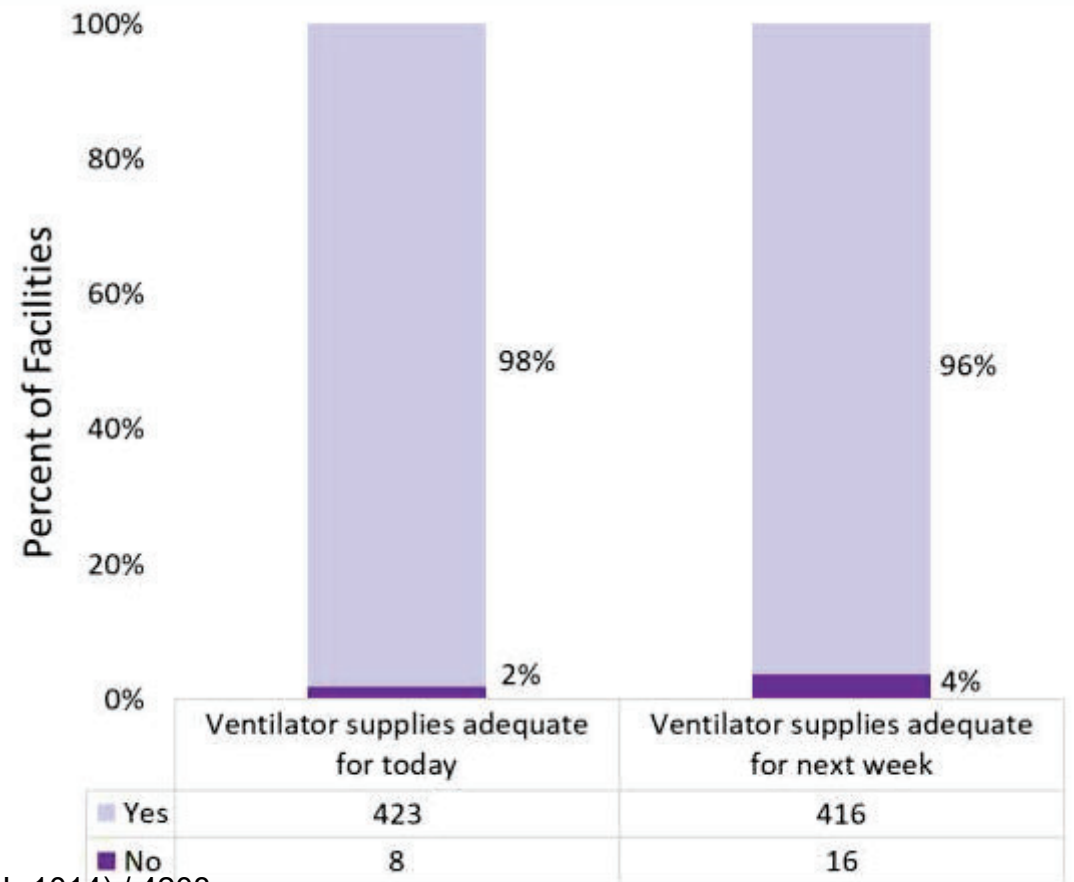
Ventilators & Supplies, Skilled Nursing Facilities, May 22 – 28, 2020

Of 11,183 Skilled Nursing Facilities, 433 (3.9%) facilities use or have ventilator dependent units

Number of facilities by % of Ventilators in-use by COVID-19 residents (Skilled Nursing Facilities)



Ventilator Supplies



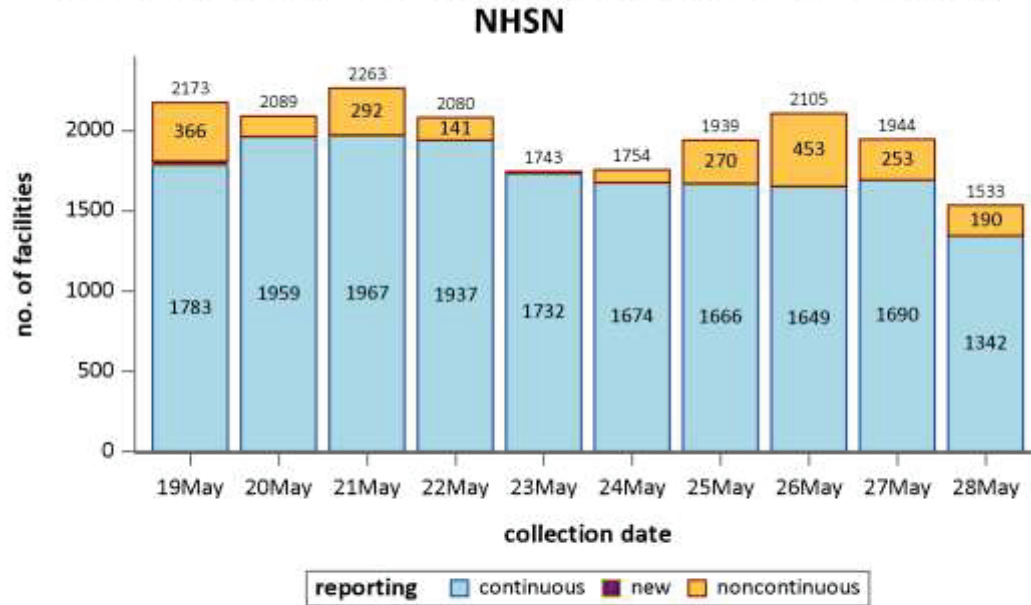
Hospital: Supplies and Staffing Pathways



NHSN COVID-19 Supplies Pathway

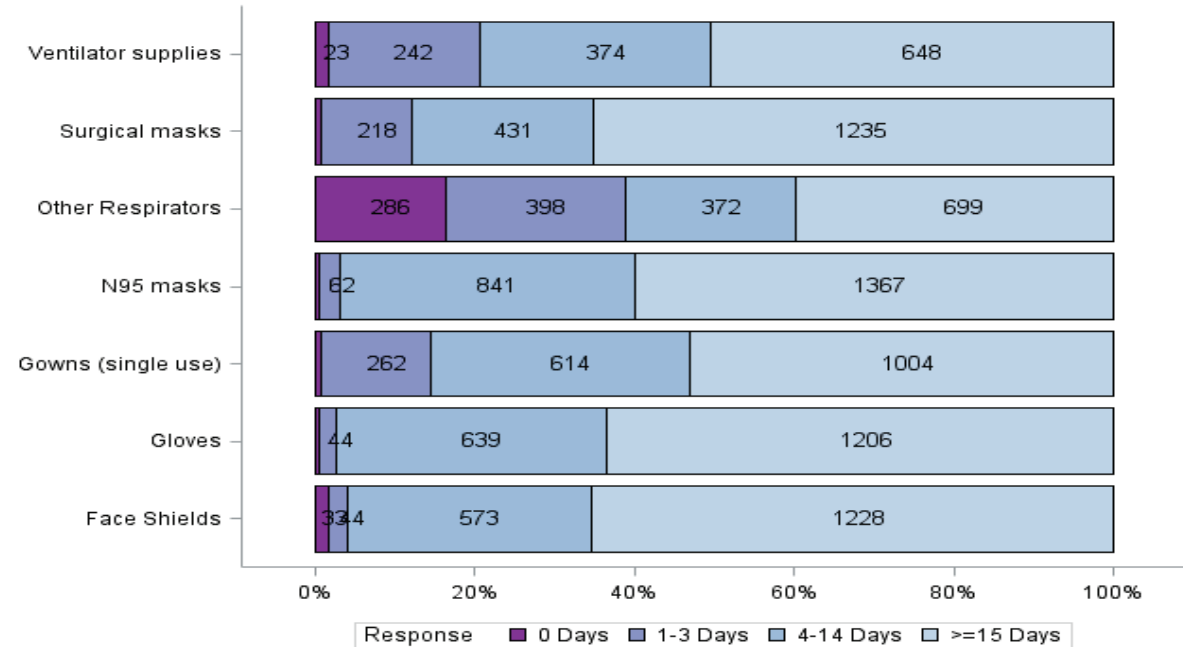
2,869 facilities from 52 states have reported for at least one day

Number of facilities by reporting pattern, Supplies Pathway, NHSN



continuous=reporting continuously within past 3 days, which include collection date
 noncontinuous=reporting noncontinuously within past 3 days, which include collection date
 new=facility reporting first time to Supplies Pathway

National: On-hand Supply



Ventilator supplies excludes hospitals that reported having no ventilators available. 9 Critical Access Hospitals and 14 Acute Care Hospitals are reporting zero days of on-hand Ventilator Supplies.

Includes the most recent data for every facility that reported for most recent three days.

<https://www.cdc.gov/nhsn/acute-care-hospital/covid19/index.html>

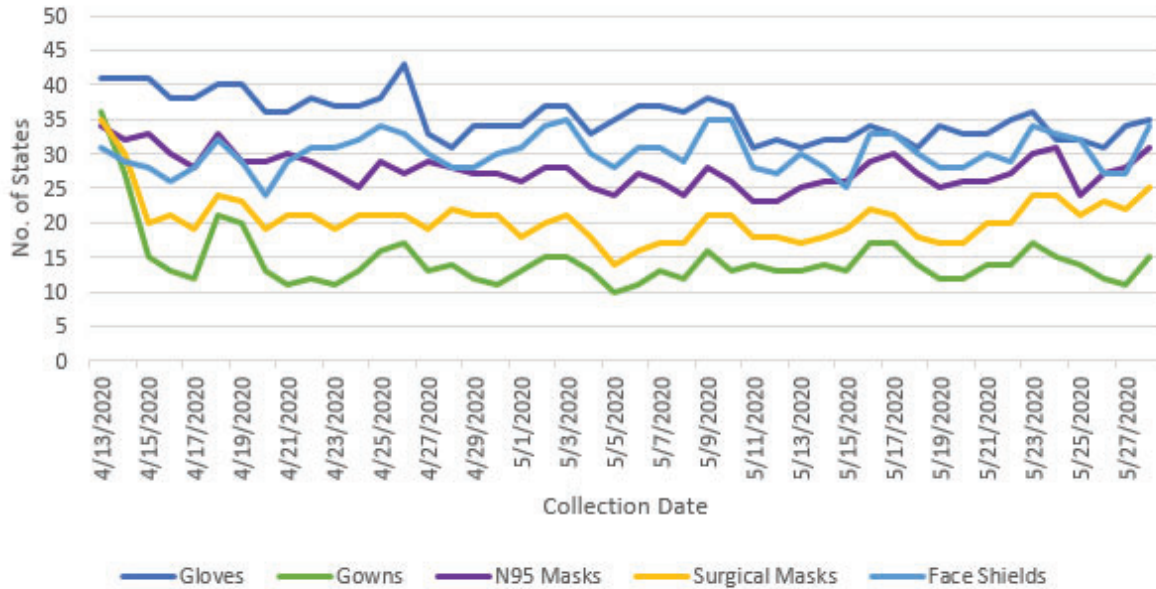
OSJI-Covid / 20cv5096 (DoD 20-L-1014) / 4210

Data are provisional until officially released from CDC – For Internal Use Only (FIUO) – For Official Use Only (FOUO) – Sensitive But Unclassified (SBU)

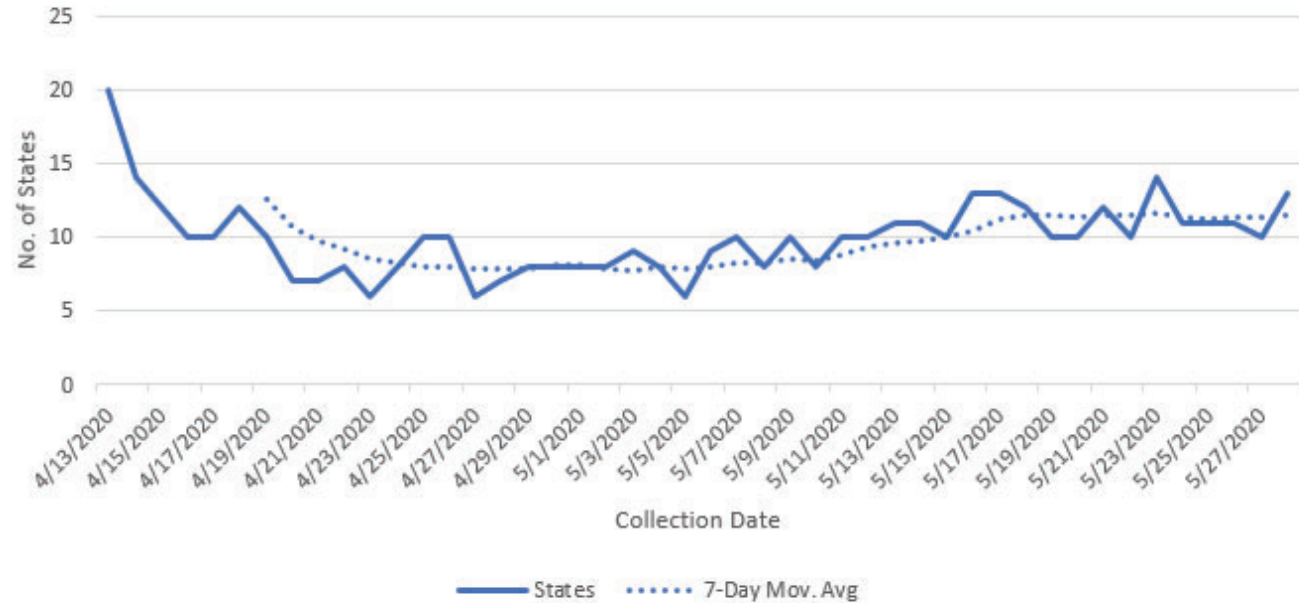


NHSN COVID-19 Supplies Pathway

Number of States with All Reporting Facilities that have 4 or More Days of Select PPE



Number of States with All Facilities Reporting No Shortages of Select PPE Overall



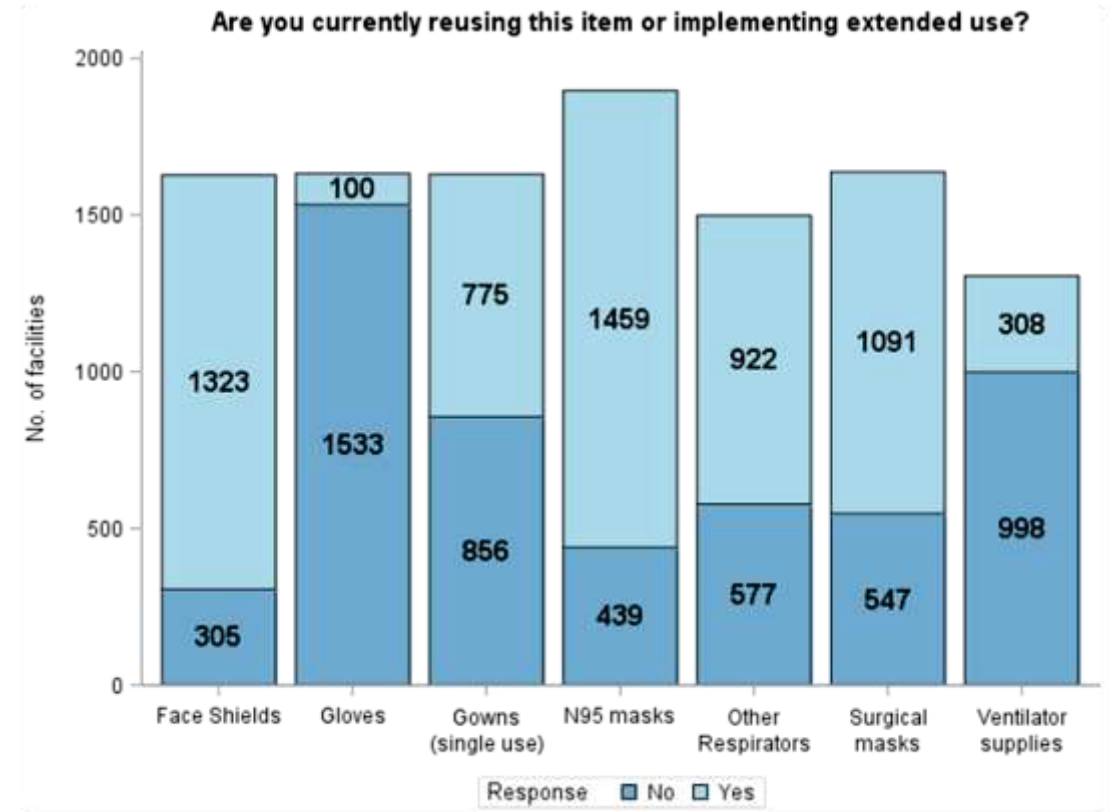
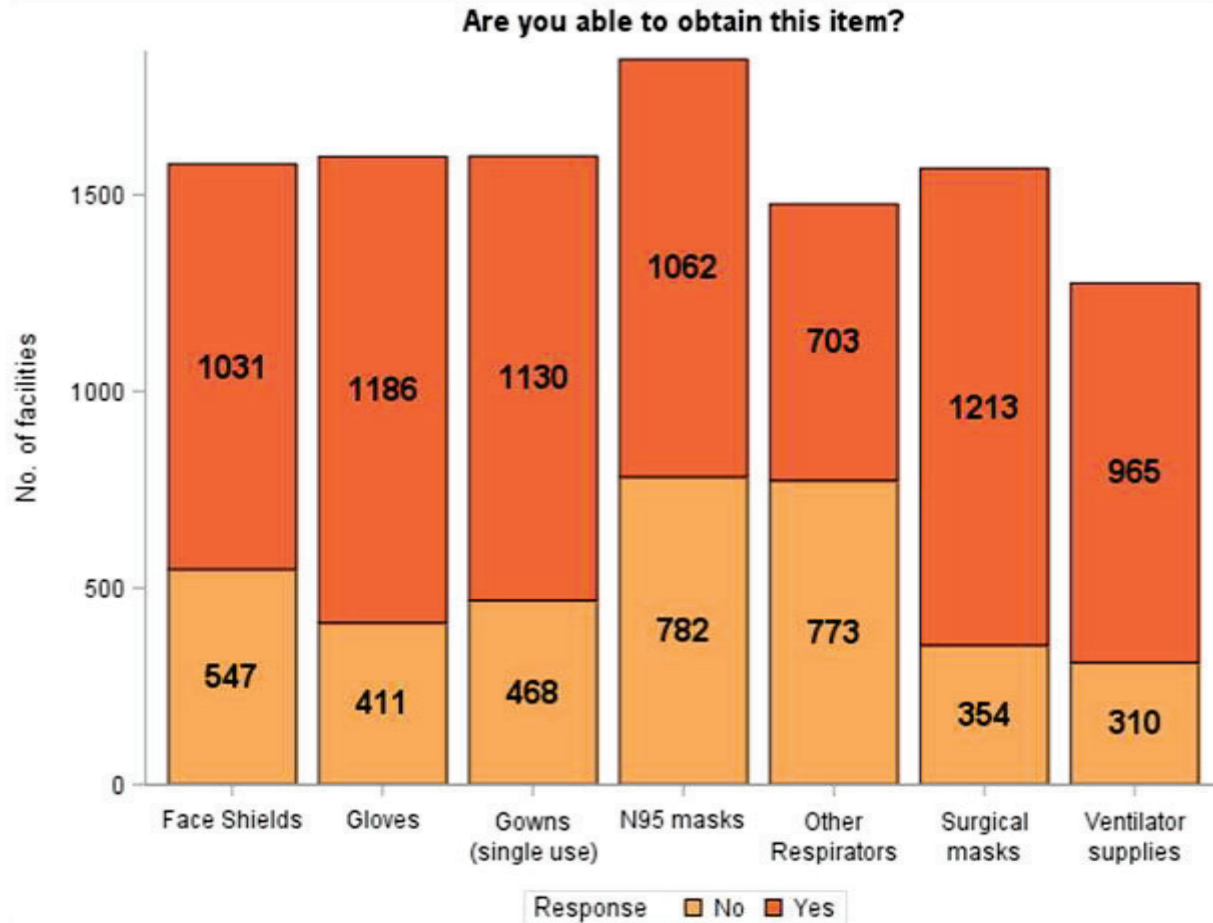
<https://www.cdc.gov/nhsn/acute-care-hospital/covid19/index.html>

OSJI-Covid / 20cv5096 (DoD 20-L-1014) / 4211

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NHSN COVID-19 Supplies Pathway



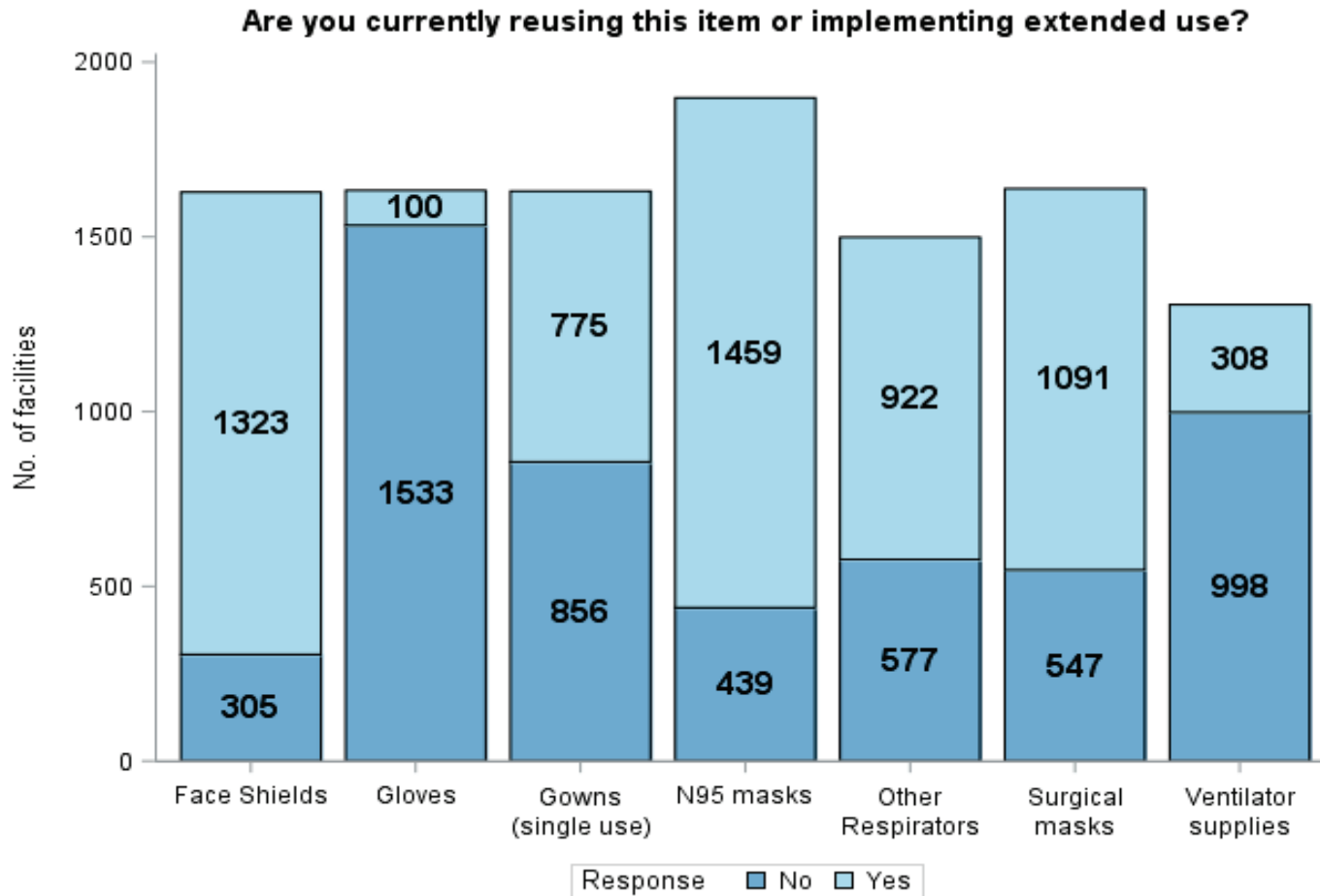
YES includes disinfection

Includes the most recent data for every facility that reported for most recent three days.

<https://www.cdc.gov/nhsn/acute-care-hospital/covid19/index.html>



Facilities reporting 3 or fewer days of on-hand supply, ability to obtain the item



*Includes facilities that reported 3 or fewer days of on-hand supply

Includes the most recent data for every facility that reported for most recent three days.



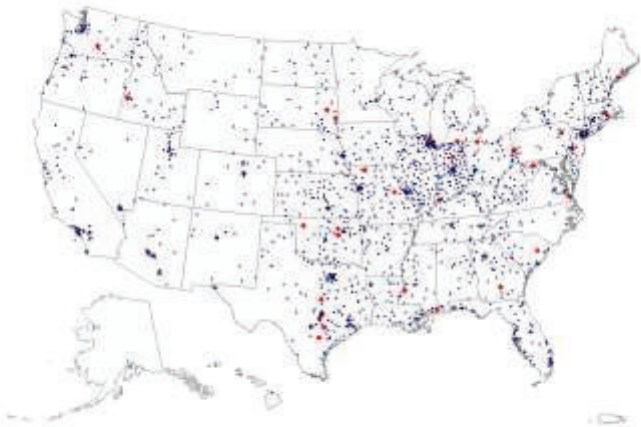
Shortages by Location, NHSN

Data as of May 29, 2020 at 5:30 AM



N95 Masks

Shortage of N95 masks, NHSN, 05/29/20



Total # facilities reporting of N95 masks to COVID-19 module (Healthcare supply pathway): 1854
Red=Facilities reporting 3 or fewer days of on-hand N95 masks and not able to obtain: 34
Blue=Other facilities

Red dots=facilities reporting 3 or fewer days of on-hand supply and reporting that they are not able to obtain item

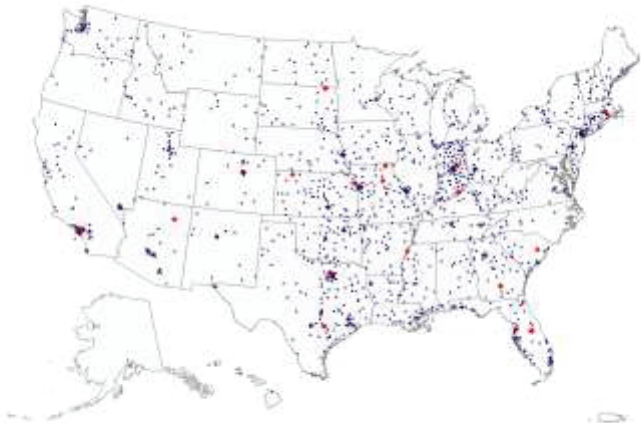
Shortage of gowns, NHSN, 05/29/20



Gowns

Total # facilities reporting of gowns to COVID-19 module (Healthcare supply pathway): 1626
Red=Facilities reporting 3 or fewer days of on-hand gowns and not able to obtain: 49
Blue=Other facilities

Shortage of surgical masks, NHSN, 05/29/20

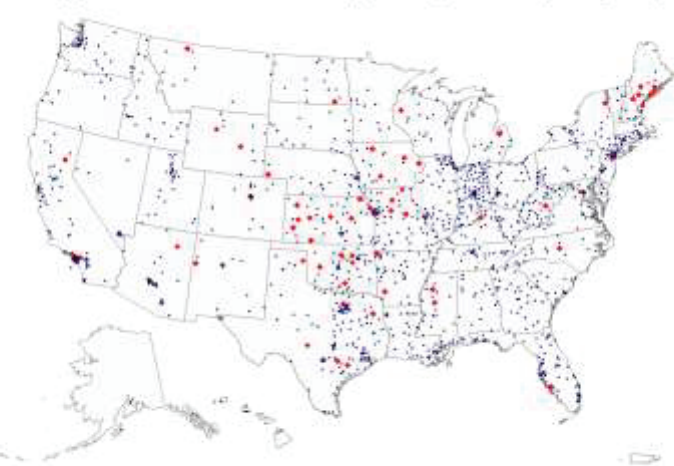


Surgical Masks

Blue dots=other facilities

Total # facilities reporting of surgical masks to COVID-19 module (Healthcare supply pathway): 1597
Red=Facilities reporting 3 or fewer days of on-hand surgical masks and not able to obtain: 22
Blue=Other facilities

Shortage of ventilator supplies, NHSN, 05/29/20



Ventilator Supplies

Total # facilities reporting of ventilator supplies to COVID-19 module: 1606
Red=Facilities reporting 3 or fewer days of on-hand ventilator supplies and reporting that they are not able to obtain them: 65
Blue=Other facilities



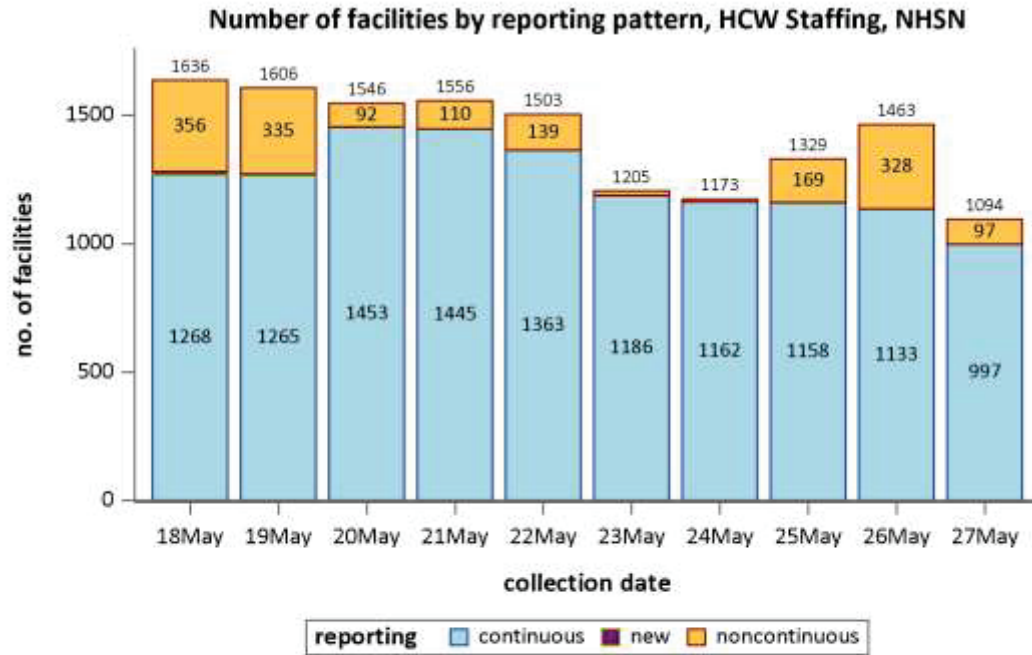
OSJI-Covid / 20cv5096 (DoD 20-L-1014) / 4214

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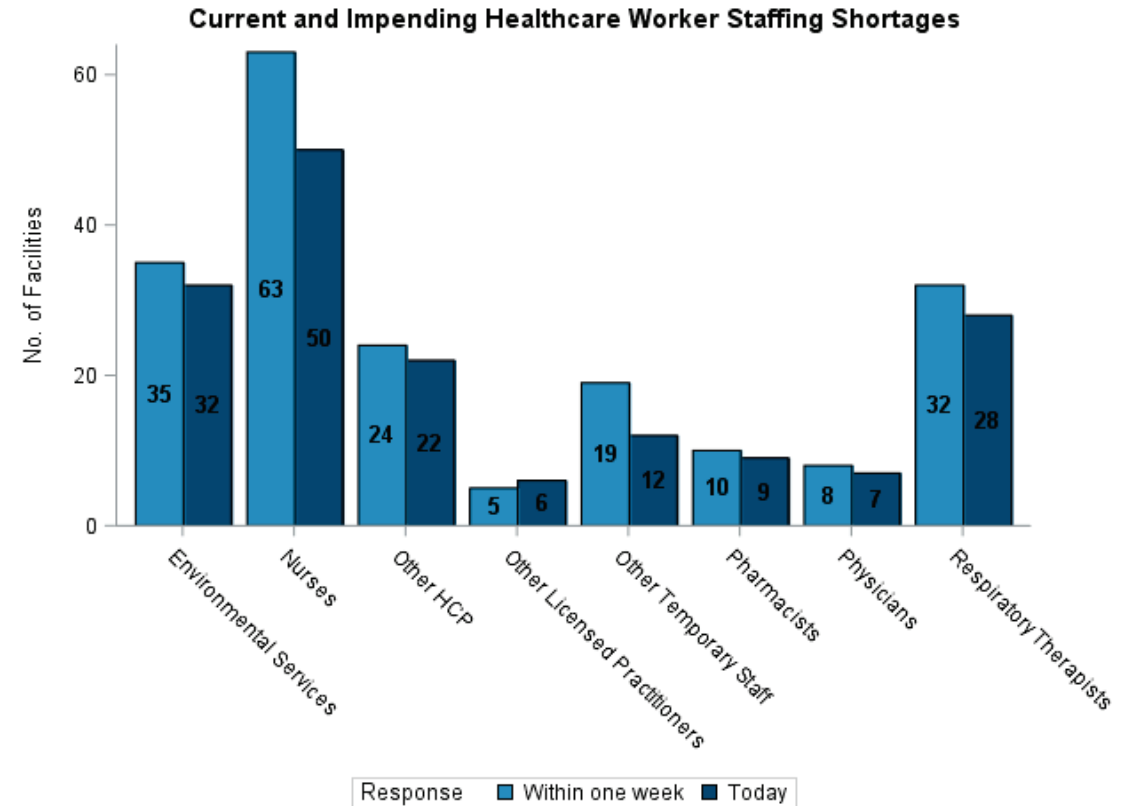


NHSN COVID-19 Healthcare Worker Pathway

2,257 facilities from 52 states have reported for at least one day



continuous=reporting continuously within past 3 days, which include collection date
 noncontinuous=reporting noncontinuously within past 3 days, which include collection date
 new=facility reporting first time to HCW Staffing Pathway



*No. of facilities reporting for the most recent three days=1,626

Includes the most recent data for every facility that reported for most recent three days.

<https://www.cdc.gov/nhsn/acute-care-hospital/covid19/index.html>

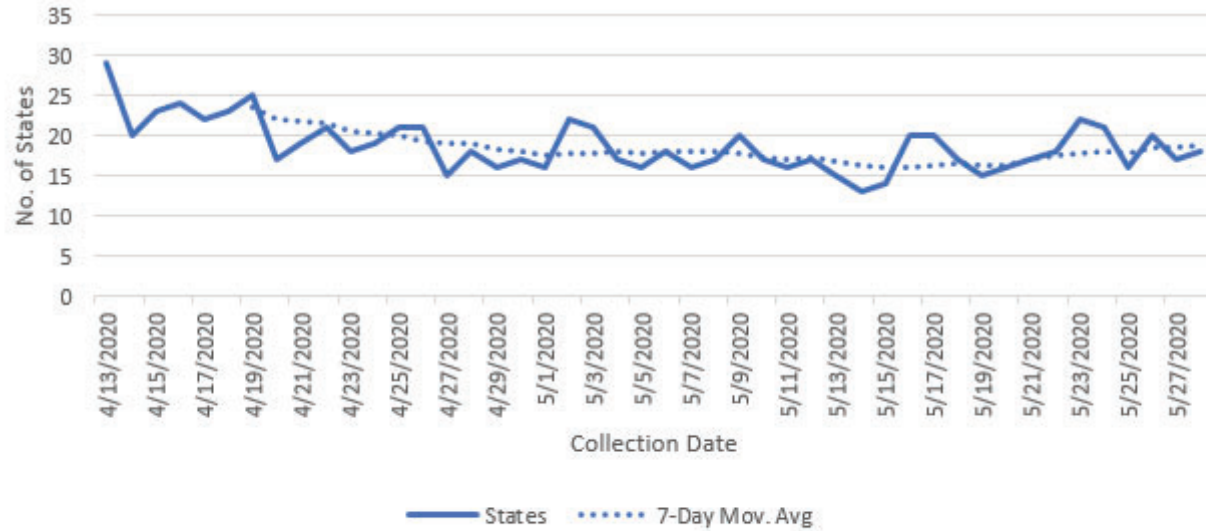
OSJI-Covid / 20cv5096 (DoD 20-L-1014) / 4215

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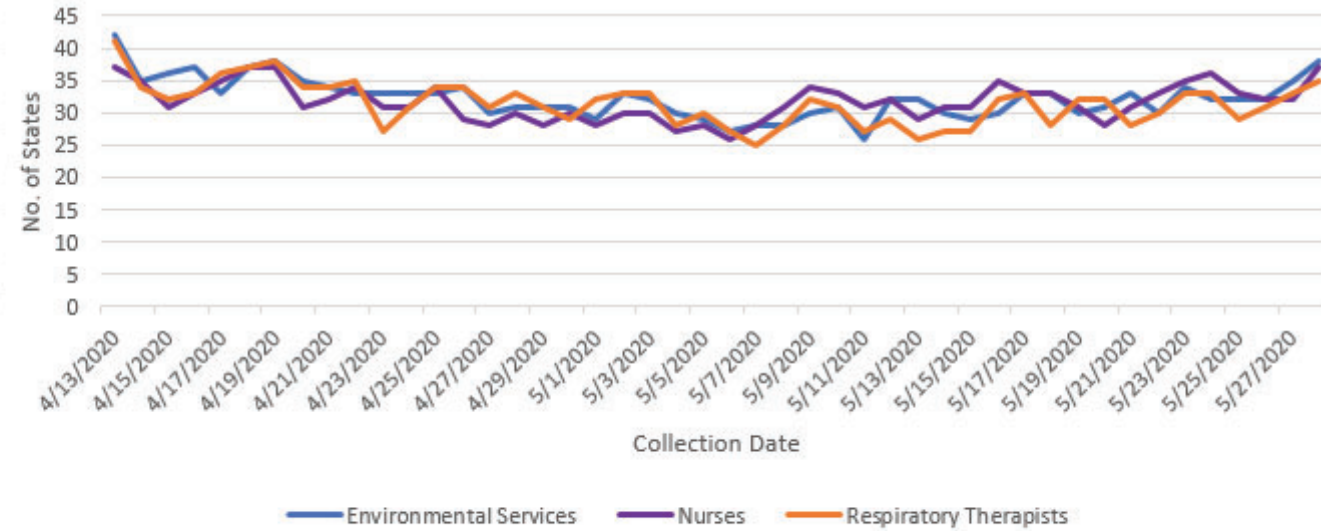


NHSN COVID-19 Healthcare Worker Pathway

Number of States with All Reporting Facilities Indicating No Current HCW Shortages in All HCW Groups



Number of States with All Reporting Facilities Indicating No Current HCW Shortages in Select HCW Groups



<https://www.cdc.gov/nhsn/acute-care-hospital/covid19/index.html>

OSJI-Covid / 20cv5096 (DoD 20-L-1014) / 4216

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Nurses

Current healthcare worker shortages by location, NHSN

Data as of May 29, 2020 at 5:30 AM



Current shortage of nurses



Total # reporting facilities in the most recent 3 days: 1620
red= Facilities reporting current shortage of nurses: 50
gray=Other facilities

Current shortage of respiratory therapists



Total # reporting facilities in the most recent 3 days: 1584
purple= Facilities reporting current shortage of respiratory therapists: 28
gray=Other facilities



Respiratory therapist

Current shortage of environmental services staff



Total # reporting facilities in the most recent 3 days: 1616
orange= Facilities reporting current shortage of environmental services staff: 32
gray=Other facilities



Environmental services staff

Current shortage of other types of healthcare workers



Total # reporting facilities in the most recent 3 days: 1580
blue= Facilities reporting current shortage of other types of healthcare workers: 43
gray=Other facilities



Other types of healthcare worker





Nurses

Impending healthcare worker shortages within a week

Data as of May 29, 2020 at 5:30 AM

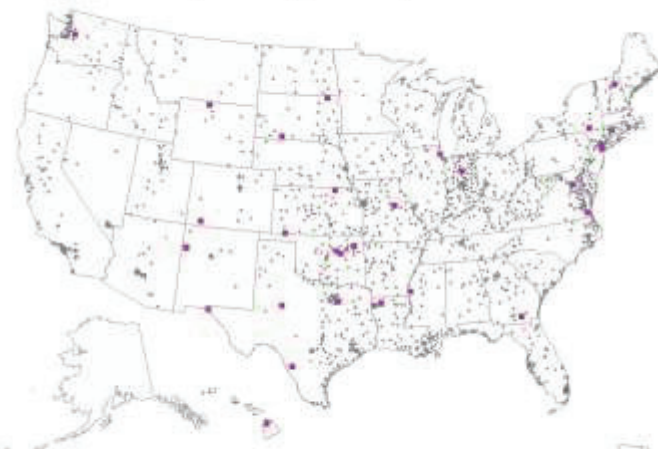


Shortage of nurses within a week



Total # reporting facilities in the most recent 3 days: 1600
red= Facilities reporting shortage of nurses within a week: 64
gray=Other facilities

Shortage of respiratory therapists within a week



Total # reporting facilities in the most recent 3 days: 1567
purple= Facilities reporting shortage of respiratory therapists within a week: 32
gray=Other facilities



Respiratory therapist

Shortage of environmental services staff within a week



Total # reporting facilities in the most recent 3 days: 1600
orange= Facilities reporting shortage of environmental services staff within a week: 35
gray=Other facilities

Shortage of other types of healthcare workers within a week



Total # reporting facilities in the most recent 3 days: 1559
blue= Facilities reporting shortage of other types of healthcare workers within a week: 47
gray=Other facilities



Other types of healthcare worker



Environmental services staff



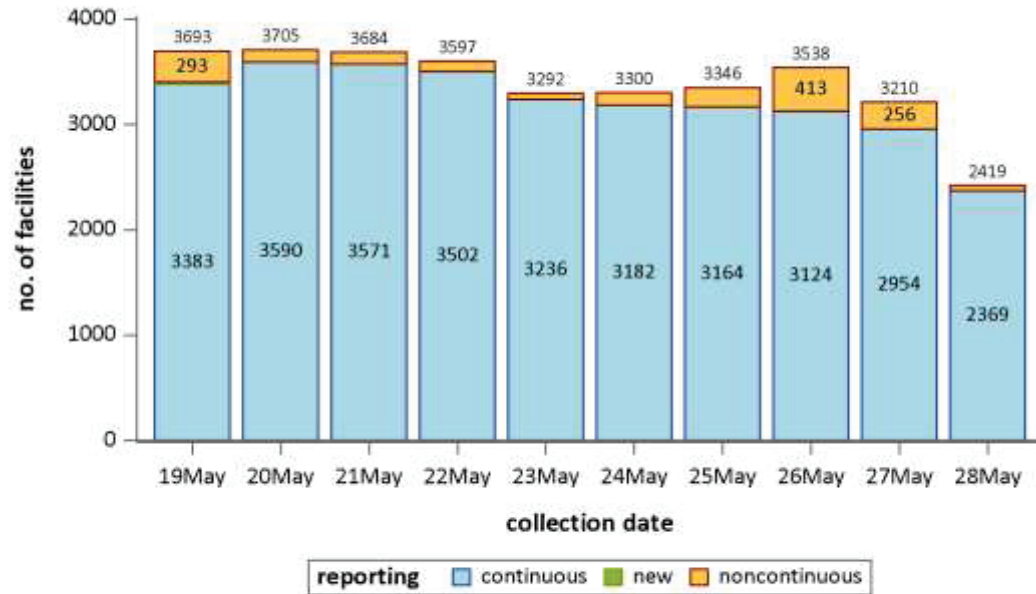
Hospital: Patient Impact & Hospital Capacity Pathway



Overall Patient Impact and Hospital Capacity

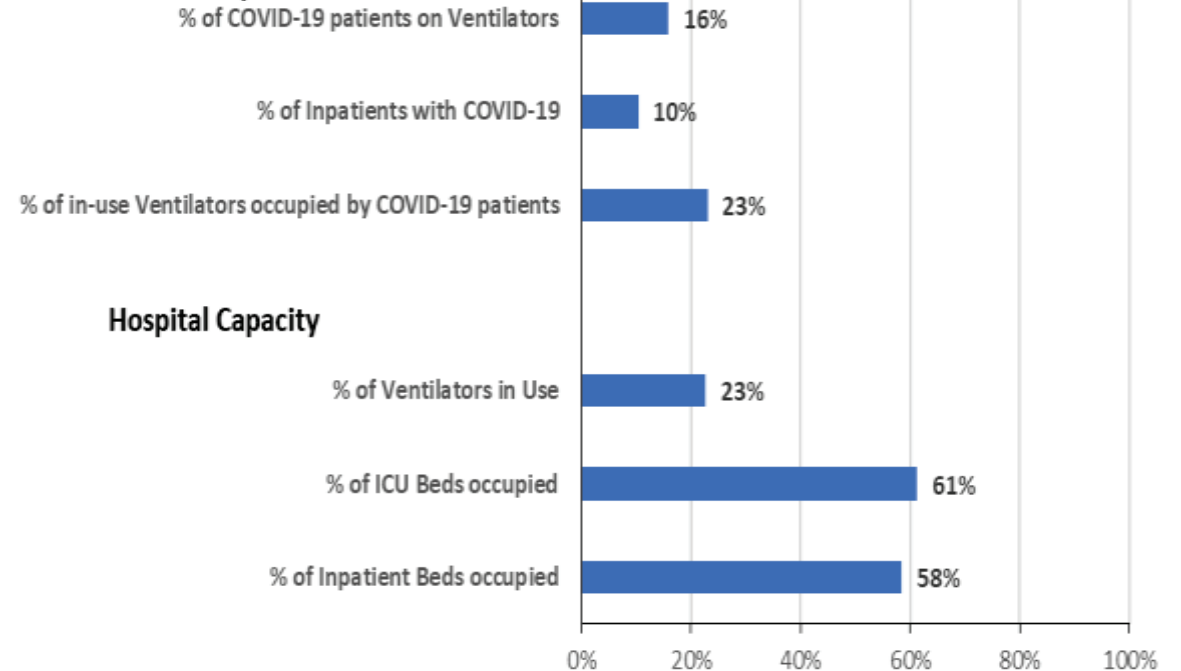
4,445 facilities have reported for at least one day

Number of facilities by reporting pattern, NHSN



continuous=reporting continuously within past 3 days, which include collection date
 noncontinuous=reporting noncontinuously within past 3 days, which include collection date
 new=facility reporting first time to PIHC module

Patient Impact



Includes the most recent data for every facility that reported for most recent three days.

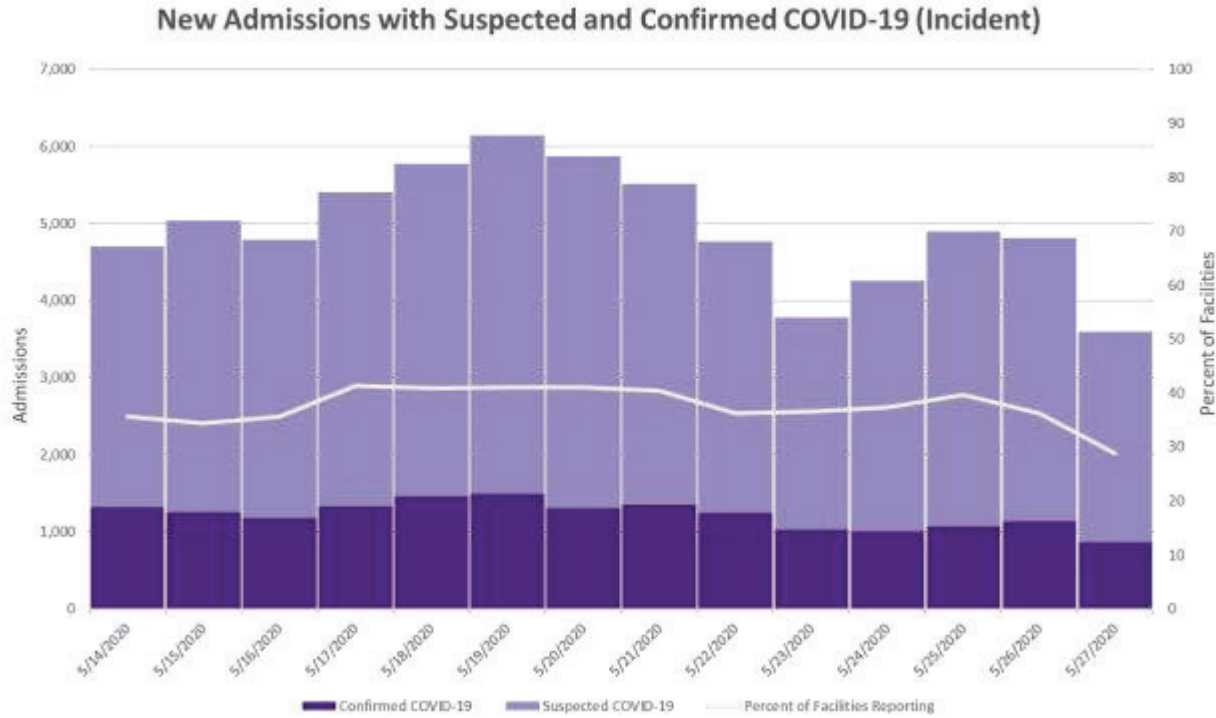
<https://www.cdc.gov/nhsn/acute-care-hospital/covid19/index.html>

OSJI-Covid / 20cv5096 (DoD 20-L-1014) / 4220

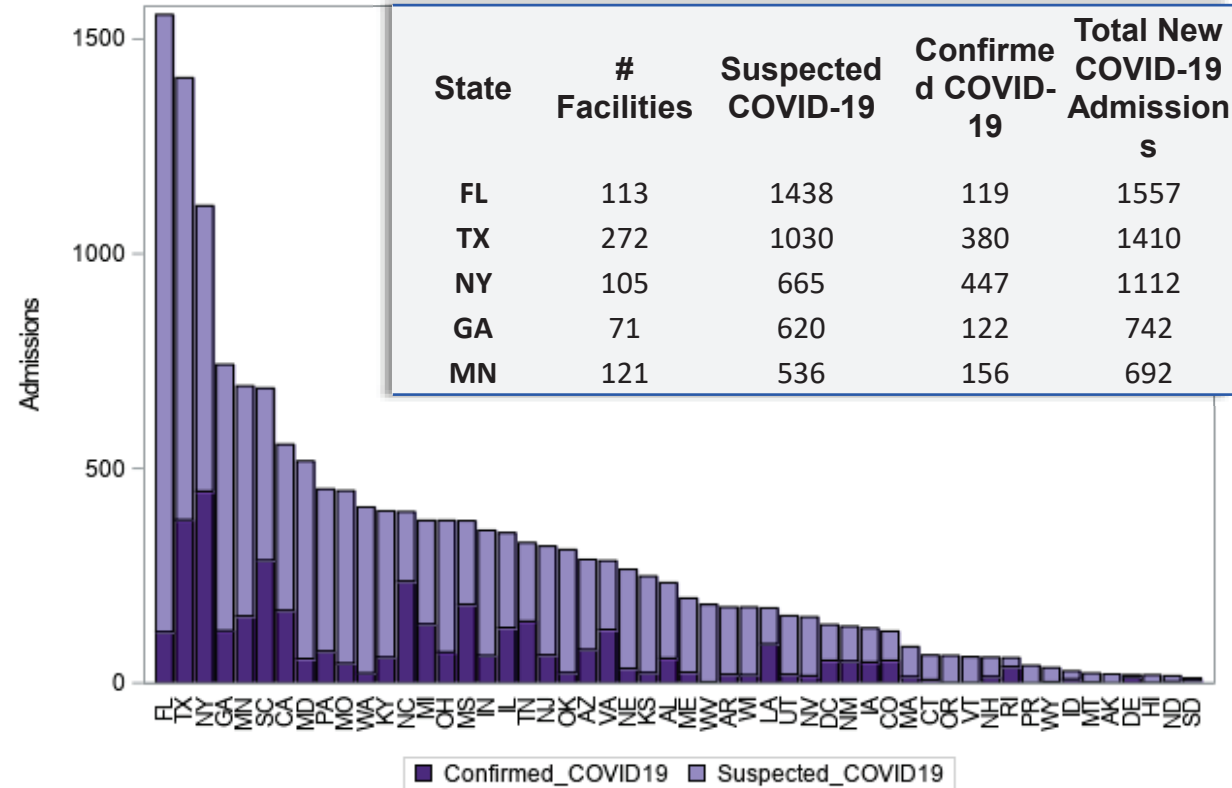
Data are provisional until officially released from CDC – For Internal Use Only (FIUO) – For Official Use Only (FOUO) – Sensitive But Unclassified (SBU)



New Admissions with COVID-19, by Day



**New Admissions with Suspected and Confirmed COVID-19 (Incident)
By State
5/24 - 5/27**



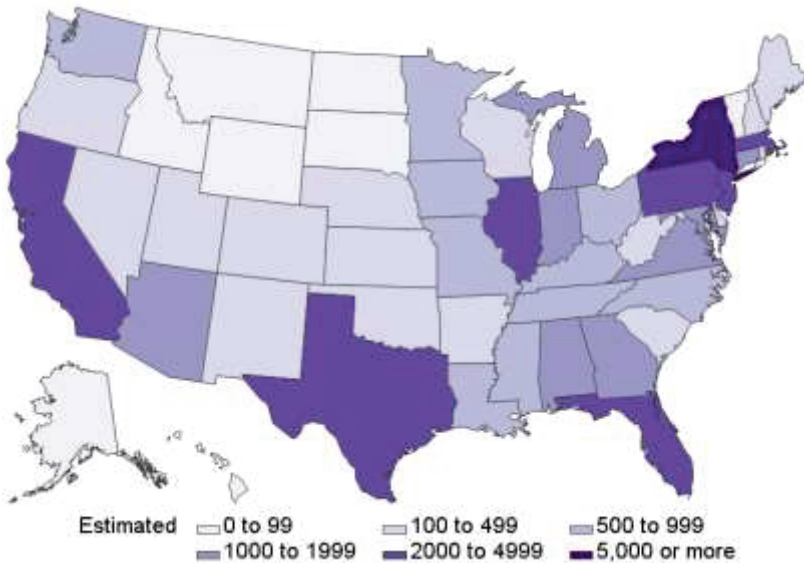


National and State Estimates, NHSN

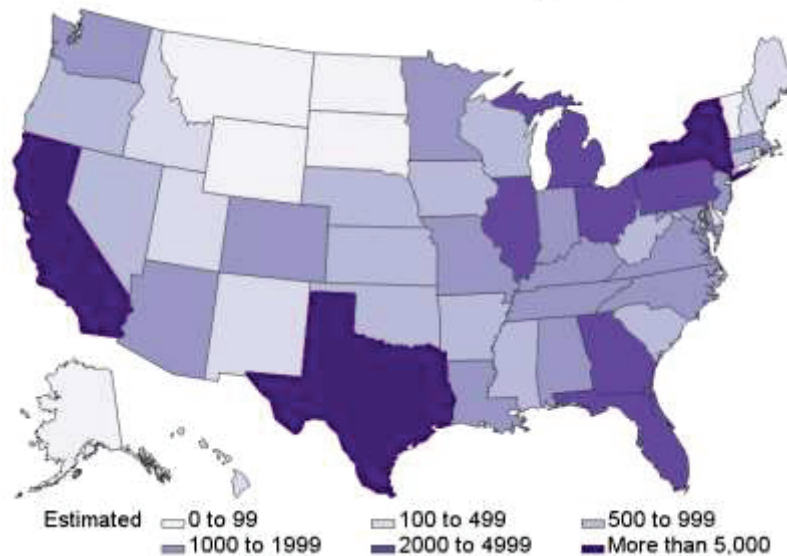
- Used reported NHSN COVID-19 data to calculate state- and nationally-weighted estimates with error estimates (95% confidence interval)
- Applied multiple imputation and survey weighting adjusting for facility characteristics

Estimates 5/28	National estimate (95% CI)
Total inpatient beds occupied	514,591 (482,468-546,713)
Inpatient beds occupied by COVID-19 patients	51,278 (46,673-55,883)
ICU beds occupied	71,606 (66,141-77,072)
Ventilators used	36,436 (33,135-39,737)

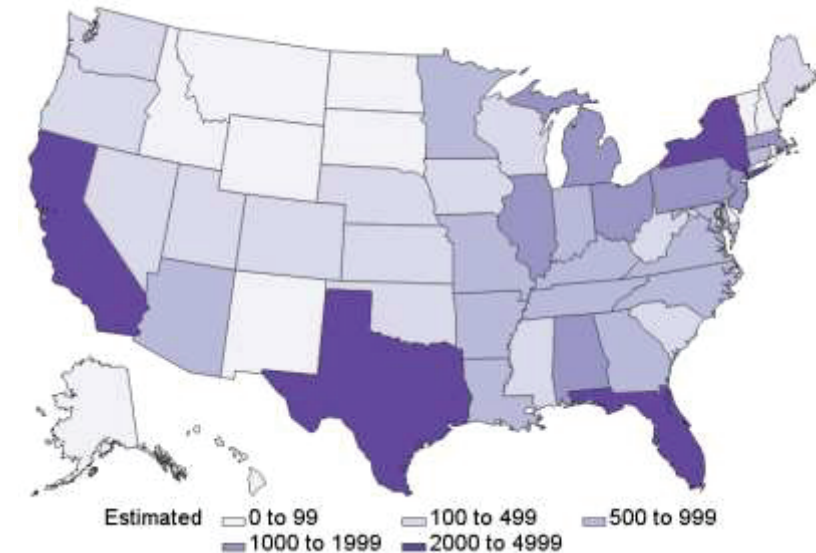
Estimate of inpatient beds occupied by COVID-19 patients, 5/28



Estimate of ICU beds occupied, 5/28



Estimate of ventilators used, 5/28



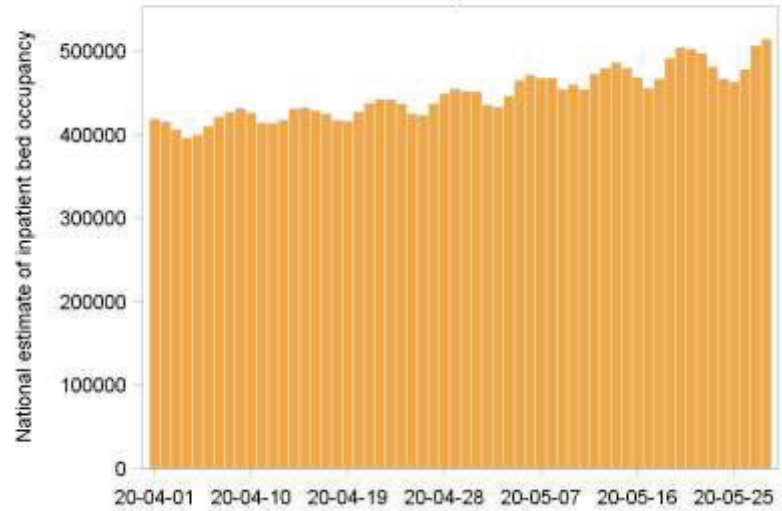
Ventilators include anesthesia machines, portable/transport ventilators, & neonatal ventilators available in the facility. BiPAP included if the hospital uses BiPAP to deliver positive pressure ventilation via artificial airways.



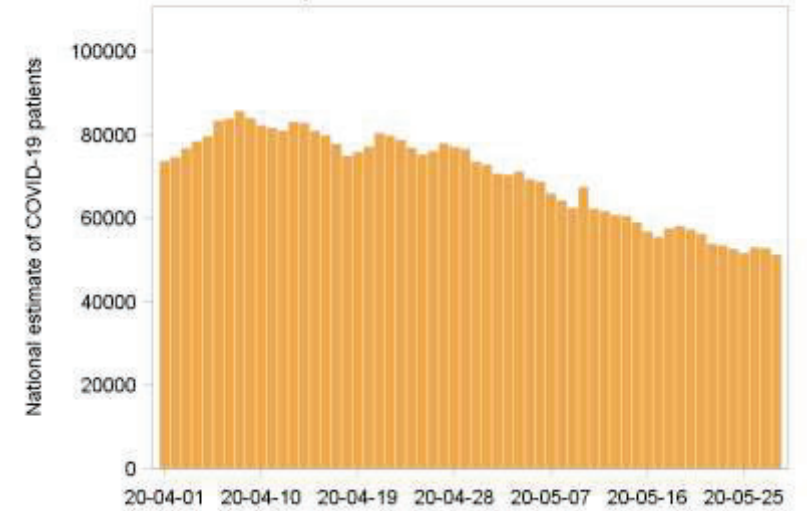
National Estimates by Day, NHSN (Apr 1st-May 27th)

- National estimates based on NHSN for April
- Estimates use weighting for non-response and multiple imputation for missing data
- Total inpatients increased, while decrease in total inpatients with COVID-19 seems to continue
- Total ventilator use has declined

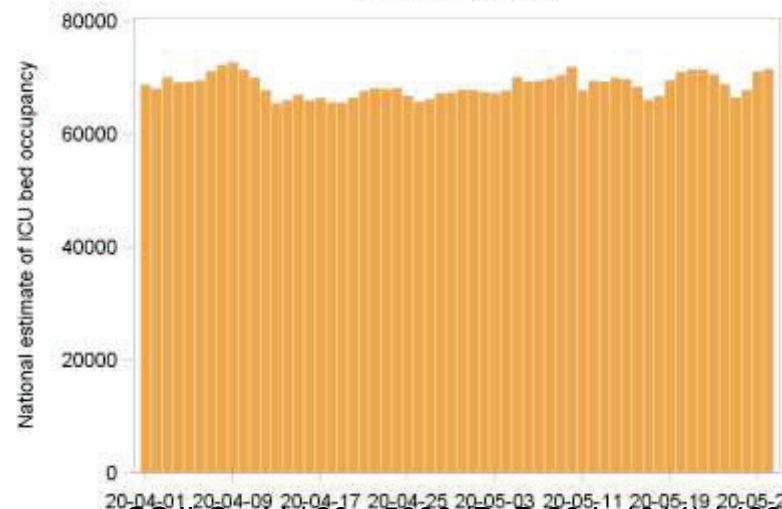
Total inpatients



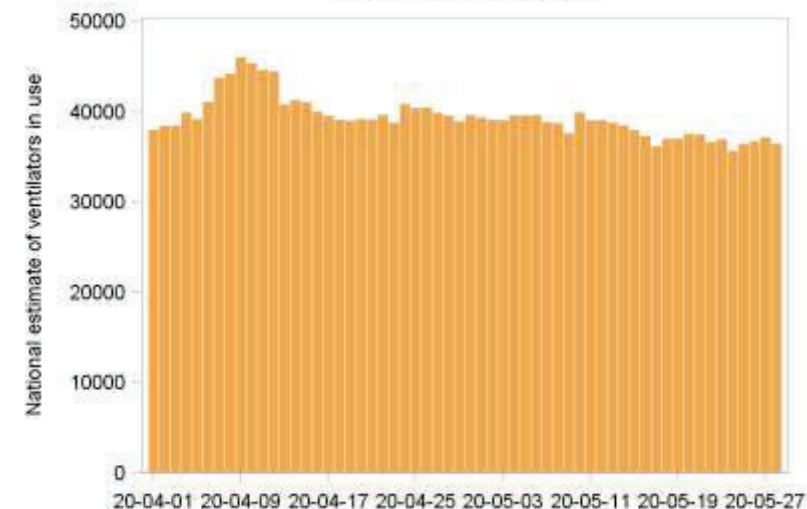
Inpatients with COVID-19



ICU Patients

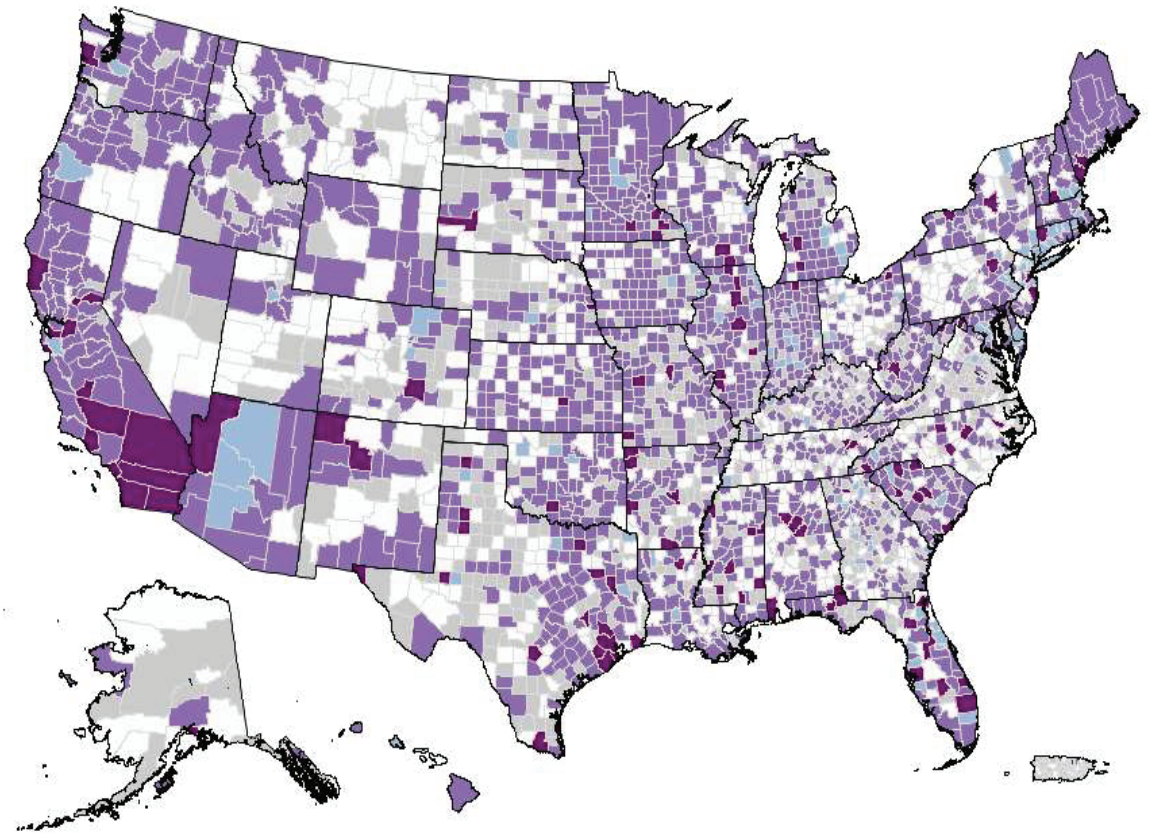
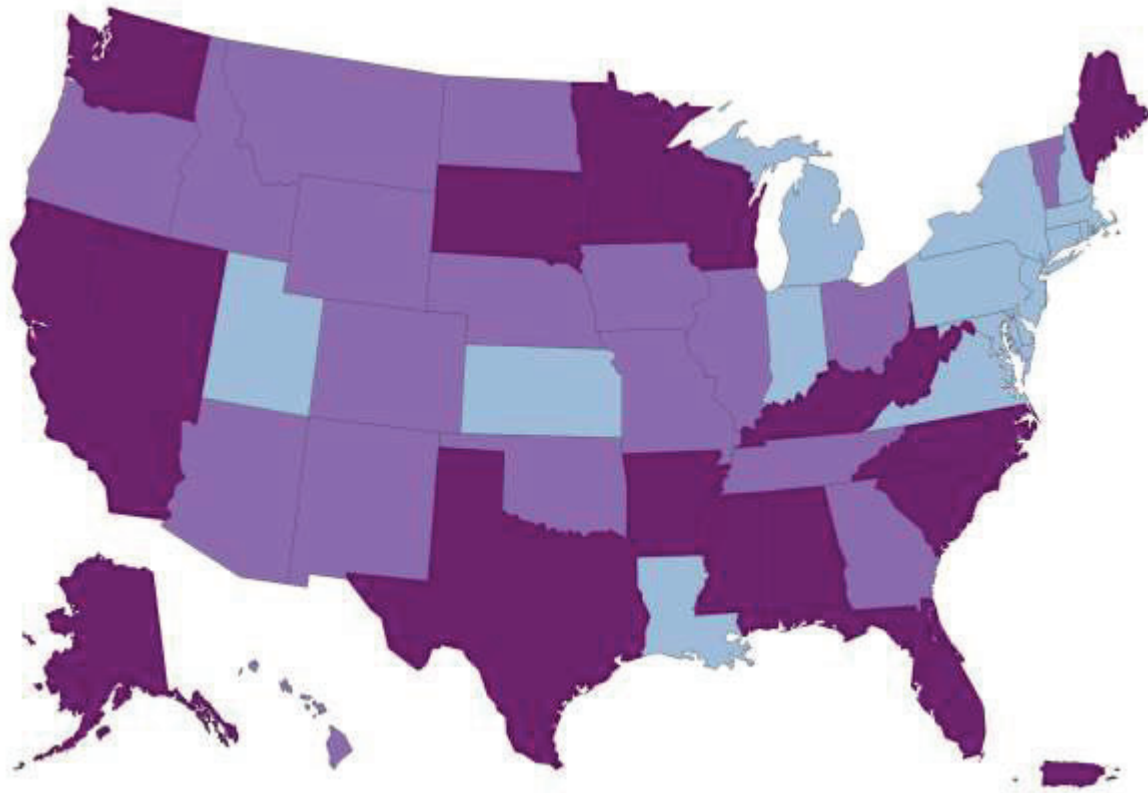


Total ventilators





Change* in Percent of Inpatient Beds Occupied by COVID-19 Patients over 14-day Period (May 13-26, 2020)



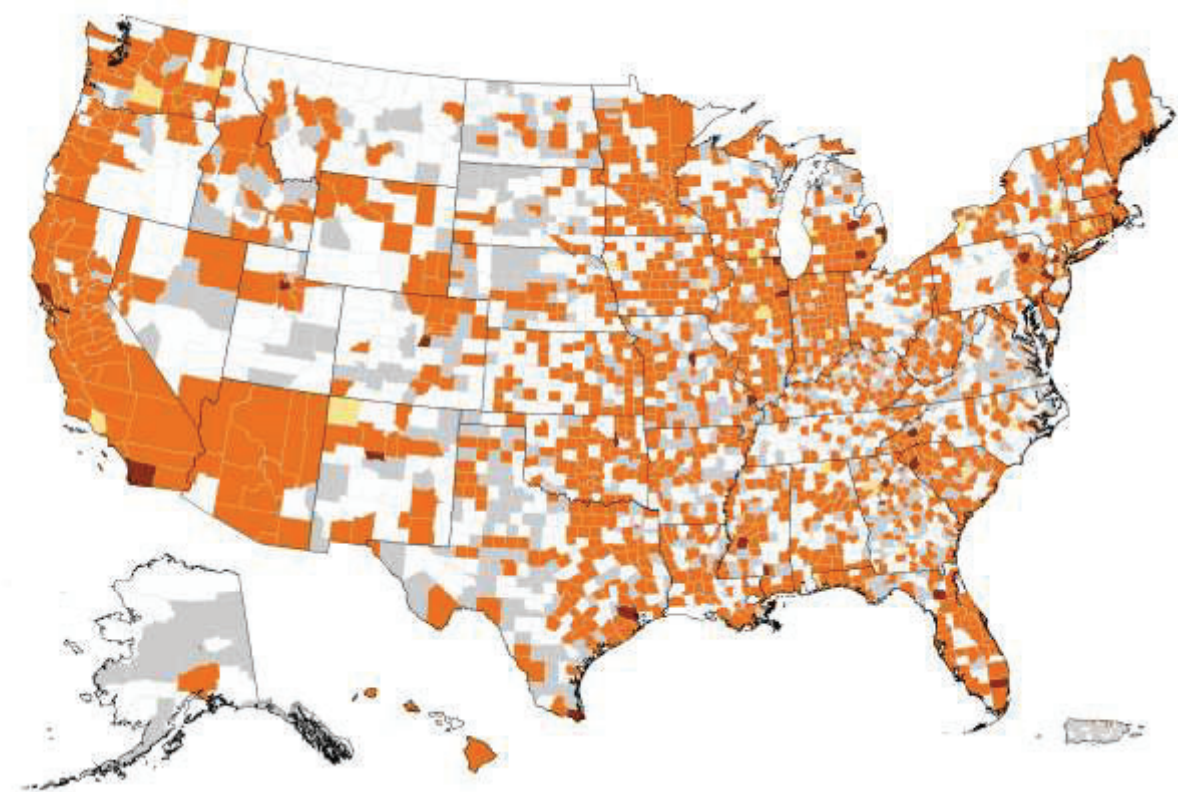
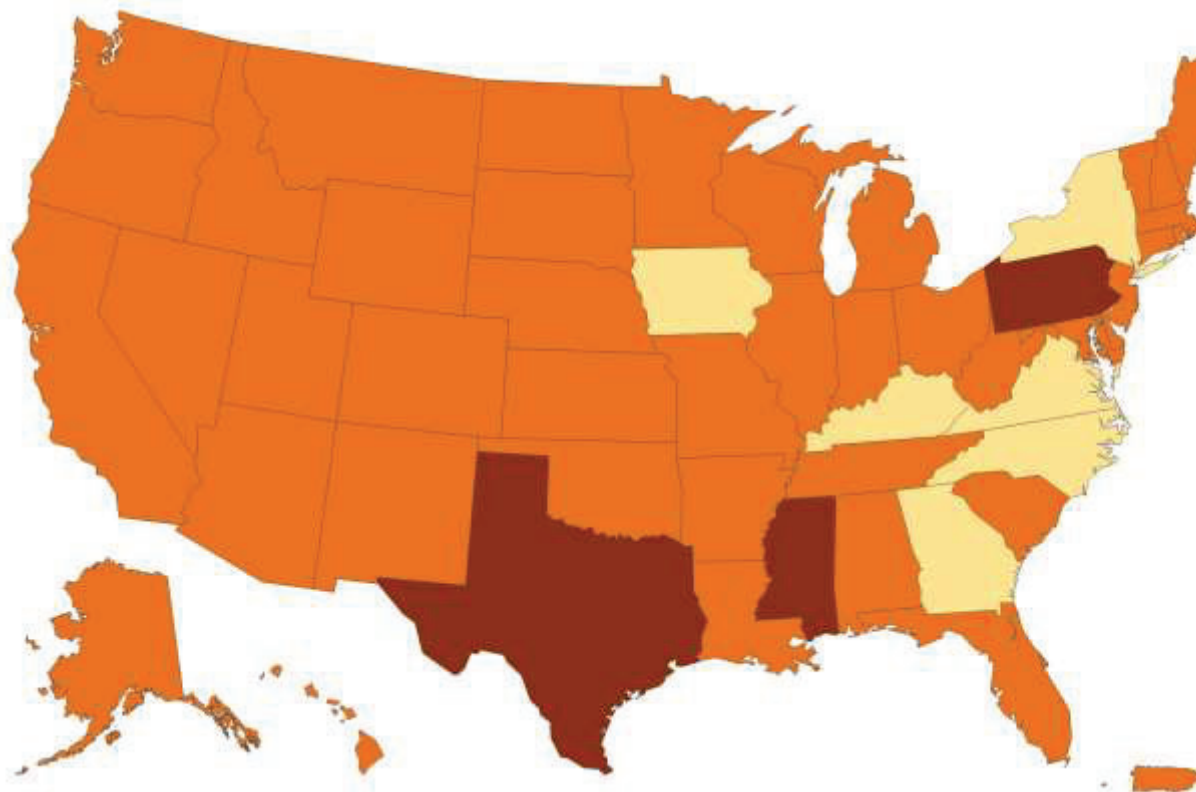
*measured as the slope of random coefficient model to 3 day-moving average of percent of inpatient beds occupied by COVID-19 patients. Model adjusted for bed size, facility type, % daily facility participation in PIHC module, and county-specific cumulative confirmed COVID-19 cases per 100,000 population (source: Johns Hopkins CSSE).

- no facilities
- facilities not reporting
- decreasing
- stable
- increasing

OSJI-Covid / 20cy5096 (DoD 20-L-1014) / 4224

Y

Change* in Percent of COVID-19 Patients on Ventilators over 14-day Period (May 13-26, 2020)

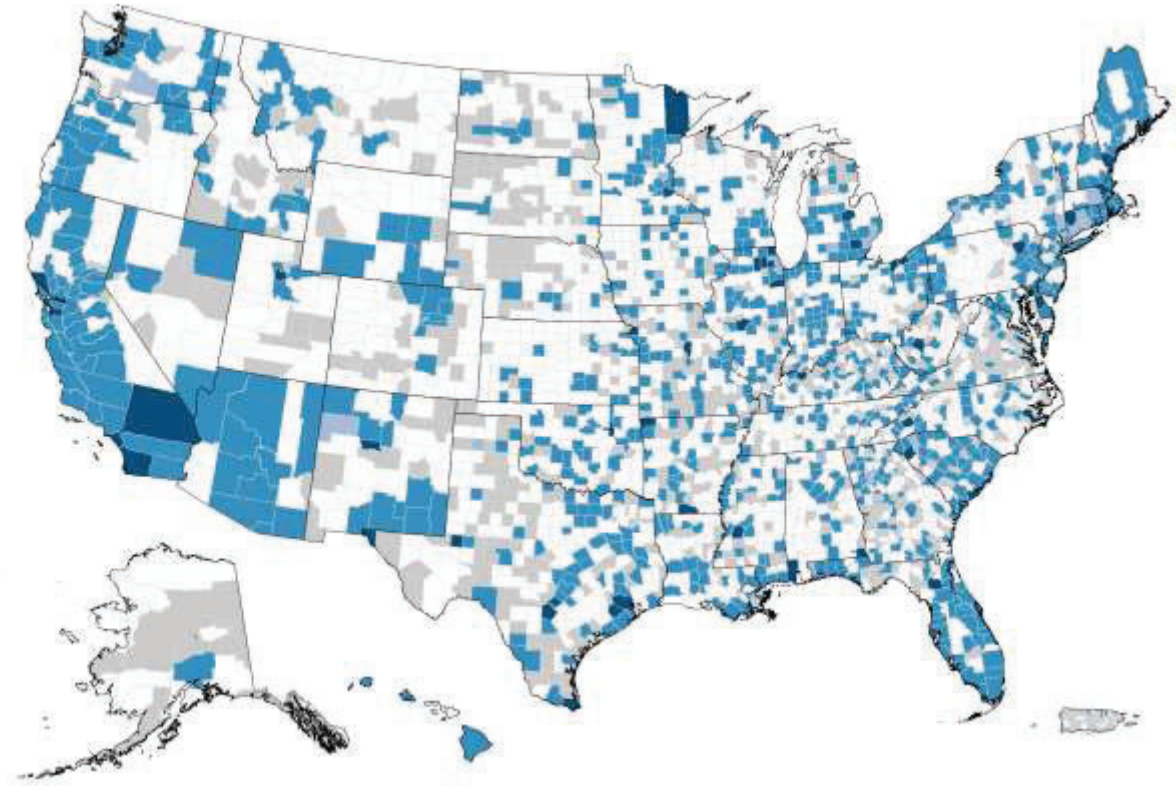
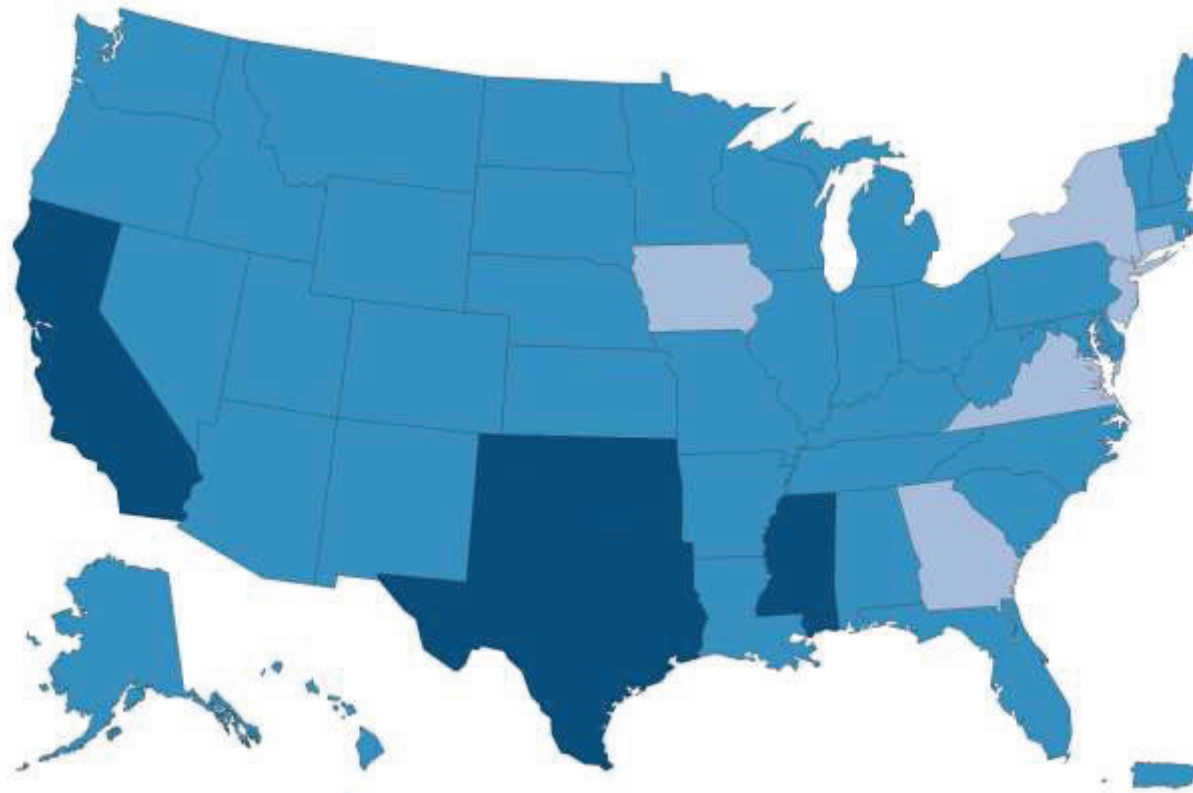


*measured as the slope of random coefficient model to 3 day-moving average of percent of COVID-19 patients on ventilators. Model adjusted for bed size, facility type, % daily facility participation in PIHC module, and county-specific cumulative confirmed COVID-19 cases per 100,000 population (source: Johns Hopkins CSSE).

- no facilities
- facilities not reporting
- decreasing
- stable
- increasing

Y

Change* in Percent of In-use Ventilators Occupied by COVID-19 Patients over 14-day Period (May 13-26, 2020)



*measured as the slope of random coefficient model to 3 day-moving average of percent of in-use ventilators occupied by COVID-19 patients. Model adjusted for bed size, facility type, % daily facility participation in PIHC module, and county-specific cumulative confirmed COVID-19 cases per 100,000 population (source: Johns Hopkins CSSE).

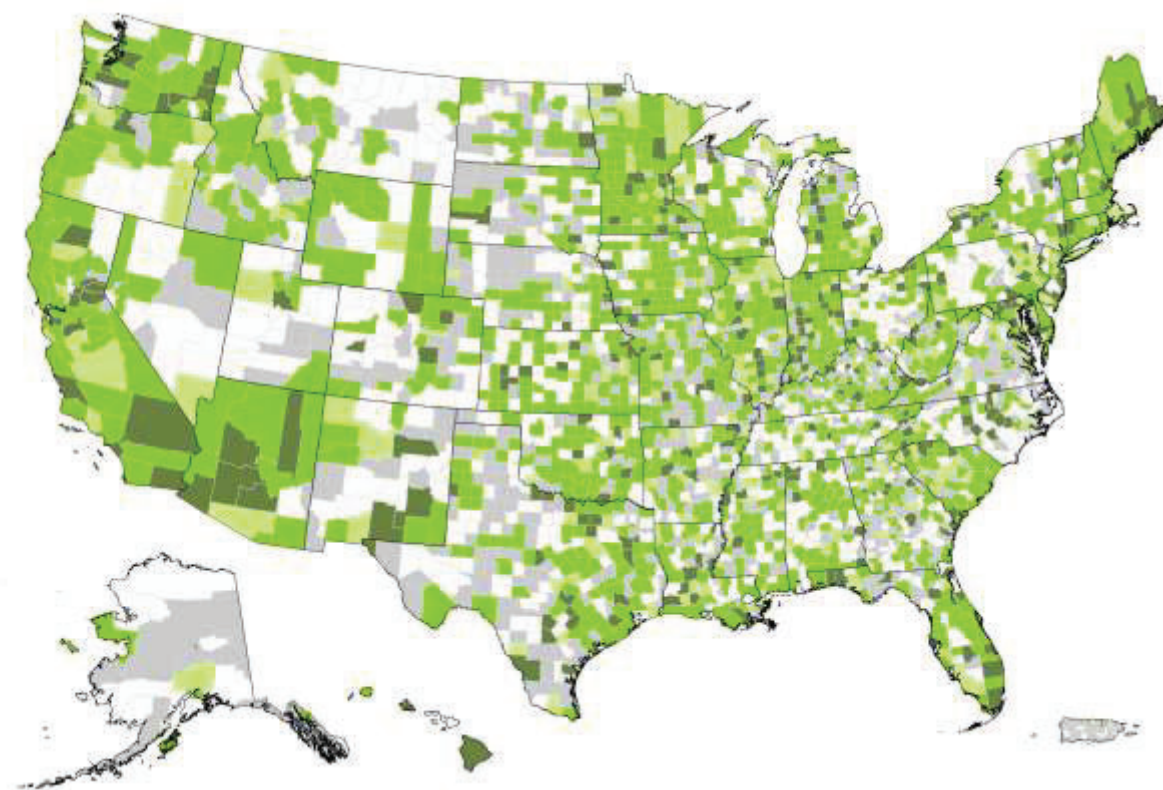
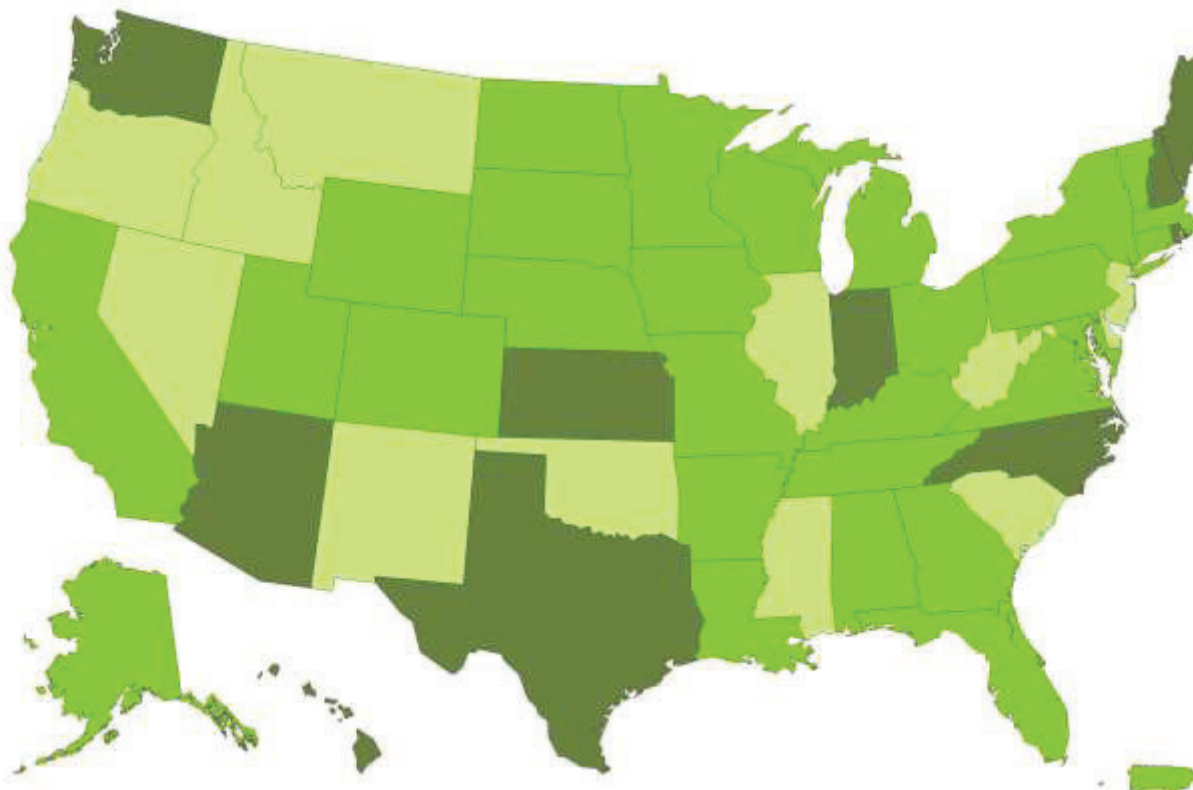
- no facilities
- facilities not reporting
- decreasing
- stable
- increasing

OSJI-Covid / 20cy5096 (DoD 20-L-1014) / 4226


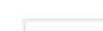



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Y

Change* in Percent of Inpatient Beds Occupied over 14-day Period (May 13-26, 2020)

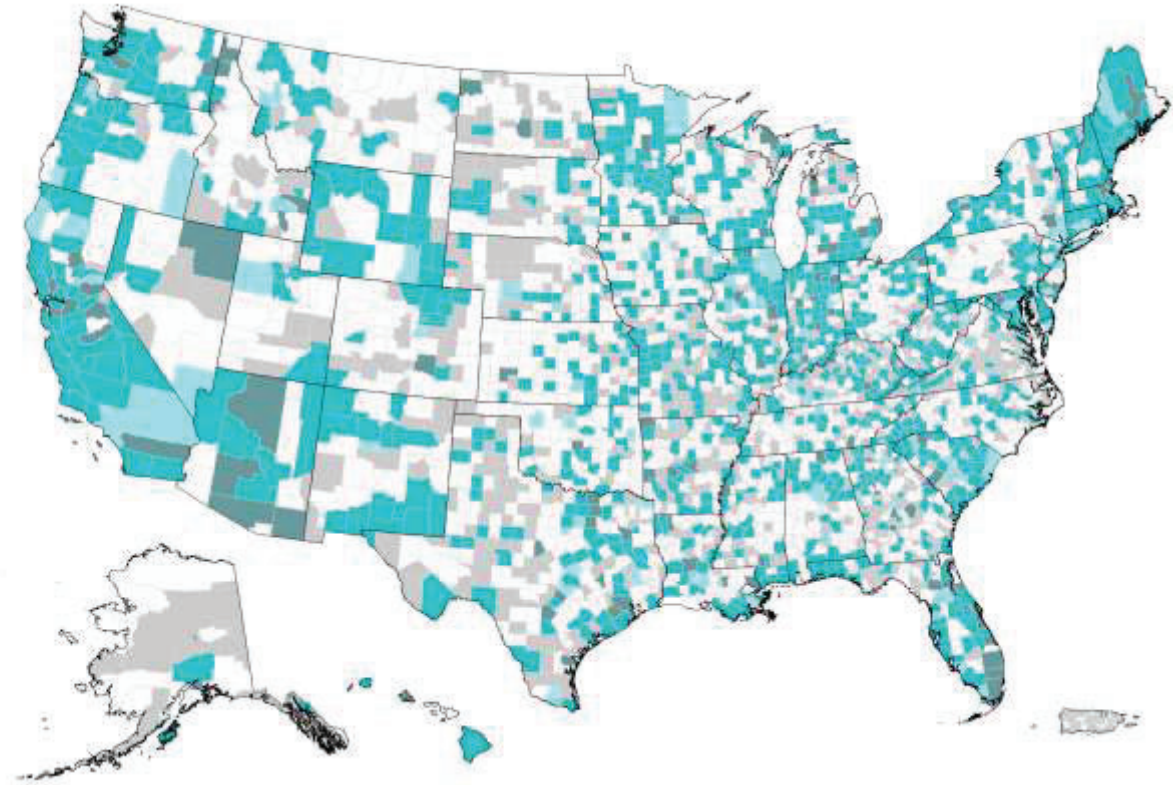
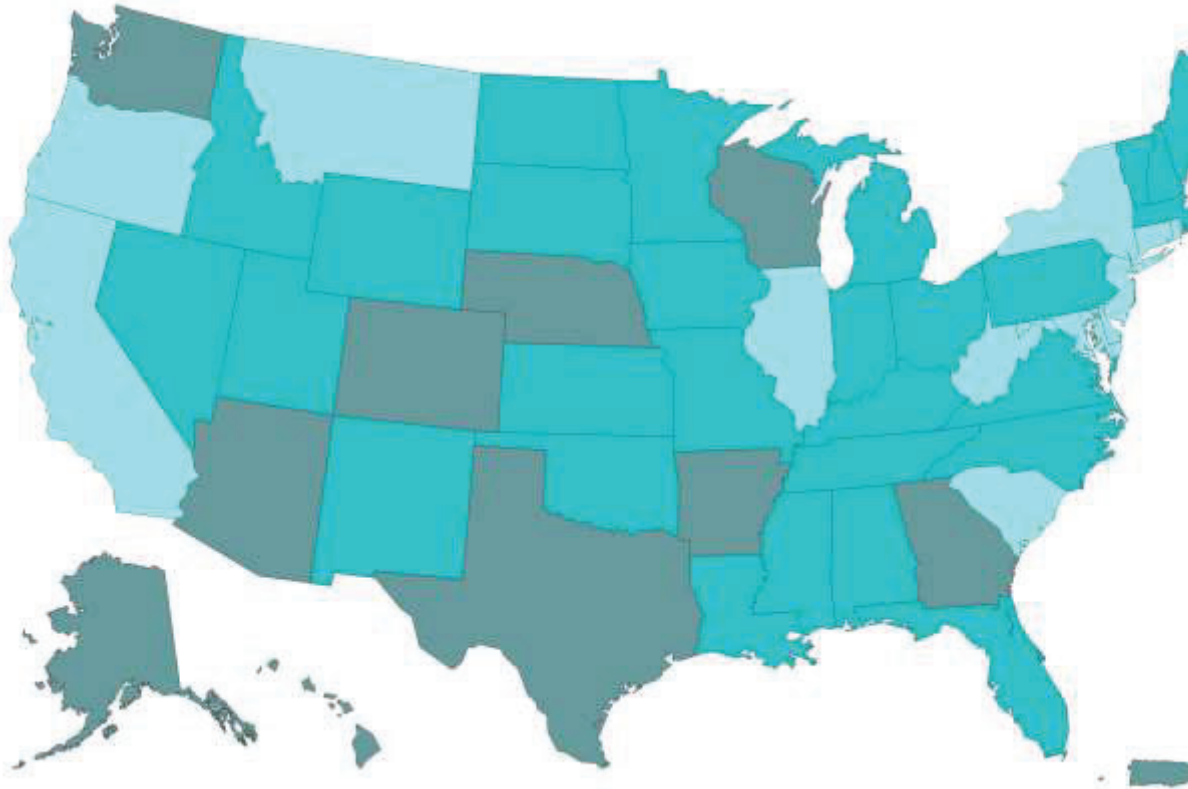


*measured as the slope of random coefficient model to 3 day-moving average of percent of inpatient beds occupied. Model adjusted for bed size, facility type, % daily facility participation in PIHC module, and county-specific cumulative confirmed COVID-19 cases per 100,000 population (source: Johns Hopkins CSSE).






-  no facilities
-  facilities not reporting
-  decreasing
-  stable
-  increasing

Y

Change* in Percent of ICU Beds Occupied over 14-day Period (May 13-26, 2020)

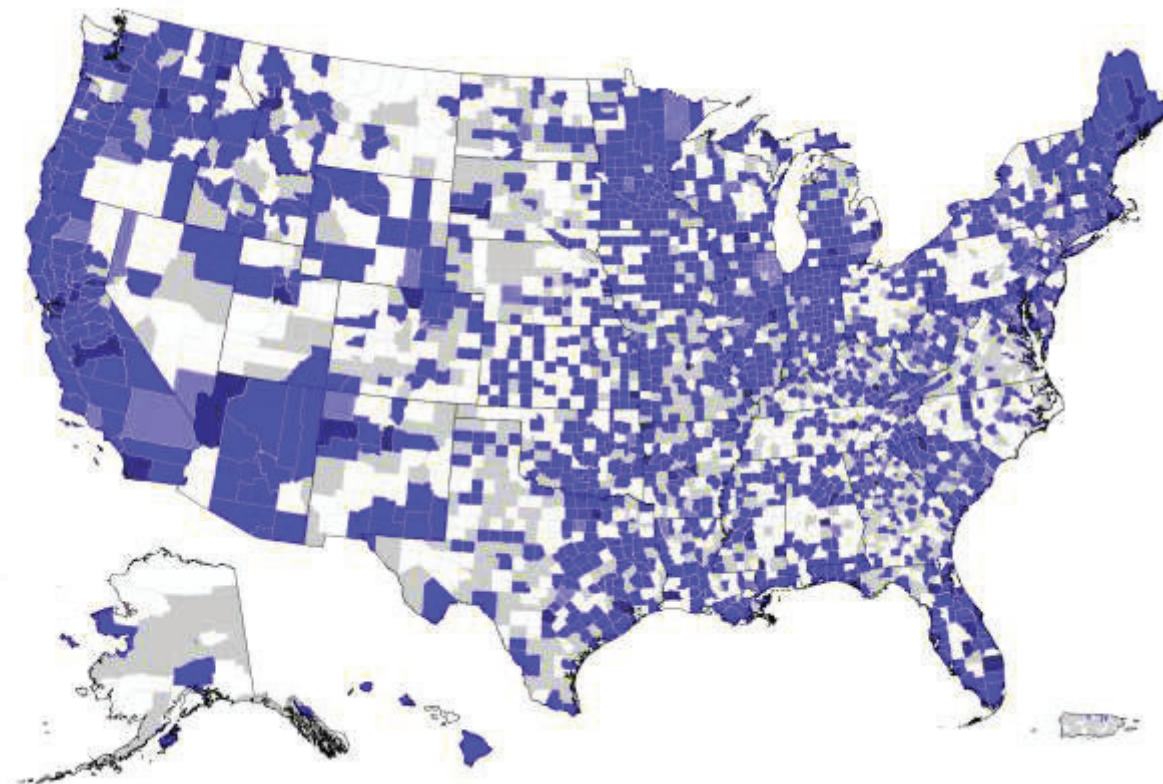
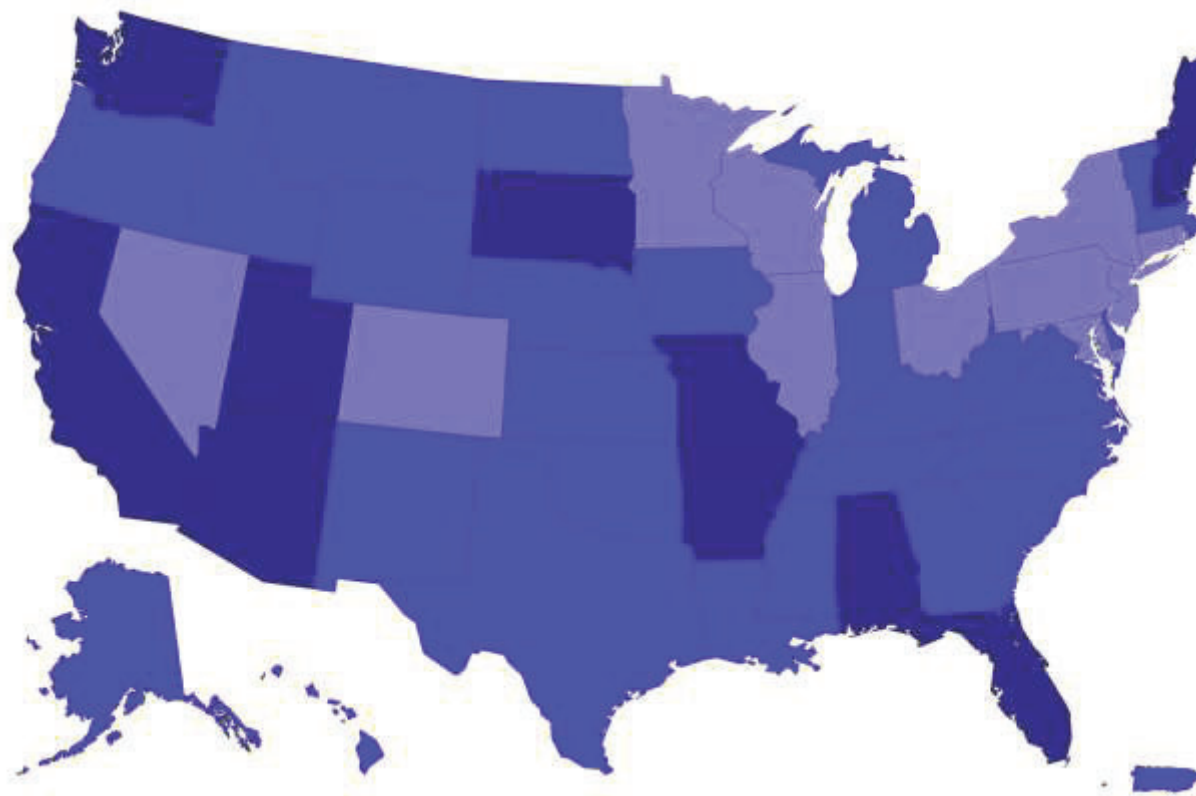


*measured as the slope of random coefficient model to 3 day-moving average of percent of ICU beds occupied. Model adjusted for bed size, facility type, % daily facility participation in PIHC module, and county-specific cumulative confirmed COVID-19 cases per 100,000 population (source: Johns Hopkins CSSE).

-  no facilities
-  facilities not reporting
-  decreasing
-  stable
-  increasing

Y

Change* in Percent of Ventilator Use over 14-day Period (May 13-26, 2020)



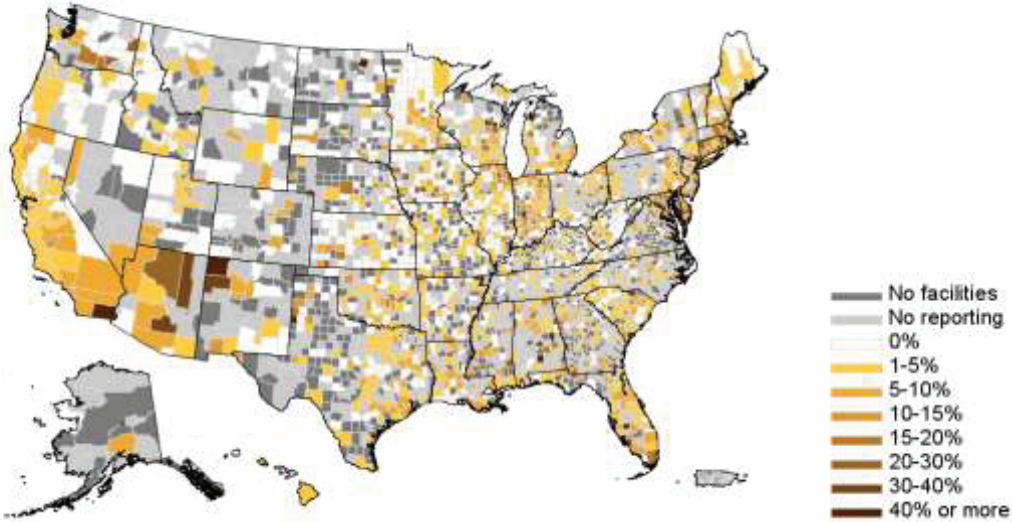
*measured as the slope of random coefficient model to 3 day-moving average of percent of ventilator use. Model adjusted for bed size, facility type, % daily facility participation in PIHC module, and county-specific cumulative confirmed COVID-19 cases per 100,000 population (source: Johns Hopkins CSSE).

- no facilities
- facilities not reporting
- decreasing
- stable
- increasing

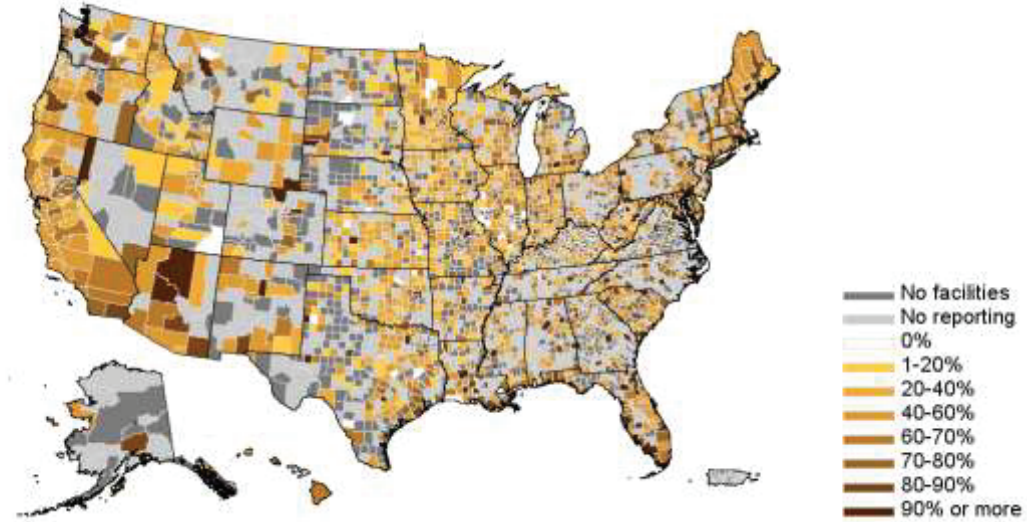


NHSN Data by County for Most Recent 3 Days

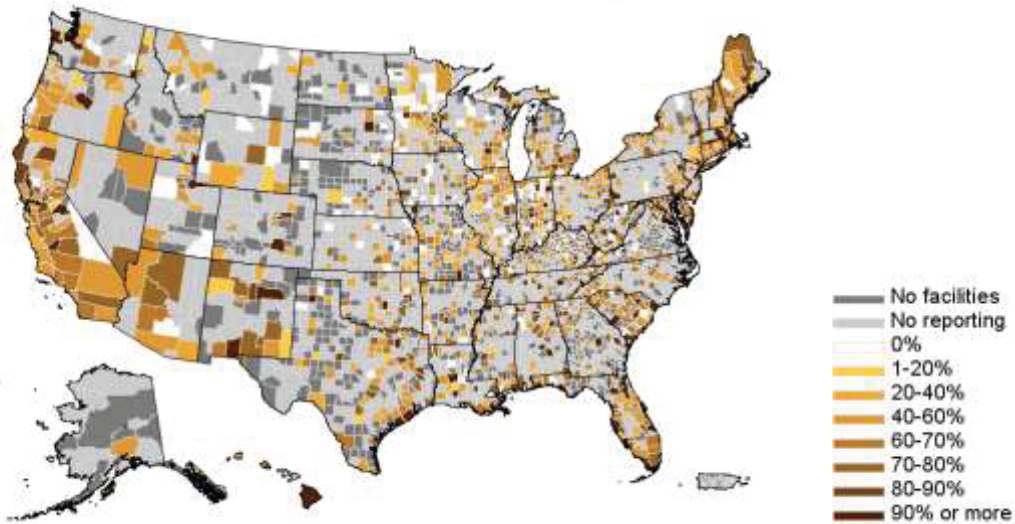
Percent of inpatient beds occupied by COVID-19 patients



Percent of inpatient beds occupied (all inpatients)

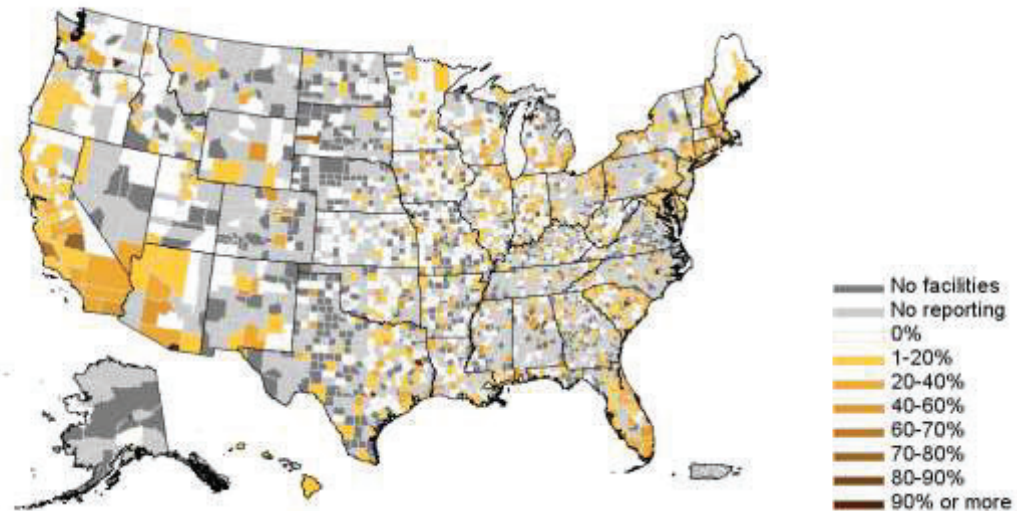


Percent of ICU Beds occupied



Ventilators include anesthesia machines, portable/transport ventilators, & neonatal ventilators available in the facility. BiPAP included if the hospital uses BiPAP to deliver positive pressure ventilation via artificial airways.

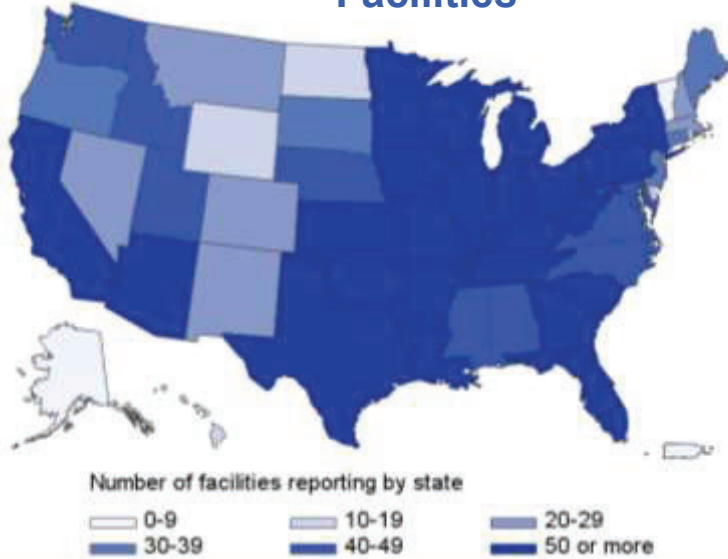
Percent of ventilators in use





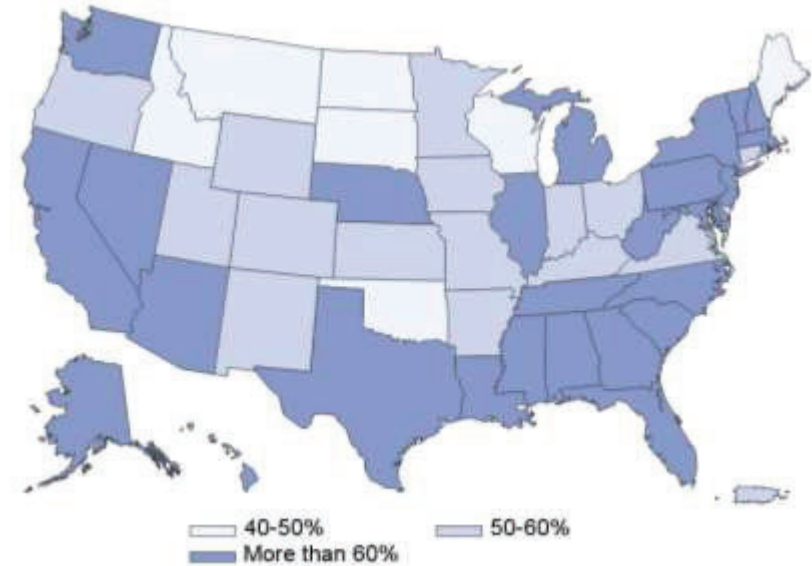
Patient Impact and Hospital Capacity Summary by State

Participation by State, Number of Facilities

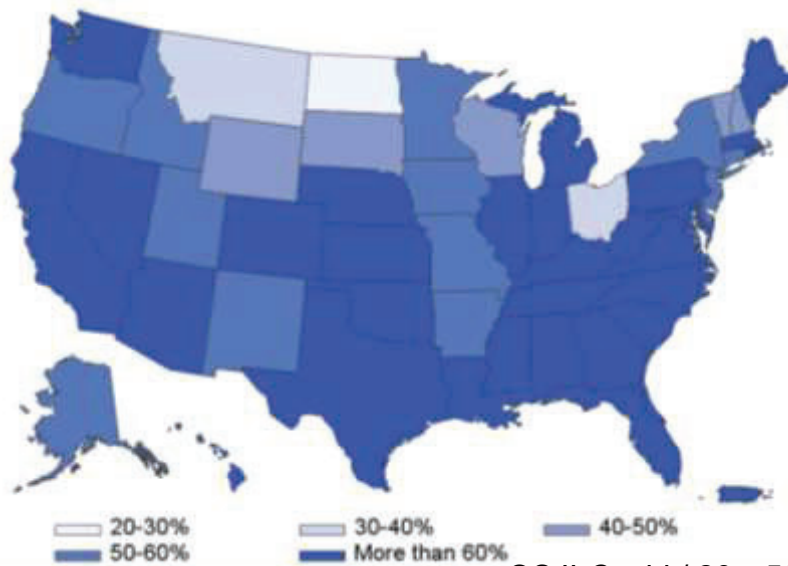


Data as of May 29, 2020 at 5:30 AM

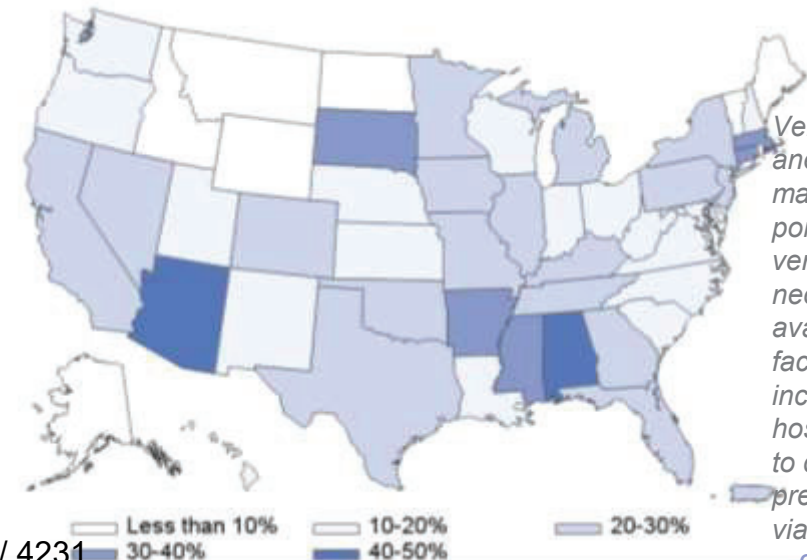
Percent of Inpatient Bed Use by State



Percent of ICU Bed Use by State



Percent of Ventilators in Use by State



Ventilators include anesthesia machines, portable/transport ventilators, & neonatal ventilators available in the facility. BiPAP included if the hospital uses BiPAP to deliver positive pressure ventilation via artificial airways.

Includes the most recent data for every facility that reported for the most recent three days.





National Capacity by Specific Cut-points, 5/26-5/28

	Number	Total Number Facilities Reporting	Percent
Facilities with 60+% of ventilators in use¹	192	3352	5.7%
Facilities with 30+% of inpatients having COVID19²	77	3527	2.2%
Facilities with 80+% of ICU beds used³	583	3339	17.5%
Facilities with 80+% of all inpatient beds used⁴	619	3400	18.2%

¹481 facilities reported 0 denominator

²12 facilities reported 0 denominator

³1029 facilities reported 0 denominator

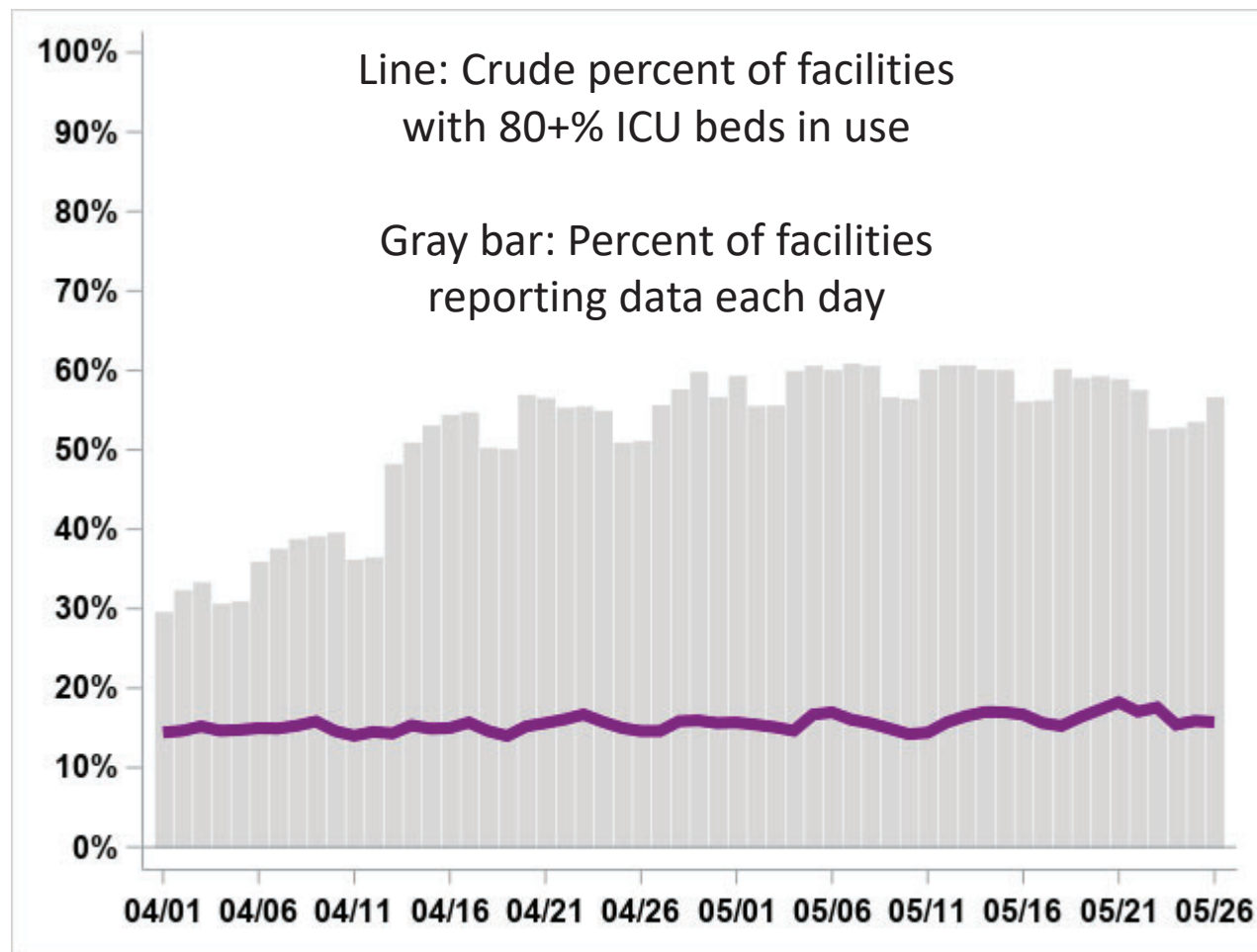
⁴12 facilities reported 0 denominator

Ventilators include anesthesia machines, portable/transport ventilators, & neonatal ventilators available in the facility. BiPAP included if the hospital uses BiPAP to deliver positive pressure ventilation via artificial airways.



NHSN Daily Percent ICU Beds Occupancy

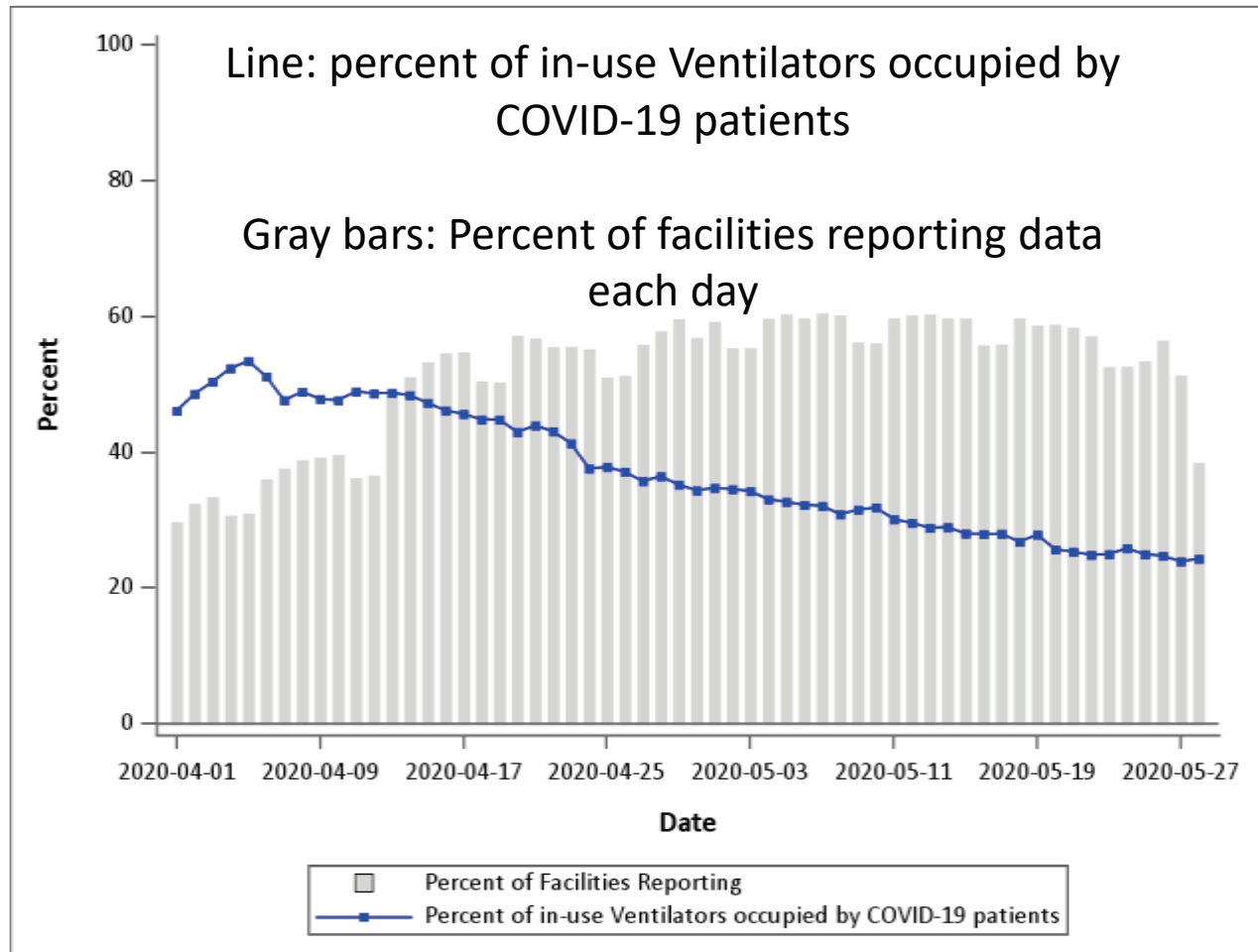
Crude percentage of reported facilities with 80% or more ICU beds used





Percent Ventilators Occupied by COVID-19 Patients

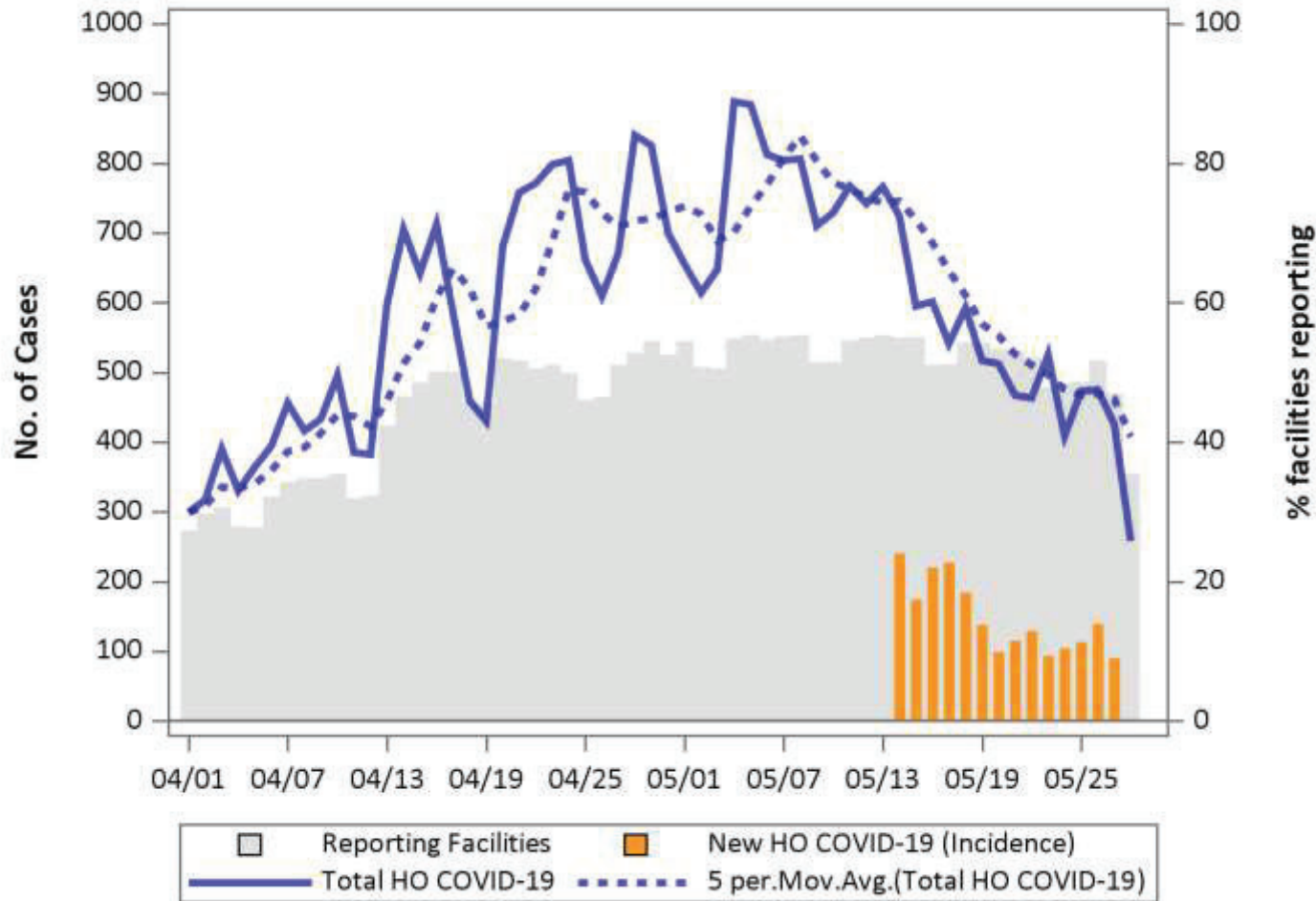
Crude percentage of in-use ventilators occupied by COVID-19 patients





Number of Hospital-Onset COVID-19 Patients, Reported to NHSN

Inpatients with Hospital Onset COVID-19



- 131 facilities reporting 5% or more of total HO cases among their hospitalized COVID-19 patients



Acute-Care Hospitals, Total Beds Reported 5/28

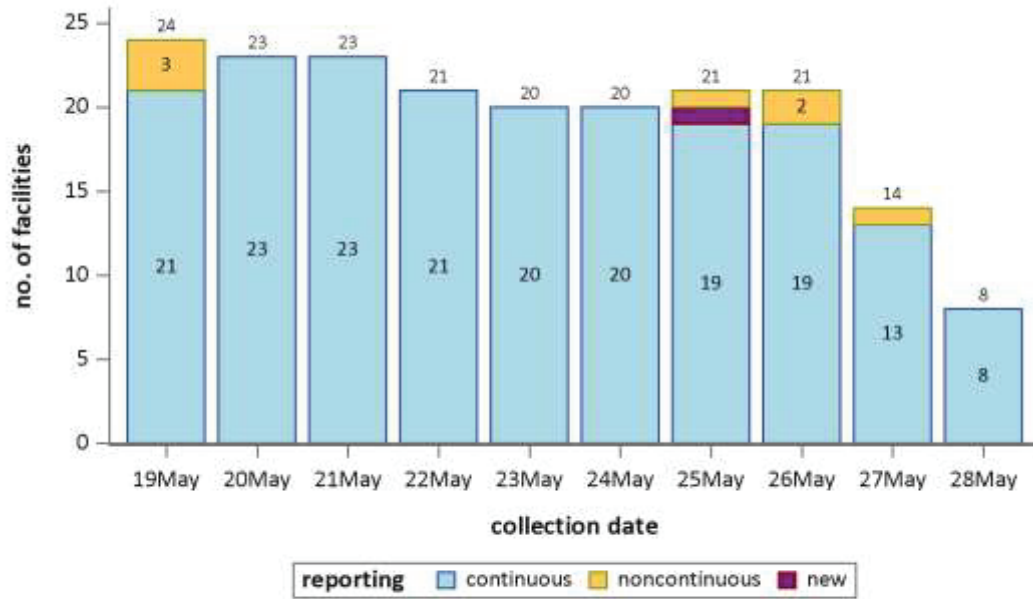
- 882 hospitals reporting more beds open than baseline
 - Total additional beds 44,389
 - Top 12 states: CA, TX, IL, NY, MD, LA, OH, MS, MI, IN, SC, NJ: 29,658
- 655 hospitals reporting fewer beds open than baseline
 - Total fewer beds: 43,270
 - Top 10 states: CA, FL, OK, MO, NY, CT, IL, TX, MN, MI: 26,592

Indian Health Service and Tribal Drill Down



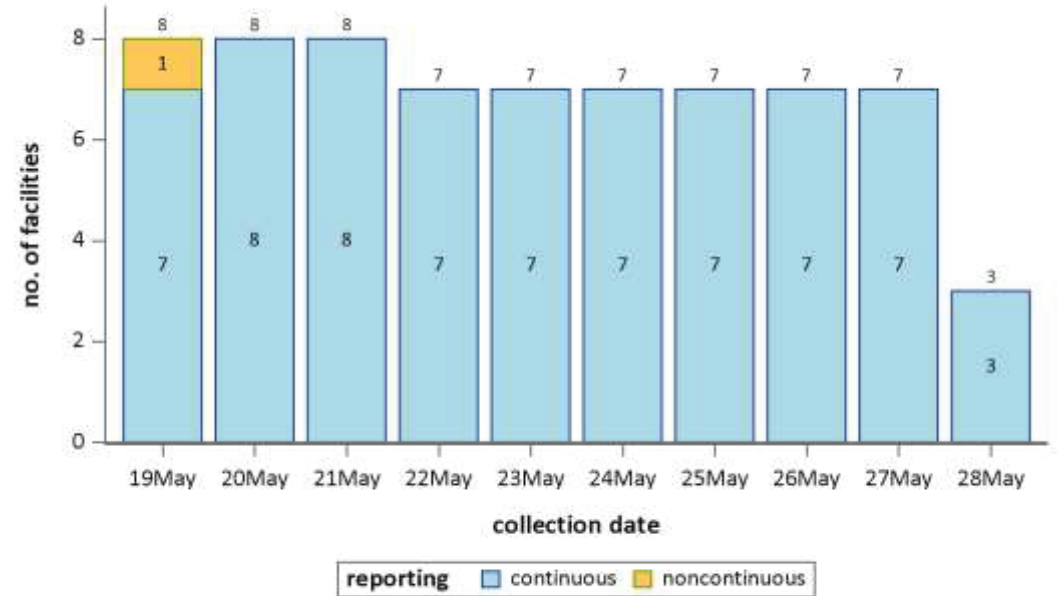
Reporting: Tribal & Indian Health Service Facilities

Number of facilities by reporting pattern, IHS



continuous=reporting continuously within past 3 days, which include collection date
 noncontinuous=reporting noncontinuously within past 3 days, which include collection date
 new=facility reporting first time to PIHC module

Number of facilities by reporting pattern, Tribal facilities



continuous=reporting continuously within past 3 days, which include collection date
 noncontinuous=reporting noncontinuously within past 3 days, which include collection date
 new=facility reporting first time to PIHC module

States with Indian Health Services facilities:
 AR, AZ, MN, MT, ND, NM, NY, OK, SD, TX, WA

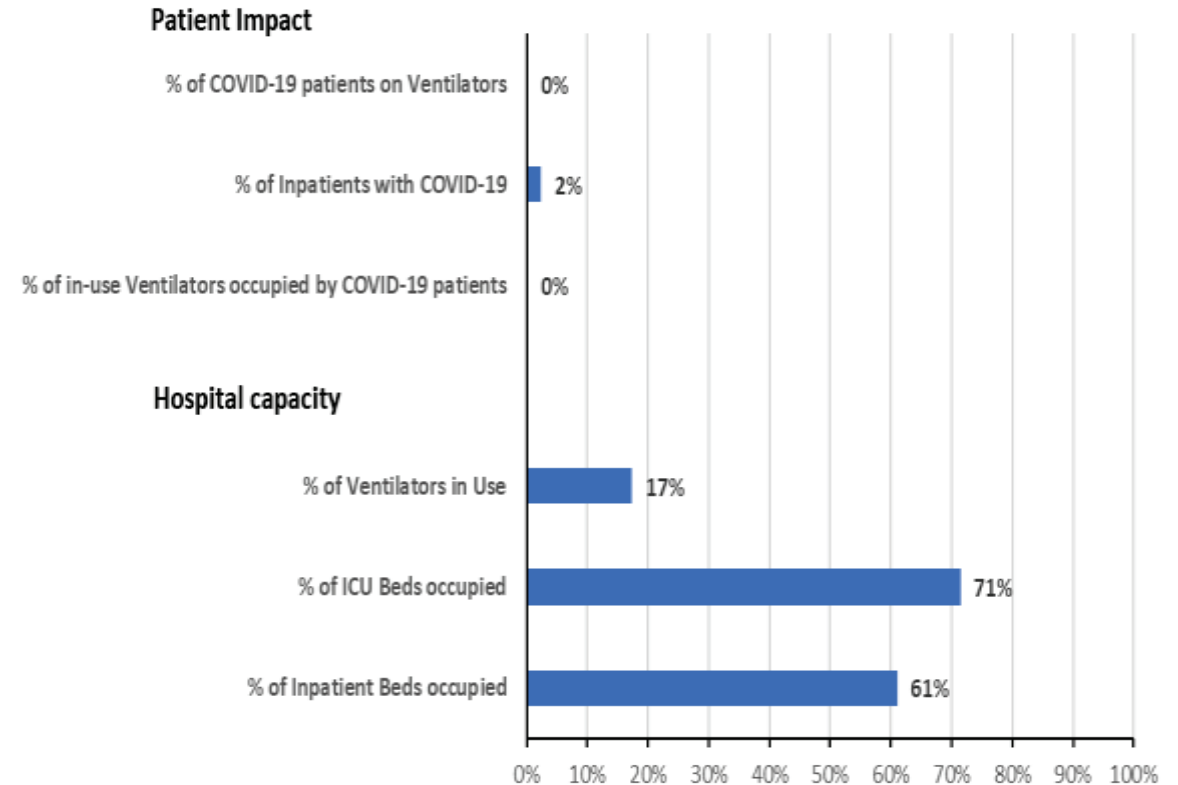
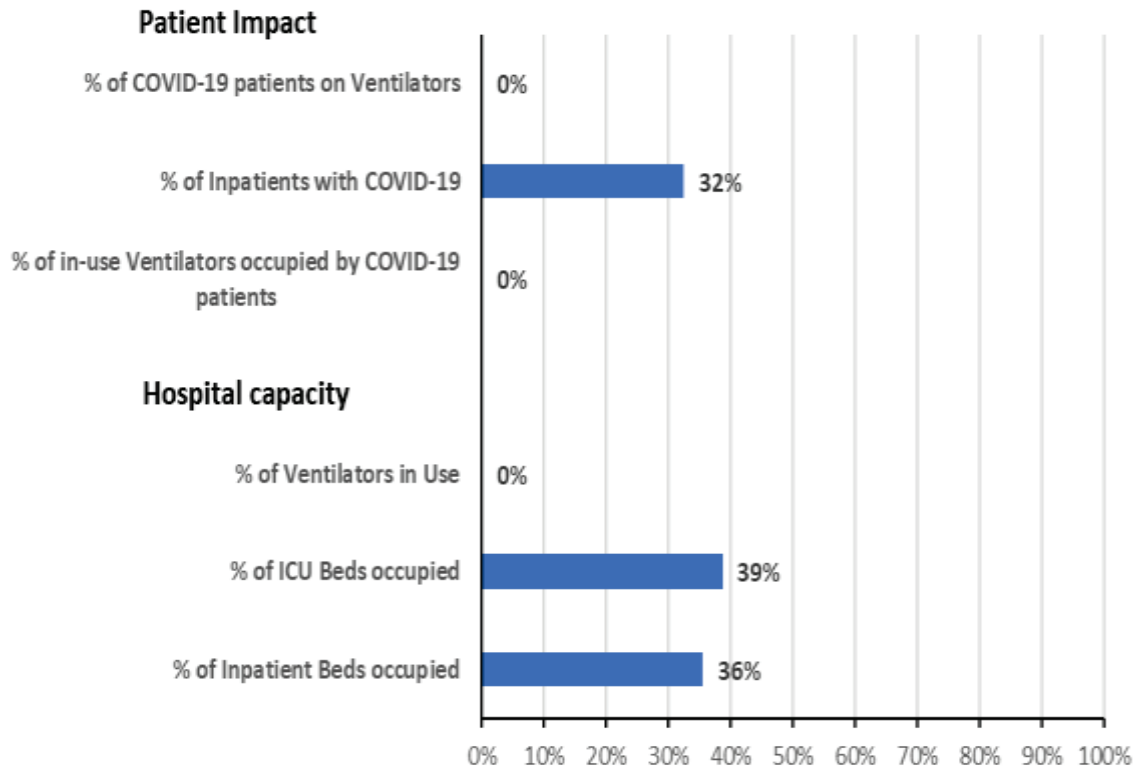
States with Tribal facilities: AK, AZ, MS, NC, OK



Patient impact and Hospital Capacity: Tribal & Indian Health Service Hospitals, Crude Percentages

Indian Health Service Facilities

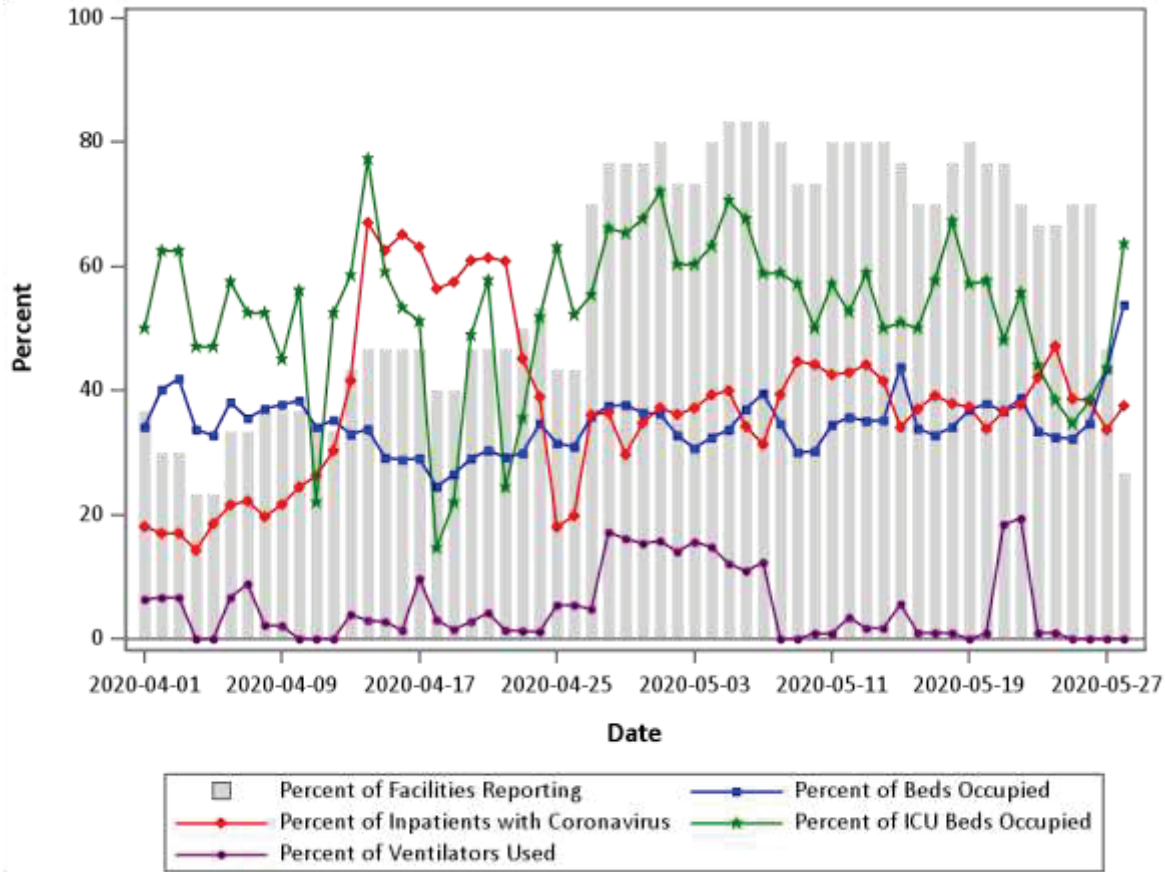
Tribal Facilities



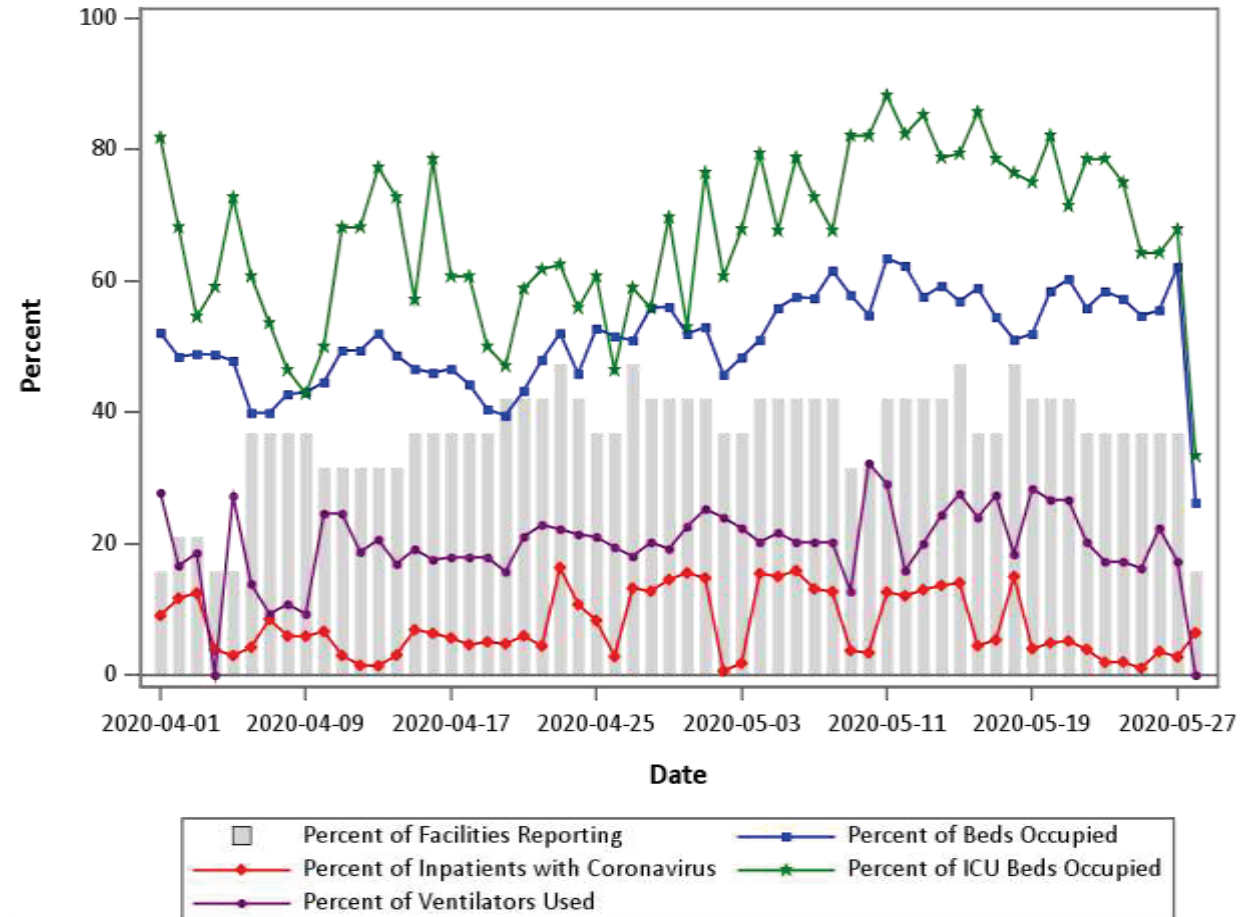


NHSN Occupancy Indicators: Tribal & Indian Health Service Facilities, Crude Percentages

Indian Health Service Facilities



Tribal Facilities

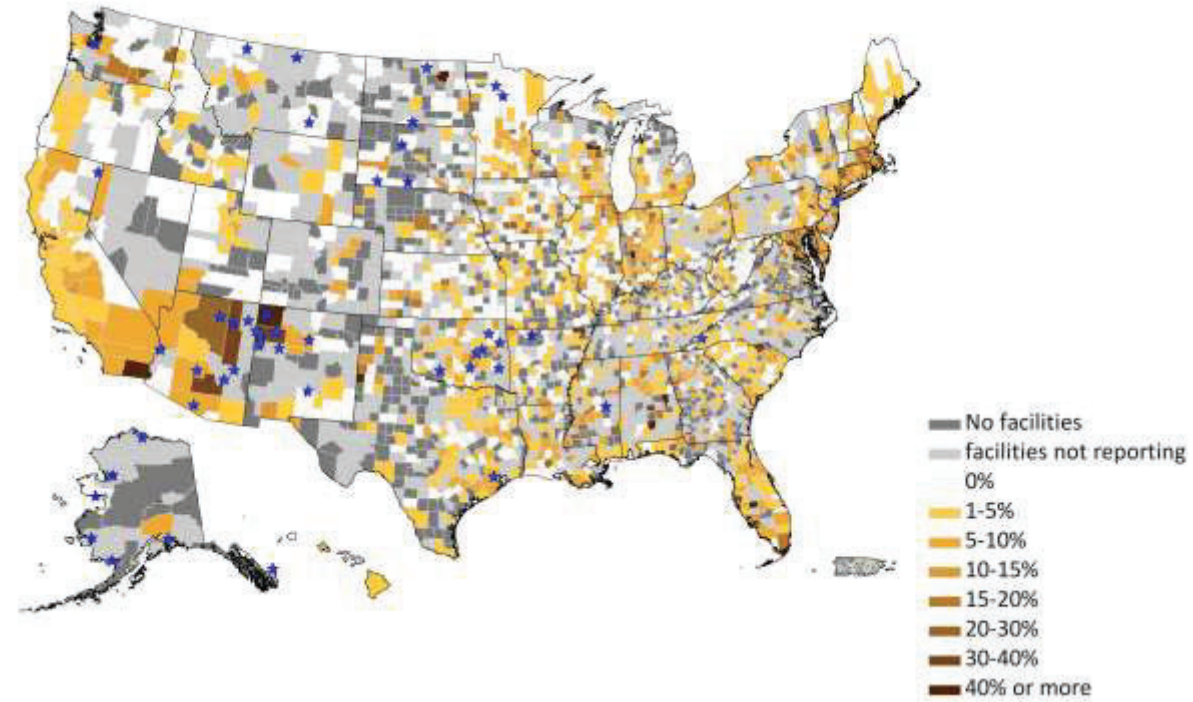
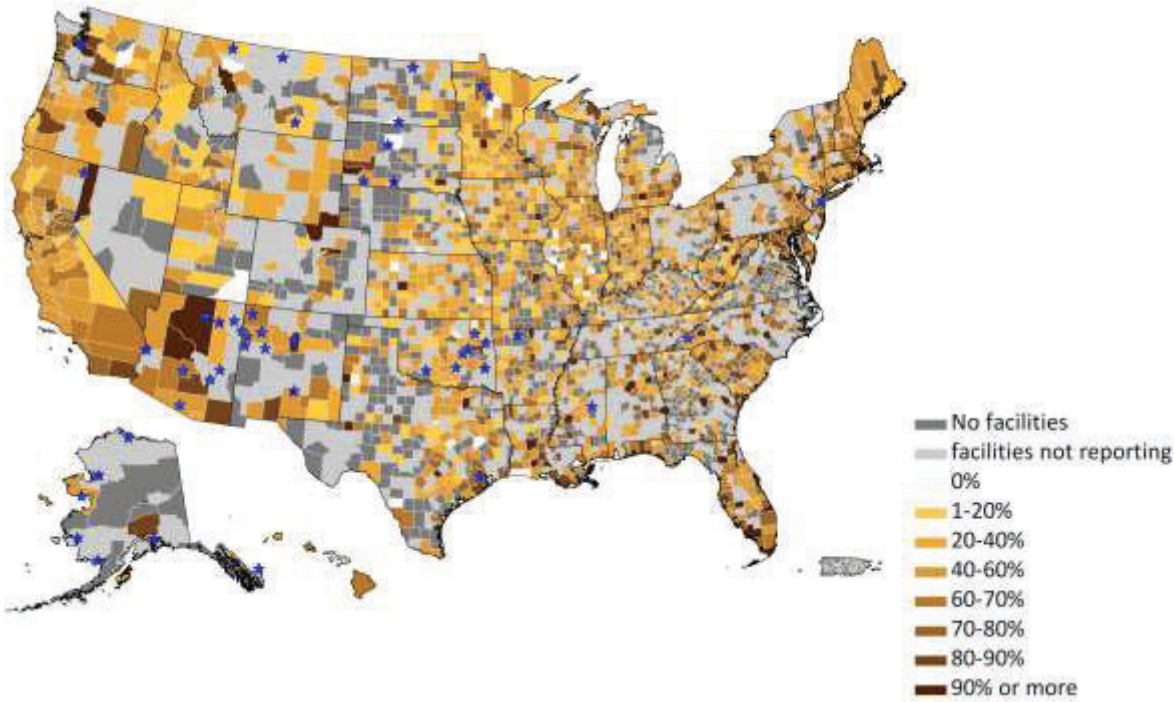




Location of IHS Facilities Shown with County-level Capacity Indicators, Past 3 Days of Data

Percent of inpatient beds occupied (all inpatients) and location of Indian Health Service facilities shown with star

Percent of inpatient beds occupied by COVID-19 patients and location of Indian Health Service facilities shown with star

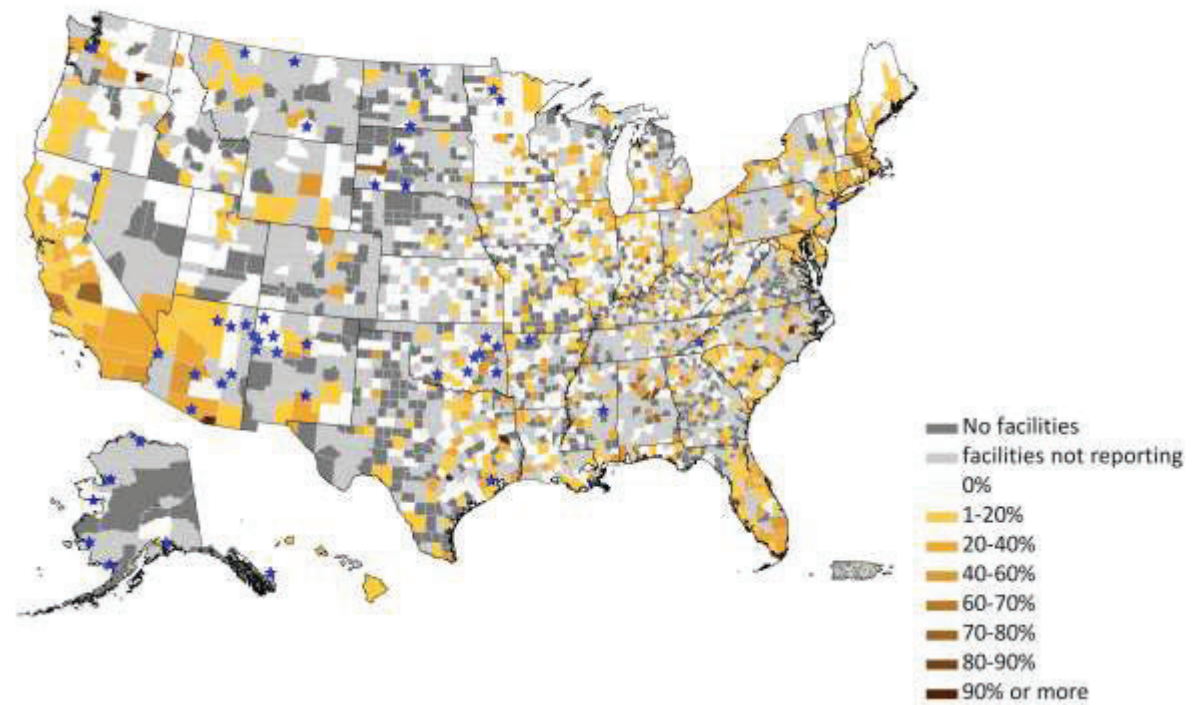
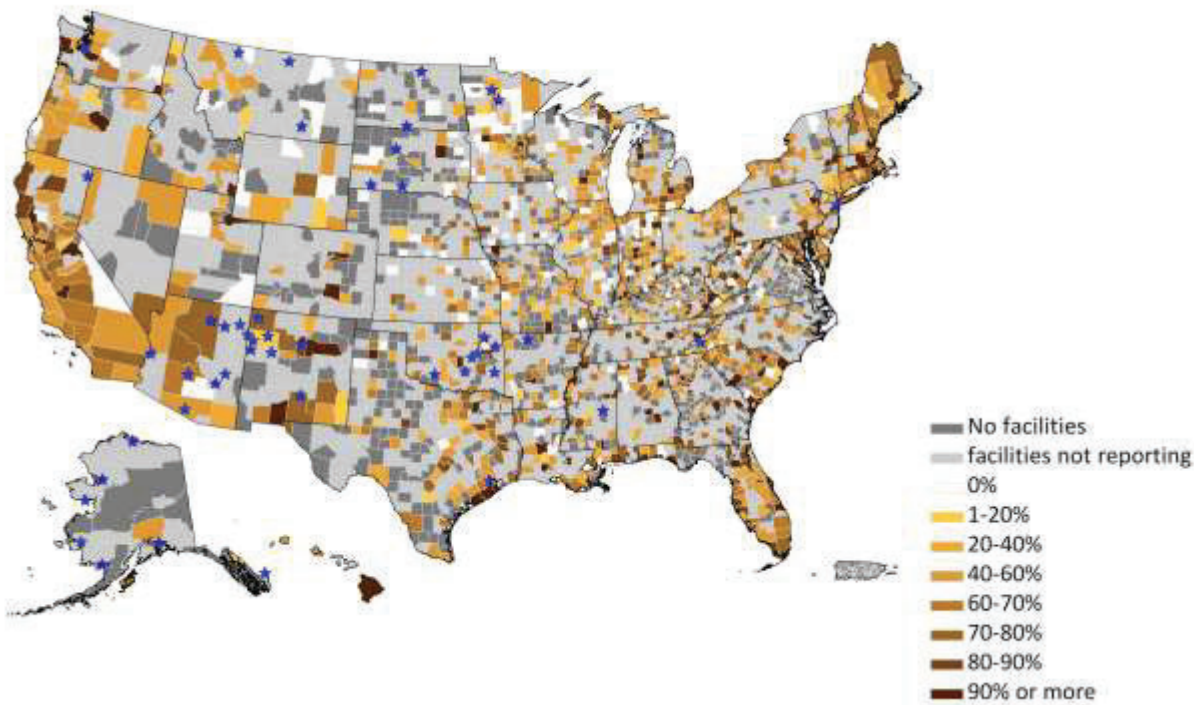




Location of IHS Facilities Shown with County-level Capacity Indicators, Past 3 Days of Data

Percent of ventilators in use and location of Indian Health Service facilities shown with star

Percent of ICU beds occupied and location of Indian Health Service facilities shown with star



Y

Occupancy & Ventilator Use by County, Navajo/Hopi Area

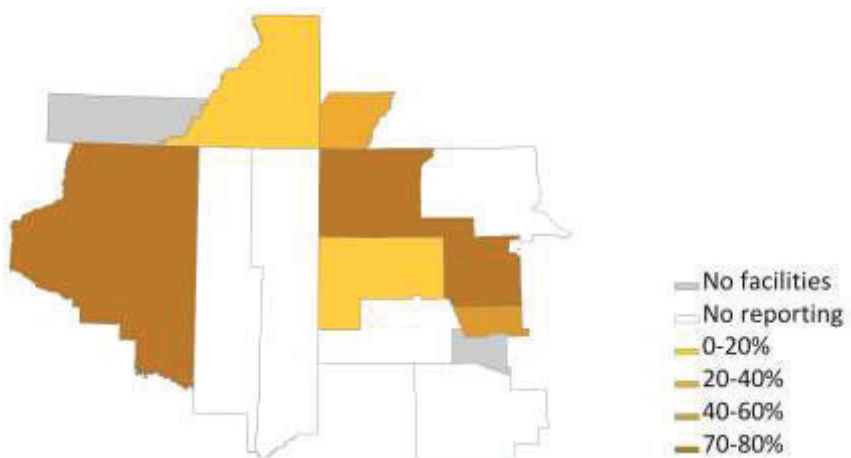
Percent of inpatient beds occupied by COVID-19 patients



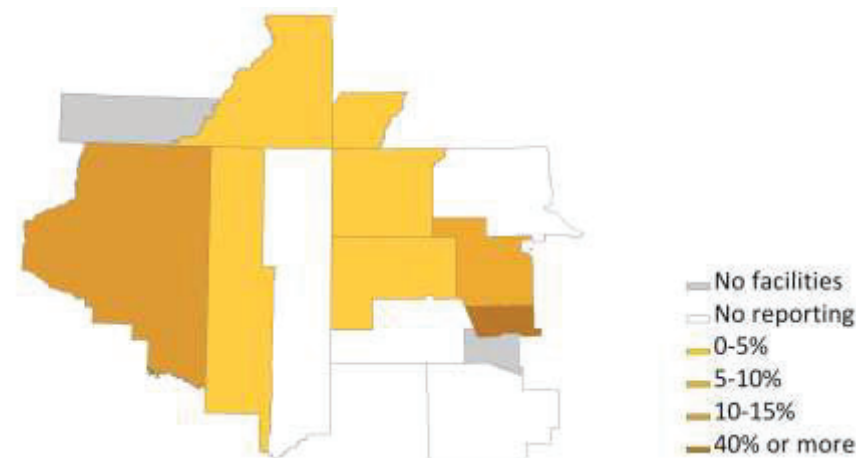
Percent of inpatient beds occupied (all inpatients)



Percent of ICU Beds occupied



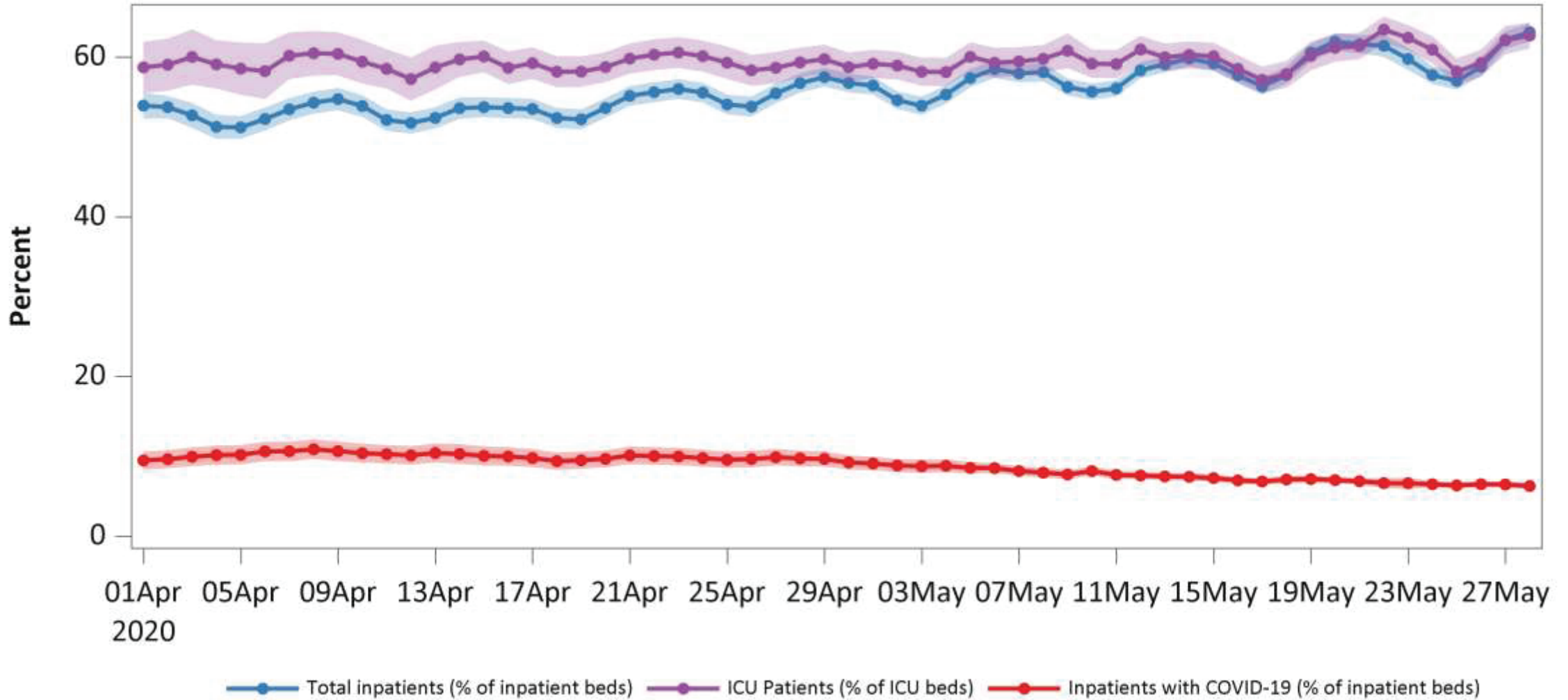
Percent of ventilators in use



Daily Occupancy, Hospitals

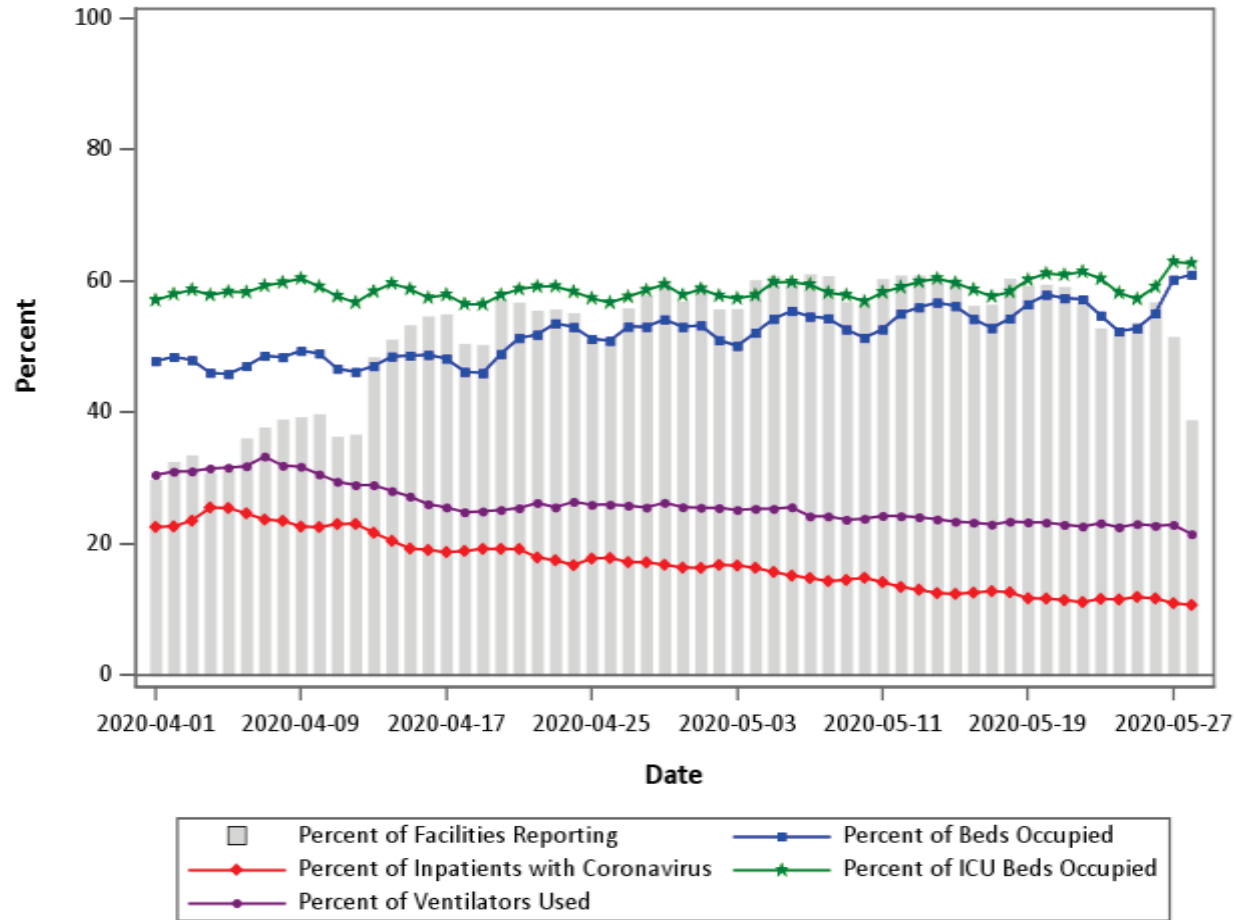


NHSN Nationally Representative Estimates, United States



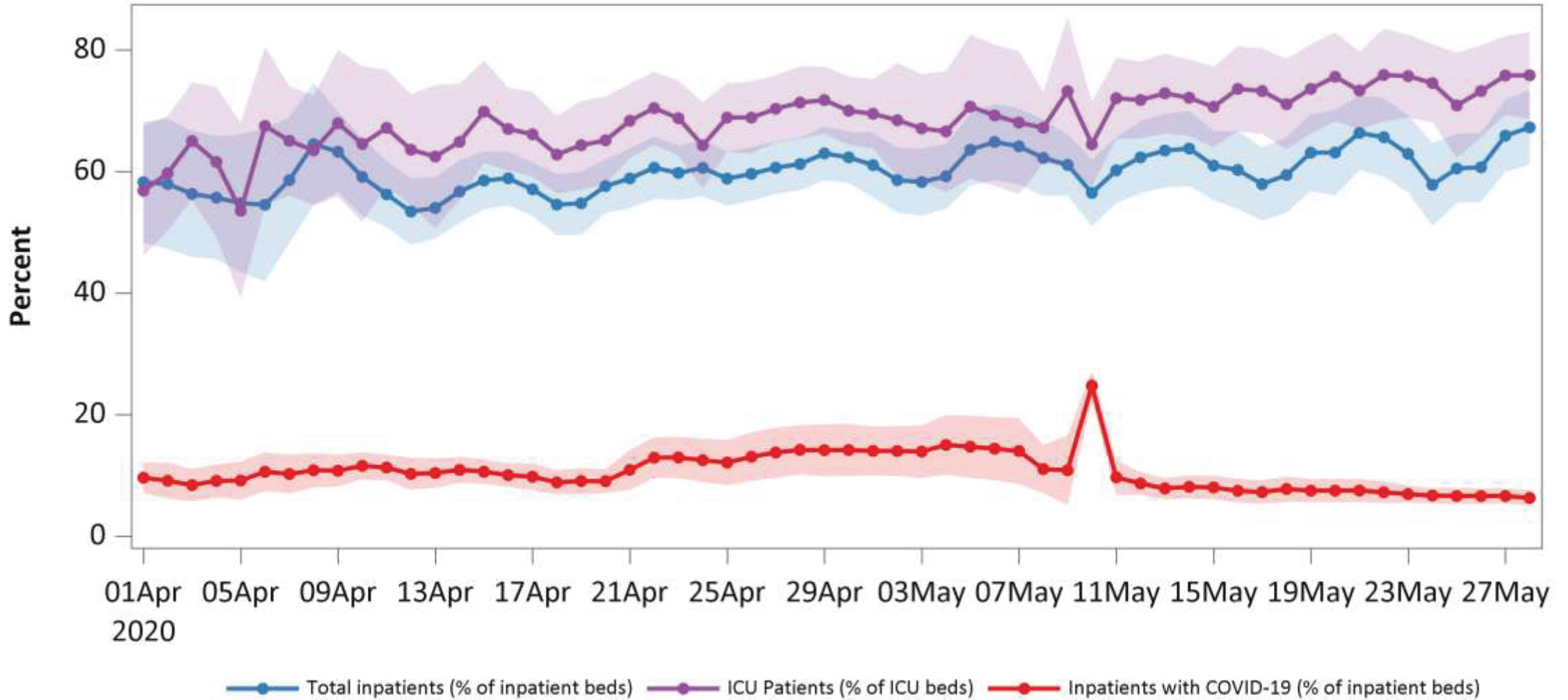


NHSN Daily Crude Percent Occupancy, United States



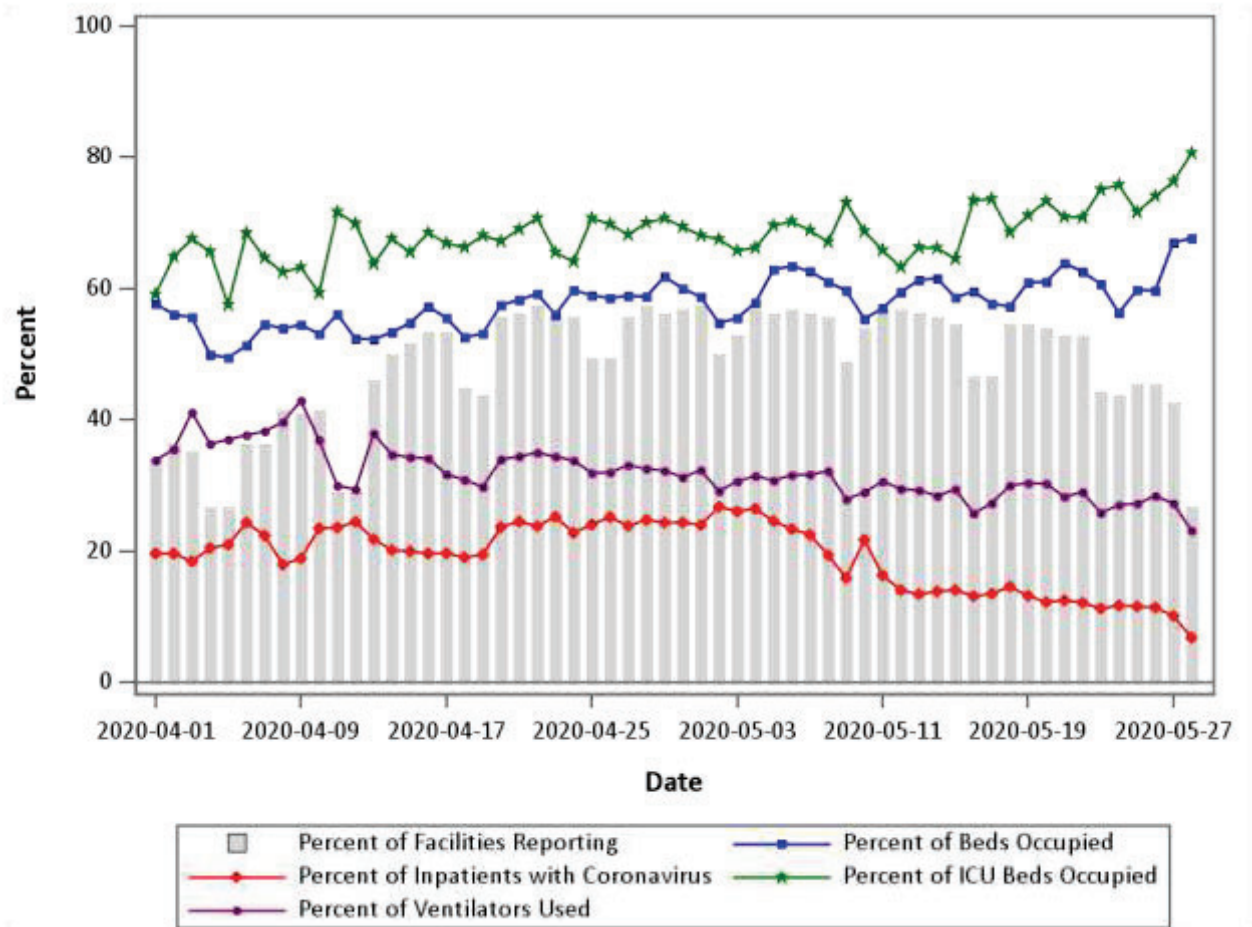


NHSN State Representative Estimates, Georgia



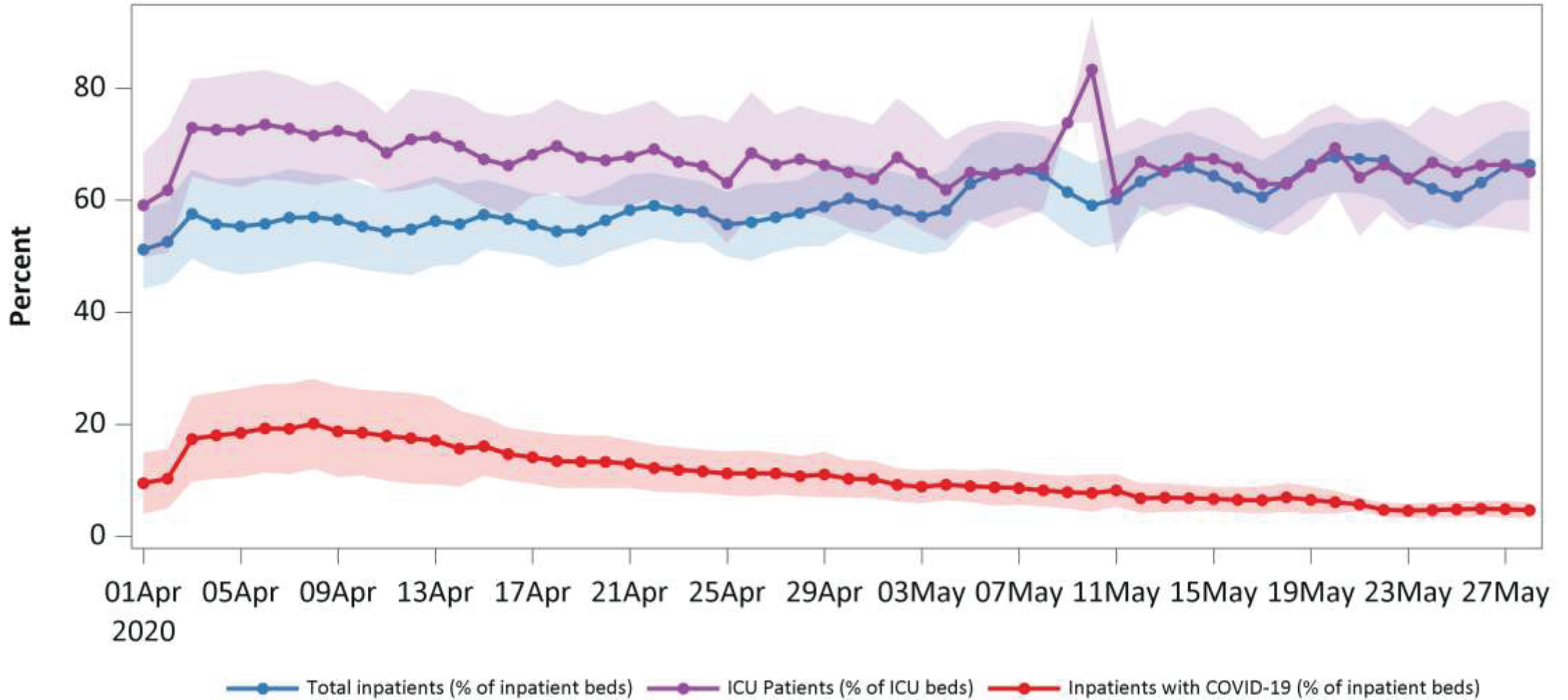


NHSN Daily Crude Percent Occupancy, Georgia



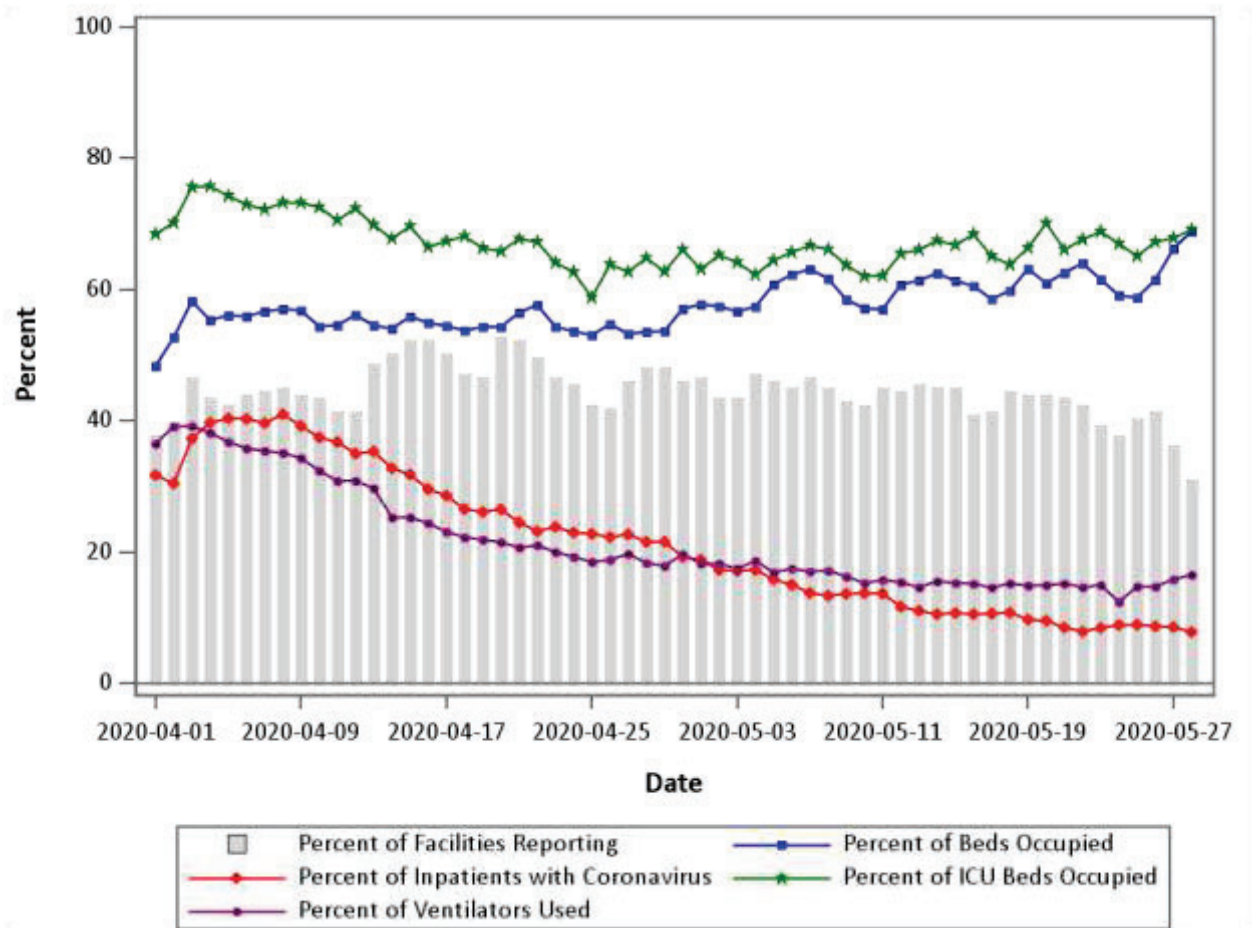


NHSN State Representative Estimates, Louisiana



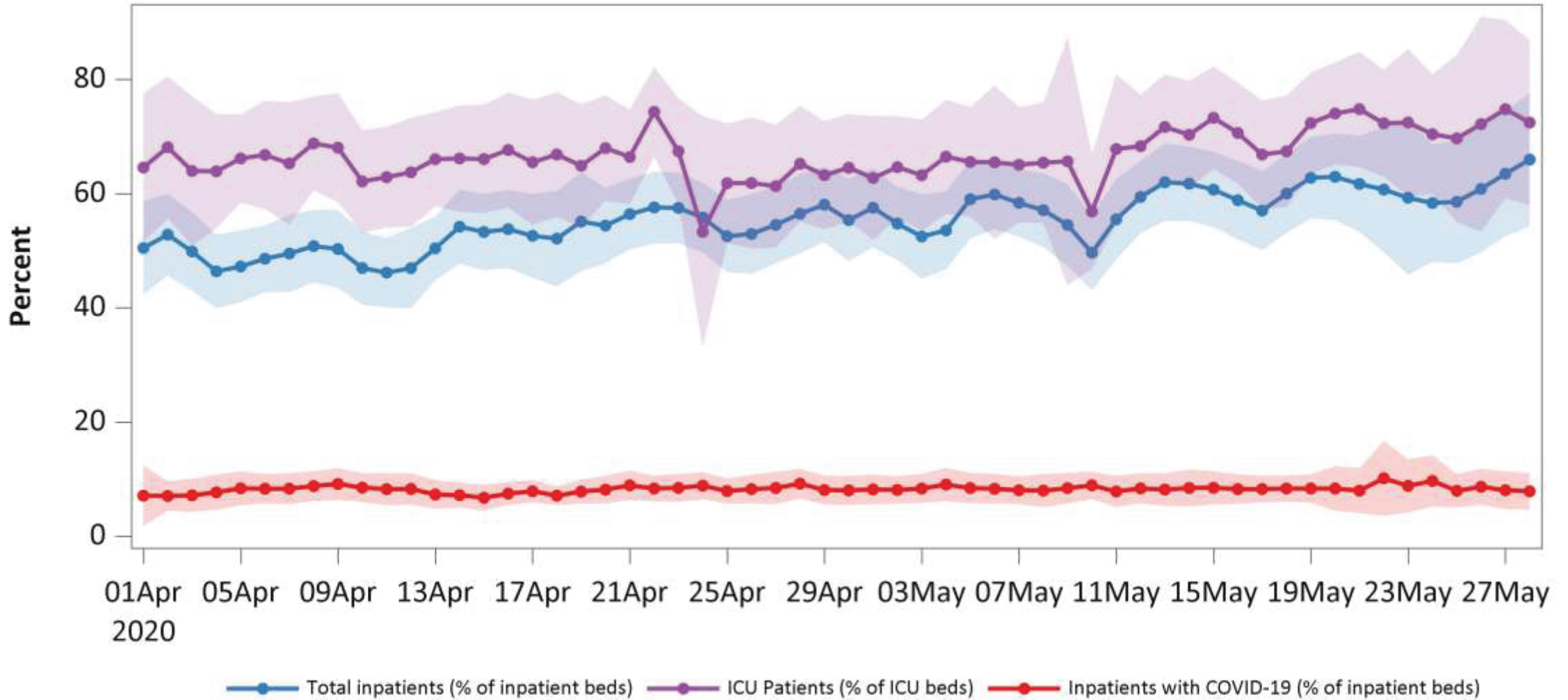


NHSN Daily Crude Percent Occupancy, Louisiana



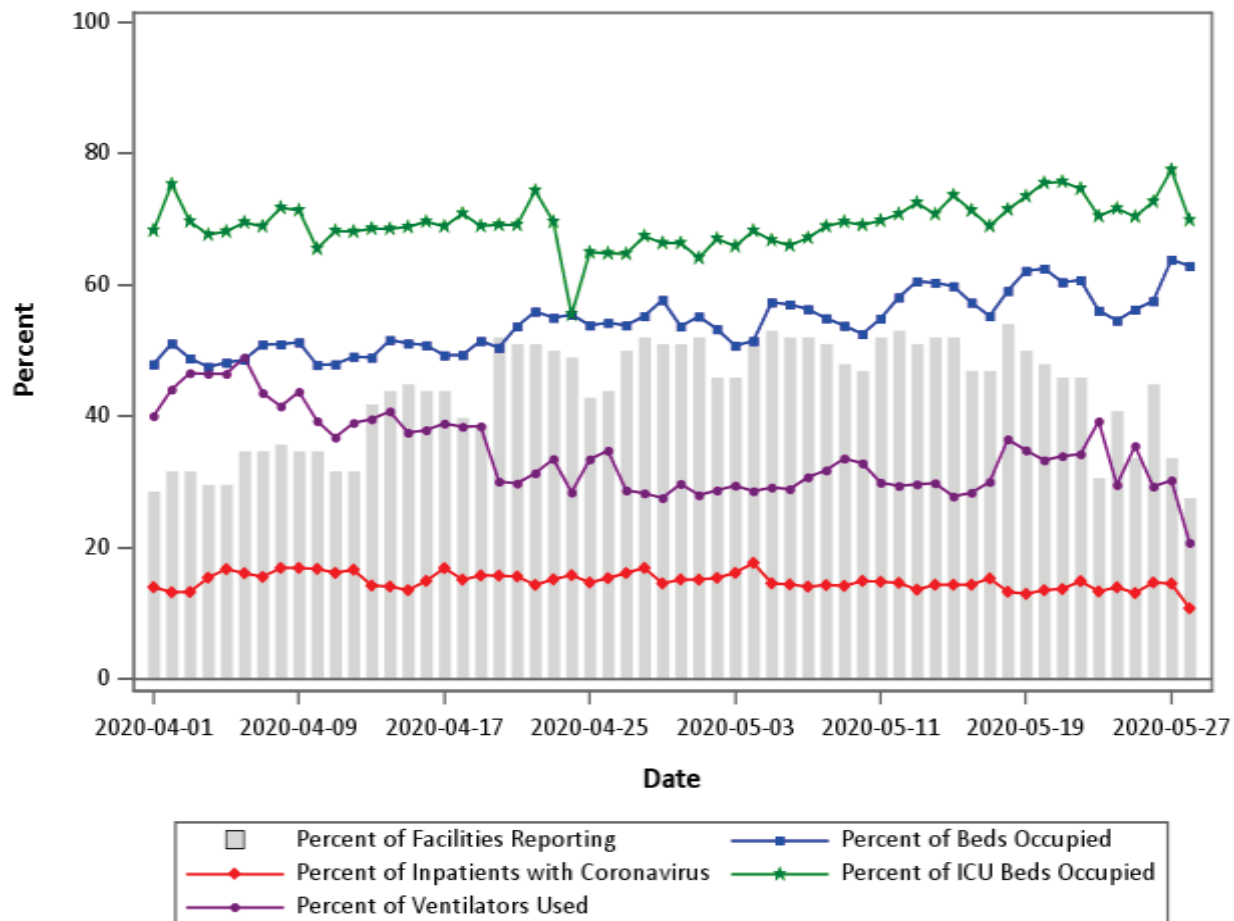


NHSN State Representative Estimates, Mississippi



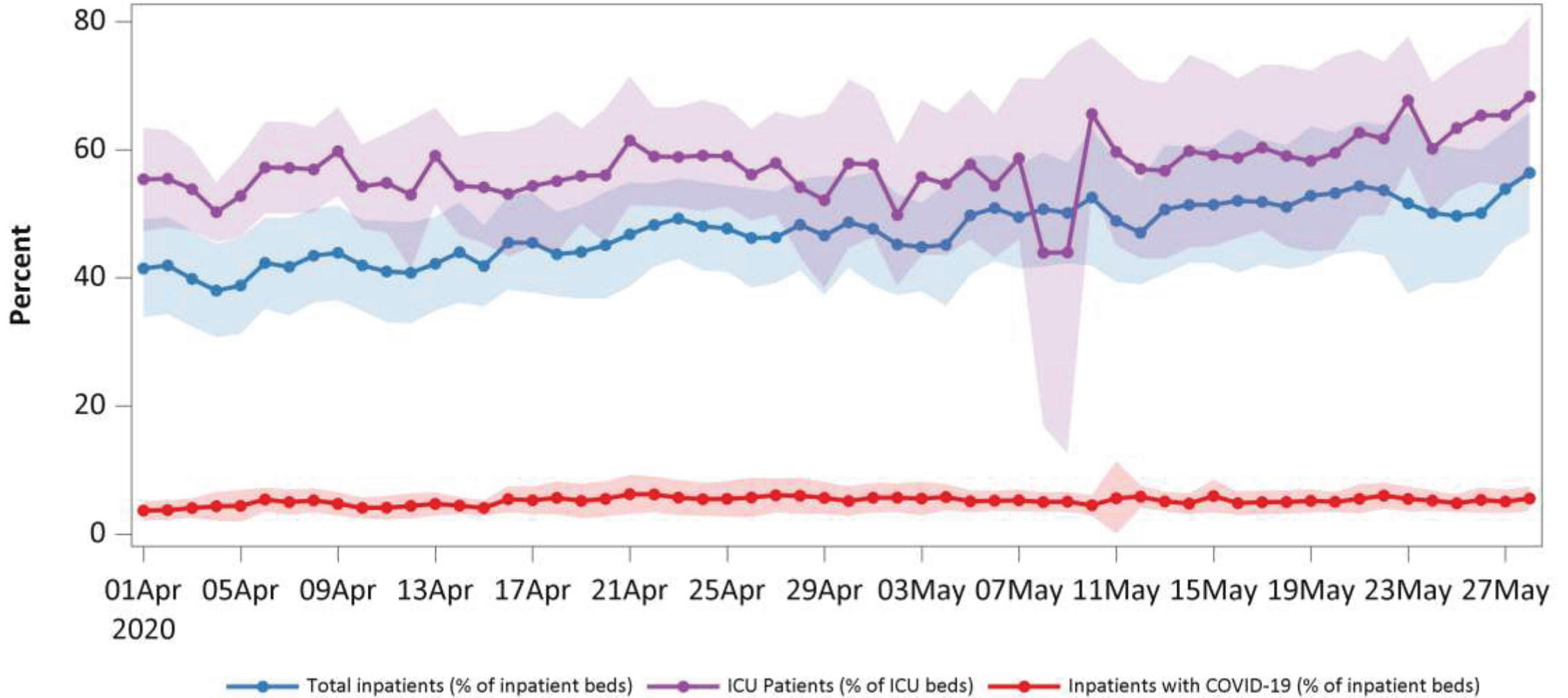


NHSN Daily Crude Percent Occupancy, Mississippi



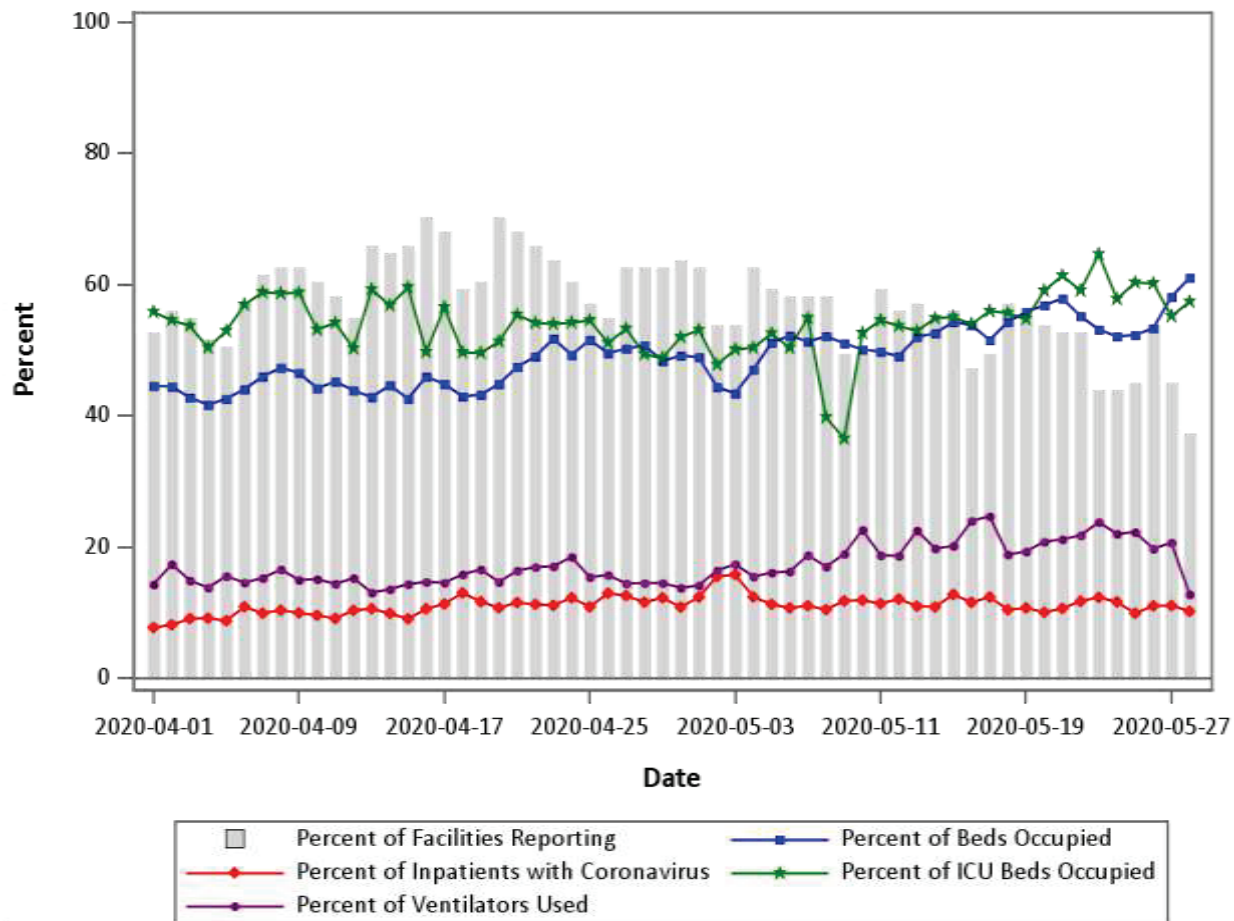


NHSN State Representative Estimates, Nebraska



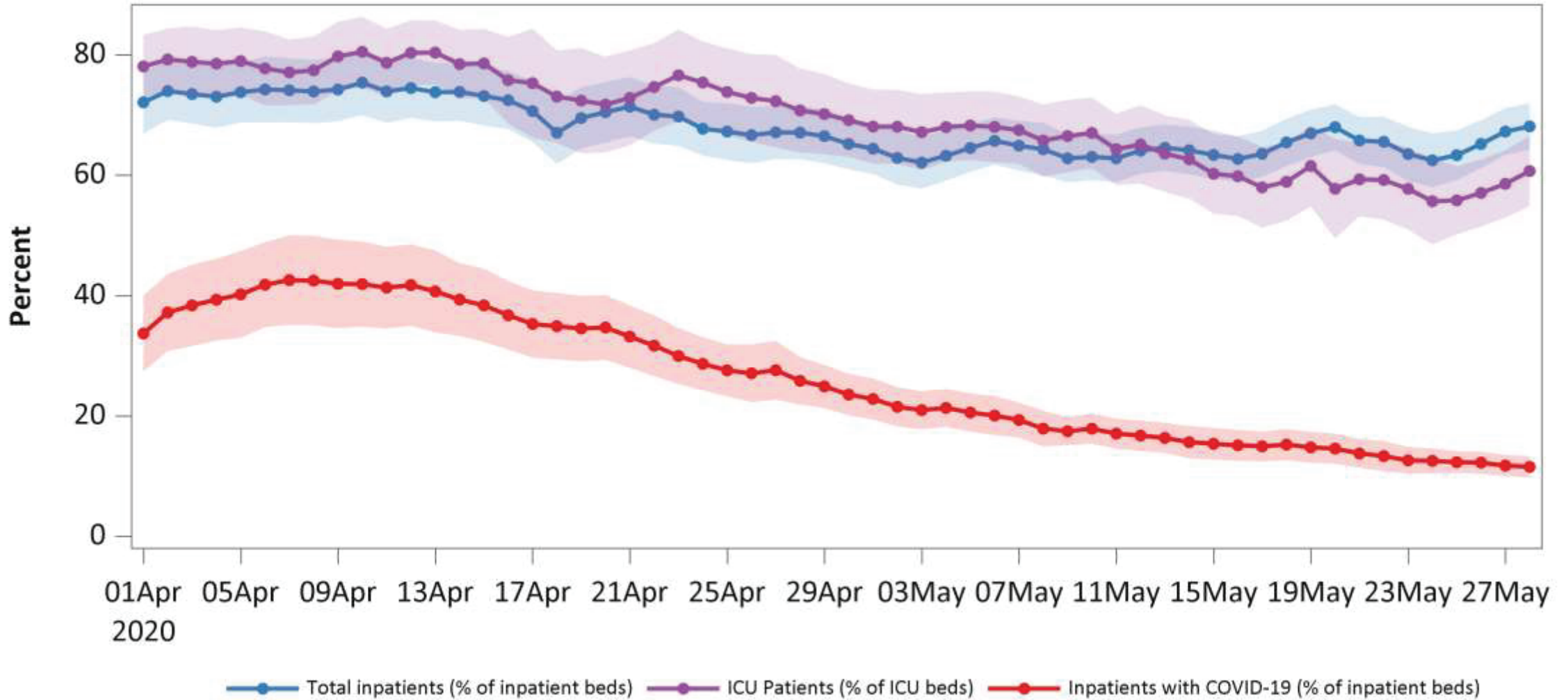


NHSN Daily Crude Percent Occupancy, Nebraska



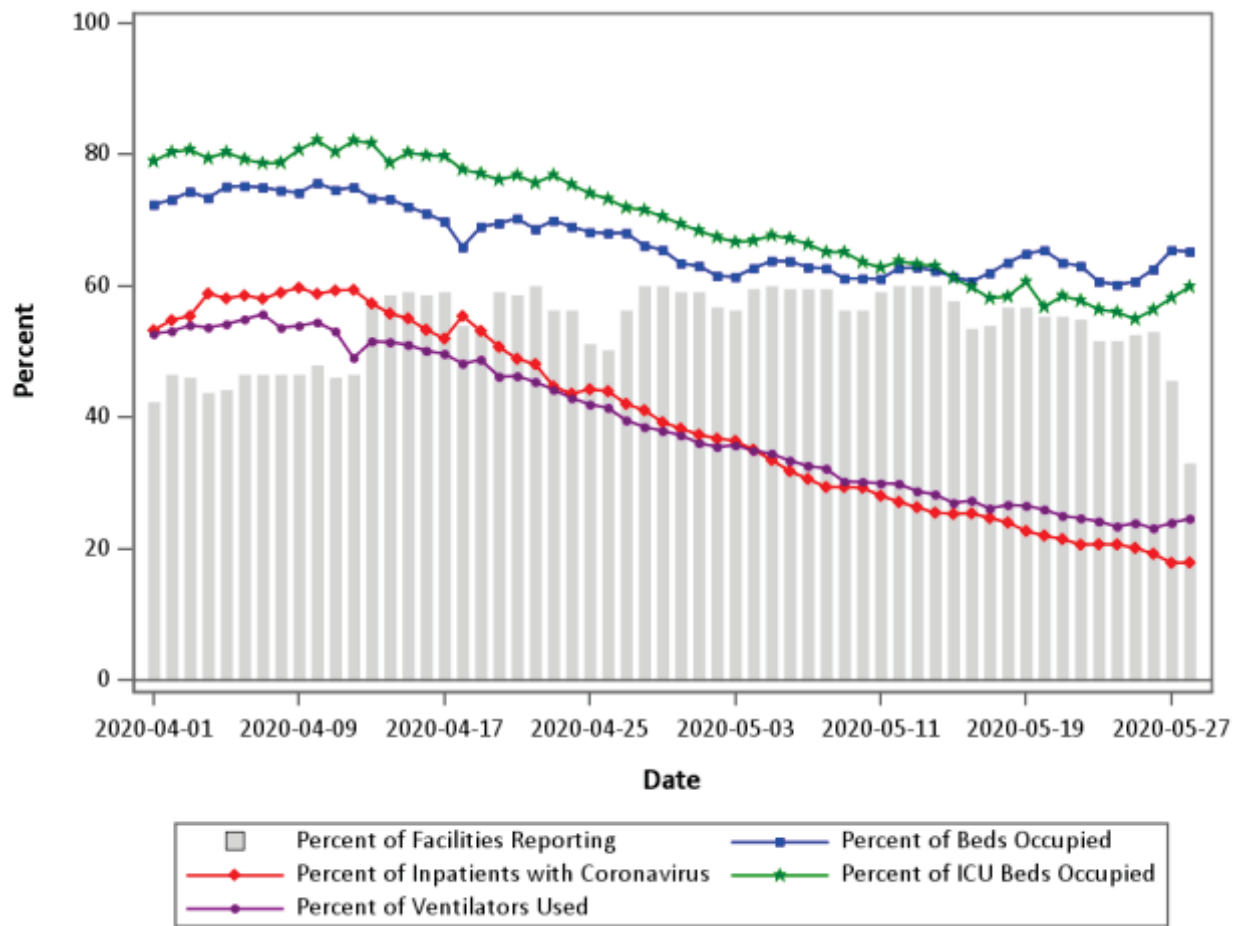


NHSN State Representative Estimates, New York



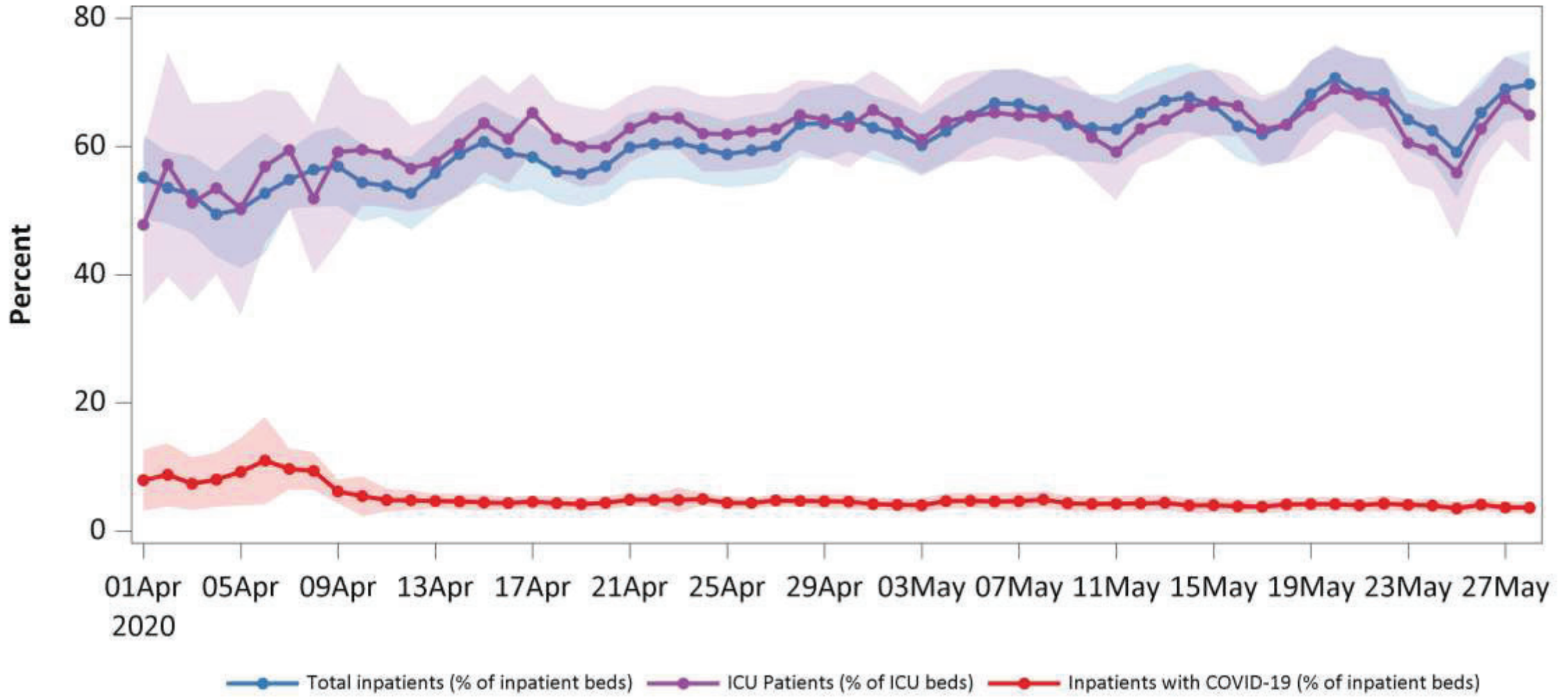


NHSN Daily Crude Percent Occupancy, New York



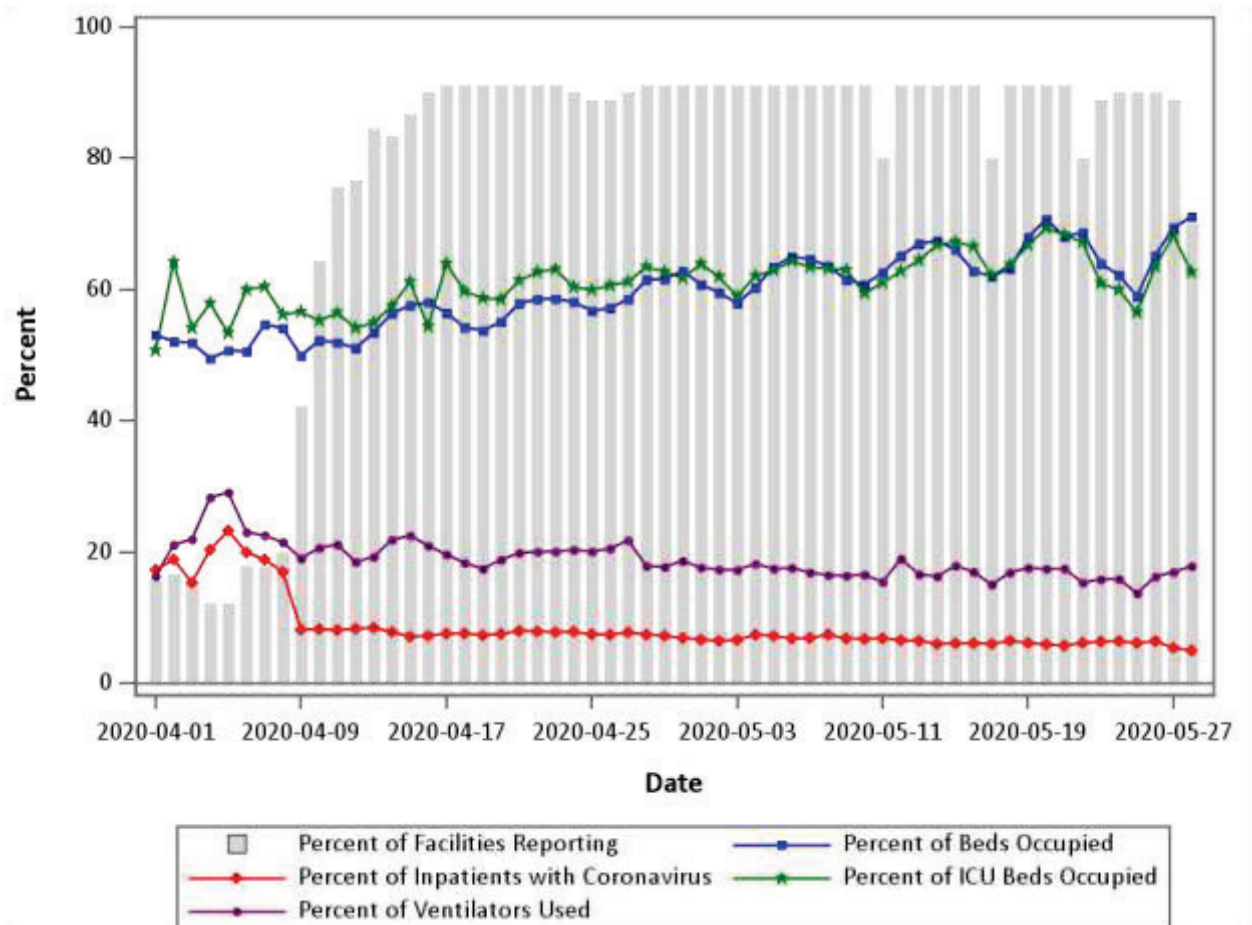


NHSN State Representative Estimates, South Carolina



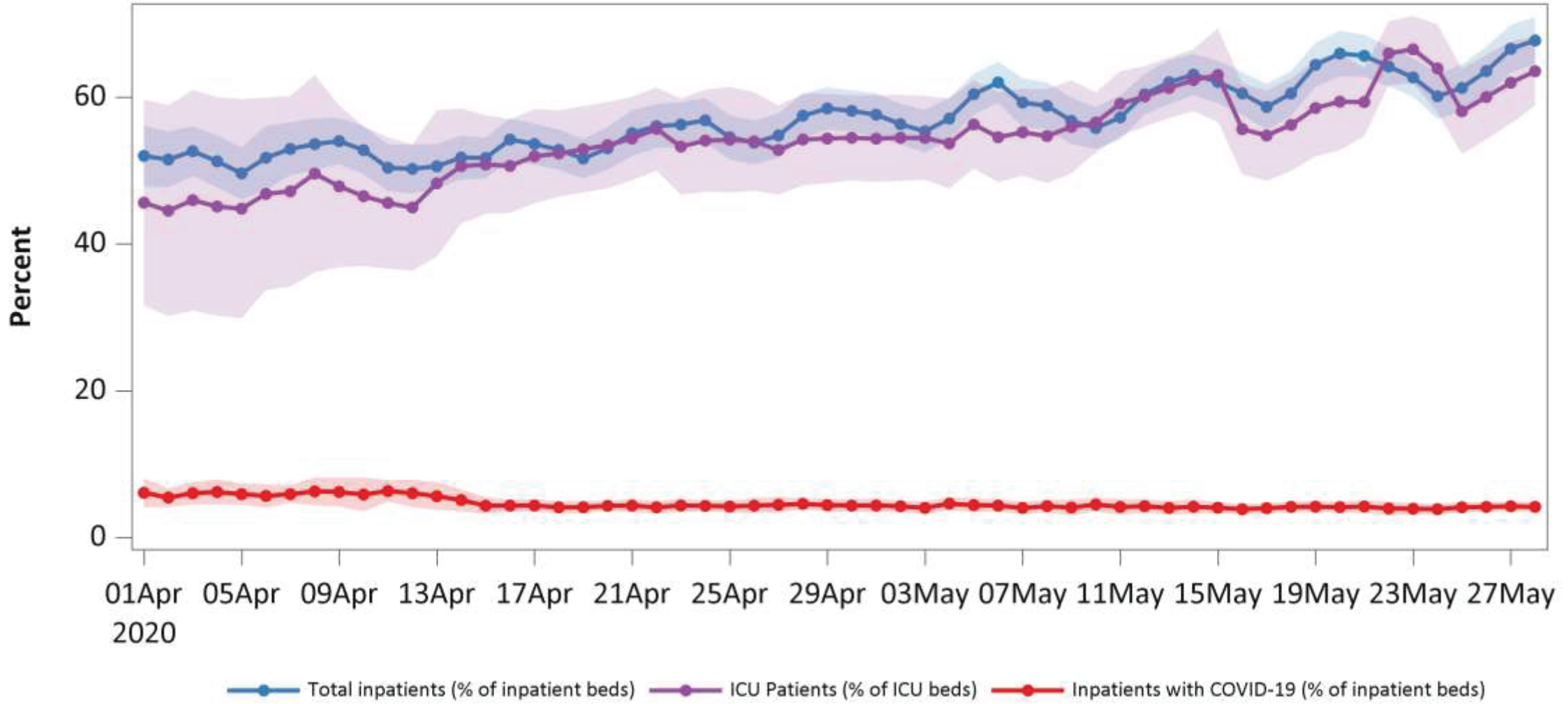


NHSH Daily Crude Percent Occupancy, South Carolina



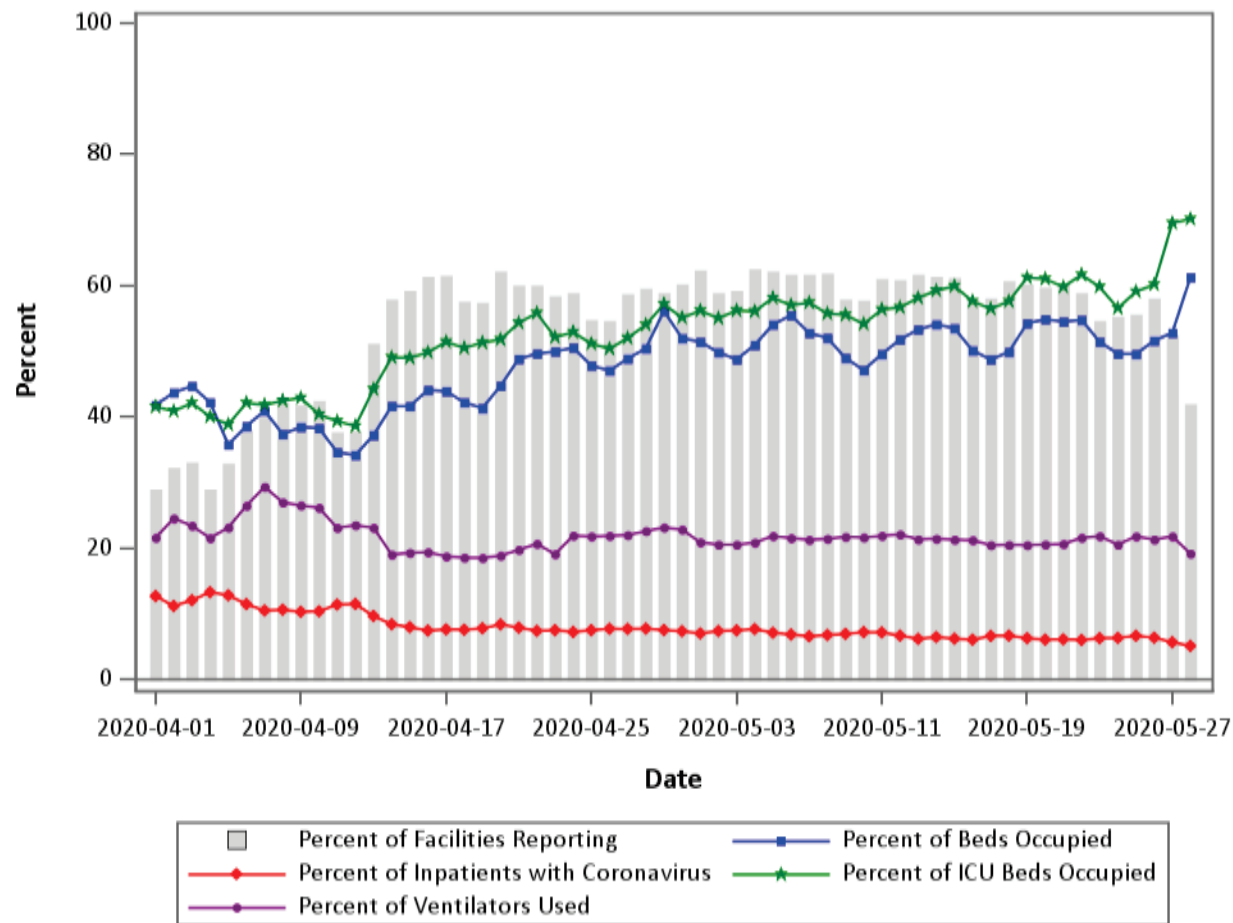


NHSN State Representative Estimates, Texas





NHSN Daily Crude Percent Occupancy, Texas



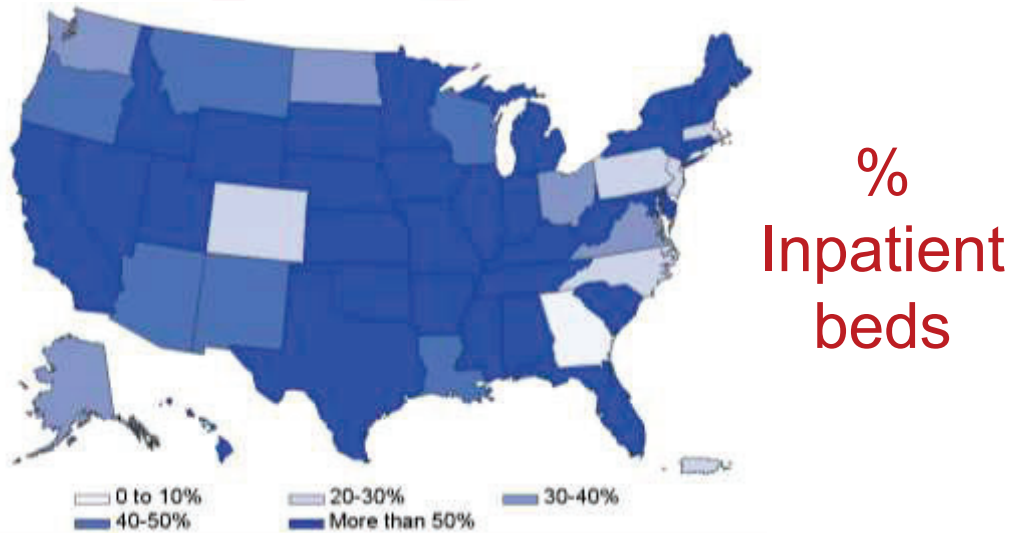
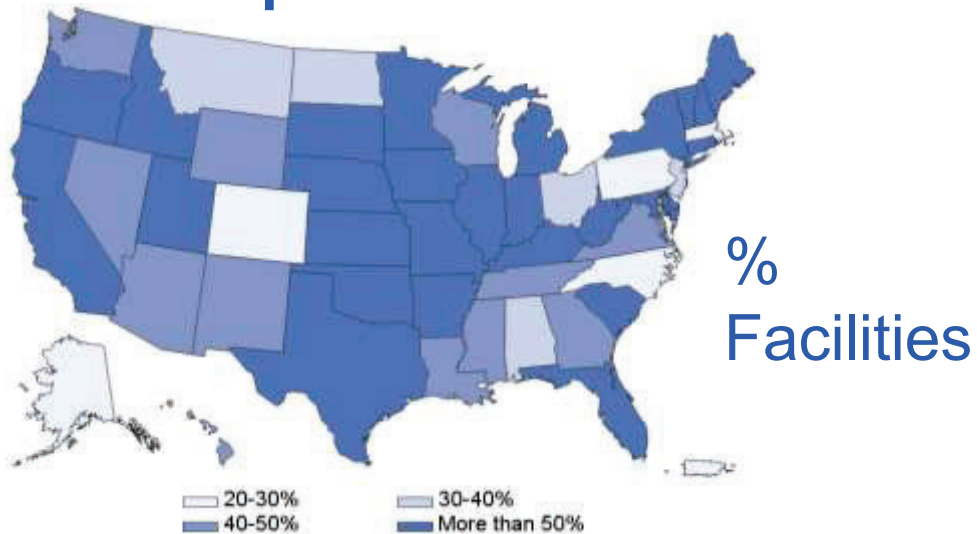
Detail Slides



Reporting to NHSN, Patient Impact & Hospital Capacity

Participation 5/26 to 5/28

- Reporting patterns are similar looking at % facilities reporting or % inpatient beds reporting by state

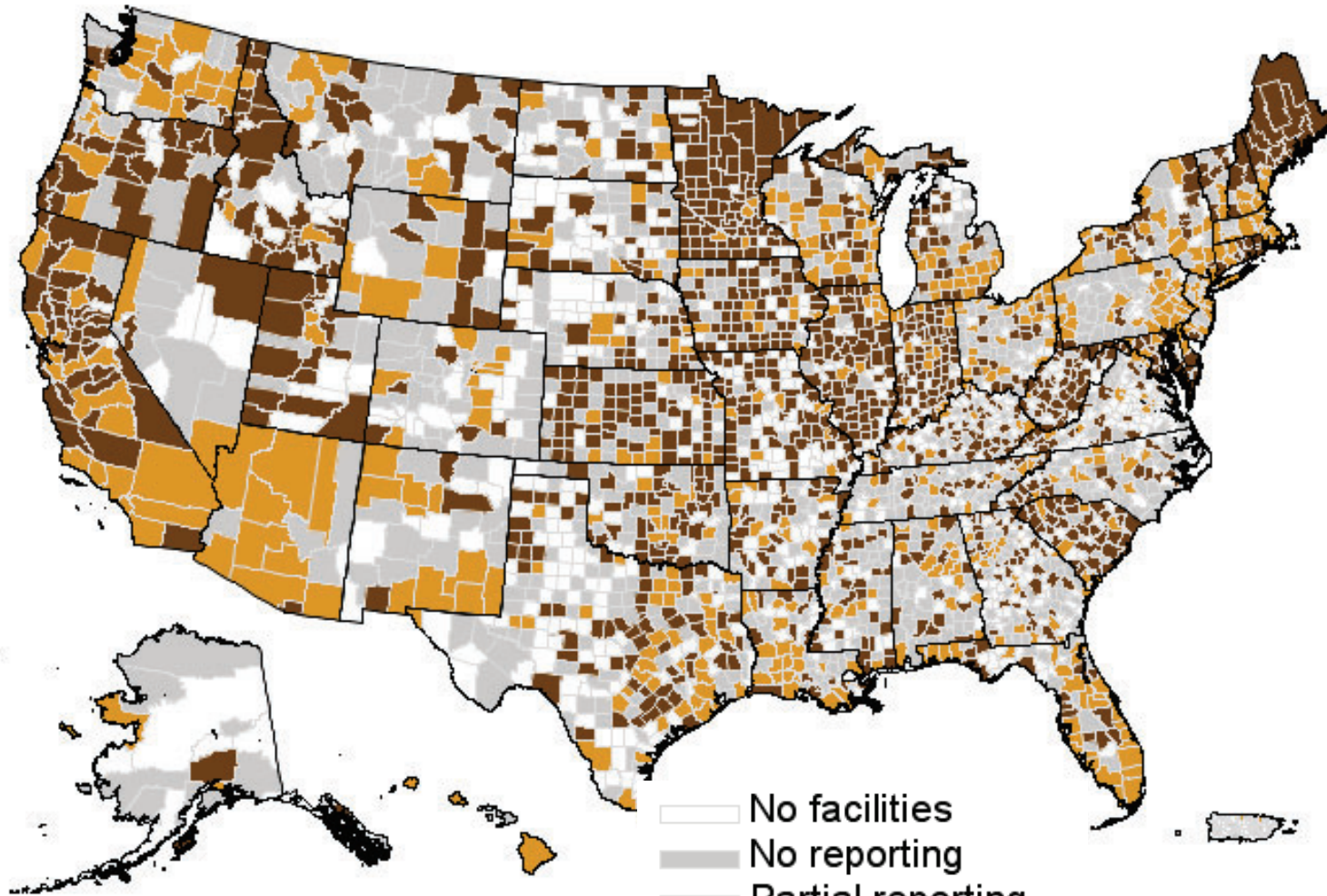


Hospital type	Reporting	Total	%
General acute care	2147	3534	60.8
175 inpatient beds or more	888	1425	62.3
75-174 inpatient beds	628	980	64.1
25-74 inpatient beds	504	869	58.0
24 inpatient beds or less	127	260	48.8
Critical access	735	1246	59.0
Surgical	61	127	48.0
Children's	58	107	54.2
Orthopedic	14	32	43.8
Long-term acute care	169	451	37.5
Other*	400	754	53.1

Includes all facilities reporting to PIHCM between 5/26 and 5/28
 * Other: HOSP-PSYCH, HOSP-ONC, HOSP-REHAB, HOSP-WOM, HOSP-WOMCHILD, HOSP-MIL, HOSP-VA



Status of Reporting by County, Patient Impact and Hospital Capacity, Most Recent 3 Days



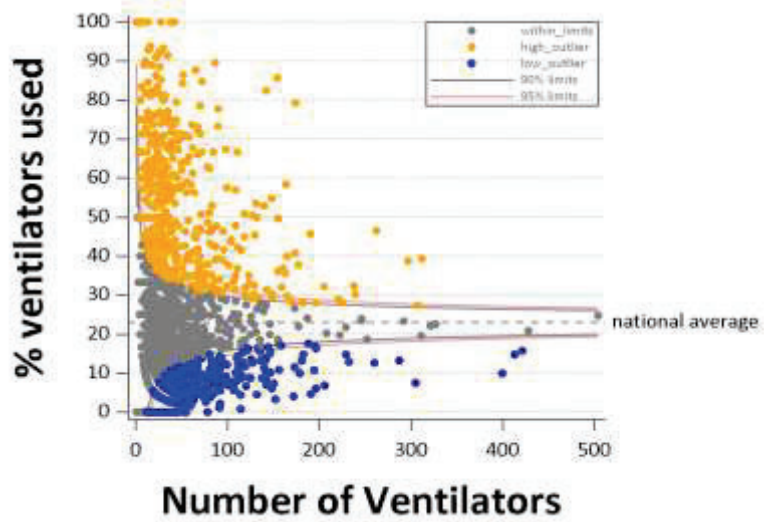
No facilities
 No reporting
 Partial reporting
 Complete reporting

- Around a quarter of all counties with >1 facility have not reported in last 3 days
- 24% of counties have no NHSN facility

	N Counties	%
No facilities	779	24.2
No reporting	782	24.3
Partial reporting	544	16.9
Complete reporting	1116	34.6
Total	3221	100

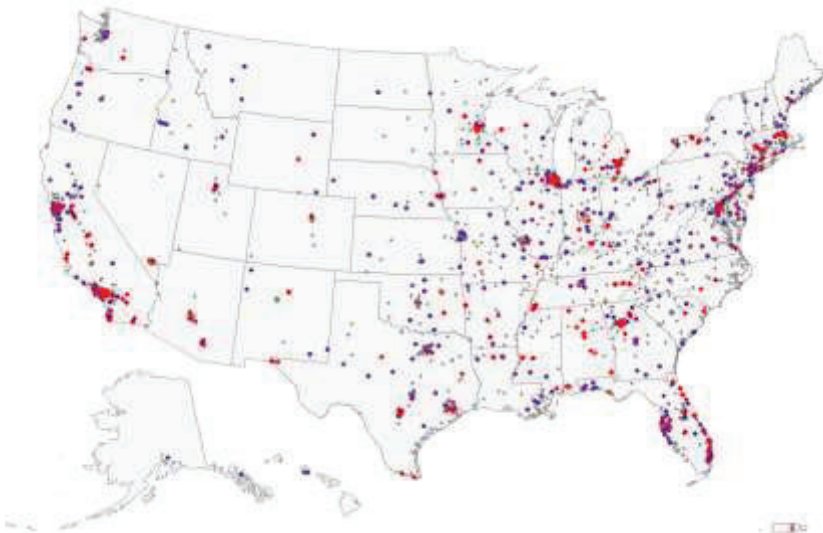
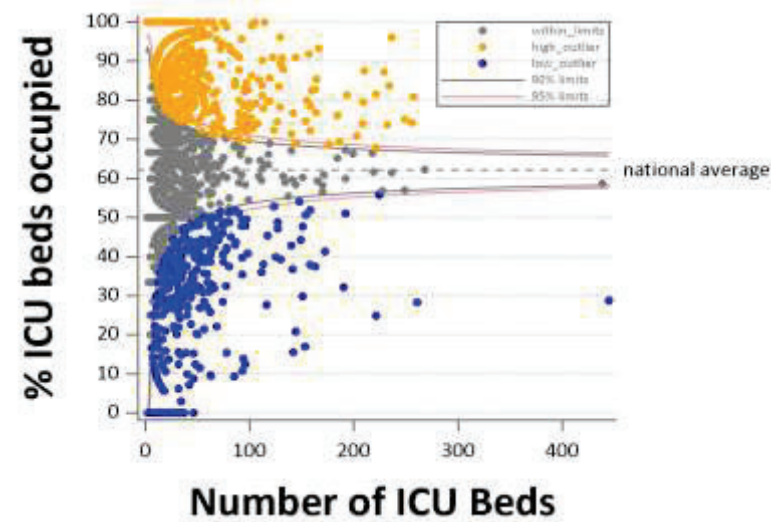
Y

Outlier Facilities, Most Recent 3 days NHSN Ventilators

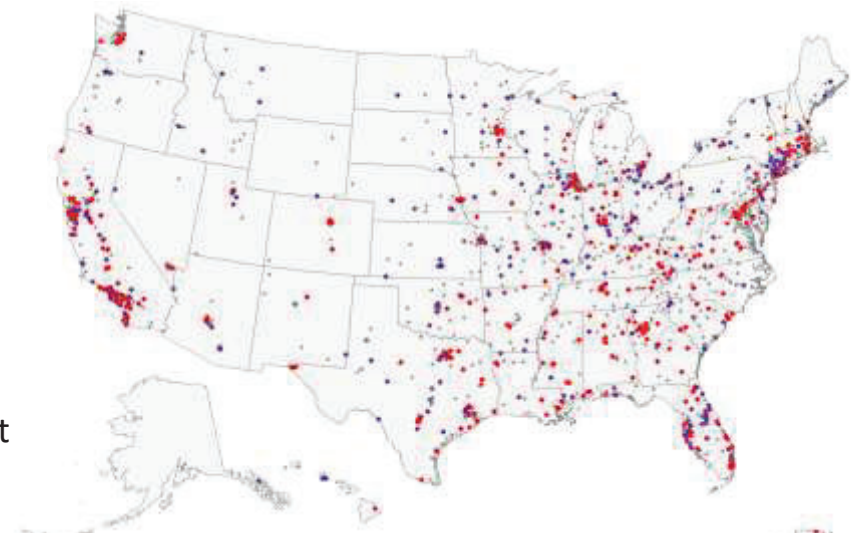


Control limits are the inverse of binomial cumulative distribution function with continuity correction

ICU Beds



Facilities with 50+ inpatient beds are mapped.
 Yellow/red =above 90% control limit of national average
 Purple=below 90% control limit of national average
 Gray=within 90% control limit of national average





Crisis Care Cut-points Reported 05/28

Cut-point		Number	Total Reporting	Percent
Occupancy	States with less than 80% of ICU beds used	51	52	98.1
	States with less than 75% of ICU beds used	43	52	82.7
	States with less than 70% of ICU beds used	38	52	73.1
	States with less than 80% of all inpatient beds used	48	52	92.3
	States with less than 75% of all inpatient beds used	47	52	90.4
	States with less than 70% of all inpatient beds used	44	52	84.6
Staffing	States with no hospital reporting any staffing shortages	18	49	36.7
	States with all hospitals reporting 4 or more days on-hand supply of gloves, gowns, N95 masks, face shields, and surgical masks	13	51	25.5
Supplies	States with all hospitals reporting 15 or more days on-hand supply of gloves, gowns, N95 masks, face shields, and surgical masks	1	51	2.0

About the National Healthcare Safety Network, NHSN

- NHSN is the largest surveillance system for healthcare-associated conditions in the country. Includes regular reporting by ~25,000 healthcare facilities. Began in 2005.
 - Detailed data definitions and rigorous approach to developing metrics.
 - Robust technical and user-support infrastructure. Data is used for public health & quality improvement as well as for major CMS payment programs.
- Beginning in March 2020, CDC added new reporting pathways to support the government wide response to COVID-19.
 - Hospitals now report key indicators of hospital capacity, including available hospital beds, ICU beds, and ventilators—and the percentage of COVID-19 patients using these resources. It also monitors shortages of healthcare personnel and personal protective equipment.
 - Long-term care facilities are also reporting COVID-19 data beginning May 2020.

NHSN COVID-19 Module

<https://www.cdc.gov/nhsn/acute-care-hospital/covid19/index.html>

NHSN LTCF COVID-19 Module

<https://www.cdc.gov/nhsn/ltc/covid19/index.html>

From: [Lengyel, Joseph L Gen USAF NG NGB \(US\)](#)
To: [Fenton, Bryan LTG SD](#)
Cc: [Milley, Mark A GEN USARMY JS OCJCS \(USA\)](#); [Norquist, David HON SD](#); [Hyten, John E Gen USAF JS OCJCS \(USA\)](#); [Stewart, Jennifer SES SD](#); [Rapuano, Kenneth P HON OSD OUSD POLICY \(USA\)](#); [Henke, Robert SES SD](#); [Lyons, David Brig Gen SD](#); [VanHerck, Glen D Lt Gen USAF JS ODJS \(USA\)](#)
Subject: Potential note to WH CoS//NG duty extensions
Date: Tuesday, May 26, 2020 2:31:42 PM
Attachments: [Potential Letter to WH CoS from SD.docx](#)

Bryan,

(b) (5)

Joe

Joseph L. Lengyel
General USAF
Chief National Guard Bureau

From: Fenton, Bryan LTG SD (b) (6)
Sent: Friday, May 22, 2020 10:36 AM
To: Lengyel, Joseph L Gen USAF NG NGB (USA) (b) (6); Milley, Mark A GEN USARMY JS OCJCS (USA) (b) (6)
Cc: Norquist, David HON SD (b) (6); Hyten, John E Gen USAF JS OCJCS (USA) (b) (6); Oshaughnessy, Terrence J Gen USAF NORAD-USNC CG (USA) (b) (6); Rapuano, Kenneth P HON OSD OUSD POLICY (USA) (b) (6); Hokanson, Daniel R LTG USARMY NG NGB (USA) (b) (6); Rice, L Scott Lt Gen USAF NG NGB (USA) (b) (6); White, Gregory T (YT) Maj Gen USAF NG NGB (USA) (b) (6); VanHerck, Glen D Lt Gen USAF JS ODJS (USA) (b) (6); Taheri, Michael R Maj Gen USAF NG NGB (USA) (b) (6); Wilz, Giselle M MG USARMY NG DNGBJS (USA) (b) (6); Nordhaus, Steven S Maj Gen USAF NG NGB (USA) (b) (6); (b) (6) (b) (6); Stewart, Jennifer M SES OSD (USA) (b) (6); Henke, Robert J SES (USA) (b) (6); Lyons, David Brig Gen SD (b) (6) (b) (6); (b) (6); (b) (6); (b) (6); (b) (6)

(b) (6)

(b) (6)

Subject: RE: NG COVID Update - 21 May 20

Sir,

Thanks for this... SD read and gave us the following task with regard to your request for assistance:

-Our EXECSEC team will craft, and pass the SD a letter that he will sign/send to the WH Chief of Staff

Our team should be reaching out to you for any additional info you have to make the letter as powerful as we need.

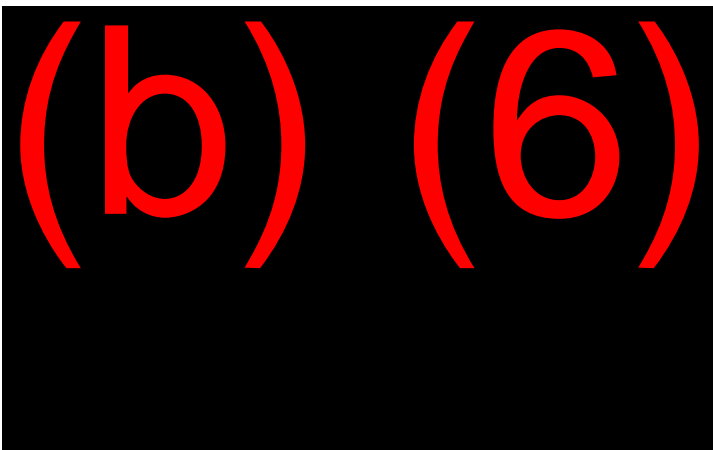
Thanks again sir—and all the best for a reflective, restful and respectful Memorial Day to you, the NGB team and you NGB families.

V/r,

Bryan

LTG Bryan P. Fenton, USA

Senior Military Assistant to the Secretary of Defense



From: Lengyel, Joseph L Gen USAF NG NGB (USA) (b) (6)

Sent: Thursday, May 21, 2020 3:58 PM

To: Fenton, Bryan LTG SD (b) (6); Milley, Mark A GEN USARMY JS OCJCS (USA)

(b) (6)

Cc: Norquist, David HON SD (b) (6); Hyten, John E Gen USAF JS OCJCS (USA)

(b) (6)

; Oshaughnessy, Terrence J Gen USAF NORAD-USNC CG (USA)

(b) (6)

; Rapuano, Kenneth P HON OSD OUSD POLICY (USA)

(b) (6)

; (b) (6)

(b) (6)

; Rice, L Scott Lt Gen USAF NG NGB (US)

(b) (6)

; White, Gregory T (YT) Maj Gen USAF NG NGB (USA)

(b) (6)

; VanHerck, Glen D Lt Gen USAF JS ODJS (USA)

(b) (6)

Taheri, Michael R Maj Gen USAF NG NGB (USA)

(b) (6)

Wilz, Giselle M MG USARMY NG DNGBJS (USA)

(b) (6)

Nordhaus, Steven S Maj Gen USAF NG NGB (US)

(b) (6)

(b) (6)

(b) (6)

Stewart, Jennifer SES SD (b) (6); Henke,

(b) (6)

Robert SES SD (b) (6); Lyons, David Brig Gen SD (b) (6); (b) (6)

(b) (6)

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(b) (6)

Subject: NG COVID Update - 21 May 20

Mr. Secretary and Chairman,

Total NG Activated: T32: **45,917** T10: 303

Total and % of NG on active duty worldwide: 84,305 (19%)

Total NG currently CV-19 positive: 605

Update on states/territories that have approved 32 U.S.C 502 (f)(2) MAs: 48

Request assistance: PM-10 failed to authorize extension of MAs past 24 Jun 20. In fact, ends mission on 10 June to allow for demob of the force. **This mission will not be done by 10 June.** I ask for **your support and assistance** to influence the White House/White House COVID-19 Task Force for a new Presidential Memorandum running through at least 31 JUL 20. The pandemic, and our response, did not start on the same day in each state, and it will not end on the same day in each state. This must be driven by requirements. Ending it on the 89th day to prevent attainment of benefit eligibility for soldiers and airmen is not how we do business. States have been judicious regarding growing the response versus total numbers authorized, putting only the number they need on orders. I know HD/GS is working to get it extended and work a draw down plan. The comments and concerns will get louder from Governors and from media if not resolved soon. **I advise, based on mission requirements, we extend these Mission Assignments to at least 31 July.**

National Guard response by the numbers. Over the last 69 days, National Guard Soldiers and Airmen have accomplished the following:

- 5,269 facilities disinfected
- 1.46 million tests/screenings

- 121 million PPE products distributed
- 92.8 million meals provided

Travel: This week I traveled to Arizona, Colorado, and Tennessee to visit Soldiers and Airmen performing COVID-19 support operations. In Flagstaff, Arizona Guardsmen are supporting local food banks with pick/pack operations, and curbside loading for **high risk members of the community—many from Navajo nation**. In Colorado, **I met with Governor Jared Polis, who supports the extension of National Guard orders** and the ability to rapidly transition NG to an operational status to support a potential second wave of COVID-19 cases, if needed. Guardsmen are caring for those experiencing homelessness, and maintaining the facilities on which they depend. **In Tennessee and met with Governor Bill Lee** and MG Jeff Holmes, the Tennessee Adjutant General, as well as Airmen from the 118th Wing.

All-Hazards Coordination Workshop: We held our **annual pre-hurricane season planning** conference virtually last week and **identified several areas of concern** given the current crisis and anticipating what the summer will bring.

In the near term, we will see increased **challenges surrounding emergency mutual aid support agreements (EMACs)** between states and territories. COVID-19 **will likely exacerbate support operations** as individual states and territories implement testing, quarantine and Restriction of Movement (ROM) policies. State balanced budget restrictions may further constrain mutual aid support for large-scale response. Wildland fire and hurricane seasonal forecasts predict above average activity, potentially placing additional pressure on shared capabilities. We will work early and often with NC, FEMA, HD and our other DoD partners to meet the challenges this summer will bring.

VR, Joe

Joseph L. Lengyel
General USAF
Chief National Guard Bureau

(b) (5)

From: (b) (6)
To: OBRIEN, Kristina M SES JS J4 (USA); Williams, Lorraine A SES OSD OUSD C (USA)
Cc: (b) (6)
Subject: RE: (U) CARES Act PPE Talking Points / Follow-up
Date: Wednesday, June 3, 2020 6:35:36 AM

How may I help?

Thanks very much

(b) (6)

From: OBRIEN, Kristina M SES JS J4 (USA) (b) (6)
Sent: Tuesday, June 2, 2020 6:17 PM
To: Williams, Lorraine A SES OSD OUSD C (USA) (b) (6)
Cc: (b) (6)
Subject: RE: (U) CARES Act PPE Talking Points / Follow-up

CLASSIFICATION: UNCLASSIFIED

Lorraine –

Thanks for reaching out on this –

The GENADMIN message went through another review with the Services and is still very close to going final ... hope to see it out this week.

As for a JS member to participate in the Hill briefs on the medical and non-medical PPE allocations, respectfully request the request for briefing support be routed through the ExecSec so it flows through the Director Joint Staff office. I've copied (b) (6); he should be able to answer any questions ref the process.

I'll keep you posted on the status of the message ...

V/r Kris

Kristina M. O'Brien, SES
Principal Deputy Director for Logistics, J4
The Joint Staff
Pentagon Room 2C923
(b) (6)

(b) (6)

CLASSIFICATION: UNCLASSIFIED

From: Williams, Lorraine A SES OSD OUSD C (USA) (b) (6)

Sent: Tuesday, June 2, 2020 1:24 PM

To: OBRIEN, Kristina M SES JS J4 (USA) (b) (6)

Subject: RE: (U) CARES Act PPE Talking Points / Follow-up

Kris,

As a follow on, it is Anne's intent to start Hill briefings on the Department's final CARES Act Spend Plan (attached) as early as this Friday. We are looking for someone from JS that can participate with us in these briefings to answer any questions they may have on the medical and non-medical PPE allocations. We also plan to have someone from DLA participate. From our perspective, JS will be there to address any questions the Hill may have with respect to the Department's approach to PPE within the scope of the PPE GENADMIN in mind. If you can let me know who would be best positioned to participate, I will follow up with specific information on timing once the briefings are set up. Finally, I'm wondering if the PPE GENADMIN has been signed, and if so, could you send me a copy. If not, can you share the timeline for finalizing?

Thank you again for your assistance. I look forward to actually meeting you in person.

R,

Lorraine

Lorraine A. Williams

Director for Operations

OUSD(Comptroller) Program/Budget

(b) (6)

From: OBRIEN, Kristina M SES JS J4 (USA) (b) (6)

Sent: Friday, May 29, 2020 6:40 AM

To: Williams, Lorraine A SES OSD OUSD C (USA) (b) (6)

Subject: RE: (U) CARES Act PPE Talking Points / Follow-up

CLASSIFICATION: UNCLASSIFIED

Lorraine –

Thank you for the follow-up –

(b) (5) [Redacted]

[Redacted]

Thank you again --

V/r Kris

Kristina M. O'Brien, SES
Principal Deputy Director for Logistics, J4
The Joint Staff
Pentagon Room 2C923

(b) (6)

CLASSIFICATION: UNCLASSIFIED

From: Williams, Lorraine A SES OSD OUSD C (USA) (b) (6) [Redacted]
Sent: Thursday, May 28, 2020 6:19 PM
To: O'BRIEN, Kristina M SES JS J4 (USA) (b) (6) [Redacted]
Subject: RE: (U) CARES Act PPE Talking Points / Follow-up

Kris,

Again, thank you so much for your assistance. I will route any such requests through the formal process in the future. I wanted to respond to your comments since these are areas that are also included in the draft CARES Spend Plan that will soon be going to Congress. In particular, (b) (5) [Redacted]

[Redacted]

[Redacted]

[Redacted]

(b) (5)

[Redacted]. Again, we appreciate your assistance and look forward to seeing the final GENADMIN.

R,
Lorraine

Lorraine Williams
Director for Operations
OUSD(Comptroller) Program/Budget

(b) (6)

From: OBRIEN, Kristina M SES JS J4 (USA) (b) (6)
Sent: Thursday, May 28, 2020 8:46 AM
To: Williams, Lorraine A SES OSD OUSD C (USA) (b) (6)
Cc: (b) (6)
[Redacted]
[Redacted] Bricker, Julie R SES OSD OUSD C (USA) (b) (6)
(b) (6)
[Redacted]
[Redacted]
[Redacted]
[Redacted]
[Redacted] Friedrichs, Paul A Brig Gen USAF JS OCJCS (USA)
(b) (6)
Subject: RE: (U) CARES Act PPE Talking Points / Follow-up

CLASSIFICATION: UNCLASSIFIED

Lorraine –

The Joint Staff has coordinated on the attached; I added a couple recommendations for your review, but the staff otherwise concurred without comment.

Respectfully request you coordinate any future coordination requests through formal OSD channels to the Joint Staff.

In addition – still tracking the GENADMIN for release ... hopefully this week. Will keep you posted --

V/r Kris

Kristina M. O'Brien, SES
Principal Deputy Director for Logistics, J4
The Joint Staff

(b) (6)

CLASSIFICATION: UNCLASSIFIED

From: Williams, Lorraine A SES OSD OUSD C (USA) (b) (6)
Sent: Tuesday, May 26, 2020 5:54 PM
To: OBRIEN, Kristina M SES JS J4 (USA) (b) (6)
Cc: (b) (6); (b) (6); (b) (6)
(b) (6)
(b) (6) Bricker, Julie R SES OSD OUSD C (USA) (b) (6)
(b) (6) (b) (6)
Subject: FW: CARES Act PPE Talking Points

Kristina,

I'd like to ask for your help in getting the Joint Staff's clearance on the attached PPE talking points for use at upcoming engagements with the Hill on CARES Act funding distribution. Additionally, can you provide an update on the status of the attached PPE GENADMIN, specifically has it been signed? The congressional engagement are expected to take place soon, possibly as early as this week, so I'd appreciate your feedback on the attached talking points at your earliest opportunity. Please let me know if you have any questions or need any additional information.

Thank you in advance for your assistance.

R,
Lorraine

Lorraine Williams
Director for Operations
OUSD (Comptroller) Program/Budget

(b) (6)

(b) (6)

Subject: RE: (U//FOUO SENSITIVE) MILAIR' and Aid to Russia
Date: Tuesday, May 12, 2020 5:27:14 PM

Rgr – thanks

(b) (6)

(b) (6)

Subject: RE: (U//~~FOUO SENSITIVE~~) (b) (5)

Sir,

We did not received the request yet. There is an NSC meeting tomorrow to discuss this request further.

A&S and USP are both tracking and are ready to support.

V/R

(b) (6)

(b) (6)

Subject: RE: (U//FOUO SENSITIVE) MILAIR' and Aid to Russia

(b) (6)

Did we get an official request from DoS?

(b) (6)

(b) (6)

Sent: Tuesday, May 12, 2020 11:09 AM

(b) (6)

Subject: RE: (U//~~FOUO SENSITIVE~~) MILAIR' and Aid to Russia

(b) (6)

(b) (5)

V/R

(b) (6)

(b) (6)

(b) (6)

Sent: Tuesday, May 12, 2020 10:17 AM

To: (b) (6)

Cc: (b) (6)

(b) (6)
(b) (6)
(b) (6)
(b) (6)

Subject: FW: (U//FOUO SENSITIVE) MILAIR' and Aid to Russia

CLASSIFICATION: UNCLASSIFIED//FOR OFFICIAL USE ONLY SENSITIVE

(b) (6),

Passing this you on behalf of Lt Gen Tuck.

VR,

(b) (6)

CLASSIFICATION: UNCLASSIFIED//FOR OFFICIAL USE ONLY SENSITIVE

From: Tuck, Giovanni K Lt Gen USAF JS J4 (USA) (b) (6)

Sent: Tuesday, May 12, 2020 10:13 AM

To: (b) (6) (b) (6)

Cc: OBRIEN, Kristina M SES JS J4 (USA) (b) (6); Byrne, William D Jr RADM USN JS ODJS (USA) (b) (6); Taliaferro, Jeffrey B (Jeff) Maj Gen USAF JS J3 (USA) (b) (6); Lamontagne, John D Brig Gen USAF JS J5 (USA) (b) (6)

(b) (6)

Subject: RE: (U//FOUO SENSITIVE) MILAIR' and Aid to Russia

CLASSIFICATION: UNCLASSIFIED//FOR OFFICIAL USE ONLY SENSITIVE

(b) (6)

Can you forward below to (b) (6), ExecSec MA? I just got off the TB with him and he is expecting it from us. He will start the internal coord as this request works its way to their office. We'll see what traction this gains, but was a go do coming out of the Top 4 today.

Thanks/GI

CLASSIFICATION: UNCLASSIFIED//~~FOR OFFICIAL USE ONLY SENSITIVE~~

(b) (6)

Sent: Tuesday, May 12, 2020 10:08 AM

To: Tuck, Giovanni K Lt Gen USAF JS J4 (USA) (b) (6)

Cc: (b) (6)

(b) (6); O'BRIEN, Kristina M SES JS J4 (USA)

(b) (6); French, Christopher C RDML USN JS OCJCS (USA)

(b) (6)

(b) (6)

(b) (6)

Subject: RE: (U//~~FOUO SENSITIVE~~) (b) (5)

CLASSIFICATION: UNCLASSIFIED//FOR OFFICIAL USE ONLY SENSITIVE

Lt Gen Tuck,

Copy sir, Thank you. I will see what I can find out.

VR,

(b) (6)

CLASSIFICATION: UNCLASSIFIED//FOR OFFICIAL USE ONLY SENSITIVE

From: Tuck, Giovanni K Lt Gen USAF JS J4 (USA) (b) (6)

Sent: Tuesday, May 12, 2020 9:47 AM

To: (b) (6)

(b) (6)

(b) (6)

Subject: FW: (U//~~FOUO SENSITIVE~~) (b) (5)

CLASSIFICATION: UNCLASSIFIED//~~FOR OFFICIAL USE ONLY SENSITIVE~~

(b) (6),

FYSA. We haven't seen an ExecSec Memo come in (b) (5) (b) (6) is putting me in contact with ExecSec next and I'll reach out to SOLIC.

Vr/GI

CLASSIFICATION: UNCLASSIFIED//FOR OFFICIAL USE ONLY SENSITIVE

(b) (6)

Sent: Tuesday, May 12, 2020 9:20 AM

(b) (6)

Subject: FW: (U//~~FOUO SENSITIVE~~) (b) (5)

CLASSIFICATION: UNCLASSIFIED//~~FOR OFFICIAL USE ONLY SENSITIVE~~

SENSITIVE BUT UNCLASSIFIED

DRAFT

MEMORANDUM FOR (b) (6), USN
EXECUTIVE SECRETARY
DEPARTMENT OF DEFENSE

SUBJECT: (U) Request (b) (5)

(b) (5)

(b) (5)

CLASSIFICATION: UNCLASSIFIED//~~FOR OFFICIAL USE ONLY SENSITIVE~~

From: [Henke, Robert SES SD](#)
To: (b) (6)
Subject: RE: Agenda and RAH for Thur 30Apr20 COVID-19 Update to the SecDef
Date: Thursday, April 30, 2020 6:02:49 PM

Why do we call it a buck-slip anyway? What does *that* mean?

(b) (6)

Sent: Thursday, April 30, 2020 5:37 PM
To: Henke, Robert SES SD (b) (6)
Subject: RE: Agenda and RAH for Thur 30Apr20 COVID-19 Update to the SecDef

Is that in reference to the CMO plan or my buck-slip??

From: Henke, Robert SES SD (b) (6)
Sent: Thursday, April 30, 2020 5:21 PM

(b) (6)

Subject: RE: Agenda and RAH for Thur 30Apr20 COVID-19 Update to the SecDef

10-81

(b) (6)

Sent: Thursday, April 30, 2020 10:44 AM
To: Lyons, David Brig Gen SD (b) (6); (b) (6)
Cc: Henke, Robert SES SD (b) (6); Verga, Peter SES SD (b) (6)
(b) (6) (b) (6)
Subject: FW: Agenda and RAH for Thur 30Apr20 COVID-19 Update to the SecDef

Team – please see attached buck-slip for the SD Update this afternoon. (b) (5)

with the SD this afternoon. Please provide him this buck-slip prior to the 1330. Thanks

From: Rapuano, Kenneth P HON OSD OUSD POLICY (USA) (b) (6)
Sent: Wednesday, April 29, 2020 6:22 PM
To: Norquist, David HON SD (b) (6); Hyten, John E Gen USAF JS OCJCS (USA) (b) (6); Hershman, Lisa W HON (USA) (b) (6); McCarthy, Ryan D HON USARMY HQDA SECARMY (USA) (b) (6); Barrett, Barbara M HON USAF SAF-OS (USA) (b) (6); RAYMOND, JOHN W Gen USSF HQSF USSF/CSO USSPACECOM/CC (b) (6); McConville, James C GEN USARMY HQDA CSA (USA) (b) (6); Gilday, Michael M ADM USN CNO (USA)

(b) (6); Goldfein, David L Gen USAF AF-CC (USA)
(b) (6); Berger Gen David H (b) (6); Burke, Robert P
ADM USN VCNO (USA) (b) (6); Martin, Joseph M GEN USARMY HQDA VCSA
(USA) (b) (6); Thomas Gen Gary L (b) (6) Wilson,
Stephen W Gen USAF AF-CV (USA) (b) (6); Griffin, Michael D HON OSD
OUSD R-E (USA) (b) (6); Lord, Ellen M HON OSD OUSD A-S (USA)
(b) (6); Anderson, James H HON OSD OUSD POLICY (USA)
(b) (6); McCusker, Elaine A HON OSD OUSD C (USA)
(b) (6); Donovan, Matthew P HON OSD OUSD P-R (USA)
(b) (6); Kernan, Joseph D HON (USA) (b) (6);
Oshaughnessy, Terrence J Gen USAF NORAD-USNC CG (USA)
(b) (6) Faller, Craig Stephen ADM USN SOUTHCOM SC-CC (USA)
(b) (6); Wolters, Tod D Gen USAF EUCOM COM (USA)
(b) (6) McKenzie, Kenneth F Jr Gen USMC CENTCOM CCCG (USA)
(b) (6); Davidson, Philip S ADM USN INDOPACOM J00 (USA)
(b) (6); Clarke, Richard D GEN USARMY USSOCOM SOCOM (USA)
(b) (6); Townsend, Stephen J (Steve) GEN USARMY AFRICOM ACCC (USA)
(b) (6); Lyons, Stephen R GEN USARMY TRANSCOM TCCC (USA)
(b) (6); Nakasone, Paul M GEN USARMY USCYBERCOM (USA)
(b) (6); Richard, Charles A ADM USN STRATCOM JOCC (USA)
(b) (6); Lengyel, Joseph L Gen USAF NG NGB (US)
(b) (6); Ney, Paul C Jr HON OSD OGC (USA) (b) (6)
Whitley, John E HON OSD CAPE (USA) (b) (6); Deasy, Dana S HON (USA)
(b) (6) Manasco, Shon J HON USAF SAF-US (USA)
(b) (6); Hood, Robert R HON OSD OASD LA (USA)
(b) (6); Hoffman, Jonathan R SES OSD OSD (USA)
(b) (6); Baker, James H SES OSD ODNA (USA)
(b) (6); >; Stewart, Jennifer SES SD (b) (6); Fenton, Bryan
LTG SD (b) (6)
Cc: Henke, Robert SES SD (b) (6); Lyons, David Brig Gen SD (b) (6);
Johnson, Justin SES SD (b) (6); Ross, Alexis SES SD (b) (6); Salesses,
Robert G SES OSD OUSD POLICY (USA) (b) (6); Payne, Lee E Maj Gen USAF
DHA J-3 (USA) (b) (6); (b) (6)
(b) (6); Castle, William S SES OSD OGC (USA)
(b) (6) SD - DSD Read ahead (b) (6)

Subject: Agenda and RAH for Thur 30Apr20 COVID-19 Update to the SecDef

DSD, Vice, and Colleagues – provided is the agenda and RAH for Thursday’s COVID-19 Update to the Secretary.

- 1) Updates on key due-outs from last meeting:
 - Increasing production capacity for vaccines & therapeutics (A&S) (TAB 1)
 - Testing requirements and supplies (Maj Gen Payne, P&R) (TAB 2)
 - Breakout of the testing quantities required to meet our testing strategy cross-

referenced with the testing supplies (swabs, reagents, machines, etc) on-hand and on-order

-

2) Increased workforce at the Pentagon (CMO) (TAB 3)

3) Elective medical procedures (P&R) (TAB 4)

4) Testing Update

- Serological Testing R&D (b) (6) [REDACTED] (TAB 5)
 - Update on DoD serologic research
 - (b) (5) [REDACTED]
- Testing for the Force (Maj Gen Payne) (TAB 2)
 - DoD Lab testing Lines of Effort

I appreciate your continued efforts and support on these issues.

Best,

Ken

From: [Salesses, Robert G SES OSD OUSD POLICY \(USA\)](#)
To: [Henke, Robert SES SD](#)
Cc: [Piatt, Walter E LTG USARMY HQDA DAS \(USA\)](#); [Miller, Kathleen S SES USARMY HQDA OAA \(USA\)](#); [Muir, Thomas M SES \(USA\)](#); [Mapes, Andrew M \(Andy\) SES OSD OCMO \(USA\)](#); (b) (6)
Subject: RE: COVID-19 DoD CVTF Full Meeting - May 15
Date: Friday, May 15, 2020 7:11:26 AM

Thanks, Bob.

Always glad to have the right organization take the lead. Army and CMO/WHS did great work with DoS getting their Charleston, SC facility moving in the right the direction over the last week.

Best, Bob

From: Henke, Robert SES SD (b) (6)
Sent: Thursday, May 14, 2020 9:48 PM
To: Salesses, Robert G SES OSD OUSD POLICY (USA) (b) (6)
Cc: Piatt, Walter E LTG USARMY HQDA DAS (USA) (b) (6); Miller, Kathleen S SES USARMY HQDA OAA (USA) (b) (6); Muir, Thomas M SES (USA) (b) (6); Mapes, Andrew M (Andy) SES OSD OCMO (USA) (b) (6)
Subject: Re: COVID-19 DoD CVTF Full Meeting - May 15

Bob, Army is the Executive Agent for DoD passports and is working the issue. From what I understand, CMO/WHS has policy responsibility for passports, but Army might be best to own this item. Thanks

Task – Dependent Passports – (CMO): Provide an update on the State Department effort to process DoD dependent passports to support PCS moves. **(SD) Suspense: May 18**

From: "Salesses, Robert G SES OSD OUSD POLICY (USA)" (b) (6)
Date: Thursday, May 14, 2020 at 7:36:45 PM
To: "Norquist, David HON SD" (b) (6), "Hyten, John E Gen USAF JS OCJCS (USA)" (b) (6), "Oshaughnessy, Terrence J Gen USAF NORAD-USNC CG (USA)" (b) (6), "Stewart, Jennifer SES SD" (b) (6), "Henke, Robert SES SD" (b) (6), "Donovan, Matthew P HON OSD OUSD P-R (USA)" (b) (6), "Lord, Ellen M HON OSD OUSD A-S (USA)" (b) (6), "McCusker, Elaine A HON OSD OUSD C (USA)" (b) (6), "Whitley, John E HON OSD OCMO (USA)" (b) (6), "Thomas Gen Gary L" (b) (6), "Burke, Robert P ADM USN VCNO (USA)" (b) (6), "Wilson, Stephen W Gen USAF AF-CV (USA)"

(b) (6), "Martin, Joseph M GEN USARMY HQDA
VCSA (USA)" (b) (6) "Rapuano, Kenneth P HON
OSD OUSD POLICY (USA)" (b) (6), "Ross, Alexis
SES SD" (b) (6) "Blake, Robert M Brig Gen USAF AF-A3
(USA)" (b) (6), "Blanks, Julie A SES OSD OUSD P-R
(USA)" (b) (6), "Bushman, William G SES (USA)"
(b) (6), "Byrne, William D Jr RADM USN JS ODJS
(USA)" (b) (6), "Castle, William S SES OSD OGC
(USA)" (b) (6), "Dumont, Michael J (Mike) VADM
USN NORAD-USNC CG (USA)" (b) (6), "Fedrigo,
John A SES USAF SAF-MR (USA)" (b) (6), "Fisher,
Vincent L SES OSD OUSD C (USA)" (b) (6), "Flynn,
Charles A LTG USARMY HQDA DCS G-3-5-7 (USA)"
(b) (6), "Friedrichs, Paul A Brig Gen USAF JS OCJCS
(USA)" (b) (6), "Funkhouser, Anthony C MG
USARMY CEHQ (USA)" (b) (6), "Greene, Jodi
J SES USN (USA)" (b) (6), "Hebert, Lernes J SES OSD OUSD
P-R (USA)" (b) (6), "Henke, Robert SES SD"
(b) (6), "Hershman, Lisa W HON (USA)"
(b) (6) "Hoffman, Jonathan R SES OSD OSD (USA)"
(b) (6) "Hood, Robert R HON OSD OASD LA
(USA)" (b) (6), "Kelly, Mark D Lt Gen USAF AF-A3
(USA)" (b) (6), "LaNeve, Christopher Charles BG
USARMY HQDA DCS G-3-5-7 (USA)" (b) (6)
"Lei, JihFen SES OSD OUSD R&E (USA)" (b) (6),
"Lestorti, Joseph M BG USARMY JS J3 (USA)"
(b) (6), "Liszewski BGen Stephen E"
(b) (6) "Lord, Ellen M HON OSD OUSD A-S (USA)"
(b) (6) "Maurer, Derek J (Dirk) SES OSD OUSD POLICY
(USA)" (b) (6), "McAndrew, Anne J SES OSD OUSD C
(USA)" (b) (6), "Mccaffery, Thomas P HON OSD
OSD P-R (USA)" (b) (6) "Mott, Jon K Maj Gen
USAF NG CTANG (USA)" (b) (6) "Muir, Thomas M SES
(USA)" (b) (6) "Piatt, Walter E LTG USARMY HQDA
DAS (USA)" (b) (6), (b) (6)
(b) (6), "Ross, Alexis Lasselle SES OSD
OSD P-R (USA)" (b) (6), "Sawyer, Phillip G VADM
USN (USA)" (b) (6) "Semonite, Todd T LTG USARMY
HQDA OCE (USA)" (b) (6), "Shaffer, Alan R HON
OSD OUSD A-S (USA)" (b) (6), "Simon, Martin S
(Marty) SES USN UNSECNAV DC (USA)" (b) (6)
"Taliaferro, Jeffrey B (Jeff) Maj Gen USAF JS J3 (USA)"
(b) (6), (b) (6)
(b) (6) "VanHerck, Glen D Lt Gen USAF JS
ODJS (USA)" (b) (6), "Walsh, Daniel P SES PFPA
HQS (USA)" (b) (6) "Whitney, Steven P Brig Gen
USAF OSD OUSD A-S (USA)" (b) (6), "Williams,
Lorraine A SES OSD OUSD C (USA)" (b) (6)
"Williams, Marshall M (Will) SES USARMY HQDA ASA MRA (USA)"
(b) (6), "Friedrichs, Paul A Brig Gen USAF JS

OCJCS (USA)" (b) (6), "Payne, Lee E Maj Gen USAF
DHA J-3 (USA)" (b) (6), (b) (6)
"Lyons, Judd H SES OSD OUSD
P-R (USA)" (b) (6), "Deasy, Dana S HON (USA)"
(b) (6), "Mewbourne, Dee L VADM USN TRANSCOM
TCDC (USA)" (b) (6), "Shaffer, Alan R HON OSD
OUSD A-S (USA)" (b) (6), (b) (6)
(b) (6), "Smith,
David J SES OSD OUSD P-R (USA)" (b) (6)
Cc: "Lyons, David Brig Gen SD" (b) (6), (b) (6)

Subject: COVID-19 DoD CVTF Full Meeting - May 15

Deputy Secretary, Vice Chairman, and Distinguished Task Force Colleagues,

BLUF: DSD and VCJCS will Chair the next COVID TF meeting 1230-1330 tomorrow, May 15, 2020 in multiple SVTC locations to maintain social distance.

Tomorrow's Agenda:

- I. **President's Task Force Update: ASD Rapuano**
- II. **NORTHCOM Update: General O'Shaughnessy**
- III. **Review Task List:**

Force Health Protection/Medical Preparedness

Task – Integrated diagnostics, therapeutics, and vaccine development program – (HD&GS): Provide update on status of MOA with HHS. (DSD) **Suspense: May 18**

Task – Increasing Production Capacity for Vaccines & Therapeutics – (A&S): Provide an update on discussions with manufacturers to increase manufacturing fill and finish capacity. Include next steps with HHS and DoD. (SD) **Suspense: May 18**

Task – Testing Framework – (P&R): Provide an update on testing requirement for tiers 1, 2, 3, and 4. Include maximum capacity and actual tests completed per day. (SD) **Suspense: May 18**

Task – Contact Tracing and Using Testing as a Sentinel Tool – (P&R): Develop FHP-

10 guidance for DoD surveillance testing. Develop two case studies (aboard a ship and on an installation) for conducting contact tracing. Studies will include feasibility, pros and cons, and value of conducting contact tracing in each environment. In coordination with the CIO, develop an info paper on the risk of using Bluetooth devices in a secure facility. Conduct an exhaustive review of potential hardware to determine if it is possible for DoD to exclusively retain all data collected via electronic contract tracing tools. **(DSD) Suspense: May 20**

Task – Serology Testing – (P&R): Update on progress and timelines associated with serological testing for the presence of SAR-CoV-2 (COVID-19) antibodies. **(SD) Suspense: May 18**

Mission Readiness

Task – Enabling Operations in a COVID-19 Environment – (HD&GS): Provide an update on the guidance memo on strategy to resume daily operations across the Department. **(SD) Suspense: May 18**

Task – Military Personnel Deploying in support of CCMDs – (P&R, JS): Provide update on FHP-9 and the plan to ensure military forces deploying in support of Combatant Commands have procedures in place to minimize risk of being COVID positive. **(SD) Suspense: May 18**

Personnel Policy & Mitigation

Task – Adjustments to HPCON memo – (P&R): Provide an update on draft guidance memo. **(SD) Suspense: To SD for review on May 15**

Task – Elective Medical Procedures – (P&R): Provide an update on the draft guidance memo. **(SD) Suspense: To SD for review on May 15**

Modified Task – Lifting Travel Restrictions – (P&R): Provide update on guidance memo for transition to conditions-based approach to personnel movement and travel restrictions. **(SD) Suspense: May 18**

New Task – Household Good Movement – (USTRANSCOM): Provide update on plan to meet challenges of upcoming “peak season” coming out of COVID stop move. **(DSD) Suspense: May 15**

Task – Dependent Passports – (CMO): Provide an update on the State Department effort to process DoD dependent passports to support PCS moves. **(SD) Suspense: May 18**

Task – International Students – (Policy, P&R): Develop plan for addressing COVID-19 concerns for international students entering DoD schools, PME, and training courses this fall. **(DSD) Suspense: May 20**

Pentagon Reservation

Task – Pentagon Plan – (CMO): Provide an update on the plan. **(SD) Suspense: May 15**

International Support

Modified Task – Assistance to International Partners – (SOLIC): Provide an update on plan to prioritize international partners to assist with COVID supplies. **(DSD) Suspense: May 15**

New Task – Support COCOM and FMS Programs – (SOLIC): Provide update on support to COCOM and FMS programs. **(DSD) Suspense: May 15**

Task – Ventilator aid – (SOLIC): Provide an update on the status of ventilator aid and potential DoD request for transport. **(DSD) Suspense: May 15**

Task – Ventilator offer to NATO – (SOLIC): Provide an update on the status of ventilator offer to NATO. **(DSD) Suspense: May 15**

Task – USG Process for International Support – (SOLIC): Provide an update on State Department plan to provide USG assistance to international partners. **(DSD) Suspense: May 15**

Installations and Logistics

Task – DPA and JATF update – (A&S): Provide an update on the Defense Production Act and the Joint Acquisition Task Force. **(SD) Suspense: Ongoing**

Strategic Communications

Task – Coordinated PA Plan for Service New Normal Plans – (PA, Services): Develop coordinated PA and launch plan for Service New Normal plans. **(SD) Suspense: Pending release of SD guidance memo**

Funding

Task – New Supplemental Request – (Comptroller): Update on status of DoD submission for supplemental funding and authorities. **(SD) Suspense: Ongoing**

Modeling

Task – Modeling and analytic update – (CVTF, CAPE): Provide an update on DoD’s modeling and analytics effort and how it fits into the larger USG modeling effort. **(SD) Suspense: Ongoing**

Lessons Learned

Task – Lessons Learned – (JS J7, HD&GS): Update on status of DSD memo directing all DoD components to collect lessons learned and to be prepared to provide them to DoD’s Lessons Learned Task Force on a continuing basis. **(SD) Suspense: Ongoing**

Services Issues: Army: General Martin; Navy: Admiral Burke; Air Force: General Wilson; Marine Corps: General Thomas

As time permits, we will review other tasks, so please come prepared for those as well.

Please let me know if you have any questions or need assistance.

Best, Bob

From: (b) (6)
To: Folliard, Daniel SES SD; (b) (6)
Cc: (b) (6)
Subject: RE: COVID-19 DoD CVTF Full Meeting - May 20
Date: Wednesday, May 20, 2020 8:07:13 PM

Dan, thanks to all – I let DSD know this is coming. V/R (b) (6)

From: Folliard, Daniel SES SD (b) (6)
Sent: Wednesday, May 20, 2020 7:45 PM
To: Florick, Davis L CIV OSD OUSD POLICY (USA) (b) (6)
Cc: (b) (6)
(b) (6)
(b) (6)
(b) (6)
(b) (6)
(b) (6)
Subject: RE: COVID-19 DoD CVTF Full Meeting - May 20

+ (b) (6)

Davis, All,

(b) (6) has the action. Intent is to provide a template / mock-up tomorrow to the group tomorrow; something that's easy/helpful for the TF and conveys the broader story to SD/DSD.

Dan

(b) (6)

Sent: Wednesday, May 20, 2020 1:05 PM
To: Folliard, Daniel SES SD (b) (6)

(b) (6)

Subject: FW: COVID-19 DoD CVTF Full Meeting - May 20

Dan,

Good afternoon. The task list below should provide a basis for the SD 10-15 tasks and DSD ~5 tasks.

Thank you.

(b) (6)

From: Salesses, Robert G SES OSD OUSD POLICY (USA) (b) (6)
Sent: Tuesday, May 19, 2020 6:26 PM
To: (b) (6); Hyten, John E Gen USAF JS OCJCS (USA) (b) (6)
Oshaughnessy, Terrence J Gen USAF NORAD-USNC CG (USA)
(b) (6); Stewart, Jennifer M SES OSD OSD (USA)
(b) (6) Henke, Robert J SES (USA) (b) (6); Donovan, Matthew P
HON OSD OUSD P-R (USA) (b) (6); Lord, Ellen M HON OSD OUSD A-S
(USA) (b) (6); McCusker, Elaine A HON OSD OUSD C (USA)
(b) (6); Whitley, John E HON OSD OCMO (USA)
(b) (6); Thomas, Gary L Gen USMC ACMC (USA) (b) (6)
Burke, Robert P ADM USN VCNO (USA) (b) (6) Wilson, Stephen W Gen USAF
AF-CV (USA) (b) (6); Martin, Joseph M GEN USARMY HQDA VCSA (USA)
(b) (6) Rapuano, Kenneth P HON OSD OUSD POLICY (USA)
(b) (6); 'Ross, Alexis SES SD' (b) (6); Blake, Robert M Brig
Gen USAF AF-A3 (USA) (b) (6); Blanks, Julie A SES OSD OUSD P-R (USA)
(b) (6); Bushman, William G SES (USA) (b) (6)
Byrne, William D Jr RADM USN JS ODJS (USA) (b) (6); Castle, William S SES
OSD OGC (USA) (b) (6); Dumont, Michael J (Mike) VADM USN NORAD-
USNC CG (USA) (b) (6); Fedrigo, John A SES USAF SAF-MR (USA)
(b) (6); Fisher, Vincent L SES OSD OUSD C (USA)
(b) (6); Flynn, Charles A LTG USARMY HQDA DCS G-3-5-7 (USA)
(b) (6); Friedrichs, Paul A Brig Gen USAF JS OCJCS (USA)
(b) (6); Funkhouser, Anthony C MG USARMY CEHQ (USA)
(b) (6); Greene, Jodi J SES USN (USA) (b) (6)
Hebert, Lernes J SES OSD OUSD P-R (USA) (b) (6) Henke, Robert J SES (USA)
(b) (6); Hershman, Lisa W HON (USA) (b) (6); Hoffman,
Jonathan R SES OSD OSD (USA) (b) (6); Hood, Robert R HON OSD
OASD LA (USA) (b) (6); Kelly, Mark D Lt Gen USAF AF-A3 (USA)
(b) (6); LaNeve, Christopher Charles BG USARMY HQDA DCS G-3-5-7 (USA)
(b) (6); Lei, JihFen SES OSD OUSD R&E (USA) (b) (6)
Lestorti, Joseph M BG USARMY JS J3 (USA) (b) (6); Liszewski, Stephen E
BGen USMC HQMC (USA) (b) (6); Lord, Ellen M HON OSD OUSD A-S (USA)
(b) (6); Maurer, Derek J (Dirk) SES OSD OUSD POLICY (USA)
(b) (6); McAndrew, Anne J SES OSD OUSD C (USA)
(b) (6); Mccaffery, Thomas P HON OSD OUSD P-R (USA)
(b) (6); Mott, Jon K Maj Gen USAF NG CTANG (USA)
(b) (6); Muir, Thomas M SES (USA) (b) (6); Piatt, Walter
E LTG USARMY HQDA DAS (USA) (b) (6); (b) (6)
(b) (6); Ross, Alexis Lasselle SES OSD OUSD P-R (USA)
(b) (6); Sawyer, Phillip G VADM USN (USA) (b) (6)
Semonite, Todd T LTG USARMY HQDA OCE (USA) (b) (6); Shaffer, Alan R
HON OSD OUSD A-S (USA) (b) (6); Simon, Martin S (Marty) SES USN
UNSECNAV DC (USA) (b) (6); Taliaferro, Jeffrey B (Jeff) Maj Gen USAF JS J3 (USA)
(b) (6); (b) (6)

(b) (6); VanHerck, Glen D Lt Gen USAF JS ODJS (USA)
(b) (6); Walsh, Daniel P SES PFPA HQS (USA)
(b) (6); Whitney, Steven P Brig Gen USAF OSD OUSD A-S (USA)
(b) (6); Williams, Lorraine A SES OSD OUSD C (USA)
(b) (6); Williams, Marshall M (Will) SES USARMY HQDA ASA MRA (USA)
(b) (6); Friedrichs, Paul A Brig Gen USAF JS OCJCS (USA)
(b) (6); Payne, Lee E Maj Gen USAF DHA J-3 (USA)
(b) (6); (b) (6)
Lyons, Judd H SES OSD OUSD P-R (USA) (b) (6); Deasy, Dana S HON (USA)
(b) (6); Mewbourne, Dee L VADM USN TRANSCOM TCDC (USA)
(b) (6); Shaffer, Alan R HON OSD OUSD A-S (USA)
(b) (6)

Cc: 'Lyons, David Brig Gen SD' (b) (6)
[Redacted]
[Redacted]
[Redacted]
[Redacted]
[Redacted]
[Redacted]
[Redacted]

Subject: COVID-19 DoD CVTF Full Meeting - May 20

Deputy Secretary, Vice Chairman, and Distinguished Task Force Colleagues,

BLUF: DSD and VCJCS will Chair the next COVID TF meeting 1000-1100 tomorrow, May 20, 2020 in multiple SVTC locations to maintain social distance.

Tomorrow's Agenda:

- I. **President's Task Force Update:** ASD Rapuano
- II. **NORTHCOM Update:** General O'Shaughnessy
- III. **Review Task List:**

Force Health Protection/Medical Preparedness

Task – MOU on integrated diagnostics, therapeutics, and vaccine development program – (HD&GS): Provide update on status of MOU with HHS. **(DSD) Suspense: May 22**

Task – Increasing Production Capacity for Vaccines & Therapeutics – (A&S): Provide an update on discussions with manufacturers to increase manufacturing fill and finish capacity. Include next steps with HHS and DoD. **(SD*) Suspense: May 22**

New Task – Collection of Convalescent Blood Plasma – (P&R): Develop a plan to increase collection, storage, and use of convalescent blood plasma from DoD beneficiaries who have recovered from COVID-19. **(SD*) Suspense: May 26**

New Task – DHA Facility in Florida – (P&R): Develop an info paper on capacity to expand DoD's Medical Counter Measures Advanced Biologics Manufacturing (DoD MCM ABM) Facility in Alachua, FL. **(SD*) Suspense: May 26**

New Task – Zinc and Vitamin-D Supplements – (P&R): Provide a recommendation on assessing the feasibility and efficacy of providing zinc and vitamin-D supplements for DoD beneficiaries to boost immune defense. **(SD*) Suspense: May 26**

Task – Testing Framework – (P&R): Provide an update on testing framework. **(SD*) Suspense: Ongoing**

Modified Task – Serology Testing – (P&R): Provide and update on progress and timelines associated with serological testing for the presence of SAR-CoV-2 (COVID-19) antibodies. **(SD*) Suspense: Ongoing**

Modified Task – (FHP-10) DoD Surveillance Testing – (P&R): Develop FHP-10 guidance for DoD surveillance testing. Include a plan to increase DoD surveillance testing from its current 1% of the total force to 8-10%. **(DSD) Suspense: May 22**

New Task – Ortho Test for Neutralizing Antibodies – (P&R): Develop an info paper on DoD's capacity to conduct COVID-19 antibody testing using the Ortho Clinical Diagnostics COVID-19 Total or IgG antibody test. **(SD*) Suspense: May 26**

Modified Task – Contact Tracing – (P&R): Provide an update on contact tracing case studies. **(DSD) Suspense: Awaiting DSD review (Tab 1)**

New Task – Guidance for Susceptible Populations – (P&R): Provide a recommendation on providing COVID-19 specific guidance concerning the susceptibility of certain portions of the population. **(SD*) Suspense: May 26**

New Task – COVID-19 Isolation – (P&R): Develop an info paper on the possibility of reducing COVID-19 isolation period from 14-days to 10-days. **(SD*) Suspense: May 26**

New Task – Displaying Health Surveillance Data – (P&R): In coordination with ADVANA, provide a geospatial display DoD health surveillance data in the map format displayed during the May 19 SD update. **(SD) Suspense: May 26**

Mission Readiness

Task – Enabling Operations in a COVID-19 Environment – (HD&GS): Provide an update on the guidance memo on strategy to resume daily operations across the Department. **(SD*) Suspense: May 20**

Task – (FHP-9) DoD Guidance for Deployment and Redeployment of Individuals and Units during COVID-19 Pandemic Response – (P&R, JS): Provide update on FHP-9 and the plan to ensure military forces deploying in support of Combatant Commands have procedures in place to minimize risk of

being COVID positive. **(SD*) Suspense: Topic for May 26 SD update**

Task – Exception to 14-day ROM of DoD Forces deploying OCONUS – (Policy): Negotiate with host nations on an exception to restriction of movement requirements for deploying forces that isolated within the U.S. prior to departure. **(SD*) Suspense: May 20**

-
Personnel Policy & Mitigation

Task – Adjustments to HPCON memo – (P&R): Provide an update on draft guidance memo. **(SD*) Suspense: SD signed on May 19.**

Modified Task – Elective Medical Procedures – (P&R): Provide an update on the draft guidance memo. **(SD*) Suspense: SD reviewed and pending release of HPCON memo. Will be signed by ASD(HD).**

Task – Lifting Travel Restrictions – (P&R): Provide update on guidance memo for transition to conditions-based approach to personnel movement and travel restrictions. **(SD*) Suspense: Topic for May 26 SD update**

Task – Cost-based Analysis of ROM – (CAPE): Provide a cost-based analysis of the impacts from DoD’s current Restriction of Movement (ROM) policy. **(DSD) Suspense: May 22**

Task – Household Goods Movement Plan – (USTRANSCOM): Provide update on plan to meet challenges of upcoming “peak season” coming out of COVID stop move. Include previous year historical data on number of moves per week. **(DSD) Suspense: Topic for May 26 SD update**

Task – Household goods movement policy – (P&R, A&S): Develop policy on movement of household goods as personnel movements resume. Policy should include incentives for Service Members to conduct personally procured moves. **(DSD) Suspense: May 22**

Modified Task – International Students – (Policy, P&R): Develop a policy/plan for addressing COVID-19 concerns for international students entering DoD schools, PME, and training courses this fall. **(DSD) Suspense: May 20**

Pentagon Reservation

Modified Task – Pentagon Plan – (CMO): Provide an update on the plan. **(SD*) Suspense: SD reviewed and pending release of HPCON memo.**

International Support

Task – Assistance to International Partners – (SOLIC): Provide an update on State Department plan to provide USG assistance to international partners. Provide an update on prioritized international partners for DoD to assist with COVID supplies. Provide updated policy memo and country list to USDs, Services, and CCMDs for comment. **(DSD) Suspense: Topic for May 26 SD update**

Task – Support CCMD and FMS Programs – (SOLIC): Provide update on support to CCMD and Foreign Military Sales programs. **(DSD) Suspense: May 20**

Task – Ventilator aid – (SOLIC): Provide an update on the status of ventilator aid and potential DoD request for transport. **(SD) Suspense: May 20**

Task – Ventilator offer to NATO – (SOLIC): Provide an update on the status of ventilator offer to NATO. **(DSD) Suspense: May 20**

Installations and Logistics

New Task – DoD Pandemic Stockpile – (A&S): Provide a recommendation on items to add to the DoD Pandemic Stockpile and a recommendation on increasing the on-hand supply of items in the DoD Pandemic Stockpile. **(SD*) Suspense: May 26**

Task – DPA and JATF update – (A&S): Provide an update on the Defense Production Act and the Joint Acquisition Task Force. **(SD*) Suspense: Ongoing**

Strategic Communications

Task – Coordinated PA Plan for Service New Normal Plans – (PA, Services): Develop coordinated PA and launch plan for Service New Normal plans. **(SD*) Suspense: Pending release of SD guidance memo**

Funding

Task – New Supplemental Request – (Comptroller): Update on status of DoD submission for supplemental funding and authorities. **(SD*) Suspense: Ongoing**

-

Modeling

Task – Modeling and analytic update – (CVTF, CAPE): Provide an update on DoD's modeling and analytics effort and how it fits into the larger USG modeling effort. **(SD*) Suspense: Ongoing**

Lessons Learned

Task – Lessons Learned – (JS J7, HD&GS): Update on status of DSD memo directing all DoD components to collect lessons learned and to be prepared to provide them to DoD's Lessons Learned Task Force on a continuing basis. **(SD*) Suspense: Ongoing**

Services Issues: Army: General Martin; Navy: Admiral Burke; Air Force: General Wilson; Marine Corps: General Thomas

* - Denotes an SD-directed task

As time permits, we will review other tasks, so please come prepared for those as well.

Please let me know if you have any questions or need assistance.

Best, Bob

(b) (6)

Subject: RE: Daily PA COVID-19 Products
Date: Saturday, March 28, 2020 12:34:55 PM
Attachments: [ESF15_DailyBriefingPoints_20200328_FINAL.pdf](#)

Ladies and Gentlemen,

I have attached the FEMA daily briefing points.

V/R,

(b) (6)

Coronavirus (COVID-19) Pandemic Whole-of-Government Response
Saturday, March 28, 2020

"I CAN TELL YOU THIS WEEKEND, WE WILL BE REPORTING ON AGGRESSIVE EFFORTS THAT OUR SUPPLY STABILIZATION TASK FORCE AT FEMA IS TAKING TO IMPORT MEDICAL SUPPLIES FROM AROUND THE WORLD.

- VICE PRESIDENT MIKE PENCE

Topline Briefing Points and Messages

-The federal government continues taking aggressive and proactive steps to address the coronavirus (COVID-19) pandemic. The health and safety of the American people is our top priority.

-The American people play a key role in the nation's 15 Days to Slow the Spread < Caution-<https://www.whitehouse.gov/articles/15-days-slow-spread/> > campaign to help slow the virus' spread and keep our most high-risk populations safe.

-For the latest updates and information on how to protect yourself and what to do if you think you are sick is available at Caution-www.coronavirus.gov < Caution-<http://www.coronavirus.gov> > .

-Apple and CDC, together with the White House and FEMA, launched a new website < Caution-<https://www.apple.com/covid19> > and app with a COVID-19 screening tool and resources to help people protect their health.

-Under the direction of the White House Coronavirus Task Force, FEMA, HHS and our federal partners are working with state, local, tribal and territorial governments to execute a whole of government response to fight the COVID-19 pandemic and protect the public.

-As of March 28, FEMA, via the Strategic National Stockpile (SNS), has delivered, or is shipping: 11.6 million N-95 respirators, 26 million surgical masks, 5.2 million face shields, 4.3 million surgical gowns, 22 million gloves, 132,000 coveralls and 8,100 ventilators. We are sending more every day, and we are working nonstop to acquire or produce even more.

-Today, the US-NS Comfort will be underway today from Norfolk, VA to New York, NY.

-The Comfort will arrive at Pier 90 in Manhattan on Monday - only approximately a mile away from the Javits Convention Center where the U.S. Army Corps of Engineers are actively constructing a 2,910-bed alternate care facility.

-The Comfort is equipped with 12 operating rooms, 1,000 hospital beds, a medical laboratory, a pharmacy, an optometry lab, digital radiology services, a CAT-scan, two oxygen producing plants, a helicopter deck and a crew of nearly 1,200 U.S. military personnel.

-The crew onboard the Comfort will provide critically needed medical surge capacity for New York Metropolitan area. Their mission will be to care for New Yorkers who do not have COVID-19, but who require urgent medical care.

-Seventeen states and four tribes have issued stay at home orders.

-On March 22, President Trump directed the Secretary of Defense to allow the states of California, New York and Washington use of the National Guard in a Title 32 status to support state and local emergency assistance efforts.

-This allows the governors to activate the National Guard to support their disaster response efforts, on a fully reimbursable basis and under their respective command and control, if that becomes necessary.

-Additional states can request this assistance and those requests will be considered.

-On March 13, 2020, President Trump declared a nationwide emergency pursuant to Sec. 501(b) of Stafford Act to avoid governors needing to request individual emergency declarations.

-In addition, the states of California, Florida, Illinois, Iowa, Louisiana, New Jersey, New York, North Carolina, Maryland, Michigan, Missouri, South Carolina, Texas, Washington, the commonwealth of Puerto Rico, and the territory of Guam were approved for major disaster declarations to assist with additional needs identified in these states.

-----Original Message-----

From: (b) (6)

Sent: Saturday, March 28, 2020 9:54 AM

To: (b) (6)

Henke, Robert SES SD

(b) (6)

Verga, Peter SES SD (b) (6) ; (b) (6)

(b) (6)

Subject: Daily PA COVID-19 Products

Ladies and Gentlemen,

I have attached the daily coronavirus media compilation.

Below is the DoD statement that was released late last night concerning the

executive order allowing partial mobilization for coronavirus response.
Talking points attached.

Overall OSD/PA Talking Points and the Media Fact Sheet will be updated on Monday.

I am not certain on the schedule for the FEMA briefing points document. I will provide the document if its produced over the weekend.

V/R,

(b) (6)

"Today the President signed an Executive Order authorizing Secretary Esper to order units and individual members in the National Guard and Reserves and certain Individual Ready Reserve members, to active duty to augment forces for the effective response to the coronavirus outbreak.

Decisions about which individuals may be activated are still being reviewed. Generally, these members will be persons in Headquarters units and persons with high demand medical capabilities whose call-up would not adversely affect their civilian communities. With respect to any potential utilization of National Guard Reserve Component units under this EO, the Secretary of Defense and the Department of Health and Human Services will consult with state officials before acting. As this is a dynamic situation, we do not currently have a projected number of expected activations, but the Department is now fully authorized to make activations as needed. We will provide updates as they become available.

The Department has been committed to using all our capabilities to confront the coronavirus outbreak, and the President's action today ensures that we can bring select members of the Reserves and National Guard to the fight where needed most."

-----Original Message-----

From: (b) (6)

Sent: Friday, March 27, 2020 10:28 AM

To: Henke, Robert SES SD (b) (6)

Verga, Peter SES SD (b) (6)

Subject: RE: Daily PA COVID-19 Products

Ladies and Gentlemen,

FEMA national hot issues report attached.

V/R,

(b) (6)

-----Original Message-----

From: (b) (6)

Sent: Friday, March 27, 2020 9:30 AM

To: 'Henke, Robert J SES (USA)' (b) (6)

Subject: Daily PA COVID-19 Products

Ladies and Gentlemen,

I have attached the daily PA products for DoD support to Coronavirus response, briefing schedule, and FEMA briefing points.

V/R,

(b) (6)

Coronavirus (COVID-19) Pandemic

Whole-of-Government Response

Saturday, March 28, 2020

**"I CAN TELL YOU THIS WEEKEND, WE WILL BE REPORTING ON AGGRESSIVE EFFORTS THAT OUR SUPPLY STABILIZATION TASK FORCE AT FEMA IS TAKING TO IMPORT MEDICAL SUPPLIES FROM AROUND THE WORLD.
– VICE PRESIDENT MIKE PENCE**

Topline Briefing Points and Messages

- The federal government continues taking aggressive and proactive steps to address the coronavirus (COVID-19) pandemic. The health and safety of the American people is our top priority.
- The American people play a key role in the nation's [15 Days to Slow the Spread](#) campaign to help slow the virus' spread and keep our most high-risk populations safe.
 - For the latest updates and information on how to protect yourself and what to do if you think you are sick is available at www.coronavirus.gov.
 - Apple and CDC, together with the White House and FEMA, launched a [new website](#) and app with a COVID-19 screening tool and resources to help people protect their health.
- Under the direction of the White House Coronavirus Task Force, FEMA, HHS and our federal partners are working with state, local, tribal and territorial governments to execute a whole of government response to fight the COVID-19 pandemic and protect the public.
- As of March 28, FEMA, via the Strategic National Stockpile (SNS), has delivered, or is shipping: 11.6 million N-95 respirators, 26 million surgical masks, 5.2 million face shields, 4.3 million surgical gowns, 22 million gloves, 132, 000 coveralls and 8,100 ventilators. We are sending more every day, and we are working nonstop to acquire or produce even more.
- Today, the US-NS *Comfort* will be underway today from Norfolk, VA to New York, NY.
 - The *Comfort* will arrive at Pier 90 in Manhattan on Monday – only approximately a mile away from the Javits Convention Center where the U.S. Army Corps of Engineers are actively constructing a 2,910-bed alternate care facility.
 - The *Comfort* is equipped with 12 operating rooms, 1,000 hospital beds, a medical laboratory, a pharmacy, an optometry lab, digital radiology services, a CAT-scan, two oxygen producing plants, a helicopter deck and a crew of nearly 1,200 U.S. military personnel.
 - The crew onboard the *Comfort* will provide critically needed medical surge capacity for New York Metropolitan area. Their mission will be to care for New Yorkers who do not have COVID-19, but who require urgent medical care.
- Seventeen states and four tribes have issued stay at home orders.

- On March 22, President Trump directed the Secretary of Defense to allow the states of California, New York and Washington use of the National Guard in a Title 32 status to support state and local emergency assistance efforts.
 - This allows the governors to activate the National Guard to support their disaster response efforts, on a fully reimbursable basis and under their respective command and control, if that becomes necessary.
 - Additional states can request this assistance and those requests will be considered.
- On March 13, 2020, President Trump declared a nationwide emergency pursuant to Sec. 501(b) of Stafford Act to avoid governors needing to request individual emergency declarations.
- In addition, the states of California, Florida, Illinois, Iowa, Louisiana, New Jersey, New York, North Carolina, Maryland, Michigan, Missouri, South Carolina, Texas, Washington, the commonwealth of Puerto Rico, and the territory of Guam were approved for major disaster declarations to assist with additional needs identified in these states.

Medical Hotspots

New York/New York City

- FEMA and HHS are working with the Governor of New York, and New York City officials to set up a 1,000-bed medical station at the Javits Center in Manhattan to increase local healthcare capabilities. Once all phases of construction are complete, the Javits Convention Center will have a capacity of 2,910 beds.
 - The station will care for patients with non-COVID-19 healthcare needs.
 - Additional temporary hospital sites are being worked, including a 600-bed capacity nursing home facility in Brooklyn, and numerous floors of a high-rise building on Wall Street.
- FEMA issued a \$350 million Mission Assignment to the U.S. Army Corps of Engineers for construction of alternate care facilities in New York. Four sites have been selected.
- The U.S. Army Corps of Engineers awarded contracts three New York state priorities for alternate care facility conversions at State University (SUNY) Stony Brook, SUNY Old Westbury, and for the Westchester Community Center.
 - In total, the alternative care facilities in New York will expand hospital capacity by approximately 6,000 beds.
- At the request of New York state, FEMA issued a \$6 million Mission Assignment to HHS to provide round the clock medical staff to care for non-critical patients in the state.
- The U.S. Navy hospital ship Comfort will depart today from Norfolk, Virginia, for New York City, providing critically needed medical surge capacity for the New York Metropolitan area.
- Supplies from the Strategic National Stockpile have arrived in New York and are being distributed to medical facilities in the most impacted areas. Supplies delivered include 2,000 ventilators for the State and 2,400 ventilators for New York City.

California

- The U.S. Army Corps of Engineers has completed the assessment of eight state-selected facilities to develop large-scale, supplemental hospital space as the state works to expand existing hospital capacity by up to 50,000 beds.
 - The U.S. Army Corps of Engineers are scoping sites provided by the State of California for potential use as Alternate Care Facilities.
- The Department of Defense USNS Mercy hospital ship arrived in Los Angeles Friday and will care for patients with non-COVID-19 health needs to relieve strains on local hospital systems.
 - The Mercy expects to be operational within less than a week.
- Supplies from the Strategic National Stockpile have arrived in California and are being distributed to medical facilities throughout the state.
- FEMA completed the sale of 105 travel trailers to the state to support a State COVID-19 housing initiative for impacted individuals.
- On March 22, FEMA obligated \$32 million to the state of California to reimburse costs related to the COVID-19 response.

Washington

- Department of Defense sourced the 627th Hospital Center/10th Field Hospital to support COVID-19 response in Washington. The field hospital includes 148 bed capacity with ability to increase to 250 beds and 366 trained medical personnel
- Field hospital/alternate medical facility assessments are underway in Washington. Assessment teams will evaluate four potential sites for alternate medical facilities. Teams are comprised of members from DOD, USACE, FEMA, HHS, and state, county, and local officials.

Louisiana/New Orleans

- Three Community Based Testing Sites are open and operational in New Orleans.
- An epidemiology team from the Centers for Disease Control and Prevention (CDC) arrived at the Louisiana Emergency Operations Center on March 26.
- Additional support being sent to the state to increase state hospital capacity includes two 250-bed Federal Medical Stations and U.S. Army Corps of Engineers support for assessment and evaluation of alternative care facilities.
- On March 23, FEMA obligated \$31 million to the state of Louisiana to reimburse expenses for the response to COVID-19.

FEMA and HHS Response

- All 50 states, the District of Columbia, five territories and 13 tribes are working directly with FEMA under the nationwide emergency declaration for COVID-19.
 - States, tribal and territorial governments do not need to request separate emergency declarations to receive FEMA assistance under this nationwide declaration. A tribal government may choose to be a subrecipient under a state that has chosen to be a recipient of FEMA assistance, or choose to be a direct recipient of FEMA.

DAILY BRIEFING POINTS: COVID-19 WHOLE-OF-GOVERNMENT RESPONSE

- FEMA activated all 10 Regional Response Coordination Centers to support ongoing response efforts across the country. Emergency operations centers in all states and territories are activated.
- It is important that requests for assistance, especially for critical supplies, get routed through the proper channels as soon as possible. The most efficient way to identify critical gaps and get results:
 - Consistent with the principle of locally executed, state managed, and federally supported response, requests for assistance at the local and county levels should first be routed to their respective state.
 - Any needs that cannot be met by the state or tribe should then be sent to the respective FEMA regional office. FEMA regions will direct requests to FEMA NRCC in Washington, D.C. for fulfillment.
- Federal agencies are working to meet demands for personal protective equipment (PPE) through new acquisition, DOD allocation and the Strategic National Stockpile.
 - The Centers for Disease Control released [personal protective equipment optimization strategies](#) for healthcare providers to optimize resources, deal with limited resources and make contingency plans or alternative strategies when supplies are limited.
- FEMA is working with HHS to deliver additional supplies and ventilators using its Logistics Supply Chain Management System to procure and track commodities to supplement state and tribal purchases.
 - On March 21, HHS awarded contracts to five companies to purchase approximately 600 million N95 respirators over the next 18 months. This purchase will encourage manufacturers to increase production of N95 respirators now, with a guarantee that companies will not be left with excess supplies if private sector orders are cancelled once the COVID-19 response subsides.
 - Additionally, a Request for Information has been issued to the private sector for ventilators.
 - FEMA issued a [request for quotation](#) on March 26, 2020, for vendors who have medical equipment and supplies to sell to the agency. The RFQ can be found on www.sam.gov.
 - FEMA is also expediting critical supplies from overseas to various locations within the U.S. Movement of supplies is expected to begin on Saturday, March 28.
- In response to concerns of undue financial hardships, FEMA's National Flood Insurance Program is extending the 30-day grace period for policies with expiration dates between February 13 and June 15 to 120 days.
 - Specifically, the grace period extension means that policyholders will be allowed to renew their policies up to 120 days after the expiration date without facing a lapse in coverage.
- As of March 27, 15 states, the District of Columbia, one tribe and one U.S. territory have sent a total of 61 text messages to cell phones containing information on COVID-19 via the Wireless Emergency Alert system, and 24 messages to broadcast stations via the Emergency Alert System.
- On March 24, HHS announced \$250 million in grants from the Administration for Community Living to help states, territories and tribes provide meals to older adults. Additionally, HHS awarded \$100 million to support HHS health resources and services administration-funded health centers across the country to address screening and testing needs, acquire medical supplies and boost telehealth capacity.

DAILY BRIEFING POINTS: COVID-19 WHOLE-OF-GOVERNMENT RESPONSE

- HHS also has funding available, including \$80 million dollars specifically identified for tribes, tribal organizations, and tribal health service providers.
- National Institutes of Allergy and Infectious Diseases mobilized a rapid research response to quickly develop effective countermeasures for COVID-19, including diagnostics, vaccines and treatments.

Community-Based Testing Sites

- To date, more than 685,000 tests have been performed for COVID-19 in state and local public health and commercial laboratories throughout the U.S.
- Federal officials and the U.S. Public Health Service are working closely with state, local and private sector partners to bolster testing capabilities and supplies. We're working to make testing more easily accessible to high risk populations: healthcare facility workers, and first responders. There are currently 92 sites open in 50 states, the District of Columbia, Guam and Puerto Rico.
- Community-based Testing Sites (CBTSs) are focused on testing our nation's frontline heroes, healthcare facility workers and first responders, who are working around the clock to provide care, compassion, and safety to Americans.
- It is critical to test healthcare facility workers and first responders who are concerned that they may have been exposed to COVID-19, because they need to know their status as soon as possible in order to prevent infecting individuals in their care.
- People without symptoms who have not been exposed to COVID-19 should not be tested.
- CBTSs are another tool for states, local public health systems and healthcare systems to use as they work together to stop the spread of COVID-19 in their communities.

Strategic National Stockpile

- The Strategic National Stockpile (SNS) continues to ship medical equipment nationwide.
- FEMA is beginning to process another allocation of personal protective equipment (PPE) from the SNS and we expect it to arrive to the states over the course of the next week. These shipments will be sent across the country with prioritization given to areas in greatest need
- As of March 28, the SNS has delivered or is currently shipping the following personal protective equipment and supplies to support public health authorities across the U.S. and its territories:
 - 11.6 million N-95 respirators, 26 million surgical masks, 5.2 million face shields, 4.3 million surgical gowns, 22 million gloves, 132,000 coveralls and 8,100 ventilators.

Ventilator Guidance

- On March 24, the FDA issued an [Emergency Use Authorization \(EUA\) for Ventilators](#).
 - The EUA allows anesthesia gas machines and positive pressure breathing devices to be modified for use as ventilators.
- The new guidance will also assist health care personnel on how to use other ventilators like CPAP devices for sleep apnea, with COVID-19 patients in respiratory distress, as well as on shelf life of existing ventilators.

- Additionally, the FDA is providing information for manufacturers on adding production lines or alternative sites, like automobile manufacturers, for making more ventilators during the COVID-19 public health emergency.

Defense Production Act

- On March 18, President Trump issued an [Executive Order](#) outlining use of the Defense Production Act (DPA) in response to COVID-19 and supplementing Executive Order 13603, which delegates DPA authority to federal agencies.
 - The order provides federal departments with the authority to take actions implementing the DPA, if and as necessary. This includes the ability to prioritize acceptance and fulfillment of contracts, allocate limited supplies, incentivize investment in additional production capacity, and enter voluntary agreements with industry partners that might otherwise be subject to antitrust laws.
- On March 27, President Trump directed the Secretary of Health and Human Services to use Defense Production Act authorities to require General Motors to accept, perform and prioritize federal contracts for ventilators.
 - The invocation of the DPA demonstrates that the President will not hesitate to use the full authority of the federal government to combat this crisis.
 - There continues to be an outpouring of support from the private sector, which has limited the need to use DPA.
- The President also signed an [Executive Order](#) on March 27 which clarifies and updates Presidential delegations to federal agencies under the Defense Production Act (DPA).
 - For the purposes of COVID-19 response, the EO delegates a number of DPA authorities jointly to the Secretary of Health and Human Services (HHS) and the Secretary of Homeland Security (DHS).
 - The EO also assigns the Assistant to the President for Trade and Manufacturing Policy (Peter Navarro) as the National Defense Production Act Policy Coordinator.

Other Federal Agencies

- On March 24, the Department of Justice created [a national task force](#), designating a lead prosecutor in each of the 93 Offices of United States Attorneys across the nation to actively look for and act on hoarding and price gouging.
 - The task force is a result of the [March 23 Executive Order](#) and HHS determination under the Defense Production Act that certain personal protective equipment (PPE) and medical supplies are scarce.
- The National Guard is activated in 26 states, providing medical testing, assessments, logistics, planning and liaison support.
 - To date, more than 12,000 National Guard troops have activated to help with testing and other response efforts.
- The US Coast Guard is tracking eight cruise ships scheduled to arrive in the U.S. with approximately 11,000 passengers and crew in total.
- The Cybersecurity and Infrastructure Security Agency (CISA) has published [guidance on essential critical infrastructure workers](#) during COVID-19 response.

DAILY BRIEFING POINTS: COVID-19 WHOLE-OF-GOVERNMENT RESPONSE

- The U.S. Army Corps of Engineers completed 14 reconnaissance missions. More than 730 USACE personnel are activated to support the COVID-19 mission.
- The Small Business Administration is providing low-interest loans to small businesses and nonprofits severely impacted by the Coronavirus (COVID-19). The SBA also announced deferments on all SBA disaster loans from previous disasters, effective through Dec. 31.
- The U.S. Department of Labor announced the availability of up to \$100 million for Dislocated Worker Grants to help address the workforce-related impacts related to COVID-19.
- The U.S. Department of Housing and Urban Development issued a moratorium on foreclosures and evictions for single family homeowners with FHA-insured mortgages for the next 60 days.
- The U.S. Department of Agriculture is delivering one million meals per week to children in rural areas who are out of school.
- The U.S. Department of Education announced all borrowers with federally held student loans will have zero interest rates for at least 60 days. Additionally, these borrowers will have the option to suspend their payments for at least two months to allow them greater flexibility.
- The Food and Drug Administration approved a Phase-3 clinical trial using a rheumatoid arthritis drug for treatment of severe COVID-19 pneumonia.
- The Department of Homeland Security has extended the REAL ID enforcement deadline to Oct. 1, 2021

Coping with Stress

- Stress during an infectious disease outbreak, like the COVID-19 pandemic, can cause fear and worry. You may feel overwhelmed by strong emotions.
- Taking care of yourself, your friends, and your family can help you cope with stress.
- It's essential that during this time, as we make sure we are physically distancing ourselves from others, we keep up the social connection. This includes staying connected by phone, email, or chat in order to remain connected to family and friends.
- Helping others cope with their stress makes your community stronger.
- CDC has [recommendations](#) for things you can do to support yourself by managing your anxiety and stress.

Combating Disinformation and Rumors

- To help the American public distinguish between rumors and facts regarding the response to COVID-19, FEMA has created a Rumor Control page on FEMA.gov. The public can help control the spread of rumors by sharing our page: [fema.gov/coronavirus](https://www.fema.gov/coronavirus).
- Check the sources of information you see about COVID-19 by seeking out trusted, verified sources like www.coronavirus.gov or your state and local government's official accounts.
- Everyone can do their part to stop the spread of disinformation by doing three things; don't believe rumors, don't pass them along, and go to trusted sources of information to get the facts.

How to Help

- Following state, tribal and local officials' instructions to stay at home is an important way to help. Social distancing not only protects you, but it protects the people you care about.
 - Data show that older adults and people of any age who have serious underlying medical conditions are at higher risk for severe illness from COVID-19.
 - Staying home and limiting your interactions with people can break the chain of transmission and halt the spread of this new virus.
- Cash donations to the nonprofit of your choice IS THE BEST donation. Do not collect or distribute donations of supplies without understanding community needs.
- Businesses that have medical supplies or equipment to donate are asked to go to www.fema.gov and provide of the offer through our online medical supplies and equipment form.
- To sell medical supplies or equipment to the federal government, please submit a price quote under the [COVID-19 PPE and Medical Supplies Request for Quotation](#). Full details can be found in the solicitation ([Notice ID 70FA2020R00000011](#)).
- Licensed medical volunteers can offer their services by registering with [the Emergency System for Advance Registration of Volunteer Health Professionals](#). You can access a direct link to do so through fema.gov.

One thing people can do to help is to donate blood. Many blood drives have been cancelled, impacting the supply. Blood donation centers have the highest standards of safety and infection control. To find where you can donate blood, visit redcross.org.

From: (b) (6)
To: (b) (6)
Cc: (b) (6)
[\(US\); Sendak, Catherine E SES \(USA\); \(b\) \(6\)](#)
[Cooper, Laura K SES OSD OUSD POLICY](#)
Subject: RE: DoD COVID-19 Int'l Response Efforts - 21MAY
Date: Saturday, May 23, 2020 7:45:32 AM

(b) (6)

Sorry about my delayed reply, thanks for sending! Great update!

Best,

(b) (6)

From: (b) (6)
Sent: Thursday, May 21, 2020 5:12 PM
To: (b) (6)
Cc: (b) (6)
; Cooper, Laura K SES OSD OUSD
POLICY (US) (b) (6) Sendak, Catherine E SES (USA)
(b) (6)
Subject: DoD COVID-19 Int'l Response Efforts - 21MAY

(b) (6)

Below is SOLIC/SHA's biweekly update on DoD's COVID-19 international response efforts. Attached, FYSA, are the NSC talking points on the ventilators for Russia.

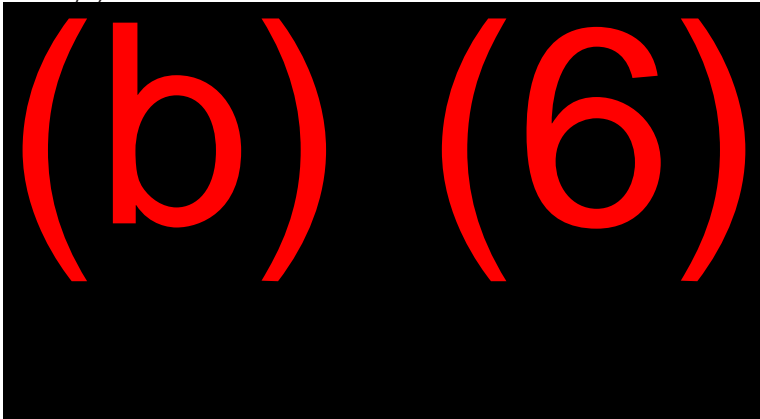
-
Contributions to Allies and Partners:

- DoD assistance to Allies and Partners is a testament to the value we place on our relationships. SD recent calls: PAK, FRA, UKR, ITA, CAN, IDN, NATO; Calls next week to GER, JPN (SD FO to update)
- DoD has provided an estimated \$18.5M to approximately 70 partner nation COVID-19 response activities through the provision of medical and PPE equipment and the

transportation of humanitarian cargo, including over \$14 million in Afghanistan Security Force Funding has been approved for local procurement of COVID-19 supplies for use by the Afghan Forces.

- U.S. European Command is supporting Italy's COVID-19 response but providing military transport to move over 45,000 kilograms of COVID-19 relief supplies between Milan and Rome distribution hubs.
 - SD has authorized up to \$10M for humanitarian activities in Italy.
- As an example of our long-term global health engagement activities, DoD recently completed Phase 2 of a multi-year collaboration – to donate a \$1.1 million field hospital, consisting of 16 shelters, 2 generators, 15 HVACs, and ancillary equipment to Mexico's Ministry of Health – for building health and disaster response capacity in Mexico, a collaboration that began after the 2017 Oaxaca earthquake. DoD understands it will be put to immediate use in Mexico City as part of Mexico's COVID-19 response.
- On May 21, 2020, at the request of the Department of State and due to commercial air limitations, USTRANSCOM transported the first shipment (50) of U.S. government donated ventilators to the people of Russia, using a C-17 Globe Master. NSC has committed 15,000 ventilators to partner countries across the globe. Most USG ventilator donations will be commercial shipment by USAID, but DOS may request future DoD transportation support.
- DTRA provided lab and diagnostic supplies to approximately 30 partner nations with over \$1.1M lab and diagnostic supplies. DHA coordinating w/~400 surveillance site in over 30 countries, totaling to over \$8.4M.
 - The Armed Forces Research Institute of Medical Science (AFRIMS) is providing urgently needed COVID-19 lab support to the Royal Thai Army, which will strengthen our longstanding relationship with Thailand by promoting health security at an important moment in history. AFRIMS is also supporting the governments of the Philippines and Nepal.

v/r,

A large black rectangular redaction box covers the signature area. Overlaid on this box are two large, bold, red characters: a lowercase 'b' inside parentheses on the left, and a '6' inside parentheses on the right, indicating a FOIA exemption.

From: (b) (6)
To: Norquist, David HON SD; Hyten, John E Gen USAF JS OCJCS (USA); Oshaughnessy, Terrence J Gen USAF NORAD-USNC CG (USA); Stewart, Jennifer SES SD; Henke, Robert SES SD; Donovan, Matthew P HON OSD OUSD P-R (USA); Lord, Ellen M HON OSD OUSD A-S (USA); McCusker, Elaine A HON OSD OUSD C (USA); Whitley, John E HON OSD OCMO (USA); Thomas Gen Gary L; Burke, Robert P ADM USN VCNO (USA); Wilson, Stephen W Gen USAF AF-CV (USA); Martin, Joseph M GEN USARMY HQDA VCSA (USA); Rapuano, Kenneth P HON OSD OUSD POLICY (USA); Ross, Alexis SES SD; Blake, Robert M Brig Gen USAF AF-A3 (USA); Blanks, Julie A SES OSD OUSD P-R (USA); Bushman, William G SES (USA); Byrne, William D Jr RADM USN JS ODJS (USA); Castle, William S SES OSD OGC (USA); Dumont, Michael J (Mike) VADM USN NORAD-USNC CG (USA); Fedrigo, John A SES USAF SAF-MR (USA); Fisher, Vincent L SES OSD OUSD C (USA); Flynn, Charles A LTG USARMY HQDA DCS G-3-5-7 (USA); Friedrichs, Paul A Brig Gen USAF JS OCJCS (USA); Funkhouser, Anthony C MG USARMY CEHO (USA); Greene, Jodi J SES USN (USA); Hebert, Lernes J SES OSD OUSD P-R (USA); Henke, Robert SES SD; Hershman, Lisa W HON (USA); Hoffman, Jonathan R SES OSD OSD (USA); Hood, Robert R HON OSD OASD LA (USA); Kelly, Mark D Lt Gen USAF AF-A3 (USA); LaNeve, Christopher Charles BG USARMY HQDA DCS G-3-5-7 (USA); Lei, JihFen SES OSD OUSD R&E (USA); Lestorti, Joseph M BG USARMY JS J3 (USA); Liszewski BGen Stephen E; Lord, Ellen M HON OSD OUSD A-S (USA); Maurer, Derek J (Dirk) SES OSD OUSD POLICY (USA); McAndrew, Anne J SES OSD OUSD C (USA); Mccaffery, Thomas P HON OSD OUSD P-R (USA); Mott, Jon K Maj Gen USAF NG CTANG (USA); Muir, Thomas M SES (USA); Piatt, Walter E LTG USARMY HQDA DAS (USA); (b) (6)
(b) (6) Ross, Alexis Lasselle SES OSD OUSD P-R (USA); Sawyer, Phillip G VADM USN (USA); Semonite, Todd I LTG USARMY HQDA OCE (USA); Shaffer, Alan R HON OSD OUSD A-S (USA); Simon, Martin S (Marty) SES USN UNSECNAV DC (USA); Taliaferro, Jeffrey B (Jeff) Maj Gen USAF JS J3 (USA); (b) (6)
(b) (6) POLICY (USA); VanHerck, Glen D Lt Gen USAF JS ODJS (USA); Walsh, Daniel P SES PFAA HOS (USA); Whitney, Steven P Brig Gen USAF OSD OUSD A-S (USA); Williams, Lorraine A SES OSD OUSD C (USA); Williams, Marshall M (Will) SES USARMY HQDA ASA MRA (USA); Friedrichs, Paul A Brig Gen USAF JS OCJCS (USA); Payne, Lee E Maj Gen USAF DHA J-3 (USA); (b) (6)
(b) (6) Lyons, Judd H SES OSD OUSD P-R (USA); Deasy, Dana S HON (USA); Mewbourne, Dee L VADM USN TRANSCOM TCDC (USA); Shaffer, Alan R HON OSD OUSD A-S (USA)
Cc: Lyons, David Brig Gen SD; (b) (6)
(b) (6)
Subject: Salesses, Robert G SES OSD OUSD POLICY (USA)
Date: RE: DoD CVTF Full Meeting - May 13
Attachments: Wednesday, May 13, 2020 8:28:47 AM
COVID19_DSD Updates_20200512_v2.pptx

Ladies and Gentlemen,
The attached slides will be discussed at today's 1230 CVTF meeting.

v/r
(b) (6)

From: Salesses, Robert G SES OSD OUSD POLICY (USA) (b) (6)
Sent: Tuesday, May 12, 2020 4:56 PM
To: (b) (6) Hyten, John E Gen USAF JS OCJCS (USA) (b) (6)
Oshaughnessy, Terrence J Gen USAF NORAD-USNC CG (USA)
(b) (6) Stewart, Jennifer M SES OSD OSD (USA)
(b) (6) Henke, Robert J SES (USA) (b) (6) Donovan, Matthew P HON OSD OUSD P-R (USA) (b) (6); Lord, Ellen M HON OSD OUSD A-S (USA) (b) (6); McCusker, Elaine A HON OSD OUSD C (USA) (b) (6); Whitley, John E HON OSD OCMO (USA) (b) (6); Thomas, Gary L Gen USMC ACMC (USA) (b) (6)
Burke, Robert P ADM USN VCNO (USA) (b) (6) Wilson, Stephen W Gen USAF AF-CV (USA) (b) (6) Martin, Joseph M GEN USARMY HQDA VCSA (USA) (b) (6); Rapuano, Kenneth P HON OSD OUSD POLICY (USA) (b) (6); 'Ross, Alexis SES SD' (b) (6); Blake, Robert M Brig Gen USAF AF-A3 (USA) (b) (6); Blanks, Julie A SES OSD OUSD P-R (USA) (b) (6); Bushman, William G SES (USA) (b) (6)
Byrne, William D Jr RADM USN JS ODJS (USA) (b) (6); Castle, William S SES

OSD OGC (USA) (b) (6); Dumont, Michael J (Mike) VADM USN NORAD-USNC CG (USA) (b) (6); Fedrigo, John A SES USAF SAF-MR (USA) (b) (6); Fisher, Vincent L SES OSD OUSD C (USA) (b) (6); Flynn, Charles A LTG USARMY HQDA DCS G-3-5-7 (USA) (b) (6); Friedrichs, Paul A Brig Gen USAF JS OCJCS (USA) (b) (6); Funkhouser, Anthony C MG USARMY CEHQ (USA) (b) (6); Greene, Jodi J SES USN (USA) (b) (6); Hebert, Lernes J SES OSD OUSD P-R (USA) (b) (6); Henke, Robert J SES (USA) (b) (6); Hershman, Lisa W HON (USA) (b) (6); Hoffman, Jonathan R SES OSD OSD (USA) (b) (6); Hood, Robert R HON OSD OASD LA (USA) (b) (6); Kelly, Mark D Lt Gen USAF AF-A3 (USA) (b) (6); LaNeve, Christopher Charles BG USARMY HQDA DCS G-3-5-7 (USA) (b) (6); Lei, JihFen SES OSD OUSD R&E (USA) (b) (6); Lestorti, Joseph M BG USARMY JS J3 (USA) (b) (6); Liszewski, Stephen E BGen USMC HQMC (USA) (b) (6); Lord, Ellen M HON OSD OUSD A-S (USA) (b) (6); Maurer, Derek J (Dirk) SES OSD OUSD POLICY (USA) (b) (6); McAndrew, Anne J SES OSD OUSD C (USA) (b) (6); Mccaffery, Thomas P HON OSD OUSD P-R (USA) (b) (6); Mott, Jon K Maj Gen USAF NG CTANG (USA) (b) (6); Muir, Thomas M SES (USA) (b) (6); (b) (6); Ross, Alexis Lasselle SES OSD OUSD P-R (USA) (b) (6); Sawyer, Phillip G VADM USN (USA) (b) (6); Semonite, Todd T LTG USARMY HQDA OCE (USA) (b) (6); Shaffer, Alan R HON OSD OUSD A-S (USA) (b) (6); Simon, Martin S (Marty) SES USN UNSECNAV DC (USA) (b) (6); Taliaferro, Jeffrey B (Jeff) Maj Gen USAF JS J3 (USA) (b) (6); (b) (6); VanHerck, Glen D Lt Gen USAF JS ODJS (USA) (b) (6); Walsh, Daniel P SES PFPA HQS (USA) (b) (6); Whitney, Steven P Brig Gen USAF OSD OUSD A-S (USA) (b) (6); Williams, Lorraine A SES OSD OUSD C (USA) (b) (6); Williams, Marshall M (Will) SES USARMY HQDA ASA MRA (USA) (b) (6); Friedrichs, Paul A Brig Gen USAF JS OCJCS (USA) (b) (6); Payne, Lee E Maj Gen USAF DHA J-3 (USA) (b) (6); (b) (6); Lyons, Judd H SES OSD OUSD P-R (USA) (b) (6); Deasy, Dana S HON (USA) (b) (6); Mewbourne, Dee L VADM USN TRANSCOM TCDC (USA) (b) (6); Shaffer, Alan R HON OSD OUSD A-S (USA) (b) (6);

Cc: 'Lyons, David Brig Gen SD' (b) (6);
(b) (6);
(b) (6);
(b) (6);

Subject: DoD CVTF Full Meeting - May 13

Deputy Secretary, Vice Chairman, and Distinguished Task Force Colleagues,

BLUF: DSD and VCJCS will Chair the next COVID TF meeting 1230-1330 tomorrow, May 13, 2020 in multiple SVTC locations to maintain social distance.

Tomorrow's Agenda:

- I. **President's Task Force Update:** ASD Rapuano
- II. **NORTHCOM Update:** General O'Shaughnessy
- III. **Review Task List:**

Force Health Protection/Medical Preparedness

Task – Integrated diagnostics, therapeutics, and vaccine development program – (HD&GS):

Provide update on status of MOA with HHS. **(DSD) Suspense: May 13**

Task – Increasing Production Capacity for Vaccines & Therapeutics – (A&S): Provide an update on discussions with manufacturers to increase manufacturing fill and finish capacity. Include next steps with HHS and DoD. **(SD) Suspense: May 13**

Task – Testing Framework – (P&R): Provide an update on testing requirement for tiers 1, 2, 3, and 4. Include maximum capacity and actual tests completed per day. **(SD) Suspense: May 13**

Modified Task – Contact Tracing and Using Testing as a Sentinel Tool – (P&R): Develop FHP-10 guidance for DoD surveillance testing. Develop two case studies (aboard a ship and on an installation) for conducting contact tracing. Studies will include feasibility, pros and cons, and value of conducting contact tracing in each environment. In coordination with the CIO, develop an info paper on the risk of using Bluetooth devices in a secure facility. Conduct a review of potential hardware to determine if it is possible for DoD to exclusively retain all data collected via electronic contract tracing tools. **(DSD) Suspense: May 20**

Task – Serology Testing – (P&R): Update on progress and timelines associated with serological testing for the presence of SAR-CoV-2 (COVID-19) antibodies. **(SD) Suspense: May 13**

Mission Readiness

Task – Enabling Operations in a COVID-19 Environment – (HD&GS): Provide an update on the guidance memo on strategy to resume daily operations across the Department. **(SD) Suspense: May 13**

Task – Military Personnel Deploying in support of CCMDs – (P&R, JS): Provide update on FHP-9 and the plan to ensure military forces deploying in support of Combatant Commands have procedures in place to minimize risk of being COVID positive. **(SD) Suspense: May 13**

- **Personnel Policy & Mitigation**

Modified Task – Adjustments to HPCON memo – (P&R): Provide an update on draft guidance

memo. **(SD) Suspense: To SD for review on May 15**

Modified Task – Elective Medical Procedures – (P&R): Provide an update on the draft guidance memo. **(SD) Suspense: To SD for review on May 15**

Modified Task – Global Stop Movement Assessment – (P&R): Provide an update on the draft assessment criteria and placemat. **(SD) Suspense: To SD for review on May 15**

Task – Dependent Passports – (CMO): Provide an update on the State Department effort to process DoD dependent passports to support PCS moves. **(SD) Suspense: May 13**

New Task – International Students – (P&R and Policy): Develop plan for addressing COVID-19 concerns for international students entering DoD schools, PME, and training courses this fall. **(DSD) Suspense: May 15**

Pentagon Reservation

Modified Task – Pentagon Plan – (CMO): Provide an update on the plan. All attendees are requested to review attached plan and matrix ([Tabs A1 and A2](#)). **(SD) Suspense: May 13**

International Support

New Task – Ventilator aid – (SOLIC): Provide an update on the status of ventilator aid and potential DoD request for transport. **(DSD) Suspense: 15 May**

New Task – Ventilator offer to NATO – (SOLIC): Provide an update on the status of ventilator offer to NATO. **(DSD) Suspense: 15 May**

Task – USG Process for International Support – (SOLIC): Provide an update on State Department plan to provide USG assistance to international partners. Provide an update on the memo from DSD to Deputy Secretary of State and the Administrator of USAID requesting assistance with nomination of a lead federal agency for COVID-19 international support. **(DSD) Suspense: May 13**

Task – Exports to international partners – (SOLIC): Provide an update on progress with A&S on DoD position, recommendation, and process for providing exports of COVID-19 response related equipment and supplies to foreign partners. **(DSD) Suspense: May 13**

Installations and Logistics

Task – DPA and JATF update – (A&S): Provide an update on the Defense Production Act and the Joint Acquisition Task Force. **(SD) Suspense: Ongoing**

Strategic Communications

Task – Coordinated PA Plan for Service New Normal Plans – (PA, Services): Develop coordinated PA and launch plan for Service New Normal plans. **(SD) Suspense: Pending release of SD guidance memo**

Funding

Task – New Supplemental Request – (Comptroller): Update on status of DoD submission for supplemental funding and authorities. **(SD) Suspense: Ongoing**

-

Modeling

Task – Modeling and analytic update – (CVTF, CAPE): Provide an update on DoD’s modeling and analytics effort and how it fits into the larger USG modeling effort. **(SD) Suspense: Ongoing**

Lessons Learned

Task – Lessons Learned – (JS J7, HD&GS): Update on status of DSD memo directing all DoD components to collect lessons learned and to be prepared to provide them to DoD’s Lessons Learned Task Force on a continuing basis. **(SD) Suspense: Ongoing**

Services Issues: Army: General Martin; Navy: Admiral Burke; Air Force: General Wilson; Marine Corps: General Thomas

As time permits, we will review other tasks, so please come prepared for those as well.

Please let me know if you have any questions or need assistance.

Best, Bob

US Population COVID-19 Case Snapshot



Confirmed Cases
1,339,641

Deaths
79,604

Last Data Refresh
05-11-2020

DoD Sites/MTFs

On

OFF



RPAD_MAP.sitename

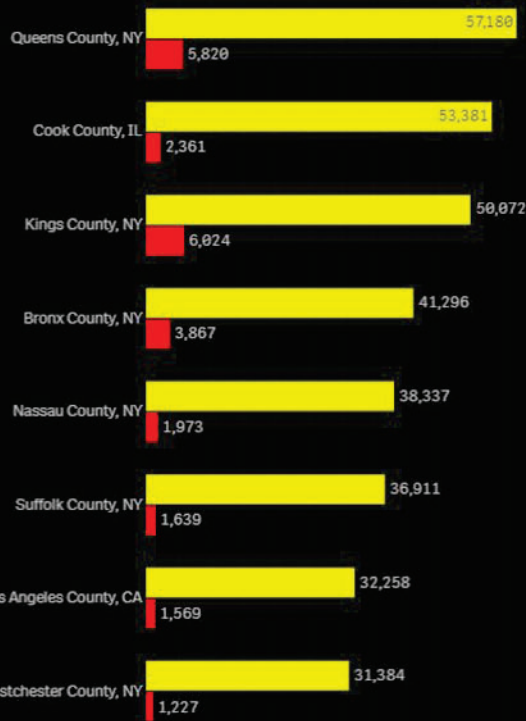
State

County

Cumulative Confirmed Cases

Cases Per Thousand Population

County, State



Measures
 Confirmed Cases
 Deaths

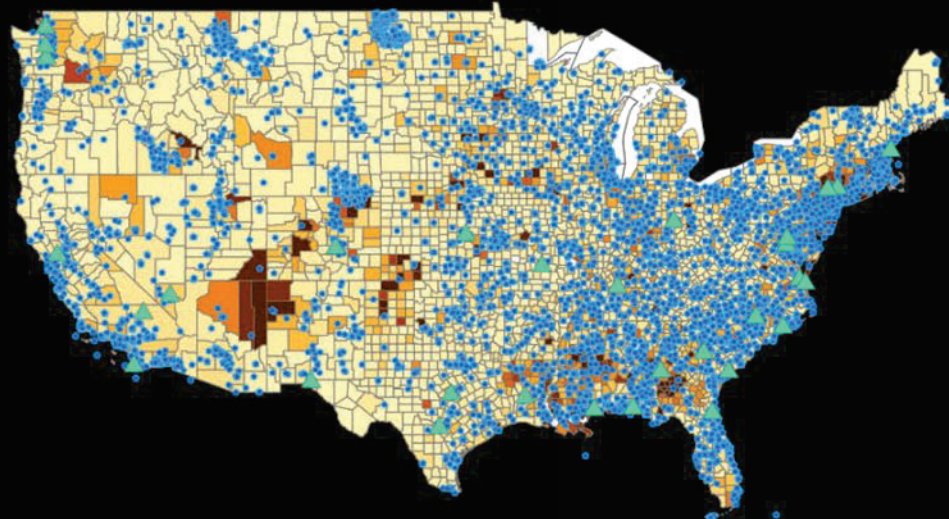
COVID-19 Cases by County

Military Treatment Facility (Green Triangles)
 Point layer

DoD Site (Blue Pentagons)
 Point layer

County Name
 Area layer

Confirmed Cases
 10
 0



Base County Map
 Area layer

Data Source: USAFacts contributes the cases and deaths data. USAFacts provides a comprehensive, nonpartisan view of the state of our union. Johns Hopkins Data contributes the population values for each county. The installation-location data was pulled from the Real Property Asset Database (RPAD).
 Refresh Rate: Daily
 As of Date: 05/11/2020

Latest version shows site-level data on map

US Population Hotspots



New Case Percent Change over Past 7 Days

3 Day Change | **7 Day Change** | 14 Day Change

Largest Positive Percent Change (Locations with 50+ new cases)

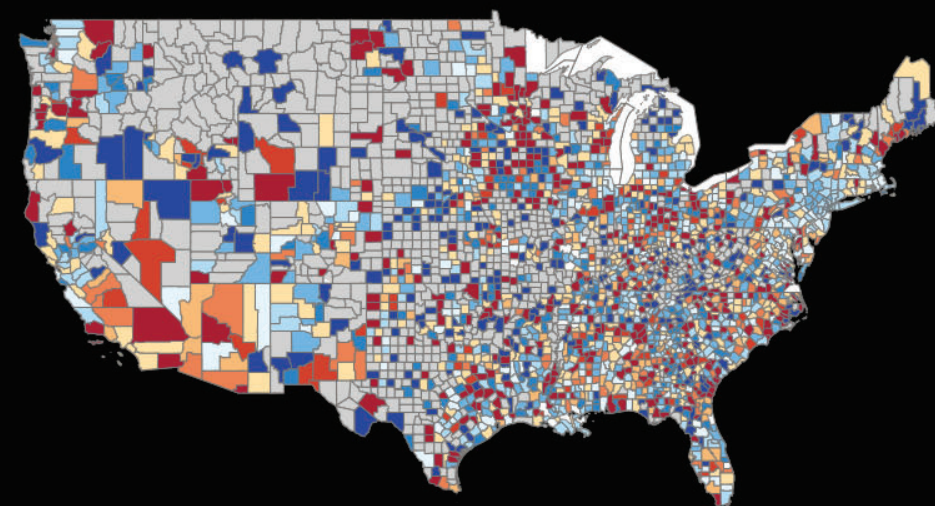
County, State	7 Day Prior Percent Delta	Latest 7 Days	7 Days Prior to that
Jackson County, FL	4000%	82	2
Miami County, OH	2013%	169	8
Hardeman County, TN	1578%	151	9
Santa Barbara County, CA	1477%	836	53
Muhlenberg County, KY	1448%	325	21
St. Francis County, AR	1214%	184	14
Rice County, MN	629%	102	14
Carver County, MN	550%	65	10
Yavapai County, AZ	444%	87	16
Marshall County, AL	391%	221	45
Logan County, CO	358%	142	31

Largest Negative Percent Change (Locations with 50+ new cases)

County, State	7 Day Prior Percent Delta	Latest 7 Days	7 Days Prior to that
Trousdale County, TN	-99%	15	1300
Martin County, MN	-94%	4	65
Hall County, NE	-89%	51	485
Habersham County, GA	-79%	33	160
Jasper County, IA	-76%	28	119
Northampton County, VA	-72%	31	111
Black Hawk County, IA	-71%	151	517
Dallas County, IA	-69%	123	399
Adams County, NE	-68%	24	76
Bibb County, GA	-68%	29	91
Calcasieu Parish, LA	-66%	32	95

COVID-19 Cases by County

- County Name
- Area layer
- Percent Change
- 80 - < 100
- 60 - < 80
- 40 - < 60
- 20 - < 40
- 0 - < 20
- 20 - < 0
- 40 - < -20
- 60 - < -40
- 80 - < -60
- 100 - < -80



State Name
Area layer
600 km

Data Source: USAFacts contributes the cases and deaths data. USAFacts provides a comprehensive, nonpartisan view of the state of our union. Johns Hopkins Data contributes the population values for each county. The installation-location data was pulled from the Real Property Asset Database (RPAD).
Refresh Rate: Daily
As of Date: 05/11/2020

Global COVID-19 Case Snapshot



Confirmed Cases
! 4,177,502

Deaths
! 286,330

Recovered
! 1,423,202

Last Data Refresh
! 5/11/202...

Installations/MTFs

On
 OFF



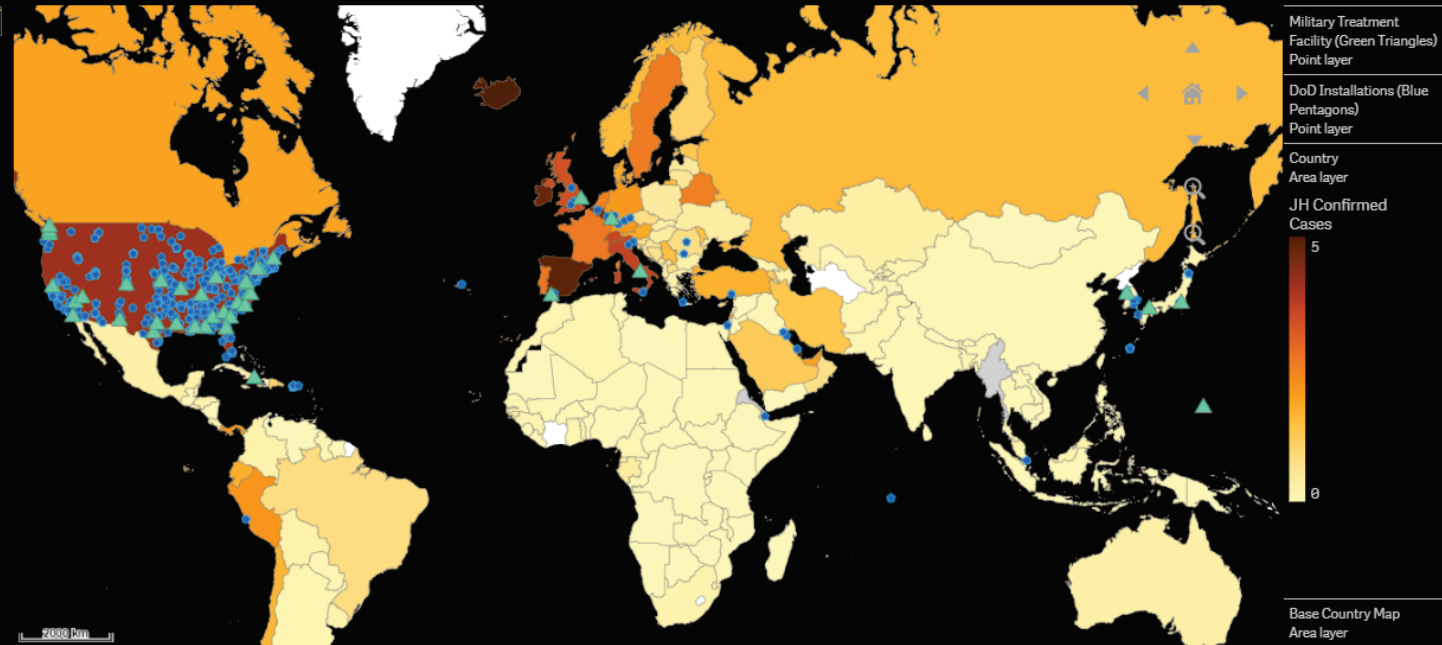
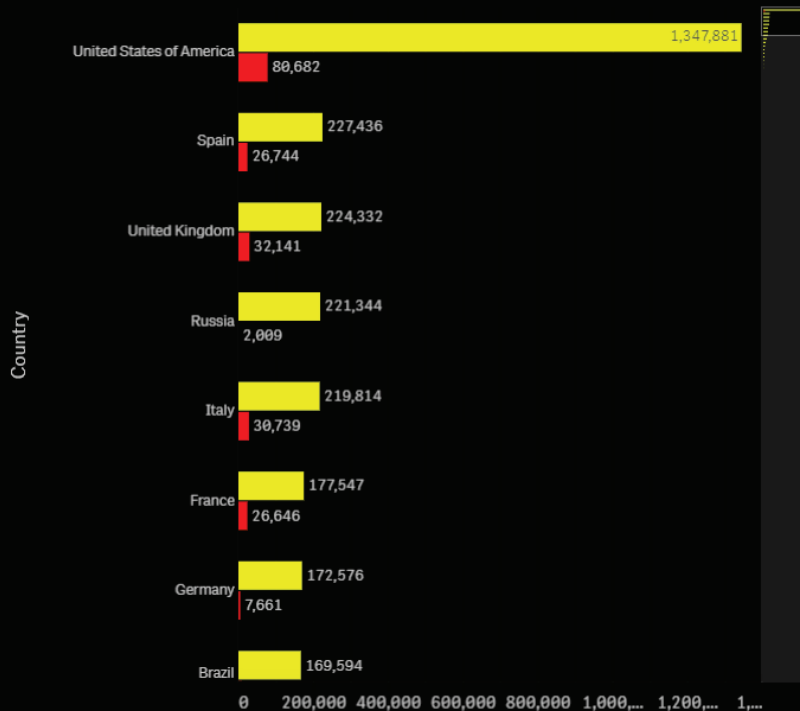
Country or Region

Province

Cumulative Confirmed Cases

Cases Per Thousand Population

Cases per Million Population



Data Source: This is the data repository for the Coronavirus Visual Dashboard operated by the Johns Hopkins University Center for Systems Science and Engineering (JHU CSSE). The installation-location data was pulled from the Real Property Asset Database (RPAD).
 Refresh Rate: Daily
 As of Date: 05/11/2020

Global Hotspots



Largest Positive Percent Change (Locations with 50+ new cases)

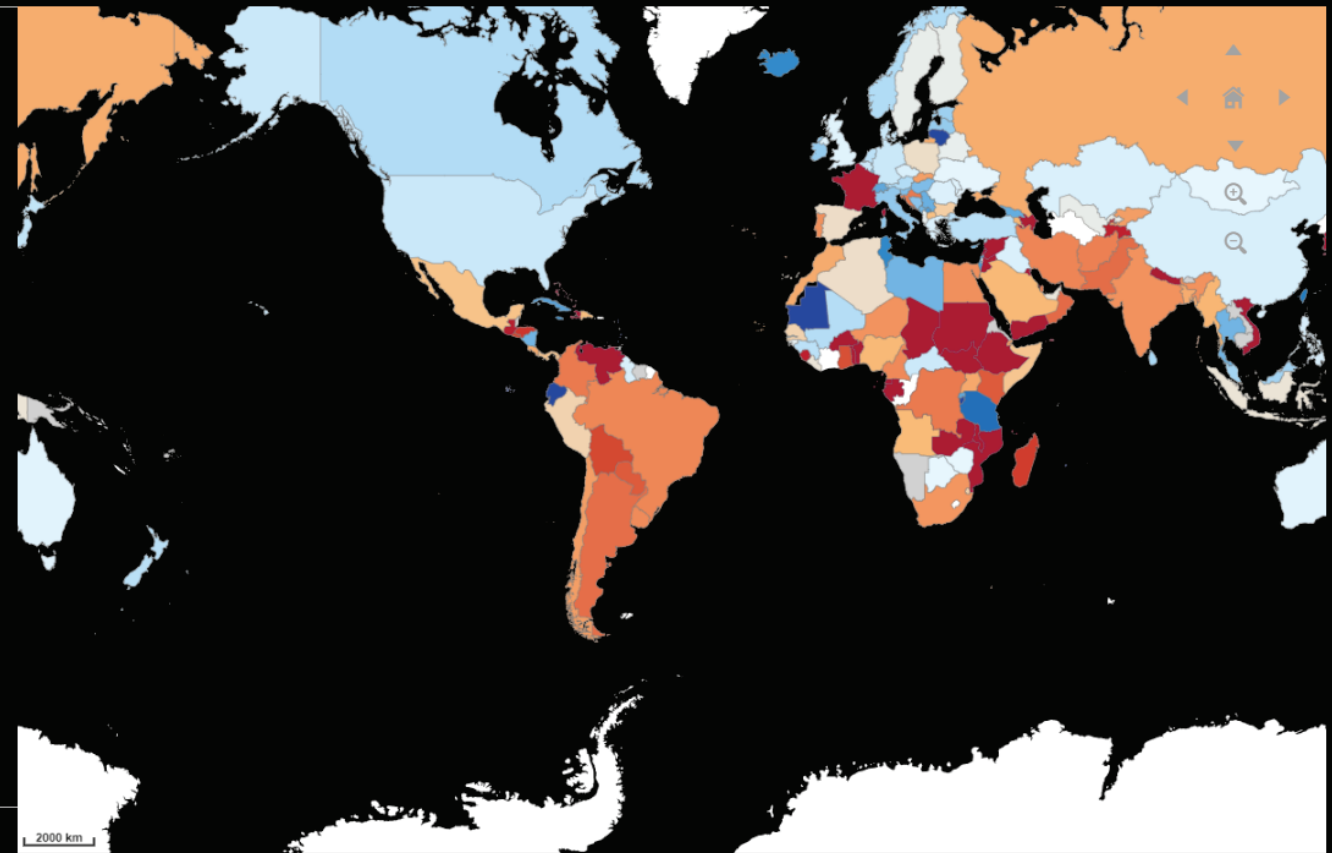
Country or Region	7 Day Prior Percent Delta	Latest 7 Days	7 Days Prior to that
Sao Tome and Principe	874%	185	19
Benin	597%	223	32
Ethiopia	588%	110	16
Jordan	506%	97	16
Haiti	354%	100	24
Lebanon	297%	119	30
Chad	189%	205	71
Gabon	179%	435	156
South Sudan	175%	110	40
Congo	169%	97	36
Zambia	165%	130	49
South Korea	154%	132	52
Burkina Faso	138%	88	37
France	120%	7964	3620

Largest Negative Percent Change (Locations with 50+ new cases)

Country or Region	7 Day Prior Percent Delta	Latest 7 Days	7 Days Prior to that
United Republic of Tanzania	-84%	29	181
Jamaica	-68%	34	107
Israel	-62%	260	691
Cuba	-59%	115	279
Switzerland	-56%	363	817
Georgia	-53%	45	96
Serbia	-52%	619	1282
Hungary	-45%	249	452
Bosnia and Herzegovina	-40%	215	361
Italy	-37%	7876	12524
Ireland	-36%	1363	2124
Malaysia	-30%	373	533

3 Day Change | **7 Day Change** | 14 Day Change

Country or Region
Area layer
% Change
100
-100



Base Country Map
Area layer

Data Formulation: The percent change is comparing the sum of new cases across varying amounts of days (3, 7, or 14 day comparisons).
 Data Source: This is the data repository for the Coronavirus Visual Dashboard operated by the Johns Hopkins University Center for Systems Science and Engineering (JHU CSSE). The installation location data illustrated the provided chart is pulled from the Real Property Asset Database (RPAD).
 Refresh Rate: Daily
 As of Date: 05/11/2020

From: (b) (6)
To: (b) (6)
Subject: RE: DoD CVTF Full Meeting Due Outs - May 13
Date: Friday, May 15, 2020 12:06:18 PM

I think Policy is overwhelmed, as are we!

From: (b) (6)
Sent: Friday, May 15, 2020 12:03 PM
To: (b) (6)
Cc: Lyons, David Brig Gen SD (b) (6)
Subject: RE: DoD CVTF Full Meeting Due Outs - May 13

Ma'am,

Thanks so much for this.

Respectfully,

(b) (6)

From: (b) (6)
Sent: Friday, May 15, 2020 11:52 AM
To: (b) (6)
Cc: (b) (6); Lyons, David Brig Gen SD (b) (6)
Subject: FW: DoD CVTF Full Meeting Due Outs - May 13

(b) (6) – were there due outs from yesterday's 1200 meeting or notes you guys did? If so, please reply to all with... Thanks. V/R (b) (6)

From: Salesses, Robert G SES OSD OUSD POLICY (USA) (b) (6)
Sent: Wednesday, May 13, 2020 6:09 PM
To: Norquist, David HON SD (b) (6); Hyten, John E Gen USAF JS OCJCS (USA) (b) (6); Oshaughnessy, Terrence J Gen USAF NORAD-USNC CG (USA) (b) (6); Stewart, Jennifer SES SD (b) (6); Henke, Robert SES SD (b) (6); Donovan, Matthew P HON OSD OUSD P-R (USA) (b) (6); Lord, Ellen M HON OSD OUSD A-S (USA) (b) (6); McCusker, Elaine A HON OSD OUSD C (USA) (b) (6); Whitley, John E HON OSD OCMO (USA) (b) (6); Thomas Gen Gary L (b) (6); Burke, Robert P ADM USN VCNO (USA) (b) (6); Wilson, Stephen W Gen USAF AF-CV (USA) (b) (6); Martin, Joseph M GEN USARMY HQDA VCSA (USA) (b) (6); Rapuano, Kenneth P HON OSD OUSD POLICY (USA) (b) (6); Ross, Alexis SES SD (b) (6); Blake, Robert M Brig Gen USAF AF-A3 (USA) (b) (6); Blanks, Julie A SES OSD OUSD P-R (USA) (b) (6); Bushman, William G SES (USA) (b) (6); Byrne, William D Jr RADM USN JS ODJS (USA) (b) (6); Castle, William S SES

OSD OGC (USA) (b) (6); Dumont, Michael J (Mike) VADM USN NORAD-USNC CG (USA) (b) (6); Fedrigo, John A SES USAF SAF-MR (USA) (b) (6); Fisher, Vincent L SES OSD OUSD C (USA) (b) (6); Flynn, Charles A LTG USARMY HQDA DCS G-3-5-7 (USA) (b) (6); Friedrichs, Paul A Brig Gen USAF JS OCJCS (USA) (b) (6); Salesses, Robert G SES OSD OUSD POLICY (USA) (b) (6); Funkhouser, Anthony C MG USARMY CEHQ (USA) (b) (6); Greene, Jodi J SES USN (USA) (b) (6); Hebert, Lernes J SES OSD OUSD P-R (USA) (b) (6); Henke, Robert SES SD (b) (6); Hershman, Lisa W HON (USA) (b) (6); Hoffman, Jonathan R SES OSD OSD (USA) (b) (6); Hood, Robert R HON OSD OASD LA (USA) (b) (6); Kelly, Mark D Lt Gen USAF AF-A3 (USA) (b) (6); LaNeve, Christopher Charles BG USARMY HQDA DCS G-3-5-7 (USA) (b) (6); Lei, JihFen SES OSD OUSD R&E (USA) (b) (6); Lestorti, Joseph M BG USARMY JS J3 (USA) (b) (6); Liszewski BGen Stephen E (b) (6); Lord, Ellen M HON OSD OUSD A-S (USA) (b) (6); Maurer, Derek J (Dirk) SES OSD OUSD POLICY (USA) (b) (6); McAndrew, Anne J SES OSD OUSD C (USA) (b) (6); Mccaffery, Thomas P HON OSD OUSD P-R (USA) (b) (6); Mott, Jon K Maj Gen USAF NG CTANG (USA) (b) (6); Muir, Thomas M SES (USA) (b) (6); Piatt, Walter E LTG USARMY HQDA DAS (USA) (b) (6); Ross, Alexis Lasselle SES OSD OUSD P-R (USA) (b) (6); Sawyer, Phillip G VADM USN (USA) (b) (6); Semonite, Todd T LTG USARMY HQDA OCE (USA) (b) (6); Shaffer, Alan R HON OSD OUSD A-S (USA) (b) (6); Simon, Martin S (Marty) SES USN UNSECNAV DC (USA) (b) (6); Taliaferro, Jeffrey B (Jeff) Maj Gen USAF JS J3 (USA) (b) (6); (b) (6); VanHerck, Glen D Lt Gen USAF JS ODJS (USA) (b) (6); Walsh, Daniel P SES PFFPA HQS (USA) (b) (6); Whitney, Steven P Brig Gen USAF OSD OUSD A-S (USA) (b) (6); Williams, Lorraine A SES OSD OUSD C (USA) (b) (6); Williams, Marshall M (Will) SES USARMY HQDA ASA MRA (USA) (b) (6); Friedrichs, Paul A Brig Gen USAF JS OCJCS (USA) (b) (6); Payne, Lee E Maj Gen USAF DHA J-3 (USA) (b) (6); (b) (6); Lyons, Judd H SES OSD OUSD P-R (USA) (b) (6); Deasy, Dana S HON (USA) (b) (6); Mewbourne, Dee L VADM USN TRANSCOM TCDC (USA) (b) (6); Shaffer, Alan R HON OSD OUSD A-S (USA) (b) (6); (b) (6);

Cc: Lyons, David Brig Gen SD (b) (6); (b) (6);

(b) (6)

(b) (6)

(b) (6)

(b) (6)

Subject: DoD CVTF Full Meeting Due Outs - May 13

Deputy Secretary, Vice Chairman, and Distinguished Task Force Colleagues,

Good evening. Thank you for the productive meeting this afternoon. The following were identified as due-outs from today's COVID-19 DoD TF Meeting:

Force Health Protection/Medical Preparedness

Task – Integrated diagnostics, therapeutics, and vaccine development program – (HD&GS):

Provide update on status of MOA with HHS. **(DSD) Suspense: May 15**

Task – Increasing Production Capacity for Vaccines & Therapeutics – (A&S): Provide an update on discussions with manufacturers to increase manufacturing fill and finish capacity. Include next steps with HHS and DoD. **(SD) Suspense: May 15**

Modified Task – Testing Framework – (P&R): Provide an update on testing requirement for tiers 1, 2, 3, and 4. Include maximum capacity and actual tests completed per day. **(SD) Suspense: May 15; Service CONOPS briefed to DSD/VCJCS on May 14**

Task – Contact Tracing and Using Testing as a Sentinel Tool – (P&R): Develop FHP-10 guidance for DoD surveillance testing. Develop two case studies (aboard a ship and on an installation) for conducting contact tracing. Studies will include feasibility, pros and cons, and value of conducting contact tracing in each environment. In coordination with the CIO, develop an info paper on the risk of using Bluetooth devices in a secure facility. Conduct a review of potential hardware to determine if it is possible for DoD to exclusively retain all data collected via electronic contract tracing tools. **(DSD) Suspense: May 20**

Task – Serology Testing – (P&R): Provide an update on progress and timelines associated with serological testing for the presence of SAR-CoV-2 (COVID-19) antibodies. **(SD) Suspense: May 15**

Modified Task – Convalescence Blood Plasma – (P&R): Provide an update on FDA approval to collect and use convalescence blood plasma. Develop a plan to use collected convalescence blood plasma. **(DSD) Suspense: May 13 for update; May 20 for plan**

Mission Readiness

Task – Enabling Operations in a COVID-19 Environment – (HD&GS): Provide an update on the guidance memo on strategy to resume daily operations across the Department. **(SD) Suspense: May 15**

Task – Military Personnel Deploying in support of CCMDs – (P&R, JS): Provide update on FHP-9 and the plan to ensure military forces deploying in support of Combatant Commands have procedures in place to minimize risk of being COVID positive. **(SD) Suspense: May 15**

-

Personnel Policy & Mitigation

Task – Adjustments to HPCON memo – (P&R): Provide an update on draft guidance memo. **(SD)**
Suspense: To SD for approval on May 15

Task – Elective Medical Procedures – (P&R): Provide an update on the draft guidance memo. **(SD)**
Suspense: To SD for review on May 15

Task – Global Stop Movement Assessment – (P&R): Provide an update on the draft assessment criteria and placemat. **(SD) Suspense: To SD for review on May 15**

Task – Dependent Passports – (CMO): Provide an update on the State Department effort to process DoD dependent passports to support PCS moves. **(SD) Suspense: May 15**

Modified Task – International Students – (Policy, P&R): Develop a plan addressing COVID-19 concerns for international students entering DoD schools, PME, and training courses this fall. **(DSD)**
Suspense: May 20

Pentagon Reservation

Task – Pentagon Plan – (CMO): Provide an update on the plan. **(SD) Suspense: To SD for review on May 15**

International Support

Task – Ventilator aid – (SOLIC): Provide an update on the status of ventilator aid and potential DoD request for transport. **(DSD) Suspense: May 15**

Task – Ventilator offer to NATO – (SOLIC): Provide an update on the status of ventilator offer to NATO. **(DSD) Suspense: May 15**

Task – USG Process for International Support – (SOLIC): Provide an update on State Department plan to provide USG assistance to international partners. Provide an update on the memo from DSD to Deputy Secretary of State and the Administrator of USAID requesting assistance with nomination of a lead federal agency for COVID-19 international support. **(DSD) Suspense: May 15**

Modified Task -- DoD support to International Partners and others – (SOLIC): Provide recommendations on providing COVID-19 response related equipment and supplies to foreign partners and other nations. **(DSD) Suspense: May 15; Provide draft memo to DSD and JS/Services by COB May 13**

-

Installations and Logistics

Task – DPA and JATF update – (A&S): Provide an update on the Defense Production Act and the Joint Acquisition Task Force. **(SD) Suspense: Ongoing**

Strategic Communications

Task – Coordinated PA Plan for Service New Normal Plans – (PA, Services): Develop coordinated

PA and launch plan for Service New Normal plans. **(SD) Suspense: Pending release of SD guidance memo**

Funding

Task – New Supplemental Request – (Comptroller): Update on status of DoD submission for supplemental funding and authorities. **(SD) Suspense: Ongoing**

-

Modeling

Task – Modeling and analytic update – (CVTF, CAPE): Provide an update on DoD’s modeling and analytics effort and how it fits into the larger USG modeling effort. **(SD) Suspense: Ongoing**

Lessons Learned

Task – Lessons Learned – (JS J7, HD&GS): Update on status of DSD memo directing all DoD components to collect lessons learned and to be prepared to provide them to DoD’s Lessons Learned Task Force on a continuing basis. **(SD) Suspense: Ongoing**

Please let me know if you have any questions or need assistance.

Best, Bob

From: [Johnson, Justin SES SD](#)
To: [Rapuano, Kenneth P HON OSD OUSD POLICY \(USA\)](#); (b) (6); [VanHerck, Glen D Lt Gen USAF JS ODJS \(USA\)](#); [Henke, Robert SES SD](#); [Salesses, Robert G SES OSD OUSD POLICY \(USA\)](#)
Cc: (b) (6); [Ross, Alexis SES SD](#); (b) (6); [Verga, Peter SES SD](#)
Subject: RE: Draft Agenda for Thursday's SecDef COVID-19 Update
Date: Tuesday, April 7, 2020 6:27:15 PM
Attachments: [Agenda_SD COVID-19 Update - 09Apr20 \(as of 0407 1825\).docx](#)

Ken, (b) (5)

(b) (5)

-----Original Message-----

From: Rapuano, Kenneth P HON OSD OUSD POLICY (USA)

(b) (6)

Sent: Tuesday, April 7, 2020 6:14 PM

To: Johnson, Justin SES SD (b) (6)

(b) (6); VanHerck, Glen D Lt Gen USAF JS ODJS (USA)

(b) (6); Henke, Robert SES SD (b) (6)

Salesses, Robert G SES OSD OUSD POLICY (USA)

(b) (6)

Cc: (b) (6)

(b) (6); Ross, Alexis SES SD (b) (6)

(b) (6); Verga, Peter SES SD

(b) (6)

Subject: RE: Draft Agenda for Thursday's SecDef COVID-19 Update

Justin et al - (b) (5)

Best,

Ken

-----Original Message-----

From: Johnson, Justin SES SD (b) (6)

Sent: Tuesday, April 7, 2020 5:54 PM

To: (b) (6); Rapuano, Kenneth P HON OSD

OUSD POLICY (USA) (b) (6); VanHerck, Glen D Lt Gen

USAF JS ODJS (USA) (b) (6); Henke, Robert J SES (USA)

(b) (6); Salesses, Robert G SES OSD OUSD POLICY (USA)

(b) (6)

Cc: (b) (6)

(b) (6); Ross, Alexis SES SD (b) (6);

(b) (6); Verga,

Peter SES SD (b) (6)

Subject: RE: Draft Agenda for Thursday's SecDef COVID-19 Update

Thanks (b) (6) Super helpful. Updated agenda attached. If no other feedback, Team CVTF please push out.

Best,
Justin

-----Original Message-----

From: (b) (6)
Sent: Tuesday, April 7, 2020 5:35 PM
To: Johnson, Justin SES SD (b) (6); Rapuano, Kenneth P HON
OSD OUSD POLICY (USA) (b) (6); VanHerck, Glen D Lt
Gen USAF JS ODJS (USA) (b) (6); Henke, Robert SES SD
(b) (6); Salesses, Robert G SES OSD OUSD POLICY (USA)
(b) (6)
Cc: (b) (6)
(b) (6); Ross, Alexis SES SD (b) (6)
(b) (6); Verga, Peter SES SD
(b) (6)
Subject: RE: Draft Agenda for Thursday's SecDef COVID-19 Update

Justin - DSD has the following feedback:

(b) (5)

-----Original Message-----

From: Johnson, Justin SES SD (b) (6)
Sent: Tuesday, April 7, 2020 4:33 PM
To: Rapuano, Kenneth P HON OSD OUSD POLICY (USA)
(b) (6); VanHerck, Glen D Lt Gen USAF JS ODJS (USA)
(b) (6); Henke, Robert SES SD (b) (6)
Salesses, Robert G SES OSD OUSD POLICY (USA)
(b) (6)
Cc: (b) (6)
(b) (6); (b) (6)
(b) (6); Ross, Alexis SES SD (b) (6); Lewis,
(b) (6); (b) (6)
Subject: Draft Agenda for Thursday's SecDef COVID-19 Update
Importance: High

Team,

Please see the attached draft agenda for Thursday's SecDef COVID-19 update.
I'd like the COVID Task Force to push this out shortly so that we can get
first stab at RAH's by COB Wednesday.

Any feedback? (b) (5)

Best,
Justin

Justin T. Johnson
Deputy Chief of Staff
Secretary of Defense
(b) (6)

DRAFT Agenda for SecDef COVID-19 Update

Thursday, April 9, 2020

1330-1430

(b) (5)

From: (b) (6)
To: [Henke, Robert SES SD](#)
Subject: RE: DSD Prep for Cabinet Call on 14 Feb 2020
Date: Thursday, February 13, 2020 5:02:08 PM

Thanks, sir. It was a pleasure. We'll plan to do a very rapid update in the morning prior to the call starting to ensure the Deputy is armed with any changes overnight.

v/r,

(b) (6)

From: Henke, Robert SES SD (b) (6)
Sent: Thursday, February 13, 2020 4:38 PM
To: (b) (6) Verga,
Peter SES SD (b) (6)
Cc: Salesses, Robert G SES OSD OUSD POLICY (USA) (b) (6) Taliaferro,
Jeffrey B (Jeff) Maj Gen USAF JS J3 (USA) (b) (6); Friedrichs, Paul A Brig
Gen USAF JS OCJCS (USA) (b) (6); (b) (6)
(b) (6)
(b) (6)
(b) (6)

Subject: RE: DSD Prep for Cabinet Call on 14 Feb 2020

(b) (6) and team – thanks for a quick turn on the prep – nice work.

From: (b) (6)
Sent: Thursday, February 13, 2020 2:25 PM
To: Henke, Robert SES SD (b) (6) Verga, Peter SES SD (b) (6)
(b) (6)
Cc: Salesses, Robert G SES OSD OUSD POLICY (USA) (b) (6); Taliaferro,
Jeffrey B (Jeff) Maj Gen USAF JS J3 (USA) (b) (6); Friedrichs, Paul A Brig
Gen USAF JS OCJCS (USA) (b) (6); (b) (6)
(b) (6)
(b) (6)
(b) (6)

Subject: DSD Prep for Cabinet Call on 14 Feb 2020

Good afternoon,

Please find the Talking Points for DSD's Cabinet Call tomorrow on Coronavirus.

Below is a read-out of the President's Task Force on Coronavirus that DASD Salesses and I attended

yesterday evening at the White House. This will help frame the discussion for this afternoon and help prep DSD for tomorrow's Cabinet Call.

v/r,

(b) (6)

(b) (6)

From: Salesses, Robert G SES OSD OUSD POLICY (USA) (b) (6)
Sent: Thursday, February 13, 2020 9:01 AM
To: Anderson, James H HON OSD OUSD POLICY (USA) (b) (6); Rapuano, Kenneth P HON OSD OUSD POLICY (USA) (b) (6); Alexander, Thomas A SES OSD OUSD POLICY (USA) (b) (6)
Cc: (b) (6); (b) (6) Taliaferro, Jeffrey B (Jeff) Maj Gen USAF JS J3 (USA) (b) (6); Friedrichs, Paul A Brig Gen USAF JS OCJCS (USA) (b) (6)

[Redacted]

Subject: Read-out from President's Task Force on Coronavirus Meeting

James, Ken, and Tom – below is the readout from last evening's meeting of the President's Task Force on Coronavirus.

Attendees: Mick Mulvaney chaired the meeting. Attendees included Secretary Azar, Deputy Secretary Biegun, Acting Deputy Secretary Cuccinelli, Deputy National Security Advisor Matthew Pottinger, Rob Blair (Aide to Mr. Mulvaney), Joseph Grogan (Director, Domestic Policy Council), Dr. Robert Redfield (Director, CDC), Dr. Anthony Fauci (Director, National Institute of Allergy and

Infectious Diseases at NIH), Acting Under Secretary Joel Szabat (DOT), Deputy Chief of Staff Christopher Liddell and other members of the White House staff.

BLUF: The Task Force reviewed and supported a white paper on the U.S. Government Response to the 2019 Novel Coronavirus. A Cabinet Call is scheduled for Friday, February 14, 2020, during which Secretary Azar will provide an update on the U.S. response to the Coronavirus, the Task Force's progress, and to align messaging for consistency.

Due-outs: None for DoD.

Overview of the Meeting: The meeting began with an update by HHS/CDC of the current spread of Coronavirus and the USG response posture. China reports 44,654 cases and 1,113 deaths, and globally, the virus has spread into 28 countries. The USG is postured for containment. The meeting proceeded with discussion of the white paper on the U.S. Government Response to the 2019 Novel Coronavirus. The paper supplements the National Strategy for Pandemic Influenza and identifies four phases of the response.

1. Current Posture (Containment): Continue with Presidential Proclamation limiting travel to the United States and continue funneling passengers arriving from China through eleven major U.S. international airports. The objectives are (1) contain the outbreak at its source, (2) minimize domestic importation of additional cases, (3) limit potential for domestic epidemic, (4) prepare the domestic response mechanisms, and (5) begin outreach to state and local authorities to prepare for mitigation.
2. Aggressive Containment: Triggers for this phase could include sustained human-human transmission (three generations) and exportation of cases without nexus to China. This phase could include an expansion of travel restrictions. CDC would recommend a transition model for airport screening and quarantine/isolation with the overarching goal of moving from a mostly Federal response to a response primarily driven by state and local health authorities. The objectives of this phase are (1) limit the outbreak to the source and additional outbreak areas, (2) minimize importation of additional cases, (3) limit potential for domestic epidemic, (4) additional preparation of the domestic response mechanisms and in some cases executing those plans, and (5) accelerate outreach to state and local authorities to prepare for mitigation.
3. Transitioning from Containment to Community Mitigation Efforts: Triggers for this stage include (1) greater than 3 generations of human-to-human transmission, and (2) evidence that public health systems in multiple U.S. locations are unable to meet the demands for achieving containment or providing care. In this stage the USG would implement broader community and healthcare-based mitigation measures proportionate to disease severity and impact on healthcare systems. In this stage the U.S. government would pursue broader community and healthcare-based mitigation measures proportionate to disease severity and impact on healthcare systems.
4. Full Domestic Mitigation: Triggers for this phase include established widespread transmission

of disease in the United States. Examples in this stage could include cancelling mass gathering, closing schools, working on alternating schedules / encouraging telework, etc.

Please let me know if you have any questions.

Best, Bob

From: [Staff Secretary](#)
To: [Kushner, Jared C. EOP/WHO](#); [Hicks, Hope C. EOP/WHO](#); [Navarro, Peter K. EOP/WHO](#); [Kudlow, Larry A. EOP/WHO](#); [Grogan, Joseph J. EOP/WHO](#); [DL Chief of Staff Office](#); [Gountanis, John](#); [Vought, Russell T. EOP/OMB](#); [Navarro, Peter K. EOP/WHO](#); [DeBacker, Devin A. EOP/WHO](#); [Boehler, Adam](#); [White House Clearances](#); [Ueland, Eric M. EOP/WHO](#); [Liddell, Christopher P. EOP/WHO](#); [Hoelscher, Douglas L. EOP/WHO](#); [Pataki, Tim A. EOP/WHO](#); [Miller, Stephen EOP/WHO](#); [Nevins, Kristan K. EOP/WHO](#); [\(b\) \(6\)](#) [Conway, Kellyanne E. EOP/WHO](#); [Berkowitz, Avrahm J. EOP/WHO](#); [Short, Marc T. EOP/OVP](#); [Pottinger, Matthew F. EOP/WHO](#); [Miller, Katie R. EOP/OVP](#); [Levi, William \(OAG\)](#); [Harrison, Brian \(HHS/IOS\)](#); [Birx, Deborah L. EOP/NSC](#); [Stewart, Jennifer SES SD](#); [Walsh, Michael \(Federal\)](#); [Grisham, Stephanie A. EOP/WHO](#); [Ditto, Jessica E. EOP/WHO](#); [Gidley, Hogan H. EOP/WHO](#); [Hahn, Julia A. EOP/WHO](#); [Deere, Judd P. EOP/WHO](#); [Greer, Jamieson L. EOP/USTR](#); [Philbin, Patrick F. EOP/WHO](#); [Eisenberg, John A. EOP/WHO](#)
Cc: [Staff Secretary](#)
Subject: RE: FLASH REVIEW: Draft PPE DPA PM
Date: Friday, April 3, 2020 8:14:50 PM
Attachments: [2020DPAScarceMaterials.mem.docx](#)

All – this has been signed and will be released shortly.

From: Staff Secretary
Sent: Friday, April 3, 2020 3:36 PM
To: Staff Secretary [\(b\) \(6\)](#); [Kushner, Jared C. EOP/WHO](#)
[\(b\) \(6\)](#); [Hicks, Hope C. EOP/WHO](#) [\(b\) \(6\)](#); [Navarro, Peter K. EOP/WHO](#)
[\(b\) \(6\)](#) [Kudlow, Larry A. EOP/WHO](#) [\(b\) \(6\)](#)
[Grogan, Joseph J. EOP/WHO](#) [\(b\) \(6\)](#); [DL Chief of Staff Office](#)
[\(b\) \(6\)](#) [Vought,](#)
[Russell T. EOP/OMB](#) [\(b\) \(6\)](#); [Navarro, Peter K. EOP/WHO](#)
[\(b\) \(6\)](#); [DeBacker, Devin A. EOP/WHO](#)
[\(b\) \(6\)](#); [\(b\) \(6\)](#) 'White House
Clearances' [\(b\) \(6\)](#) [Ueland, Eric M. EOP/WHO](#)
[\(b\) \(6\)](#); [Liddell, Christopher P. EOP/WHO](#)
[\(b\) \(6\)](#); [Hoelscher, Douglas L. EOP/WHO](#)
[\(b\) \(6\)](#); [Pataki, Tim A. EOP/WHO](#) [\(b\) \(6\)](#);
[Miller, Stephen EOP/WHO](#) [\(b\) \(6\)](#); [Nevins, Kristan K. EOP/WHO](#)
[\(b\) \(6\)](#); [Conway, Kellyanne E. EOP/WHO](#)
[\(b\) \(6\)](#) [Berkowitz, Avrahm J. EOP/WHO](#) [\(b\) \(6\)](#) [Short, Marc T. EOP/OVP](#)
[\(b\) \(6\)](#); [Pottinger, Matthew F. EOP/WHO](#) [\(b\) \(6\)](#);
[Miller, Katie R. EOP/OVP](#) [\(b\) \(6\)](#) 'Levi, William (OAG'
[\(b\) \(6\)](#); 'Harrison, Brian (HHS/IOS)' [\(b\) \(6\)](#); [Birx, Deborah L.](#)
[EOP/NSC](#) [\(b\) \(6\)](#) 'Stewart, Jennifer SES SD' [\(b\) \(6\)](#)
'Walsh, Michael (Federal)' [\(b\) \(6\)](#) [Grisham, Stephanie A. EOP/WHO](#)
[\(b\) \(6\)](#) [Ditto, Jessica E. EOP/WHO](#) [\(b\) \(6\)](#)
'Gidley, Hogan H. EOP/WHO' [\(b\) \(6\)](#) [Hahn, Julia A. EOP/WHO](#)
[\(b\) \(6\)](#); [Deere, Judd P. EOP/WHO](#) [\(b\) \(6\)](#) [Greer,](#)
[Jamieson L. EOP/USTR](#) [\(b\) \(6\)](#); [Philbin, Patrick F. EOP/WHO](#)
[\(b\) \(6\)](#); [Eisenberg, John A. EOP/WHO](#) [\(b\) \(6\)](#)
Subject: RE: FLASH REVIEW: Draft PPE DPA PM

All,

A further updated final is attached. This may be signed as early as this afternoon.

From: Staff Secretary

Sent: Thursday, April 2, 2020 6:46 PM

To: Staff Secretary (b) (6); Kushner, Jared C. EOP/WHO (b) (6); Hicks, Hope C. EOP/WHO (b) (6); Navarro, Peter K. EOP/WHO (b) (6); Kudlow, Larry A. EOP/WHO (b) (6); Grogan, Joseph J. EOP/WHO (b) (6) DL Chief of Staff Office (b) (6); Vought, Russell T. EOP/OMB (b) (6); Navarro, Peter K. EOP/WHO (b) (6); DeBacker, Devin A. EOP/WHO (b) (6); 'White House Clearances' (b) (6) Ueland, Eric M. EOP/WHO (b) (6) Liddell, Christopher P. EOP/WHO (b) (6); Hoelscher, Douglas L. EOP/WHO (b) (6); Pataki, Tim A. EOP/WHO (b) (6); Miller, Stephen EOP/WHO (b) (6); Nevins, Kristan K. EOP/WHO (b) (6) Conway, Kellyanne E. EOP/WHO (b) (6); Berkowitz, Avrahm J. EOP/WHO (b) (6); Short, Marc T. EOP/OVP (b) (6); Pottinger, Matthew F. EOP/WHO (b) (6); Miller, Katie R. EOP/OVP (b) (6); 'Harrison, Brian (HHS/IOS)' (b) (6); Birx, Deborah L. EOP/NSC (b) (6); 'Stewart, Jennifer SES SD' (b) (6); Grisham, Stephanie A. EOP/WHO (b) (6) Ditto, Jessica E. EOP/WHO (b) (6); 'Gidley, Hogan H. EOP/WHO' (b) (6); Hahn, Julia A. EOP/WHO (b) (6); Deere, Judd P. EOP/WHO (b) (6); Greer, Jamieson L. EOP/USTR (b) (6); Philbin, Patrick F. EOP/WHO (b) (6); Eisenberg, John A. EOP/WHO (b) (6)

Subject: RE: FLASH REVIEW: Draft PPE DPA PM

Updated attached. This may be signed as early as tonight.

From: Staff Secretary

Sent: Thursday, April 2, 2020 4:04 PM

To: Kushner, Jared C. EOP/WHO (b) (6); Hicks, Hope C. EOP/WHO (b) (6); Navarro, Peter K. EOP/WHO (b) (6); Kudlow, Larry A. EOP/WHO (b) (6); Grogan, Joseph J. EOP/WHO (b) (6); DL Chief of Staff Office (b) (6); 'Gountanis, John' (b) (6); Vought, Russell T. EOP/OMB (b) (6); Navarro, Peter K. EOP/WHO (b) (6); DeBacker, Devin A. EOP/WHO (b) (6); 'White House Clearances' (b) (6); Ueland, Eric M. EOP/WHO (b) (6); Liddell, Christopher P. EOP/WHO (b) (6); Hoelscher, Douglas L. EOP/WHO (b) (6); Pataki, Tim A. EOP/WHO (b) (6)

Miller, Stephen EOP/WHO (b) (6); Nevins, Kristan K. EOP/WHO (b) (6); Conway, Kellyanne E. EOP/WHO (b) (6); Berkowitz, Avrahm J. EOP/WHO (b) (6); Short, Marc T. EOP/OVP (b) (6); Pottinger, Matthew F. EOP/WHO (b) (6); Miller, Katie R. EOP/OVP (b) (6); 'Levi, William (OAG' (b) (6); 'Harrison, Brian (HHS/IOS)' (b) (6); Birx, Deborah L. EOP/NSC (b) (6); 'Stewart, Jennifer SES SD' (b) (6) (b) (6); Grisham, Stephanie A. EOP/WHO (b) (6) Ditto, Jessica E. EOP/WHO (b) (6) 'Gidley, Hogan H. EOP/WHO' (b) (6); Hahn, Julia A. EOP/WHO (b) (6); Deere, Judd P. EOP/WHO (b) (6); Greer, Jamieson L. EOP/USTR (b) (6) Philbin, Patrick F. EOP/WHO (b) (6); Eisenberg, John A. EOP/WHO (b) (6)
Cc: Staff Secretary (b) (6)
Subject: RE: FLASH REVIEW: Draft PPE DPA PM

All – a near-final draft is attached. Please send any critical, red flag edits only by [5pm today](#).

Thank you,
Staff Secretary

From: Staff Secretary

Sent: Thursday, April 2, 2020 12:53 PM

To: Kushner, Jared C. EOP/WHO (b) (6) Hicks, Hope C. EOP/WHO (b) (6); Navarro, Peter K. EOP/WHO (b) (6) Kudlow, Larry A. EOP/WHO (b) (6); Grogan, Joseph J. EOP/WHO (b) (6) DL Chief of Staff Office (b) (6) 'Gountanis, John' (b) (6) Vought, Russell T. EOP/OMB (b) (6); Navarro, Peter K. EOP/WHO (b) (6) DeBacker, Devin A. EOP/WHO (b) (6); 'Boehler, Adam' (b) (6) 'White House Clearances' (b) (6); Ueland, Eric M. EOP/WHO (b) (6); Liddell, Christopher P. EOP/WHO (b) (6); Hoelscher, Douglas L. EOP/WHO (b) (6) Pataki, Tim A. EOP/WHO (b) (6) Miller, Stephen EOP/WHO (b) (6); Nevins, Kristan K. EOP/WHO (b) (6); Conway, Kellyanne E. EOP/WHO (b) (6); Berkowitz, Avrahm J. EOP/WHO (b) (6); Short, Marc T. EOP/OVP (b) (6); Pottinger, Matthew F. EOP/WHO (b) (6) Miller, Katie R. EOP/OVP (b) (6); 'Levi, William (OAG' (b) (6); (b) (6) (b) (6); Birx, Deborah L. EOP/NSC (b) (6); 'Stewart, Jennifer SES SD' (b) (6) (b) (6); Grisham, Stephanie A. EOP/WHO (b) (6) Ditto, Jessica E. EOP/WHO (b) (6) 'Gidley, Hogan H. EOP/WHO' (b) (6) Hahn, Julia A. EOP/WHO (b) (6); Deere, Judd P. EOP/WHO (b) (6); Greer,

Jamieson L. EOP/USTR (b) (6) Philbin, Patrick F. EOP/WHO
(b) (6); Eisenberg, John A. EOP/WHO (b) (6)
Cc: Staff Secretary (b) (6)
Subject: RE: FLASH REVIEW: Draft PPE DPA PM
Importance: High

All,

Attached is a revised draft. Affirmative clearance is requested from **WHCO, DHS, and HHS** – and all others are welcome to comment as well. Please send all comments to Staff Secretary **by 3pm today.**

Thank you.

From: Staff Secretary
Sent: Wednesday, April 1, 2020 4:13 PM
To: Kushner, Jared C. EOP/WHO (b) (6) Hicks, Hope C. EOP/WHO
(b) (6); Navarro, Peter K. EOP/WHO (b) (6); Kudlow,
Larry A. EOP/WHO (b) (6); Grogan, Joseph J. EOP/WHO
(b) (6); DL Chief of Staff Office (b) (6)
(b) (6) Vought, Russell T. EOP/OMB
(b) (6)
Ueland, Eric M. EOP/WHO (b) (6); Liddell, Christopher P. EOP/WHO
(b) (6) Hoelscher, Douglas L. EOP/WHO
(b) (6); Pataki, Tim A. EOP/WHO (b) (6)
Miller, Stephen EOP/WHO (b) (6); Nevins, Kristan K. EOP/WHO
(b) (6); Conway, Kellyanne E. EOP/WHO
(b) (6); Berkowitz, Avrahm J. EOP/WHO (b) (6); Short, Marc T. EOP/OVP
(b) (6); Pottinger, Matthew F. EOP/WHO (b) (6)
Miller, Katie R. EOP/OVP (b) (6); 'Levi, William (OAG'
(b) (6); 'Harrison, Brian (HHS/IOS)' (b) (6) Birx, Deborah L.
EOP/NSC (b) (6); 'Stewart, Jennifer SES SD' (b) (6);
(b) (6) Grisham, Stephanie A. EOP/WHO
(b) (6) Ditto, Jessica E. EOP/WHO (b) (6)
'Gidley, Hogan H. EOP/WHO' (b) (6) Hahn, Julia A. EOP/WHO
(b) (6); Deere, Judd P. EOP/WHO (b) (6); Greer,
Jamieson L. EOP/USTR (b) (6)
Cc: Staff Secretary (b) (6)
Subject: FLASH REVIEW: Draft PPE DPA PM

All,

Attached is a draft Presidential Memorandum ordering FEMA to Seize Exports of Scarce Materials or Threatened Materials Subject to COVID-19 Hoarding Prevention Measures Not from a Qualified Suppliers. Affirmative clearance is requested from **WHCO, DHS, and HHS** – and all others are welcome to comment as well.

Please send all comments to Staff Secretary **by 10am tomorrow morning.**

Thank you,
Staff Secretary

From: McConville, James C GEN USARMY HODA CSA (USA)
To: Flynn, Charles A LTG USARMY HODA DCS G-3-5-7 (USA)
Cc: McCarthy, Ryan D HON USARMY HODA SECARMY (USA); (b) (6)
(USA); Adrian, Anthony H BG USARMY NG NGB ARNG (USA); (b) (6)
(USA); (b) (6) Austin, Stephen D SES USARMY OCAR
(USA); Avenill, Mark F SES USARMY HODA OAA (USA); (b) (6)
(b) (6) (b) (6)
Beaudette, Francis M LTG USARMY USASOC (US); Beehler, Alex A HON USARMY HODA ASA TEE (USA); Benchoff,
Peter N BG USARMY HODA DCS G-3-5-7 (USA); Bernabe, Sean C BG USARMY USAREUR (USA); Berrier, Scott D
LTG USARMY HODA DCS G-2 (USA); (b) (6); Bills, Michael A
LTG USARMY 8 ARMY (USA); Bowling, Martin Jeremy LTC USARMY HODA DCS G-3-5-7 (USA); (b) (6)
Calloway, Joseph R MG
USARMY HRC (USA); (b) (6); Calvert, Paul Thomas MG USARMY HODA
DCS G-3-5-7 (USA); Cavoli, Christopher G LTG USARMY USAREUR (US); (b) (6)
Cloutier, Roger L Jr MG USARMY USARAF (US); Gingrich, Karl H MG USARMY HODA DCS G-8
(USA); (b) (6) Cooke, Thomas M (Tom) SES USARMY HODA
DCS G-3-5-7 (USA); Costanza, Charles D BG USARMY HODA DCS G-3-5-7 (USA); Crawford, Bruce T LTG USARMY
HODA CIO G-6 (US); Daly, Edward M LTG USARMY USAMC (USA); (b) (6)
(b) (6) Dickinson, James H LTG USARMY SMDC (US); Dingle, Raymond S LTG USARMY HODA OTSG
(USA); Durham-Aguilera, Karen L SES USARMY HODA ANMC (USA); (b) (6)
Eifler, Brian S BG USARMY HODA OCLL (USA); Evans, Jason T LTG USARMY HODA DCS G-9
(USA); Faris, Jill K BG USARMY HODA OTSG (USA); Fenton, Bryan P LTG USARMY OSD OSD (USA); Ferrell, Terry
R LTG USARMY USARCENT (USA); Fisher, Ryan A SES USARMY HODA ASA CW (USA); Fogarty, Stephen G LTG
USARMY ARCYBER (USA); Francis, David J MG USARMY AVNCOE (USA); Funk, Paul E II GEN USARMY TRADOC
(USA); Gabram, Douglas M LTG USARMY IMCOM HQ (USA); (b) (6)
Gainey, Sean A MG USARMY JS J8 (USA); Gallivan, James J BG USARMY FUTURES COMMAND (USA); Gamble,
Duane Anthony LTG USARMY HODA (USA); Garcia, Gregory L (Greg) SES USARMY HODA CIO G-6 (US); Garrett,
Michael X GEN USARMY FORSCOM (USA); Gericke, Bradley T MG USARMY HODA DCS G-3-5-7 (USA); Gillis, W
Jordan HON OSD OUSD A-S (USA); (b) (6); (b) (6)
Green, William Jr. (Bill) BG USARMY HODA OCCH (USA); Grinston,
Michael A SMA USARMY HODA SMA (USA); (b) (6)
Hannah, Amy E BG USARMY HODA OCPA (USA);
(b) (6) (b) (6)
Hibbard, Lonnie G MG USARMY IMT (USA); (b) (6) Hokanson, Daniel R
LTG USARMY NG NGB (US); Horlander, Thomas A LTG USARMY HODA ASA FM (USA); Hort, John H SES USARMY
FORSCOM (USA); Hovatter, Mark J BG USARMY HODA DCS G-3-5-7 (USA); Huh, Fred L LTC USARMY HODA DCS
G-3-5-7 (USA); Jackson, Donald Edwin (Ed) JR MG USARMY HODA OTIG (USA); James, Rickey Dale (RD) HON
USARMY HODA ASA CW (USA); James, Thomas S Jr LTG USARMY FIRST ARMY HQ (USA); Jette, Bruce D HON
USARMY HODA ASA ALT (USA); Johnson, John P (Pete) MG USARMY USARPAC (USA); Johnston, Gary W MG
USARMY HQ INSCOM (USA); Jones, Omar J IV MG USARMY MDW (USA); Kadavy, Timothy J LTG USARMY NG
NGB ARNG (US); Kelly, Thomas E III SES USARMY HODA DUSA (USA); Kem, John S MG USARMY AWC (USA);
Klein, Martin F (Marty) BG USARMY HODA DCS G-3-5-7 (USA); LaNeve, Christopher Charles BG USARMY HODA
DCS G-3-5-7 (USA); (b) (6) (b) (6)
Lowman, Christopher J SES USARMY HODA DCS G-3-5-7 (USA); Luckey,
Charles D LTG USARMY OCAR (USA); (b) (6) (b) (6)
Manoney, Michael T SES USARMY HODA DCS G-3-5-7 (US); Markowitz,
David SES USARMY HODA DCS G-8 (USA); (b) (6) Martin,
Joseph M GEN USARMY HODA VCSA (USA); Martin, Theodore D LTG USARMY TRADOC (USA); McCurry, Michael
C (Mac) BG USARMY HODA DCS G-3-5-7 (USA); McPherson, James E HON USN (USA); (b) (6)
Miller, Kathleen S SES USARMY HODA OAA (USA); (b) (6)
Miyamasu, Myles M SES USARMY CAA (USA); (b) (6)
Moore, William F SES USARMY HODA DCS G-4 (USA); Murray, John M (Mike) GEN
USARMY FUTURES COMMAND (USA); (b) (6) Nucci, Adam J SES USARMY HODA
DCS G-3-5-7 (USA); (b) (6) (b) (6)
Ostrowski, Paul A LTG USARMY HODA ASA ALT (USA); Pasquarette, James F (Jim) LTG
USARMY HODA DCS G-8 (USA); (b) (6) Pede, Charles N LTG USARMY
HODA OTJAG (USA); (b) (6) Perna, Gustave F GEN USARMY USAMC (USA);
(b) (6) Platt, Walter E LTG USARMY HODA DAS (USA); (b) (6)
Poppas, Andrew P LTG USARMY JS J3 (USA); (b) (6)
Preston, Andrew D BG USARMY USARPAC (USA); (b) (6)
Quintas, Leopoldo A LTG USARMY FORSCOM (USA); Rainey, James E (Jim) LTG
USARMY CAC (USA); Randon, Diane M SES USARMY HODA DCS G-2 (USA); Redmann, Steven J (Steve) SES
USARMY HODA CSA (USA); (b) (6) Richards, Anne L SES
USARMY HODA AAA (USA); Richardson, James M LTG USARMY FUTURES COMMAND (USA); Richardson, John B
IV MG USARMY FORSCOM (USA); Richardson, Laura J LTG USARMY ARNORTH (USA); Risch, Stuart W MG
USARMY HODA OTJAG (USA); (b) (6) Rohling, Andrew
Michael MG USARMY USAREUR (USA); (b) (6) (b) (6)
(b) (6)
Seamands, Thomas C LTG USARMY HODA DCS G-1 (USA); (b) (6)
Semonite, Todd T LTG USARMY HODA OCE (USA); (b) (6)
(USA); Smith, Leslie C LTG USARMY HODA OTIG (USA); Smith, Matthew D BG USARMY HODA DCS G-3-5-7
(USA); Solhjelm, Thomas L MG USARMY HODA OCCH (USA); (b) (6)
Stoddard, Steven A SES USARMY HODA DCS G-3-5-7 (USA); (b) (6)
Swan, Robin Paul SES USARMY HODA SECARMY (USA); (b) (6)

(b) (6) Thurgood, L Neil LTG USARMY HQDA ASA ALT (USA); Twitty, Stephen M (Steph) LTG USARMY EUCOM DCOM (USA); Tyler, Joel Keith MG USARMY ATEC (USA); Vereen, Kevin MG USARMY HQDA PMG (USA); (b) (6) Walker, Flem Bowen (Donnie) JR MG USARMY USAMC (USA); Wallace, Roy A SES USARMY HQDA DCS G-1 (USA); Walrath, Daniel R MG USARMY ARSOUTH (USA); (b) (6) (b) (6) Wardynski, Eugene C (Casey) HOJN USARMY HQDA ASA MRA (USA); Wehr, Michael C MG USARMY TRANSCOM TCJ5/4 (USA); Weidner, John W BG USARMY STRATCOM DJ5 (USA); Wendt, Eric P LTG USARMY (USA); Wesley, Eric J LTG USARMY AFC-FCC (USA); White, Jeffrey S SES USARMY HQDA ASA ALT (USA); Whitman, Bryan G SES WHS EITSD (US); Williams, Darryl A LTG USARMY USMA (USA); (b) (6)

Subject: Re: G357 Weekly Update
Date: Friday, May 22, 2020 12:19:53 PM

Great work by all Charlie!

GEN James C McConville
40th CSA
PEOPLE FIRST - WINNING MATTERS!

On May 22, 2020, at 11:30 AM, Flynn, Charles A LTG USARMY HQDA DCS G-3-5-7 (USA) (b) (6) wrote:

Mr. Secretary and Chief

A lot of successful heavy lifting this week here in the G357, across the Army, and on the Hill. The team is reinforcing the Army's narrative on readiness, pressing our planning campaign on posture initiatives, and keeping Congressional leaders informed of our fielding and stationing developments.

Below are G357 highlights –

THIS PAST WEEK – SIX POINTS

1. **HASC-R Briefing: Impacts to Military Readiness & Training.** On Wednesday I briefed the House readiness subcommittee along with fellow Service 3s. Overall great session with very positive feedback from Chairman Garamendi (D-CO). He is most interested in gathering the military's COVID lessons learned—we'll share some of CALL's Quick Look work to-date with them. Also lots of interest in collective training impacts—I shared how we've adjusted CTCs and highlighted a lot of our training initiatives. They are anxious to learn more about our depots, which Duane Gamble and his teammates will address during a brief to this subcommittee on 28 MAY.
2. **Indo-Pacific Defense Initiative.** Thank you for inviting me to join you both during your breakfast meeting to discuss our INDOPACOM Posture efforts with SEN Perdue (R-GA) and SEN Gardner (R-CO). We'll provide you and other ASLs a comprehensive review of IPDI next Friday.
3. **Operation Warp Speed (OWS).** Chief, tracking your guidance to fully support GEN Perna in his new role as the OWS chief operating officer. The G357 team is fully prepared to support the OWS mission of accelerating the development, manufacturing, and distribution of vaccines, therapeutics, and diagnostics (medical countermeasures). Yesterday myself, Scotty Berrier, LTG Ostrowski, BG McCurry sat with GEN Perna on an update by the JS J2 on

Global Threats. A very helpful session for GEN Perna; we'll create a battle rhythm event addressing threats that OWS will contend with.

4. **V Corps, MDTF, USAREUR/USARAF.** Pete Benchhoff had a very productive and well-received phone call with HASC PSMs—he is carrying the water on a lot of key messaging. Pete provided **background on MDTF** and explained **OFSC process** all of which PSMs found extremely valuable. We'll look to provide similar updates to the SASC.
5. **HPCON Levels:** As you are both aware the **SecDef signed a memo delegating authority to change HPCON levels** to Senior Mission Commanders. Chris LaNeve's G-357 OD team has the **transition framework Base Order** ready to publish which provides amplifying guidance on **local case rate, testing, treatment, and monitoring.** Pending your further guidance.
6. **COVID-19 CUOPS:** The CAT published **FRAGOs 25, 26, and 27** which provide guidance on the distribution of BioFire Tests, leave procedures under the Families First Coronavirus Response Act, and passport/visa expedited request processing. Also of note, the **"Army PCS Move App"** that Duane Gamble's G4 team developed has proven to be a very useful information source across our formations.

G357 OPTs – SEVEN PLANNING EFFORTS TO HIGHLIGHT:

1. **Med Reform:** COVID impacts highlight major friction points and flawed assumptions in Med Reform. The Army's unique medical capabilities clearly allowed us to be agile and adaptive during COVID response. This likely would not have occurred under the DHA transition plan. Our Med Reform OPT, OTSG, and M&RA will update you next Friday.
2. **Dr. Stoddard:** My sincerest thanks to Dr. Steve Stoddard for his exceptional work as the Deputy Director of the G-357 FM team as he transitions to become the Director of CAA. We also welcome Mr. Myles Miyamasu as the new FM Deputy.
3. **V Corps.** Pete Benchhoff's G-357 FM team is drafting FRAGO 1 to EXORD 162-20 to address command relationship and establish the Forward Command Post (FCP) equipping requirements. Anticipate release for staffing on 26 May with a suspense of 15 Jun.
4. **TAA 23-27:** Our team kicked off the TAA 23-27 Force Synchronization Review (FSR) OPT last week. Initial focus is to ensure data accuracy and Force Integration Functional Area (FIFA) coordination. Outputs of the Stationing OPT will help inform the needed revisions to AR 5-10.
5. **Army Watercraft.** AWS Relocation EXORD staffing is complete and is going through legal review. The Composite Watercraft Company Force Design Update (FDU) cleared requirements determination by CAC. Kickoff meeting for the Army Watercraft FFRDC Study which was directed by the SecDef is 9 Jun.
6. **CCLTF.** Mr. Secretary, the action memo response you signed designates you as the DOD lead for the CCLTF pending SD approval. CCLTF EXORD is in DRAFT as well as a revision to the CCLTF Charter. We anticipate gaining tri-chair (Army-USMC-SOCOM) by mid to late June.

UPCOMING SECDEF MEETINGS, JCS TANKS, and OPSDEPS:

- 26 MAY (TUE) **SWPR: People** (see slides on SIPR)
- 27 MAY (WED) OPSDEPS: DRT, JF Strategic Estimate
- 28 MAY (THU) DEPOPSDEPS: Munitions II
- 29 MAY (FRI) **JCS TANK: GFMIG**

ON THE HORIZON:

- 27 MAY: **Pensacola Shooting Update to SA/CSA;** Scotty Berrier and I will host a small-group 3-Star session on 26 MAY to discuss your taskers to us regarding International Military Students attending US schools.

- 27 MAY: Med Reform Update to VCSA
- 29 MAY: Pacific Defense Initiative Comprehensive Review to SA/CSA
- 29 MAY: Med Reform Options Brief to SA/CSA
- 8-12 JUN: Army Modernization and Equipping Conference (AMEC)
- Army Campaign Plan (ACP):
 - 27 MAY: INDOPACOM Posture, Bio-Defense/CNI/CWMD Readiness, Army COVID-19 Campaign Plan (AC2P)
 - 3 JUN: Army Modernization Enterprise Working Group, C-UAS, AC2P
 - 10 JUN: AC2P
 - 17 JUN: Defender 20 Reset, MDTF, Army Watercraft Strategy, Mobilization & Power Projection Strategic Gap Analysis

EXORDs: Significant EXORDs published this past week:

- FRAGO 25, 26, & 27 to HQDA EXORD 144-20: Army Wide Preparedness and Response to COVID-19 Outbreak.
- HQDA EXORD 196-20: COVID-19 Voluntary Recalls
- HQDA EXORD 177-20: The Army Strategic Readiness Assessment
- HQDA EXORD 201-20: Building a Stryker Training Set

As we honor the fallen this Memorial Day, I wish also to express my sincere thanks to all of you and your families for the selfless sacrifices in war and peace – thank all of the Soldiers we proudly serve with – and honor them all!

Pending your questions or guidance.

People First – Winning Matters!

Vr
Charlie

From: [Piatt, Walter E LTG USARMY HQDA DAS \(USA\)](#)
To: [Stewart, Jennifer SES SD](#)
Subject: Re: HQDA Coronavirus Update 26 MAR 20 (UNCLASSIFIED)
Date: Thursday, March 26, 2020 9:13:37 PM

Jen

For ANC. We will still do funerals just with less soldiers and all at social distance.

As for the museum. The work halted so the time is off. We think we will establish a new timeline once workers are safe to return.

Regards
Walt

From: "Stewart, Jennifer SES SD" (b) (6)
Date: Thursday, March 26, 2020 at 21:02:20
To: "Piatt, Walter E LTG USARMY HQDA DAS (USA)" (b) (6), "Fenton, Bryan LTG SD" (b) (6)
Cc: (b) (6)
Subject: Re: HQDA Coronavirus Update 26 MAR 20 (UNCLASSIFIED)

Thank you. The Secretary will care to know about the Arlington and Army Museum. I do not anticipate needing more information on those topics.

I will review the update below; thank you for sending.

Sent from Mobile Device

From: "Piatt, Walter E LTG USARMY HQDA DAS (USA)" (b) (6)
Date: Thursday, March 26, 2020 at 8:59:48 PM
To: "Stewart, Jennifer SES SD" (b) (6), "Fenton, Bryan LTG SD" (b) (6)
Cc: (b) (6)
Subject: FW: HQDA Coronavirus Update 26 MAR 20 (UNCLASSIFIED)

Ms. Stewart,

Good evening. Sorry to fill your in box, but the last email I sent you was not the "Army Update" but rather some actions we are working that might be of interest. Our daily update is below. If your team would like our daily update please let me know we would be happy to send. The actions I sent are simply items of interest. Not sure they are worth the SEC DEF's time but if there is something on the list you think is let me know and we will provide more.

Hope this is helpful. Thanks again for establishing a daily meeting. I find them very helpful.

V/R

Walt

Subject: HQDA Coronavirus Update 26 MAR 20 (UNCLASSIFIED)

CLASSIFICATION: UNCLASSIFIED

UPDATE: # 47

As of 26 1900 MAR 20

BLUF:

o Confirmed Army cases: 301 (+51) (108-Soldiers, 9-Cadets, 65-DA Civilians, 52-Contractors, and 67-Dependents).

o Vermont will exhaust COVID-19 testing capacity as of 26 MAR 20; this issue is being worked through the Regional Response Coordination Center-National Response Coordination Center.

o Governors of New Jersey, North Carolina, Florida, and Texas declared Major Disaster Declarations on 25 MAR 20.

o 21 states have issued "stay-at-home" orders affecting approximately 158 million Americans.

o Minnesota issued a shelter-in-place order in effect 27 MAR 20 to 10 APR 20.

o Maryland Governor allowing nursing and medical technician students from Maryland universities and colleges to assist the COVID-19 response.

o Cruise Ships COSTA MAGICA and COSTA FAVALOSA are in transit towards Miami, FL with 13 critically ill crew members, including 9 COVID-19 positives.

o USAREUR: Significant increases over the last 24 hours: Italy 80,539 (+11,363), Spain 56,197 (+8,587), Germany 43,646 (+9,637), and France 25,624 (+2,987). Other countries of interest: Poland 1,163 (+236), Estonia 538 (+134), Latvia 244 (+23), and Lithuania 290 (+35).

o USARPAC: Countries of interest: China 81,782 (+121), South Korea: 9,241 (+104), and Japan 1,399 (+206).

Last 24 Hours:

Army Cases (as of 26 1400 MAR 20):

ROM (quarantine or isolation)

Positive Cases

Total

Mil

CDT

DA-Civ

DA-CTR

Dep

Total
Recovered
Mil
CDT
DA-Civ
DA-CTR
Dep
Deaths

USAREUR

2093
1131
0
332
260
370
65
0
19
0
11
16
19
0

ARCENT

2002
1442
0
35
518
7
0

0
0
0
0
0
0
0

USARAF

131
90
0
6
3
32
2
0
1
0
0
0
1
0

USARPAC

775
565
0
91
3
116
7
10

1
0
5
1
0
0

ARSOUTH

63
50
0
8
5
0
0
0
0
0
0
0
0
0
0
0

ARNORTH

23287
12791
989
3880
1892
3735
227
7
87

9
49
35
47
1

Total
28351
16069
989
4352
2681
4260
301
17
108
9
65
52
67
1

o ROK Military cases: 39 positive, 26 (+1) recovered, and 0 deaths.

o NGB reported positive cases: 19 (1 - CA, IL, KS, MN, MO, OR; 2 - CO, KY, PA, TX, UT; 3 - NY). Under quarantine: 18 (n/c) T-10 AGR at ARNG (Arlington Hall) are due to possible exposure.

o 58 Compo 3 SMs redeploying from S. Korea will depart on the 26 MAR 20 Patriot Express rotator with a 14-day quarantine upon arrival.

MRDC Summary:

OCLL received RFIs from the HASC and SASC PSMs reference the MRDC's FDA priority review voucher recommendations. The PSMs queried about DoD's position, who Army has socialized the recommendations with, any potential waivers under the current presidential emergency and background on where the rest of government sits on the recommendations. AFC/MRDC will work with HQDA to address these questions.

Prevent:

Daily Vaccine Update: Small animal studies remain on schedule for completion by end of MAR. First human trials of the vaccine on track for JUL 20.

MRDC partnering with Inovio and Ology Industries to assess a separate DNA vaccine effort. We support this partnership as a means to get after "best pony". More importantly, vaccine development is a cooperation that requires many parallel efforts to deliver the most effective solution.

Detect Update: Status of Diagnostic Kit Development

USAMRIID has begun testing the use of the COVID-19 diagnostic assay to detect virus in military working dog samples. The goal is to determine if the assay can be used to screen military working dogs.

Treat Update:

Distribution of Remdesivir is ongoing. The list of medical treatment facilities (MTF) that will be capable of providing Remdesivir to military personnel grew from nine this morning to 11 MTFs. These medical treatment facilities are: Naval Medical Center Portsmouth, VA, Landstuhl Regional Medical Center, Germany, RAF Lakenheath Medical Hospital, UK, Tripler Army Medical Center, HI, Madigan Army Medical Center, WA, Womack Army Medical Center, NC, Brook Army Medical Center, TX, Martin Army Community Hospital, GA, Darnall Army Medical Center, TX, Walter Reed National Military Medical Center, MD and William Beaumont Army Medical Center, TX.

Funding: MRDC refining 12 month plan of action and milestones for each line of effort (Prevent, Detect, and Treat).

Significant Events:

All states are currently supporting COVID-19 response.

o Total National Guard in all duty statuses ISO COVID-19 response: 11,396 (+635) (10,071 ARNG and 1,325 ANG).

XX

Total Cases (as of 26 1400 MAR 20):

Global

Confirmed

Previous

Delta

US

Confirmed

Previous

Delta

Confirmed Cases

510,108

438,749

71,359

Confirmed Cases

75,233

55,243

19,990

Deaths

22,993

19,675

3,318

Deaths

1,070

802

268

Countries w/ cases

175

172

3

States w/ cases

50

50

0

As reported by Johns Hopkins University

Evacuation Support Bases

Supported Airport

Tasked Rooms

Billeted

Projected Departure Date

Travis, AFB, CA

N/A

488

0

-

-

MCAS Miramar, CA

N/A

302

63

42

24 MAR

235

25 MAR

212

26 MAR

Joint Base San Antonio (JBSA)- Lackland, TX

N/A

248

0

-

-

Dobbins ARB, GA /

Clay ARNG, GA

ATL

264

49

124

24 MAR

5

23 MAR

113

25 MAR

159

26 MAR

98

26 MAR

- o Travis AFB: 9 passengers at off base medical facilities.
- o MCAS Miramar: 3 passengers at off base medical facilities.
- o Dobbins ARB, GA: 21 passengers at off base medical facilities.
- o JBSA Lackland, TX: 0 passengers at off base medical facilities.
- o Cohort numbers not reported by HHS.
- o Cohort numbers reflect incoming passenger numbers only.
- o Number per cohort is not updated from those that departed to their home states.

Travel Advisories:

- o CDC issued a Global Level 2 (Practice Enhanced Precautions) Travel Health Notice (THN).
- o CDC issued a Level 3 THN (Avoid Non-essential Travel) for: Australia, Austria, Belgium, Brazil, Canada, Chile, China, Czech Republic, Denmark, Ecuador, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, India, Indonesia, Iran, Ireland, Israel, Italy, Japan, Latvia, Liechtenstein, Lithuania, Luxembourg, Malaysia, Malta, Monaco, Netherlands, Norway, Pakistan, Philippines, Poland, Portugal, Qatar, Romania, Russia, S. Africa, S. Korea, San Marino, Saudi Arabia, Singapore, Slovakia, Slovenia, Spain, Sweden, Switzerland, Thailand, Turkey, United Kingdom, Vatican City, and worldwide cruise ships.
- o DOS issued a Global Level 4 Health Advisory advising U.S. citizens to avoid all international travel, and in countries where commercial departure options remain available, to return immediately to the U.S.

Interagency Coordination:

- o RFA 7 (VOCO approved). For use of installations for temporary lodging through 31 MAR 20, in support of asymptomatic Grand Princess passengers and crew, (Travis, AFB, CA, Joint Base San Antonio (JBSA)- Lackland, TX, Dobbins ARB, GA, and MCAS Miramar, CA).
- o SECDEF approved extension of HHS installation support through 4 APR 20.
- o Force Health Protection Guidance #3 (PPE Request Prioritization) released 10 MAR 20.
- o Force Health Protection Guidance #4 (Department of Defense Guidance for Personnel Traveling during the Novel Coronavirus Outbreak) released 11 MAR 20.
- o USSS sent RFA for DoD support to help protect the President and Vice President from COVID-19.

MEDCOM: 9 of 9 Labs approved for testing. Current testing demand remains within inventory. Maximum daily capacity (if labs run 24hrs): 1,350 tests (9 labs x ~50 tests per shift x 3 shifts).

HQDA Crisis Action Team COVID-19 Update and Repository Link:

<[https://g357.army.pentagon.mil/od/ODO/ArmyOpCenter/CAWG/CAT/SitePages/Coronavirus%20\(COVID-19\).aspx](https://g357.army.pentagon.mil/od/ODO/ArmyOpCenter/CAWG/CAT/SitePages/Coronavirus%20(COVID-19).aspx)>
[https://g357.army.pentagon.mil/od/ODO/ArmyOpCenter/CAWG/CAT/SitePages/Coronavirus%20\(COVID-19\).aspx](https://g357.army.pentagon.mil/od/ODO/ArmyOpCenter/CAWG/CAT/SitePages/Coronavirus%20(COVID-19).aspx)

<<https://phc.amedd.army.mil/topics/campaigns/covid19/Pages/default.aspx>>
<https://phc.amedd.army.mil/topics/campaigns/covid19/Pages/default.aspx>

CDC issued new guidance for discontinuation of home isolation as of 16 MAR 20.

<<https://www.cdc.gov/coronavirus/2019-ncov/hcp/disposition-in-home-patients.html>>
<https://www.cdc.gov/coronavirus/2019-ncov/hcp/disposition-in-home-patients.html>

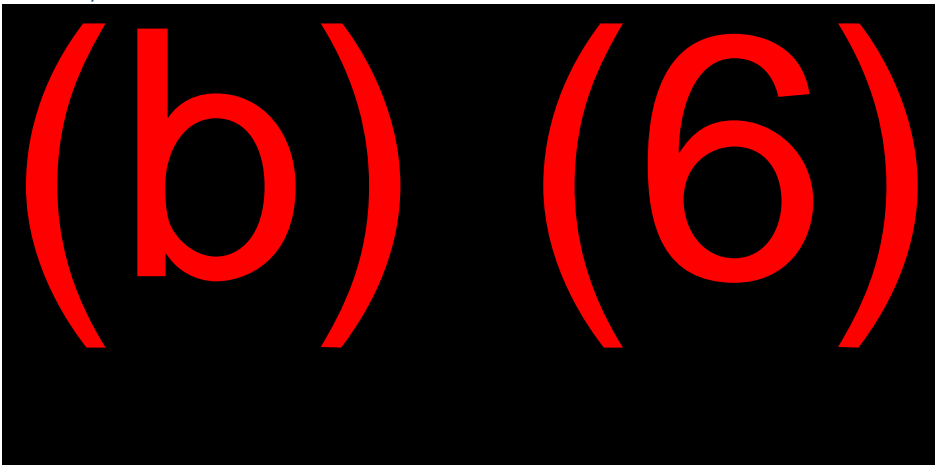
CLASSIFICATION: UNCLASSIFIED

From: (b) (6)
To: Lengyel, Joseph L Gen USAF NG NGB (US)
Cc: Norquist, David HON SD; Milley, Mark A GEN USARMY JS OCJCS (USA); Hyten, John E Gen USAF JS OCJCS (USA); Oshaughnessy, Terrence J Gen USAF NORAD-USNC CG (USA); Rapuano, Kenneth P HON OSD OUSD POLICY (USA); Hokanson, Daniel R LTG USARMY NG NGB (US); Rice, L Scott Lt Gen USAF NG NGB (US); White, Gregory T (YT) Maj Gen USAF NG NGB (USA); VanHerck, Glen D Lt Gen USAF JS ODJS (USA); Taheri, Michael R Maj Gen USAF NG NGB (USA); Wilz, Giselle M MG USARMY NG DNGBJS (USA); Nordhaus, Steven S Maj Gen USAF NG NGB (US); (b) (6) Stewart, Jennifer SES SD; Henke, Robert SES SD; Lyons, David Brig Gen SD; (b) (6) (b) (6) Fenton, Bryan LTG SD
Subject: RE: NG COVID Update - 09 May 20
Date: Monday, May 11, 2020 8:56:27 AM

Sir,

On behalf of LTG Fenton, Secretary Esper reviewed your update and appreciates the information.

V/r



From: Lengyel, Joseph L Gen USAF NG NGB (USA) (b) (6)
Sent: Saturday, May 9, 2020 10:02 AM
To: Fenton, Bryan LTG SD (b) (6); Milley, Mark A GEN USARMY JS OCJCS (USA) (b) (6)
Cc: Norquist, David HON SD (b) (6); Hyten, John E Gen USAF JS OCJCS (USA) (b) (6); Oshaughnessy, Terrence J Gen USAF NORAD-USNC CG (USA) (b) (6); Rapuano, Kenneth P HON OSD OUSD POLICY (USA) (b) (6); Hokanson, Daniel R LTG USARMY NG NGB (US) (b) (6); Rice, L Scott Lt Gen USAF NG NGB (US) (b) (6); White, Gregory T (YT) Maj Gen USAF NG NGB (USA) (b) (6); VanHerck, Glen D Lt Gen USAF JS ODJS (USA) (b) (6); Taheri, Michael R Maj Gen USAF NG NGB (USA) (b) (6); Wilz, Giselle M MG USARMY NG DNGBJS (USA) (b) (6); Nordhaus, Steven S Maj Gen USAF NG NGB (US) (b) (6); (b) (6) (b) (6) (b) (6); Stewart, Jennifer SES SD (b) (6); Henke, Robert SES SD (b) (6); Lyons, David Brig Gen SD (b) (6); (b) (6) (b) (6); (b) (6) (b) (6)

Subject: NG COVID Update - 09 May 20

Mr. Secretary and Chairman,

Total NG on mission for COVID: T32: 46,723 T10: 302

Total and % of NG on active duty worldwide: 84,986 (19.1%)

Total NG currently CV-19 positive: 562

Update on states/territories that have approved 32 U.S.C 502 (f)(2) MAs: 40

States with armed NG in support of CV-19 operations: 3- MA, RI, and WI.

For your awareness.

PM-9 authorizes extension of MAs through 24 Jun 20. This extension will alleviate several near-term issues, but presents another potential issue with the states. It appears the end date was chosen by OMB to ensure NG personnel do not incur additional benefits (namely GI Bill and early retirement credit) by exceeding 89 days on Title 32 502(f)(2) orders. My staff, and OSD are aware and working to get WH to extend beyond end of June. This is much like the 30/31 day issue we dealt with early on in this response and is a bad optic—mostly for the WH. Additionally, states have proven to be good stewards of this 502f authority, putting only troops to task on valid missions as they arise.

These potential cost increases are minor and insignificant in the context of the overall national response to this pandemic.

New mission set: The Indiana NG is conducting Information Analysis flights of terrain surrounding the Pendleton Correction Facility, Pendleton, IN. The purpose of these missions is to provide situational awareness for Department of Corrections staff and Indiana National Guard personnel providing perimeter security at the facility. Aircrews are employing the UH72's Mission Essential Package (MEP)'s video/IR systems including video down link. Personnel are conducting this support in Title 32 502(f)(2) status with an approved proper use memorandum (PUM).

Dual Status Commander issue in NYC is resolved. The NY DSC assumed TACON of JFLCC Medical personnel in NYC Fri 8 May 1700 hrs.

Kansas notes (in prep for call with Governor Kelly). Kansas currently has 664 NG personnel activated in support of COVID-19 response. FEMA approved the MA on 26 Mar and the state transitioned to Title 32 on 19 Apr. Governor Laura Kelly prioritized PPE distribution, Community Based Testing and shelters as top priorities. The state has seen a recent increase in requests for meat processing plant support to avoid shortages in the supply chain. KSNG personnel are supporting the “1 million meals” campaign to serve communities in need. The Adjutant General reports that the state will likely request an extension of their MA into June now that PM-9 is released. You may hear of the 89/90 day issue reference above and recommend you convey you are aware of the issue, and working to get approval as mission requirements dictate.

Recent Key Leader Engagements (KLE). This week I conducted some “virtual KLEs”.

Yesterday I spoke with the Polish Chief of General Staff, GEN Rajmund Andrzejczak. We discussed COVID response, and I expressed appreciation for the team of medical providers Poland sent to Illinois, their state partner. GEN Andrzejczak stated he felt obligation and desire to help based on his personal relationship and experience of co-deployments with the Illinois NG to both Afghanistan and Iraq. Right now ILNG has 6 members deployed with Polish forces in Afghanistan. He opened and closed the call with comments regarding his constant focus on countering Russian efforts in the region.

Israel, via our National Guard relationship with the IDF Homefront Command also exchanged information on our military response to COVID 19. Homefront Command has an officer on my staff, and we coordinate closely on all issues related to military domestic response. It is a mutually beneficial relationship between the US and Israel military. Israel offered to send a medical detachment similar to Poland's effort to NYC—thus far it remains only in the planning phase.

Egypt/Texas SPP--Following your call this week to Egypt MOD, I spoke with Ambassador Reda of Egypt to congratulate him on the announcement of a state partnership with Texas.. Ambassador was very pleased and we talked process for next steps to begin SPP activities. Will work with CENTCOM, OMC-Egypt, and Texas for follow on event to formally begin the partnership. Additionally, I thanked the Ambassador for Egypt's generous donation of PPE last month.

VR, Joe

Joseph L. Lengyel
General USAF
Chief National Guard Bureau

From: [Hemenway, John Troup C. EOP/WHO](#)
To: [Hughes, Dane SES SD](#); [Hayley, Jordan A. EOP/WHO](#)
Cc: (b) (6)
Subject: RE: Offer to help our government task forces
Date: Friday, May 22, 2020 1:49:34 PM

Received this as the reference:

How to Help – If you or your organization is interested in helping the effort to combat the spread of COVID-19, FEMA has established a website (www.fema.gov/coronavirus/how-to-help) with more information. Examples for the private sector include:

- To **sell medical supplies** or equipment to the federal government, please email specifics to covidsupplies@fema.dhs.gov.
- If you have **medical supplies or equipment to donate**, please [provide us details](#) on what you are offering.
- If you are a private company that wants to **produce a product related** to the COVID response – email nbeoc@max.gov.
- If you are a hospital and other companies in need of medical supplies, contact your state Department of Public Health and/or Emergency Management.
- For **non-medical** supplies, services or equipment, if you are interested in doing business with FEMA, visit our [Industry Liaison Program](#).

For additional information please visit FEMA's website: <https://www.fema.gov/coronavirus/>.

From: Hemenway, John Troup C. EOP/WHO
Sent: Thursday, May 21, 2020 8:27 PM
To: 'Hughes, Dane SES SD' (b) (6); Hayley, Jordan A. EOP/WHO
(b) (6)
Cc: (b) (6)
Subject: RE: Offer to help our government task forces

I'm happy to check. Though I'll voice some uncertainty now, just as they are pretty closed off and likely relying on their own stuff (such as I know JAIC has pulled software/ tracking systems together).

Respectfully,
Troup Hemenway
Presidential Personnel

(b) (6)

PRIVACY ACT of 1974 as Amended applies - this email and/or email attachments may contain information that is protected IAW DoD 5400.11R and is FOR OFFICIAL USE ONLY (FOUO).

From: Hughes, Dane SES SD (b) (6)
Sent: Wednesday, May 20, 2020 11:58 AM

To: Hemenway, John Troup C. EOP/WHO (b) (6); Hayley, Jordan
A. EOP/WHO (b) (6)
Cc: (b) (6)
Subject: FW: Offer to help our government task forces

Troup,

Any way you can help connect this individual to the Coronavirus Task Force or other relevant offices in the White House. A well respected business leader would like to donate their supply chain software and other technical assistance to the White House's efforts to combat the pandemic. This recommendation comes from a current employee and is a trusted recommendation.

Dane Hughes
Special Assistant to the Secretary of Defense
White House Liaison

(b) (6)

From: Ron Nash (b) (6)
Sent: Wednesday, May 20, 2020 11:53 AM
To: Hughes, Dane SES SD (b) (6)
Subject: Offer to help our government task forces

Dane,

A business executive and former colleague of mine asked me to help him deliver an offer to the federal government to use his supply chain software for free. I will give you background on him and the software below, but wanted your help in passing it along to the appropriate people leading the task forces battling the Coronavirus outbreak.

The supply chain leaders of the two task forces are as follows:

- The Coronavirus Task Force that has been working the issues with PPE, testing and quarantine policies – supply chain leader is Rear Admiral John Polowczyk
- The Operation Warp Speed task force that is working to get a vaccine developed rapidly, and then to have it widely available very soon afterward – supply chain leader is General Gustavo Perna.

My friend is Sanjiv Sidhu, who is a very accomplished businessman and an expert in the supply chain area. Sanjiv was the founder and CEO of i2 Technologies, a multi-billion dollar software company that supplied supply chain management software to companies around the world. After that company had IPO'ed and was later acquired, Sanjiv founded o9 Solutions which is a software company that transforms sales, supply chain and integrated business planning. This helps optimize the exact kind of eco-systems structured like our health care system – a complex system consisting of multiple vendors, multiple levels of distributors and multiple buyers.

Sanjiv is very smart, very ethical and a well-recognized expert on these business issues. I say that only because I worry that these task forces are probably inundated with all kinds of business offers, many from unethical players and from people trying to make money when our country is in a crisis.

Sanjiv would like to talk with the appropriate people in each of these task forces to see how he and his company can help them. He is willing to donate software, and the expertise and time of himself and his team to help our country in this effort to defeat the Coronavirus disease. When a strong and well-respected business leader makes such an offer to help on incredibly favorable terms, I would like us to consider it seriously.

The o9 Solutions web site is <https://o9solutions.com/>.

Sanjiv Sidhu's personal contact information is (b) (6)

Let me know if I can provide any additional information. If you can pass this over to the right people at the White House who can get it to the task forces, that would be great. I think this could be of significant value in helping these task forces succeed.

Thanks,

Ron

Note: For anyone wanting to know my position, I am currently serving as Senior Advisor for Transformation and Reform reporting to the Chief Management Officer of the Department of Defense. I accepted that position after a long career in business including a number of CEO positions in technology companies. That is how I know Sanjiv.

Ron Nash

Personal Interests

Nash Technology Group

(b) (6)

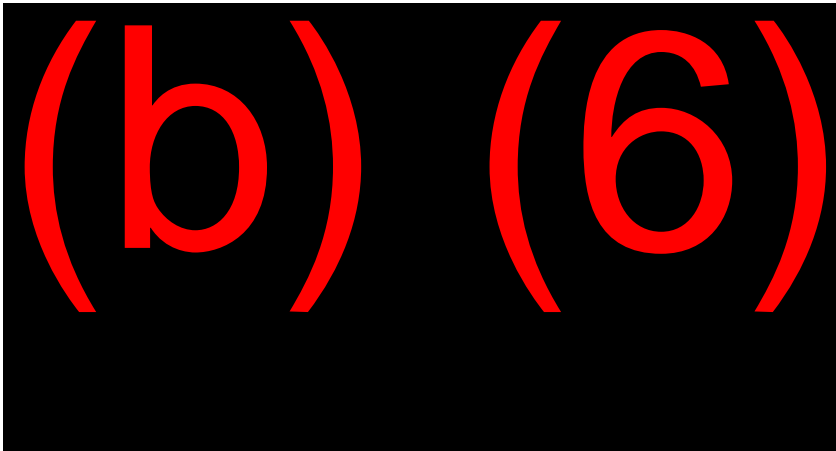
From: [Fenton, Bryan LTG SD](#)
To: [Johnson, Justin SES SD](#); (b) (6)
Cc: (b) (6)
Subject: RE: Potential note to WH CoS//NG duty extensions
Date: Tuesday, May 26, 2020 5:51:29 PM

No need to send to me... just thought it was coming from Mr. Rapuano's team... sounds like it's coming together though

V/R,

Bryan

LTG Bryan P. Fenton, USA
Senior Military Assistant to the Secretary of Defense



From: Johnson, Justin SES SD (b) (6)
Sent: Tuesday, May 26, 2020 4:59 PM
To: Fenton, Bryan LTG SD (b) (6)
Cc: (b) (6)
Subject: RE: Potential note to WH CoS//NG duty extensions

Dave sent the NGB team (CAG I believe) a draft letter a couple hours ago for their review. We can forward to you if you want to send to Lengyel directly. Our goal is to have available for SD signature tomorrow morning.

From: Fenton, Bryan LTG SD (b) (6)
Sent: Tuesday, May 26, 2020 4:56 PM
To: (b) (6)
Cc: Johnson, Justin SES SD (b) (6)
Subject: FW: Potential note to WH CoS//NG duty extensions

Does this sound right? I thought Mr Rapuano and team were working letter?

V/R,

Bryan

LTG Bryan P. Fenton, USA
Senior Military Assistant to the Secretary of Defense



From: Lengyel, Joseph L Gen USAF NG NGB (USA) (b) (6)
Sent: Tuesday, May 26, 2020 2:31 PM
To: Fenton, Bryan LTG SD (b) (6)
Cc: Milley, Mark A GEN USARMY JS OCJCS (USA) (b) (6); Norquist, David HON SD (b) (6); Hyten, John E Gen USAF JS OCJCS (USA) (b) (6); Stewart, Jennifer SES SD (b) (6); Rapuano, Kenneth P HON OSD OUSD POLICY (USA) (b) (6); Henke, Robert SES SD (b) (6); Lyons, David Brig Gen SD (b) (6); VanHerck, Glen D Lt Gen USAF JS ODJS (USA) (b) (6)
Subject: Potential note to WH CoS//NG duty extensions

Bryan,

(b) (5)
[Redacted]
[Redacted]
[Redacted]
[Redacted] VR,

Joe

Joseph L. Lengyel
General USAF
Chief National Guard Bureau

From: Fenton, Bryan LTG SD (b) (6)
Sent: Friday, May 22, 2020 10:36 AM
To: Lengyel, Joseph L Gen USAF NG NGB (USA) (b) (6); Milley, Mark A GEN USARMY JS OCJCS (USA) (b) (6)
Cc: Norquist, David HON SD (b) (6); Hyten, John E Gen USAF JS OCJCS (USA) (b) (6); Oshaughnessy, Terrence J Gen USAF NORAD-USNC CG (USA) (b) (6); Rapuano, Kenneth P HON OSD OUSD POLICY (USA) (b) (6); Hokanson, Daniel R LTG USARMY NG NGB (USA) (b) (6); Rice, L Scott Lt Gen USAF NG NGB (USA) (b) (6); White, Gregory T (YT) Maj Gen USAF NG NGB (USA) (b) (6); VanHerck, Glen D Lt Gen USAF JS ODJS (USA) (b) (6); Taheri, Michael R Maj Gen USAF NG NGB (USA) (b) (6); Wilz, Giselle M MG USARMY NG DNGBJS (USA) (b) (6); Nordhaus, Steven S Maj Gen USAF NG NGB (USA) (b) (6); Stewart, Jennifer M SES OSD OSD (USA) (b) (6); Henke, Robert J SES (USA) (b) (6); Lyons, David Brig Gen SD (b) (6); (b) (6)
Subject: RE: NG COVID Update - 21 May 20

Sir,

Thanks for this... SD read and gave us the following task with regard to your request for assistance:

-Our EXECSEC team will craft, and pass the SD a letter that he will sign/send to the WH Chief of Staff

Our team should be reaching out to you for any additional info you have to make the letter as powerful as we need.

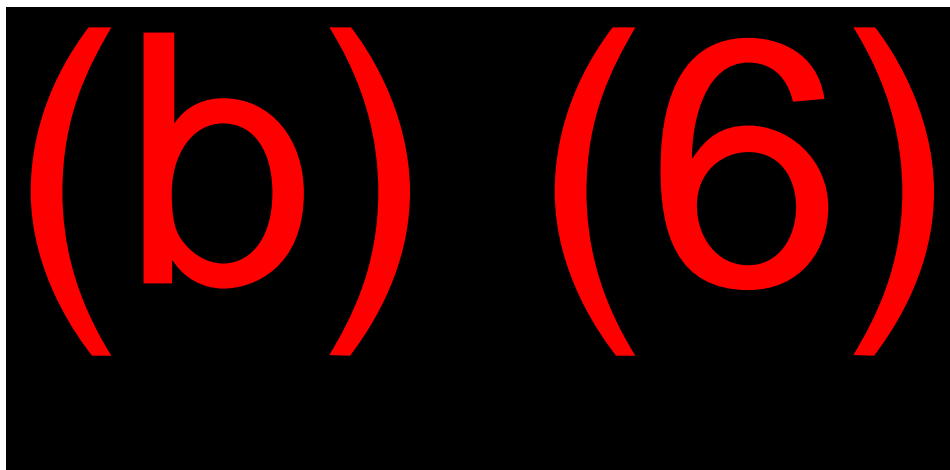
Thanks again sir—and all the best for a reflective, restful and respectful Memorial Day to you, the NGB team and you NGB families.

V/r,

Bryan

LTG Bryan P. Fenton, USA

Senior Military Assistant to the Secretary of Defense



From: Lengyel, Joseph L Gen USAF NG NGB (USA) (b) (6)
Sent: Thursday, May 21, 2020 3:58 PM
To: Fenton, Bryan LTG SD (b) (6); Milley, Mark A GEN USARMY JS OCJCS (USA)
(b) (6)
Cc: Norquist, David HON SD (b) (6); Hyten, John E Gen USAF JS OCJCS (USA)
(b) (6); Oshaughnessy, Terrence J Gen USAF NORAD-USNC CG (USA)
(b) (6); Rapuano, Kenneth P HON OSD OUSD POLICY (USA)
(b) (6); Hokanson, Daniel R LTG USARMY NG NGB (US)
(b) (6); Rice, L Scott Lt Gen USAF NG NGB (US)
(b) (6); White, Gregory T (YT) Maj Gen USAF NG NGB (USA)
(b) (6); VanHerck, Glen D Lt Gen USAF JS ODJS (USA)
(b) (6); Taheri, Michael R Maj Gen USAF NG NGB (USA)
(b) (6); Wilz, Giselle M MG USARMY NG DNGBJS (USA)
(b) (6); Nordhaus, Steven S Maj Gen USAF NG NGB (US)
(b) (6); (b) (6)
(b) (6); Stewart, Jennifer SES SD (b) (6); Henke,
Robert SES SD (b) (6); Lyons, David Brig Gen SD (b) (6)
(b) (6)
(b) (6)
(b) (6)

Subject: NG COVID Update - 21 May 20

Mr. Secretary and Chairman,

Total NG Activated: T32: 45,917 T10: 303

Total and % of NG on active duty worldwide: 84,305 (19%)

Total NG currently CV-19 positive: 605

Update on states/territories that have approved 32 U.S.C 502 (f)(2) MAs: 48

Request assistance: PM-10 failed to authorize extension of MAs past 24 Jun 20. In fact, ends mission on 10 June to allow for demob of the force. **This mission will not be done by 10 June.** I ask for **your support and assistance** to influence the White House/White House COVID-19 Task Force for a new Presidential Memorandum running through at least 31 JUL 20. The pandemic, and our response, did not start on the same day in each state, and it will not end on the same day in each state. This must be driven by requirements. Ending it on the 89th day to prevent attainment of benefit eligibility for soldiers and airmen is not how we do business. States have been judicious regarding growing the response versus total numbers authorized, putting only the number they need on orders. I know HD/GS is working to get it extended and work a draw down plan. The comments and concerns will get louder from Governors and from media if not resolved soon. **I advise, based on mission requirements, we extend these Mission Assignments to at least 31 July.**

National Guard response by the numbers. Over the last 69 days, National Guard Soldiers and Airmen have accomplished the following:

- 5,269 facilities disinfected
- 1.46 million tests/screenings
- 121 million PPE products distributed
- 92.8 million meals provided

Travel: This week I traveled to Arizona, Colorado, and Tennessee to visit Soldiers and Airmen performing COVID-19 support operations. In Flagstaff, Arizona Guardsmen are supporting local food banks with pick/pack operations, and curbside loading for **high risk members of the community—many from Navajo nation.** In Colorado, **I met with Governor Jared Polis, who supports the extension of National Guard orders** and the ability to rapidly transition NG to an operational status to support a potential second wave of COVID-19 cases, if needed. Guardsmen are caring for those experiencing homelessness, and maintaining the facilities on which they depend. **In Tennessee and met with Governor Bill Lee** and MG Jeff Holmes, the Tennessee Adjutant General, as well as Airmen from the 118th Wing.

All-Hazards Coordination Workshop: We held our **annual pre-hurricane season planning** conference virtually last week and **identified several areas of concern** given the current crisis and anticipating what the summer will bring.

In the near term, we will see increased **challenges surrounding emergency mutual aid support agreements (EMACs)** between states and territories. COVID-19 **will likely exacerbate support operations** as individual states and territories implement testing, quarantine and Restriction of Movement (ROM) policies. State balanced budget restrictions may further constrain mutual aid support for large-scale response. Wildland fire and hurricane seasonal forecasts predict above average activity, potentially placing additional pressure on shared capabilities. We will work early

and often with NC, FEMA, HD and our other DoD partners to meet the challenges this summer will bring.

VR, Joe

Joseph L. Lengyel
General USAF
Chief National Guard Bureau

From: (b) (6)
To: (b) (6)
Cc: (b) (6); [Ross, Alexis SES SD](#); [Purifoy](#); (b) (6)
Subject: RE: Principals Committee Meeting on Essential Medicines EO - 5/12 10:30AM
Date: Monday, May 11, 2020 3:14:57 PM

(b) (6)

Thanks very much

(b) (6)

(b) (6)

OSD Exec Sec

From: (b) (6)
Sent: Monday, May 11, 2020 2:34 PM
To: (b) (6)
Cc: (b) (6); [Ross, Alexis SES SD](#)
(b) (6)
Subject: RE: Principals Committee Meeting on Essential Medicines EO - 5/12 10:30AM

Sir,
This meeting has been deferred to DSD.
Thanks,
(b) (6)

From: (b) (6)
Sent: Monday, May 11, 2020 12:07 PM
To: (b) (6)
Cc: (b) (6); [Ross, Alexis SES SD](#)
(b) (6)
Subject: RE: Principals Committee Meeting on Essential Medicines EO - 5/12 10:30AM

(b) (6)

Request read item as available to task the supporting cast

Thanks very much

v/r
(b) (6)

(b) (6)

OSD Exec Sec

From: Stewart, Jennifer SES SD (b) (6)
Sent: Monday, May 11, 2020 11:48 AM
To: (b) (6); Fenton, Bryan LTG SD (b) (6);
Johnson, Justin SES SD (b) (6); Ross, Alexis SES SD (b) (6)
Cc: (b) (6)
(b) (6)
(b) (6)
Subject: RE: Principals Committee Meeting on Essential Medicines EO - 5/12 10:30AM

Yes, please engage SD.

From: (b) (6)
Sent: Monday, May 11, 2020 11:16 AM
To: (b) (6); Fenton, Bryan LTG SD
(b) (6); Johnson, Justin SES SD (b) (6); Ross, Alexis SES SD
(b) (6)
Cc: (b) (6)
(b) (6)
(b) (6)
Subject: FW: Principals Committee Meeting on Essential Medicines EO - 5/12 10:30AM

COS/SMA,
Please see request for SECDEF to participate in a PC tomorrow, May 12 at 1030. CONFLICT:
COVID-19 update.

Please let me know if I am OK to present to the SECDEF for his decision this morning.
Thanks,
(b) (6)

From: Riggs, Charlotte R. EOP/WHO (b) (6)
Sent: Monday, May 11, 2020 11:05 AM
To: (b) (6)
(b) (6)
(b) (6)
(b) (6)
(b) (6); (b) (6); (b) (6) DL
NSC NSA FO Staff (b) (6); (b) (6)
(b) (6); (b) (6); (b) (6)
(b) (6); (b) (6); (b) (6)
(b) (6); (b) (6); (b) (6)
Subject: Principals Committee Meeting on Essential Medicines EO - 5/12 10:30AM

Good morning,

I hope this email finds you well.

We are pulling together a principals meeting/call on Essential Medicines EO. This meeting will land at 10:30am tomorrow morning (1 hr). Out of an abundance of caution, we request all cabinet/agency attendees to call into the WHSR via SVTC or secure line, if your principal has a strong desire to attend in person please email me separately.

Participants are below, read ahead items attached. Please confirm your principals RSVP ASAP. Once confirmed I will send around a calendar invite with details regarding dial in instructions.

Thank you,
Charlotte

Title:

PC on Made-in-America Medicines and Medical Countermeasures

Purpose:

To convene the Principals around a DRAFT Executive Order entitled “Combatting Public Health Emergencies and Strengthening the National Defense by Ensuring Made-in-America Essential Medicines and Medical Countermeasures.”

The EO did not reach consensus through a paper DC circulation.

Participants:

Secretary Pompeo
Secretary Esper
Secretary Ross
Secretary Azar
Secretary Wilkie
Administrator Wheeler
Ambassador Lighthizer
Acting Secretary Wolf
Acting Administrator John Barsa (USAID)
Commissioner Hahn
Mark Meadows
Russ Vought
Chris Liddell
Jared Kushner
Robert O’Brien
Marc Short
Peter Navarro
Larry Kudlow
Derek Lyons
Pat Cipollone
Kelvin Droegemeier

Tomas Philipson

From: (b) (6)
To: (b) (6)
Cc: (b) (6) [Ross, Alexis SES SD](#)
Subject: RE: Principals Committee Meeting on Essential Medicines EO - 5/12 10:30AM
Date: Monday, May 11, 2020 2:33:49 PM

Sir,
This meeting has been deferred to DSD.
Thanks,
(b) (6)

From: (b) (6)
Sent: Monday, May 11, 2020 12:07 PM
To: (b) (6)
Cc: (b) (6)
(b) (6) [Ross, Alexis SES SD](#)
(b) (6)
Subject: RE: Principals Committee Meeting on Essential Medicines EO - 5/12 10:30AM

Anne

[Request read item as available to task the supporting cast](#)

Thanks very much

v/r
(b) (6)

(b) (6)
OSD Exec Sec

From: (b) (6)
Sent: Monday, May 11, 2020 11:48 AM
To: (b) (6); Fenton, Bryan LTG SD (b) (6)
Johnson, Justin SES SD (b) (6); Ross, Alexis SES SD (b) (6)
Cc: (b) (6)
(b) (6)
Subject: RE: Principals Committee Meeting on Essential Medicines EO - 5/12 10:30AM

[Yes, please engage SD.](#)

From: (b) (6)
Sent: Monday, May 11, 2020 11:16 AM
To: Stewart, Jennifer SES SD (b) (6); Fenton, Bryan LTG SD
(b) (6); Johnson, Justin SES SD (b) (6); Ross, Alexis SES SD

(b) (6) >

Cc: (b) (6)
(b) (6)
(b) (6)

Subject: FW: Principals Committee Meeting on Essential Medicines EO - 5/12 10:30AM

COS/SMA,

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Please let me know if I am OK to present to the SECDEF for his decision this morning.

Thanks,

(b) (6)

From: Riggs, Charlotte R. EOP/WHO (b) (6) >

Sent: Monday, May 11, 2020 11:05 AM

To: (b) (6)
(b) (6)
(b) (6)
(b) (6)

(b) (6) ; DL

NSC NSA FO Staff (b) (6) ; (b) (6)

(b) (6) ; (b) (6) (b) (6)

(b) (6) (b) (6) ; (b) (6)

(b) (6) ; (b) (6) (b) (6)

Subject: Principals Committee Meeting on Essential Medicines EO - 5/12 10:30AM

Good morning,

I hope this email finds you well.

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Participants are below, read ahead items attached. Please confirm your principals RSVP ASAP. Once confirmed I will send around a calendar invite with details regarding dial in instructions.

Thank you,
Charlotte

Title:

PC on Made-in-America Medicines and Medical Countermeasures

Purpose:

To convene the Principals around a DRAFT Executive Order entitled “Combatting Public Health Emergencies and Strengthening the National Defense by Ensuring Made-in-America Essential Medicines and Medical Countermeasures.”

The EO did not reach consensus through a paper DC circulation.

Participants:

Secretary Pompeo

Secretary Esper

Secretary Ross

Secretary Azar

Secretary Wilkie

Administrator Wheeler

Ambassador Lighthizer

Acting Secretary Wolf

Acting Administrator John Barsa (USAID)

Commissioner Hahn

Mark Meadows

Russ Vought

Chris Liddell

Jared Kushner

Robert O’Brien

Marc Short

Peter Navarro

Larry Kudlow

Derek Lyons

Pat Cipollone

Kelvin Droegemeier

Tomas Philipson

(b) (6)

Date: Friday, May 22, 2020 9:33:34 AM

Ma'am,

Looking like y'all are still trying to schedule Iowa and Alabama- Below would be for after that:

Mississippi Governor Tate Reeves

- State has 11,432 confirmed cases and 528 deaths as of May 17.
- The majority of COVID deaths are in long-term care facilities.
- The MS NG is providing security for COVID testing.
- Mississippi is dependent on defense dollars, ranking #3 in the country (defense funding accounts for 7.2% of the state's GDP). The state also ranks #17 in the nation for defense contract spending (\$6.6B in FY18).
- The Defense Industrial Base is impacted in the state (DCMA data below current as of May 20)
 - Stennis Space Center is closed (Lockheed Martin and Aerojet Rocketdyne). Potentially impacts: Artemis (Space Launch System Program); National Security Space Launch Program (RS68/Omega); International Space Station program; and Orion MPCV.
 - Pioneer Aerospace closed April 1- May 1 following possible infections. They are 2+ weeks from starting production to reconfigure production lines. The company produces parts for F-35, F/A-18E/F/G, JPADS Parachute, B-52 Deceleration Canopy.

Kentucky Governor Andy Beshear

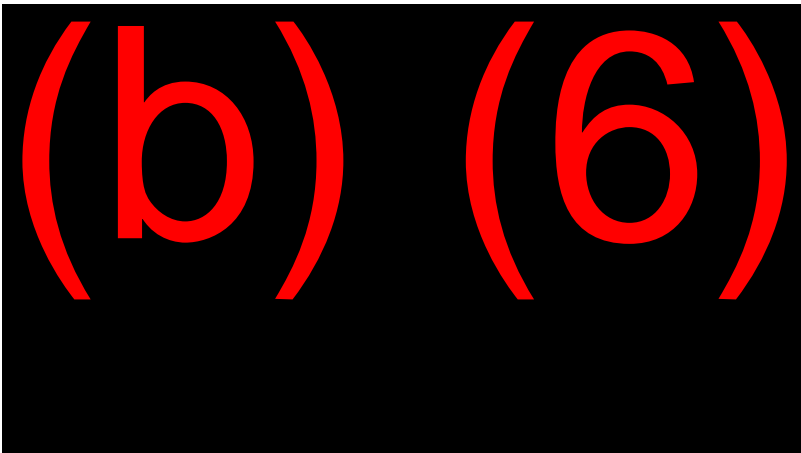
- The Governor has not served in the military, but his father (former Governor Steve Beshear) served as an Intel and a JAG officer in the Reserve.
- In April, a survey of 22,000 Americans ranked Gov Beshear #2 in the nation for COVID efforts – 81% of Kentuckians in the survey approved of his COVID response.
- As of May 20, there were at least 8,167 coronavirus cases in Kentucky and 376 deaths.

- Governor hopes to expand testing. As of mid-May, 2.7% of the population has been tested.
- Long term care facilities, farms, meatpacking plants, and prisons were hard hit in the state.
- KY ranks #14 in the nation for defense spending.
- The KYNG had a C-130 flyover across the state to honor COVID workers.

Delaware Governor John Carney

- Part of the hard hit East Coast corridor.
- 7,223 Cases and 260 COVID deaths to date – a big number for a small state.
- Delaware has 122 National Guardsman activated.
- Members from the DNG assisted a multi-state, multi-agency mission to transport critically needed ventilators to states that requested them.
- Combined decreases in tax revenue will leave a \$749 million shortfall to the planned budget.
- Personal Note- Governor All-Ivy League football player at Dartmouth College. He later coached freshman football at the University of Delaware.

v/r,



Notes:

-- If you have a COVID specific Request for Information (RFI), we have set up an RFI action team. Please Cc the following which will help facilitate your request: (b) (6)



-- I have been temporarily detailed to the DoD COVID-19 task force. I will resume duties as Director, House Affairs in the Office of the Secretary of Defense-Legislative Affairs when the current Task Force mission is complete. If you have non-COVID related House of Representative issues, please Contact (b) (6)

From: (b) (6)

Sent: Friday, May 22, 2020 9:20 AM

To: (b) (6)

Cc: (b) (6)

Subject: RE: Recommended GOV Calls

Hi Sir,

Yes, please! We only have 1 left from your previous list that we need to schedule so more recommendations for next week would be great.

Thanks!

(b) (6)

(b) (6)

Subject: RE: Recommended GOV Calls

(b) (6)

I have some names ready to go, but given the backlog, do y'all want recommendations for next week's Governor calls?

v/r,

(b) (6)

Notes:

-- If you have a COVID specific Request for Information (RFI), we have set up an RFI action team. Please Cc the following which will help facilitate your request: osd.pentagon.oasd-la.list.staff-action-users@mail.mil

-- I have been temporarily detailed to the DoD COVID-19 task force. I will resume duties as Director, House Affairs in the Office of the Secretary of Defense-Legislative Affairs when the current Task Force mission is complete. If you have non-COVID related House of Representative issues, please Contact (b) (6)

(b) (6)

Subject: Recommended GOV Calls

(b) (6)

Please see the attached.

v/r,

(b) (6)

(b) (6)

From: (b) (6)
To: (b) (6); [Henke, Robert SES SD](#); [Verga, Peter SES SD](#); (b) (6)
Cc: [OSD Pentagon OUSD Policy List USDP MAs and SAs](#)
Subject: RE: REVISIED DRAFT - PM providing Italy COVID Assistance - Suspense: 1130 TOMORROW
Date: Tuesday, March 31, 2020 11:48:27 AM

Thank you, (b) (6) – incorporating now.

(b) (6)

From: (b) (6)
Sent: Tuesday, March 31, 2020 11:31 AM
To: (b) (6); [Henke, Robert SES SD](#); (b) (6);
[Verga, Peter SES SD](#); (b) (6)
(b) (6)
Cc: (b) (6)
(b) (6)
Subject: RE: REVISIED DRAFT - PM providing Italy COVID Assistance - Suspense: 1130 TOMORROW

LTC –

Below in BOLD are Policy’s changes.

With respect to the following text in the WH PM, please see the critical changes in ALL CAPS and highlighted in the text below:

(b) (5)

(b) (5)

(b) (6)

From: (b) (6)

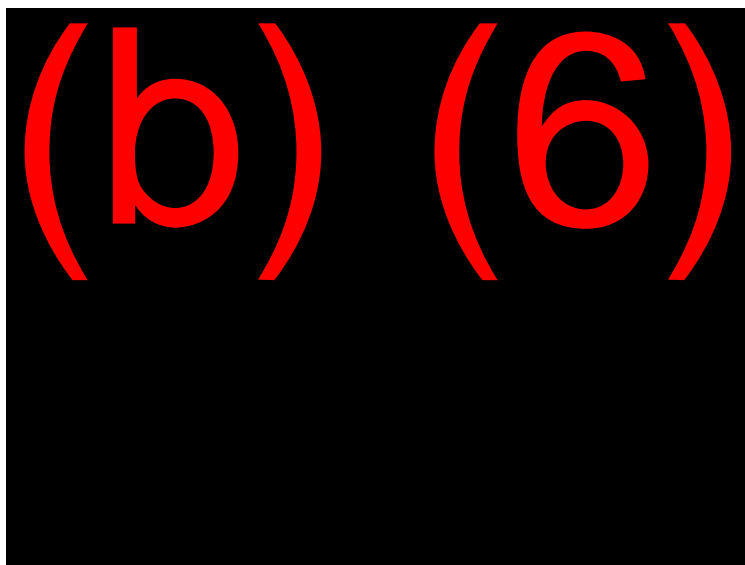
Sent: Tuesday, March 31, 2020 11:21 AM

To: Rapuano, Kenneth P HON OSD OUSD POLICY (USA) (b) (6);
VanHerck, Glen D Lt Gen USAF JS ODJS (USA) (b) (6); Taliaferro, Jeffrey B
(Jeff) Maj Gen USAF JS J3 (USA) (b) (6)
Cc: Byrne, William D Jr RADM USN JS ODJS (USA) (b) (6); Salesses, Robert G
SES OSD OUSD POLICY (USA) (b) (6); (b) (6)
(b) (6) Henke, Robert J SES (USA)
(b) (6) Verga, Peter SES SD (b) (6); (b) (6)
(b) (6); Lyons, David Brig Gen SD (b) (6)
(b) (6)
(b) (6)
(b) (6)
(b) (6)
(b) (6)

Subject: RE: REVISIED DRAFT - PM providing Italy COVID Assistance - Suspense: 1130 TOMORROW

Gentlemen,

Reminder that feedback for this PM is due at 1130; standing by for your responses.



From: (b) (6)
Sent: Monday, March 30, 2020 6:19 PM
To: Rapuano, Kenneth P HON OSD OUSD POLICY (USA) (b) (6);
VanHerck, Glen D Lt Gen USAF JS ODJS (USA) (b) (6); Taliaferro, Jeffrey B
(Jeff) Maj Gen USAF JS J3 (USA) (b) (6)
Cc: Byrne, William D Jr RADM USN JS ODJS (USA) (b) (6); Salesses, Robert G
SES OSD OUSD POLICY (USA) (b) (6); (b) (6)
(b) (6); Henke, Robert SES SD (b) (6)
Verga, Peter SES SD (b) (6)
(b) (6); Lyons, David Brig Gen SD (b) (6)
(b) (6)

(b) (6)

Subject: REVISIED DRAFT - PM providing Italy COVID Assistance - Suspense: 1130 TOMORROW

Gentlemen,

Request your review of the attached **revised** draft PM providing Italy COVID assistance. While this document incorporates many of the changes recommended by DoD earlier today, it also introduces a number of new changes from the interagency.

Please provide any critical comments or feedback on the document itself no later than 1130 tomorrow. OSD ExecSec will consolidate all comments and provide to the WH for action.

Thank you,

(b) (6)

From: (b) (6)

Sent: Sunday, March 29, 2020 3:52 PM

To: Rapuano, Kenneth P HON OSD OUSD POLICY (USA) (b) (6)

VanHerck, Glen D Lt Gen USAF JS ODJS (USA) (b) (6) Taliaferro, Jeffrey B
(Jeff) Maj Gen USAF JS J3 (USA) (b) (6)

Cc: Salesses, Robert G SES OSD OUSD POLICY (USA) (b) (6); (b) (6)

; Henke, Robert SES SD

(b) (6); Verga, Peter SES SD (b) (6); (b) (6)

; Lyons, David Brig Gen SD (b) (6)

Byrne, William D Jr

RADM USN JS ODJS (USA) (b) (6)

Subject: Fwd: For Quick Review: Draft PM providing Italy COVID Assistance

Sirs,

Request review and concurrence on attached WH Staff Sec action regarding support to Italy. Includes transfer of items from DOD to Italy.

Suspense is 0930, tomorrow, 30 March.

Very respectfully,

(b) (6)

From: "Staff Secretary" (b) (6)
Date: Sunday, March 29, 2020 at 3:43:56 PM
To: "Kudlow, Larry A. EOP/WHO" (b) (6) "Pottinger, Matthew F. EOP/WHO" (b) (6), "Boehler, Adam" (b) (6), "Kushner, Jared C. EOP/WHO" (b) (6), "Ueland, Eric M. EOP/WHO" (b) (6), "Vought, Russell T. EOP/OMB" (b) (6), "Liddell, Christopher P. EOP/WHO" (b) (6), "White House Clearances" (b) (6), "Philbin, Patrick F. EOP/WHO" (b) (6), "Eisenberg, John A. EOP/WHO" (b) (6), "Pinkos, Stephen M. EOP/OVP" (b) (6), "Short, Marc T. EOP/OVP" (b) (6), "Conway, Kellyanne E. EOP/WHO" (b) (6), "Lighthizer, Robert E. EOP/USTR" (b) (6), "Greer, Jamieson L. EOP/USTR" (b) (6), "Grogan, Joseph J. EOP/WHO" (b) (6), "Pataki, Tim A. EOP/WHO" (b) (6), "Hoelscher, Douglas L. EOP/WHO" (b) (6), "DL Chief of Staff Office" (b) (6), "Navarro, Peter K. EOP/WHO" (b) (6), "Miller, Stephen EOP/WHO" (b) (6)
Cc: "Staff Secretary" (b) (6)
Subject: For Quick Review: Draft PM providing Italy COVID Assistance

All,

Attached for your quick review is a draft Presidential Memorandum providing up to \$100M in COVID-19 assistance to Italy. Affirmative clearance is requested from **OVP, WHCO, NEC, OMB, State/USAID, DFC, EXIM, Treasury, DOD, DOC, HHS, and USTR**. We understand the desire is to

present this to the President for his consideration and signature as early as tomorrow; thus, please send any feedback you may have by **9:30am tomorrow morning, Monday, March 30.**

Thank you,
Staff Secretary

From: [Payne, Lee E Maj Gen USAF DHA J-3 \(USA\)](#)
To: [Norquist, David HON SD](#)
Subject: Re: Updated Dashboard Slide & Task Progress (UNCLASSIFIED)
Date: Sunday, May 10, 2020 5:10:53 PM

Sir,

I am checking to confirm with our laboratory team to make certain.

V/r,

Lee

From: "Norquist, David HON SD" (b) (6)
Date: Sunday, May 10, 2020 at 4:56:36 PM
To: "Payne, Lee E Maj Gen USAF DHA J-3 (USA)" (b) (6)
Subject: Re: Updated Dashboard Slide & Task Progress (UNCLASSIFIED)

So the reason we didn't get the carriers is because they went to Korea. If it had been a us commercial lab we would have seen it? Is that because our lab would have placed the order and recorded the results.

Sent from Mobile Device

From: "Payne, Lee E Maj Gen USAF DHA J-3 (USA)"
(b) (6)
Date: Sunday, May 10, 2020 at 4:23:52 PM
To: "Norquist, David HON SD" (b) (6)
Subject: Re: Updated Dashboard Slide & Task Progress (UNCLASSIFIED)

Sir,

As you have seen, we have the deployed units that have testing equipment reporting. Those are small numbers. We are not getting the tests from the ships. We do include tests reports from the standard commercial laboratories. I can work with the Navy to see how we might capture those.

V/r,

Lee

From: "Norquist, David HON SD" (b) (6)
Date: Sunday, May 10, 2020 at 3:22:08 PM
To: "Payne, Lee E Maj Gen USAF DHA J-3 (USA)"
(b) (6)
Subject: Re: Updated Dashboard Slide & Task Progress (UNCLASSIFIED)

So aside from tests sent to commercial labs. What does our total miss? On Ship test? Deployed units? (Are there any units deployed w test kits that don't link to a lab?)

Sent from Mobile Device

From: "Payne, Lee E Maj Gen USAF DHA J-3 (USA)"
(b) (6)
Date: Sunday, May 10, 2020 at 11:36:49 AM
To: "Norquist, David HON SD" (b) (6) >>, "Hyten, John E Gen

USAF JS OCJCS (USA)" (b) (6)

Cc: "Donovan, Matthew P HON OSD OUSD P-R (USA)"

(b) (6)

, "Mccaffery, Thomas P HON OSD

OUSD P-R (USA)" (b) (6)

, "VanHerck,

Glen D Lt Gen USAF JS ODJS (USA)" (b) (6)

"Taliaferro, Jeffrey B (Jeff) Maj Gen USAF JS J3 (USA)"

(b) (6)

, "Friedrichs, Paul A Brig Gen USAF

JS OCJCS (USA)" (b) (6)

Subject: RE: Updated Dashboard Slide & Task Progress (UNCLASSIFIED)

CLASSIFICATION: UNCLASSIFIED

Yes Sir,

We were comparing a shortened week when we first constructed at the weekly data. We shifted to Sunday to Saturday which matches the previous comparisons. The data the Navy gave me was ranged from 13 April to 7 May for the TR and from 8 April to 7 May for the RRN. They were not able to break it out by week, although that was the ask yesterday.

Have a restful remainder of the weekend!

V/r,

Lee

Lee E. Payne

Maj Gen, USAF, MC, CFS

DOD COVID-19 Task Force (CVTF)

COVID-19 Task Force Diagnostics & Testing Lead

(b) (6)

-----Original Message-----

From: Norquist, David HON SD (b) (6)

Sent: Sunday, May 10, 2020 11:08 AM

To: Payne, Lee E Maj Gen USAF DHA J-3 (USA) (b) (6)

Hyten, John E Gen USAF JS

OCJCS (USA) (b) (6)

Cc: Donovan, Matthew P HON OSD OUSD P-R (USA) (b) (6)

; Mccaffery, Thomas P

HON OSD OUSD P-R (USA) (b) (6)

; VanHerck, Glen D Lt Gen USAF JS ODJS

(USA) (b) (6); Taliaferro, Jeffrey B (Jeff) Maj Gen USAF JS J3 (USA)

(b) (6)

; Friedrichs, Paul A Brig Gen USAF JS OCJCS (USA)

(b) (6)

Subject: Re: Updated Dashboard Slide & Task Progress (UNCLASSIFIED)

Maj Gen Payne -

Agree we should add ~17k from Roosevelt and Reagan to # total tests completed to date. Please do so. (What I think you are saying is it's not clear which week. We can discuss that tomorrow)

Did we get one more days worth of data in this report? ie entered last night the numbers from Saturday. That would explain the total going up From yesterday even as you backed out the NHRC.

Yes tracking same tasks.

Thanks
DLN

Sent from Mobile Device

From: "Payne, Lee E Maj Gen USAF DHA J-3 (USA)"

(b) (6)

Date: Saturday, May 9, 2020 at 10:23:47 PM

To: "Norquist, David HON SD" (b) (6), "Hyten, John E Gen USAF JS OCJCS (USA)" (b) (6)

Cc: "Donovan, Matthew P HON OSD OUSD P-R (USA)"

(b) (6)

"Mccaffery, Thomas P HON OSD OUSD P-R (USA)" (b) (6), "VanHerck,

Glen D Lt Gen USAF JS ODJS (USA)" (b) (6),

"Taliaferro, Jeffrey B (Jeff) Maj Gen USAF JS J3 (USA)"

(b) (6)

"Friedrichs, Paul A Brig Gen USAF JS OCJCS (USA)" (b) (6)

Subject: Updated Dashboard Slide & Task Progress (UNCLASSIFIED)

CLASSIFICATION: UNCLASSIFIED

Deputy Secretary & Vice Chairman,

Attached is the updated Dashboard with the changes we discussed this morning. We have confirmed that the 13,657 USS TR tests and the 3264 USS RRN tests sent to the Non-DoD lab in Korea over the past month have not been included in our reported data. The results have been included in the medical records. We'll need to discuss how we want to account for these in our totals. My recommendation is that we simply adjust our total tests completed and make certain additional future tests are properly reported.

The numbers from NHRC for the recent week appear to be an error and we have removed those from the totals while we investigate the data entry with NHRC.

The total tests from previous weeks have been running from Sunday to Saturday. As we adjusted the weekly totals for that time frame and added today's number that increased the totals for the week.

I have listed the tasks I am tracking from our discussions this morning below. All charts reviewed today have been updated with the changes.

Tasks:

1. Resolve discrepancy in NHRC reporting data for this week
2. Determine if the Navy Carrier data is in or out and resolve it in the data being submitted into the CLMS report
3. We are adjusting the supply side of the Dashboard to show requirements as next week's requirements so as to show supplies adequate at the end of the week to meet next week's requirements.
4. Reconciling the actual requirements--what was done--what was not done and why
5. Make sure the comments section reflects the most obvious conclusions or questions evident in the data
6. Follow up with the Advana group and SMEs to get this process automated as quickly as possible.

Standing by for any questions.

V/r,

Lee

Lee E. Payne
Maj Gen, USAF, MC, CFS
DOD COVID-19 Task Force (CVTF)
COVID-19 Task Force Diagnostics & Testing Lead

(b) (6)

CLASSIFICATION: UNCLASSIFIED
CLASSIFICATION: UNCLASSIFIED

From: [Payne, Lee E Maj Gen USAF DHA J-3 \(USA\)](#)
To: [Henke, Robert SES SD](#)
Subject: RE: Updated Weekly Dashboard and One Pager (UNCLASSIFIED)
Date: Tuesday, May 26, 2020 6:07:08 PM

CLASSIFICATION: UNCLASSIFIED

Probably more than you wanted to know! :-)

Lee

Lee E. Payne
Maj Gen, USAF, MC, CFS
DOD COVID-19 Task Force (CVTF)
COVID-19 Task Force Diagnostics & Testing Lead



-----Original Message-----

From: Henke, Robert SES SD (b) (6)
Sent: Tuesday, May 26, 2020 6:06 PM
To: Payne, Lee E Maj Gen USAF DHA J-3 (USA) (b) (6)
Cc: (b) (6); Rapuano, Kenneth P HON OSD OUSD POLICY (USA)
(b) (6)
Subject: FW: Updated Weekly Dashboard and One Pager (UNCLASSIFIED)

Thanks Lee - that makes sense.

-----Original Message-----

From: Payne, Lee E Maj Gen USAF DHA J-3 (USA) (b) (6)
Sent: Tuesday, May 26, 2020 2:48 PM
To: Henke, Robert SES SD (b) (6)
Subject: RE: Updated Weekly Dashboard and One Pager (UNCLASSIFIED)

CLASSIFICATION: UNCLASSIFIED

Bob,

That is a good distinction. I have attached the definitions document we put together at the request of the DSD to level set everyone to these terms. We definitely use the diagnostic test to rule out the disease in those with symptoms. That is what the test was created for. We are using that same test for screening (the SSBN missions), population surveillance (Tier4), contact tracing testing post exposure, etc. These tests may pick up those that have the disease and are either asymptomatic or pre-symptomatic (most infectious) so we can isolate them and protect others.

Lee

Lee E. Payne
Maj Gen, USAF, MC, CFS
DOD COVID-19 Task Force (CVTF)

(b) (6)

-----Original Message-----

From: Henke, Robert SES SD (b) (6)
Sent: Tuesday, May 26, 2020 2:10 PM
To: Payne, Lee E Maj Gen USAF DHA J-3 (USA) (b) (6)
Subject: RE: Updated Weekly Dashboard and One Pager (UNCLASSIFIED)

Ah ok. Are these definitions accurate:

Clinical test - done when someone presents with symptoms, to determine if they have it, also called a diagnostic test.

Screening test -- done to identify people who have COVID-19 in a certain population (ie, screen an SSBN 14 days prior to underway).

Thanks

-----Original Message-----

From: Payne, Lee E Maj Gen USAF DHA J-3 (USA) (b) (6)
Sent: Tuesday, May 26, 2020 2:06 PM
To: Henke, Robert SES SD (b) (6)
Subject: RE: Updated Weekly Dashboard and One Pager (UNCLASSIFIED)

CLASSIFICATION: UNCLASSIFIED

Bob,

The 7.5K number is an estimate. In the beginning it was all clinical testing. We took the clinical average per day when we started this which was in the 750 range per day and raised that to 1000 per day anticipating growth during the outbreak. That is where the 30K tests per month for clinical came from and the 4 weeks number of 7.5K. At present, we cannot tell a clinical test from a screening test. They are just reported in the system as a COVID-19 test.

V/r,

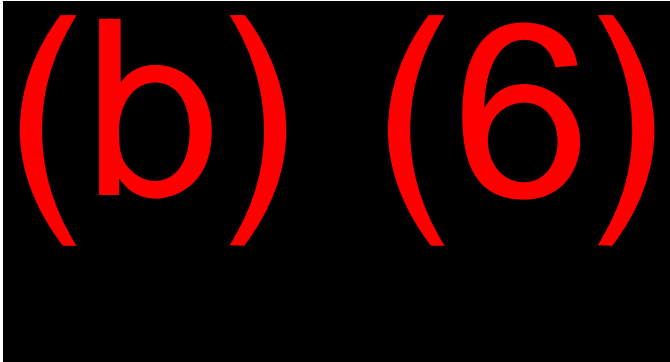
Lee

Lee E. Payne

Maj Gen, USAF, MC, CFS

DOD COVID-19 Task Force (CVTF)

COVID-19 Task Force Diagnostics & Testing Lead



-----Original Message-----

From: Henke, Robert SES SD (b) (6)

Sent: Tuesday, May 26, 2020 1:24 PM

To: Payne, Lee E Maj Gen USAF DHA J-3 (USA) (b) (6)

Cc: Rapuano, Kenneth P HON OSD OUSD POLICY (USA) (b) (6)

Subject: RE: Updated Weekly Dashboard and One Pager (UNCLASSIFIED)

Lee,

So bottom line, you think the Tier Zero number actual tests last week (13,458) includes some healthy amount of non-clinical testing, from various sources? So messy reporting?

Put another way, you are confident that 7,500 is the right number for legitimate clinical testing per week?

Thanks bob

-----Original Message-----

From: Payne, Lee E Maj Gen USAF DHA J-3 (USA) (b) (6)

Sent: Tuesday, May 26, 2020 12:50 PM

To: Henke, Robert SES SD (b) (6)

Subject: RE: Updated Weekly Dashboard and One Pager (UNCLASSIFIED)

CLASSIFICATION: UNCLASSIFIED

Bob,

Great question! My sense is that there is non-clinical testing that is being done, but not being reported by the COCOMs, their components, and the services. We have good reporting on the Tier 1 accession training gaps. The MC has a requirement for their recruiting command that is almost 5000 per week. They want to test them all weekly. We have engaged with them to determine how that will be accomplished and it should grow over time.

The Services are still not at full capacity for their basic training, but they are continuing to grow. This week, the requirement for West Point Testing and MC OCS testing were pushed to the right. We should see them next week. There may also be an increase in clinical testing as well now that there is greater availability of testing. This requirement may also grow, for as clinical services ramp back up, we expect more testing prior to elective and inpatient surgery. We are seeing this in the civilian sector in order to prevent infection in the hospitals.

Finally, DHA has implemented changes in the electronic record ordering system that will allow providers to select what type of COVID-19 test they are performing, clinical, screening, or surveillance. If used properly, this will help sort out the actual clinical from the risk mitigation and surveillance testing.

I hope that helps. Happy to answer any additional questions you might have.

V/r,

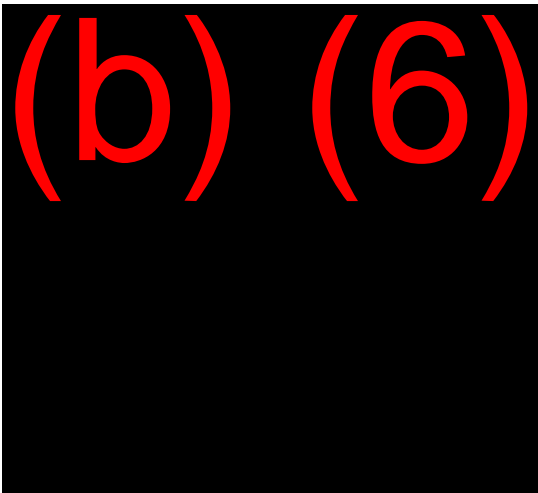
Lee

Lee E. Payne

Maj Gen, USAF, MC, CFS

DOD COVID-19 Task Force (CVTF)

COVID-19 Task Force Diagnostics & Testing Lead



(b) (6)

-----Original Message-----

From: Henke, Robert SES SD (b) (6)

Sent: Tuesday, May 26, 2020 12:38 PM

To: Payne, Lee E Maj Gen USAF DHA J-3 (USA) (b) (6)

Cc: Rapuano, Kenneth P HON OSD OUSD POLICY (USA) (b) (6)

Subject: RE: Updated Weekly Dashboard and One Pager (UNCLASSIFIED)

Lee,

I'm curious about the Tier Zero "actual requirement" compared to the tests completed. What is going on there? Has this been the trend several weeks running?

It is about 6K over (almost double the requirement), which then masks the 6K under in accessions.

Thanks/bob

-----Original Message-----

From: Payne, Lee E Maj Gen USAF DHA J-3 (USA) (b) (6)

Sent: Monday, May 25, 2020 10:23 PM

To: Norquist, David HON SD (b) (6)

Cc: Hyten, John E Gen USAF JS OCJCS (USA) (b) (6)

Subject: Updated Weekly Dashboard and One Pager (UNCLASSIFIED)

CLASSIFICATION: UNCLASSIFIED

Deputy Secretary Norquist & Vice Chairman Hyten,

Changes and updates made to the chart and the one pager. Also sent the updated documents to the CMT for inclusion in the E-Books for tomorrow.

V/r,

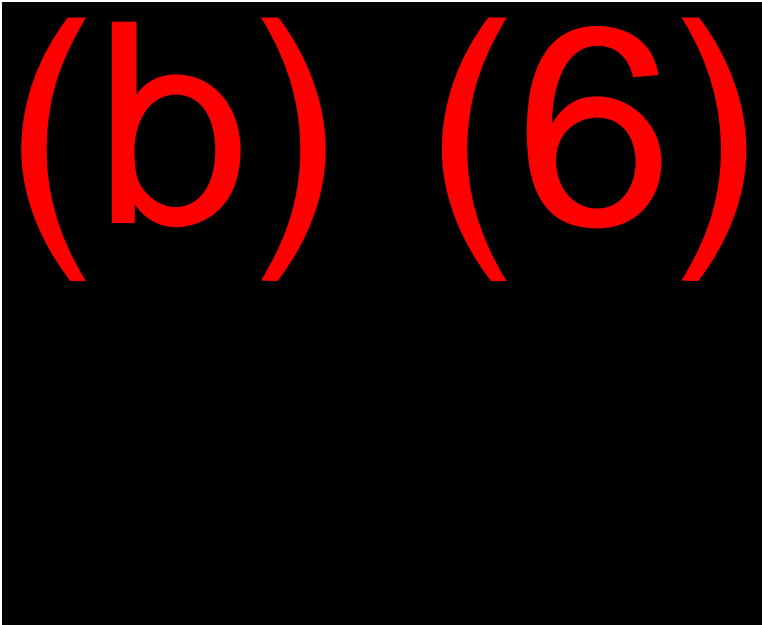
Lee

Lee E. Payne

Maj Gen, USAF, MC, CFS

DOD COVID-19 Task Force (CVTF)

COVID-19 Task Force Diagnostics & Testing Lead



CLASSIFICATION: UNCLASSIFIED

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CLASSIFICATION: UNCLASSIFIED

CLASSIFICATION: UNCLASSIFIED

From: [Roper, William B HON USAF SAF-AQ \(USA\)](#)
To: [Hyten, John E Gen USAF JS OCJCS \(USA\)](#)
Cc: [Norquist, David HON SD](#); [Friedrichs, Paul A Brig Gen USAF JS OCJCS \(USA\)](#)
Subject: RE: VCJCS Tasker: C-19 Testing Recommendation from USAF
Date: Tuesday, May 12, 2020 6:05:18 AM

Sir:

Copy on the updated task--will look forward to seeing the CDC's study as well as their Gold Standard accuracy.

To date, the published research we have reviewed puts oral swab testing at ~89% accuracy, roughly on par with NP testing (to our knowledge) but results are nascent. George Washington University is completing an independent blind study for us this Wednesday, but it will only be another data point.

(b) (5)



More to follow today.

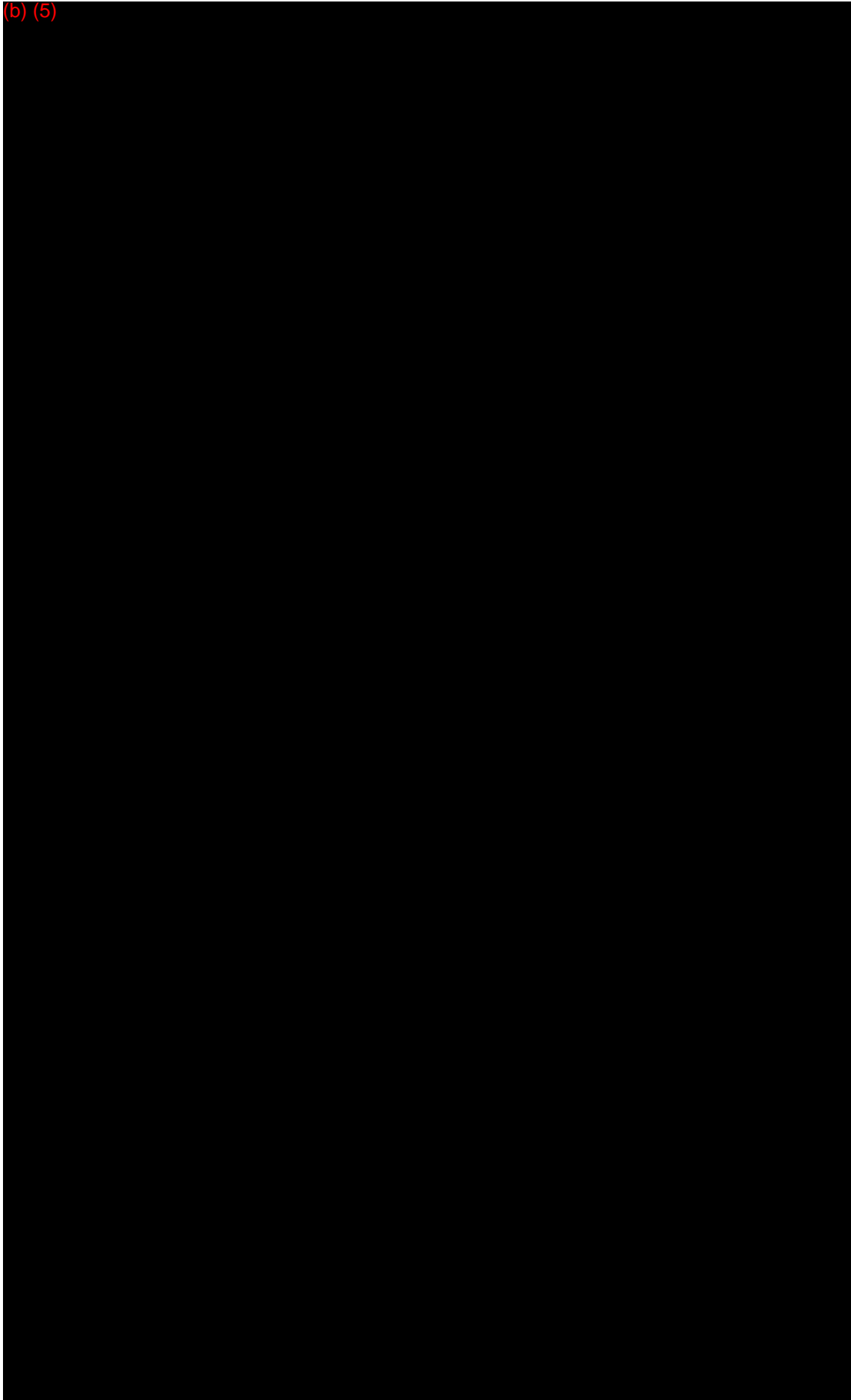
V/R, Will

-----Original Message-----

From: Hyten, John E Gen USAF JS OCJCS (USA) (b) (6)
Sent: Monday, May 11, 2020 3:29 PM
To: Roper, William B HON USAF SAF-AQ (USA) (b) (6)
Cc: (b) (6) Friedrichs, Paul A Brig
Gen USAF JS OCJCS (USA) (b) (6)
Subject: RE: VCJCS Tasker: C-19 Testing Recommendation from USAF

Will,

(b) (5)



(b) (5)

Thanks,
John

-----Original Message-----

From: Roper, William B HON USAF SAF-AQ (USA) (b) (6)

Sent: Monday, May 11, 2020 7:19 AM

To: Hyten, John E Gen USAF JS O CJCS (USA) (b) (6) >

Cc: (b) (6)

Subject: VCJCS Tasker: C-19 Testing Recommendation from USAF

Sir:

On Friday evening, you tasked me to prepare recommendations for moving out urgently on COVID-19 test options that can scale to meet DoD needs today and to send them to yourself and the DSD directly (attached).

As we discussed, when viewing testing options there is a science lens to ensure we get the best solution with appropriate V&V. But there is also an acquisition lens to ensure production and implementation can scale to quantities that make a difference. The latter is typically the limfac, so we focused there.

The attached briefing contains two recommendations.

(b) (5)

(b) (5)

This is brief has more detail than I would normally send you, but I wanted you to see the level of thought and effort we have put into this. We have been in a wartime acquisition task force since Week 1 and are ready to execute as you see fit.

Standing by for any questions.

V/R, Will

From: [55 Industries - Medical Supply Division](#)
To: [Stewart, Jennifer SES SD](#)
Subject: Reminder: Pre Approved PPE Orders
Date: Saturday, May 23, 2020 6:00:47 AM



An update from us on COVID-19

We hope you and your family are staying safe and healthy during this unprecedented time.
Are you in need of medical-grade masks, medical-grade gloves, sanitizers, and/or thermometers?

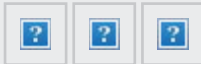
55 Medical Supply Division has secured supply chains in the above product categories that are available to be delivered to the United States within days. Through our supply chain experience and our extensive sourcing for all agencies in the Federal Military product and logistics environment in the USA and over 100 other countries, we're working to help with the challenges facing our country and healthcare system.

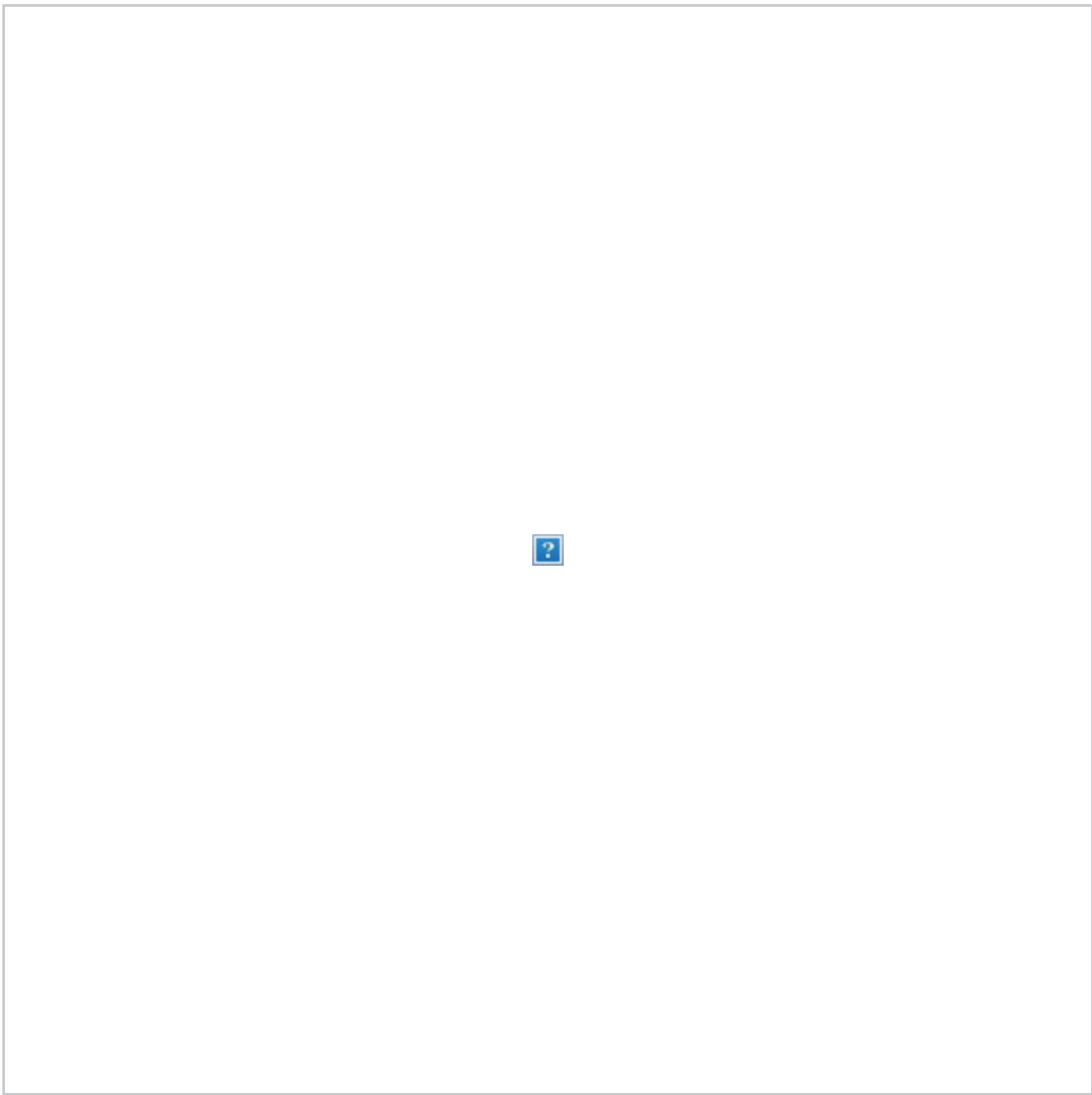
Stay Safe!

[CLICK HERE FOR OUR MEDICAL SUPPLIES CATALOG](#)



Connect with us



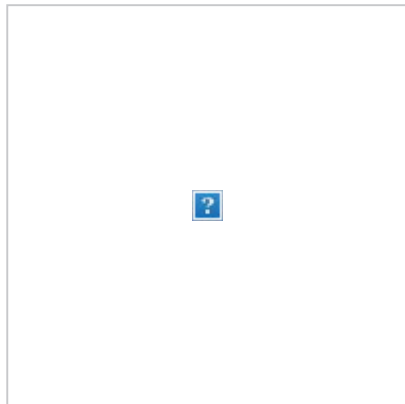


55 Industries | 1320 NW 65th Place, Fort Lauderdale, FL 33309

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Sent by (b) (6) in collaboration with



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(b) (6)

Subject: WSJ Op Ed (David Rivkin)
Date: Monday, April 20, 2020 11:00:11 AM
Attachments: [image005.png](#)
Importance: High

Hi (b) (6) Hope that you are still doing well!! I thought that you might be interested in seeing David's op ed on Presidential power -- particularly because it addresses the Defense Production Act. See below.

Best, (b) (6)



Presidential Power Is Limited but Vast

Trump can't fully reopen the economy on his own authority. But he can go a long way in that direction.

By David B. Rivkin Jr. and Lee A. Casey

April 15, 2020 6:06 pm ET

President Trump has come under attack this week for saying he has “absolute authority” to reopen the economy. He doesn’t—his authority is limited. But while the president can’t simply order the entire economy to reopen on his own signature, neither is the matter entirely up to states and their governors. The two sides of this debate are mostly talking past each other.

The federal government’s powers are limited and enumerated and don’t include a “general police power” to regulate community health and welfare. That authority rests principally with the states and includes the power to impose coercive measures such as mandatory vaccination, as the Supreme Court held in *Jacobson v. Massachusetts* (1905). Nor may the federal government commandeer state personnel and resources to achieve its ends or otherwise coerce the states into a particular course of conduct. There is no dispute about these respective state and federal powers.

In most federal-state disputes, the question is what happens when authorities at both levels exercise their legitimate constitutional powers at cross-purposes. Here, the president has the edge. The Constitution’s Supremacy Clause requires that when the federal government acts within its proper sphere of constitutional authority, state law and state officials must give way to the extent that federal requirements conflict with their own. Federal power encompasses a broad power to regulate the national economy. Thus although the president lacks plenary power to “restart” the economy,

he has formidable authority to eliminate restraints states have imposed on certain types of critical commercial activity.

Much of this authority was established by Congress in the Defense Production Act of 1950, which Mr. Trump has invoked on a limited basis to require American manufacturers to make personal protective equipment and ventilators. Most of his current critics lauded these actions and urged him to do more.

The DPA was enacted principally to assure U.S. military preparedness. But it defines “national defense” broadly to include “emergency preparedness” and “critical infrastructure protection and restoration.” The law “provides the President with an array of authorities to shape national defense preparedness programs and to take appropriate steps to maintain and enhance the domestic industrial base.” It authorizes him to prioritize the production of certain products and to “allocate materials, services, and facilities in such a manner, upon such conditions, and to such extent as he shall deem necessary or appropriate to promote the national defense.”

The DPA isn’t a blank check. The president cannot, for example, impose wage and price controls without additional congressional action, and he is often required to use carrots rather than sticks to achieve the law’s purposes. Nevertheless, because he is acting under an express congressional grant of authority, he is operating, as Justice Robert Jackson explained in his iconic concurring opinion in the “steel seizure” case *Youngstown v. Sawyer* (1952), at the apex of his legal and constitutional power.

Any state restrictions on commerce or personal behavior would have to yield to the federal imperative. “The states have no power, by taxation or otherwise, to retard, impede, burden, or in any manner control, the operations of the constitutional laws enacted by congress to carry into execution the powers vested in the general government,” the Supreme Court explained in *McCulloch v. Maryland* (1819). States, whether acting alone or in coordination, would be barred, for example, from forbidding their residents to return to work in critical industries, or from restraining industrial, agricultural or transportation facilities in ways that impede the federal mandate.

That said, even the most expansive interpretation of the DPA, and other federal statutes regulating interstate commerce, wouldn’t permit President Trump to reopen all aspects of the American economy on his own authority. The reopening of many local businesses, such as restaurants and nonessential retailers, would be up to the states.

Thus state governors and lawmakers are as vital a part of this effort as the president and Congress. Federal and state officials have to work together, however much they may dislike each other politically or personally, to get America back on its feet.

The truly difficult legal issues coming out of the Covid-19 crisis are whether government at all levels has sufficiently protected individual rights. All exercises of federal and state power, emergency or not, are subject to the overriding limitations of

the Bill of Rights. The courts have traditionally taken the nature and extent of national emergencies into account in construing and applying these rights, but they cannot be ignored entirely.

So far the American people have largely accepted temporary restrictions on their liberty—especially freedom of assembly and religion—that may not stand up to court challenges. It would serve the president and governors well to make a priority of easing these restrictions and others as soon as possible after the worst of the danger has passed.

Messrs. Rivkin and Casey practice appellate and constitutional law in Washington. They served in the White House Counsel's Office and Justice Department under Presidents Reagan and George H.W. Bush and have litigated separation-of-powers cases, representing states in challenges to ObamaCare and the federal Clean Power Plan.

FIPS	CBSA	FEMA Region	State	County
47169	34980	Region 04	Tennessee	Trousdale
05079	38220	Region 06	Arkansas	Lincoln
31043	43580	Region 07	Nebraska	Dakota
27105	49380	Region 05	Minnesota	Nobles
47007	Unknown	Region 04	Tennessee	Bledsoe
36087	35620	Region 02	New York	Rockland
39101	32020	Region 05	Ohio	Marion
18017	30900	Region 05	Indiana	Cass
36119	35620	Region 02	New York	Westchester
39129	18140	Region 05	Ohio	Pickaway
36005	35620	Region 02	New York	Bronx
36059	35620	Region 02	New York	Nassau
34031	35620	Region 02	New Jersey	Passaic
36085	35620	Region 02	New York	Richmond
20175	30580	Region 07	Kansas	Seward
19115	Unknown	Region 07	Iowa	Louisa
20057	19980	Region 07	Kansas	Ford
13243	Unknown	Region 04	Georgia	Randolph
34039	35620	Region 02	New Jersey	Union
36103	35620	Region 02	New York	Suffolk
36081	35620	Region 02	New York	Queens
36071	35620	Region 02	New York	Orange
34017	35620	Region 02	New Jersey	Hudson
31047	30420	Region 07	Nebraska	Dawson
16013	25200	Region 10	Idaho	Blaine

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

13273	10500	Region 04	Georgia	Terrell
13099	Unknown	Region 04	Georgia	Early
31079	24260	Region 07	Nebraska	Hall
48341	20300	Region 06	Texas	Moore
34013	35620	Region 02	New Jersey	Essex
36047	35620	Region 02	New York	Kings
22095	35380	Region 06	Louisiana	St. John the Baptist
34003	35620	Region 02	New Jersey	Bergen
25025	14460	Region 01	Massachusetts	Suffolk
19171	Unknown	Region 07	Iowa	Tama
13095	10500	Region 04	Georgia	Dougherty
13037	Unknown	Region 04	Georgia	Calhoun
22071	35380	Region 06	Louisiana	Orleans
51159	Unknown	Region 03	Virginia	Richmond
35031	23700	Region 06	New Mexico	McKinley
34023	35620	Region 02	New Jersey	Middlesex
19127	32260	Region 07	Iowa	Marshall
31037	Unknown	Region 07	Nebraska	Colfax
31151	Unknown	Region 07	Nebraska	Saline
22051	35380	Region 06	Louisiana	Jefferson
22047	12940	Region 06	Louisiana	Iberville
13205	Unknown	Region 04	Georgia	Mitchell
36061	35620	Region 02	New York	New York
08087	22820	Region 08	Colorado	Morgan
08075	44540	Region 08	Colorado	Logan
13261	11140	Region 04	Georgia	Sumter
28123	Unknown	Region 04	Mississippi	Scott

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

36105	Unknown	Region 02	New York	Sullivan
09001	14860	Region 01	Connecticut	Fairfield
20055	23780	Region 07	Kansas	Finney
51001	Unknown	Region 03	Virginia	Accomack
34021	45940	Region 02	New Jersey	Mercer
25009	14460	Region 01	Massachusetts	Essex
22093	35380	Region 06	Louisiana	St. James
34029	35620	Region 02	New Jersey	Ocean
51131	Unknown	Region 03	Virginia	Northampton
34027	35620	Region 02	New Jersey	Morris
34035	35620	Region 02	New Jersey	Somerset
40055	Unknown	Region 06	Oklahoma	Greer
21031	14540	Region 04	Kentucky	Butler
46099	43620	Region 08	South Dakota	Minnehaha
44007	39300	Region 01	Rhode Island	Providence
13177	10500	Region 04	Georgia	Lee
22089	35380	Region 06	Louisiana	St. Charles
19193	43580	Region 07	Iowa	Woodbury
10005	41540	Region 03	Delaware	Sussex
25023	14460	Region 01	Massachusetts	Plymouth
36027	35620	Region 02	New York	Dutchess
28079	Unknown	Region 04	Mississippi	Leake
36079	35620	Region 02	New York	Putnam
13315	Unknown	Region 04	Georgia	Wilcox
22087	35380	Region 06	Louisiana	St. Bernard
34025	35620	Region 02	New Jersey	Monmouth
08037	20780	Region 08	Colorado	Eagle

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

19013	47940	Region 07	Iowa	Black Hawk
26163	19820	Region 05	Michigan	Wayne
40139	25100	Region 06	Oklahoma	Texas
13093	Unknown	Region 04	Georgia	Dooly
08051	Unknown	Region 08	Colorado	Gunnison
22125	12940	Region 06	Louisiana	West Feliciana
25017	14460	Region 01	Massachusetts	Middlesex
09009	35300	Region 01	Connecticut	New Haven
28051	Unknown	Region 04	Mississippi	Holmes
34041	10900	Region 02	New Jersey	Warren
49043	44920	Region 08	Utah	Summit
25021	14460	Region 01	Massachusetts	Norfolk
01017	46740	Region 04	Alabama	Chambers
51660	25500	Region 03	Virginia	Harrisonburg
13293	45580	Region 04	Georgia	Upson
22007	Unknown	Region 06	Louisiana	Assumption
29195	32180	Region 07	Missouri	Saline
19139	34700	Region 07	Iowa	Muscatine
13287	Unknown	Region 04	Georgia	Turner
13061	Unknown	Region 04	Georgia	Clay
25013	44140	Region 01	Massachusetts	Hampden
13139	23580	Region 04	Georgia	Hall
42101	37980	Region 03	Pennsylvania	Philadelphia
17031	16980	Region 05	Illinois	Cook
24033	47900	Region 03	Maryland	Prince George's
51029	16820	Region 03	Virginia	Buckingham
13321	10500	Region 04	Georgia	Worth

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

42077	10900	Region 03	Pennsylvania	Lehigh
34007	37980	Region 02	New Jersey	Camden
28157	Unknown	Region 04	Mississippi	Wilkinson
47095	Unknown	Region 04	Tennessee	Lake
22075	35380	Region 06	Louisiana	Plaquemines
25027	49340	Region 01	Massachusetts	Worcester
28069	32940	Region 04	Mississippi	Kemper
36111	28740	Region 02	New York	Ulster
18031	24700	Region 05	Indiana	Decatur
13081	18380	Region 04	Georgia	Crisp
13137	18460	Region 04	Georgia	Habersham
28103	Unknown	Region 04	Mississippi	Noxubee
48129	Unknown	Region 06	Texas	Donley
20111	21380	Region 07	Kansas	Lyon
13007	10500	Region 04	Georgia	Baker
42095	10900	Region 03	Pennsylvania	Northampton
04001	Unknown	Region 09	Arizona	Apache
42045	37980	Region 03	Pennsylvania	Delaware
28099	Unknown	Region 04	Mississippi	Neshoba
01123	Unknown	Region 04	Alabama	Tallapoosa
13141	33300	Region 04	Georgia	Hancock
51175	Unknown	Region 03	Virginia	Southampton
42103	35620	Region 03	Pennsylvania	Pike
22031	43340	Region 06	Louisiana	De Soto
19005	Unknown	Region 07	Iowa	Allamakee
25005	39300	Region 01	Massachusetts	Bristol
42079	42540	Region 03	Pennsylvania	Luzerne

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

11001	47900	Region 03	District of Columbia	District of Columbia
01085	33860	Region 04	Alabama	Lowndes
12077	Unknown	Region 04	Florida	Liberty
04017	43320	Region 09	Arizona	Navajo
01063	Unknown	Region 04	Alabama	Greene
42011	39740	Region 03	Pennsylvania	Berks
34037	35620	Region 02	New Jersey	Sussex
42089	20700	Region 03	Pennsylvania	Monroe
09003	25540	Region 01	Connecticut	Hartford
34005	37980	Region 02	New Jersey	Burlington
22057	26380	Region 06	Louisiana	Lafourche
45027	Unknown	Region 04	South Carolina	Clarendon
01131	Unknown	Region 04	Alabama	Wilcox
19183	26980	Region 07	Iowa	Washington
22037	12940	Region 06	Louisiana	East Feliciana
26099	19820	Region 05	Michigan	Macomb
22017	43340	Region 06	Louisiana	Caddo
18097	26900	Region 05	Indiana	Marion
22041	Unknown	Region 06	Louisiana	Franklin
49037	Unknown	Region 08	Utah	San Juan
28007	Unknown	Region 04	Mississippi	Attala
48375	11100	Region 06	Texas	Potter
51683	47900	Region 03	Virginia	Manassas
31001	25580	Region 07	Nebraska	Adams
28015	24900	Region 04	Mississippi	Carroll
13035	12060	Region 04	Georgia	Butts
13193	Unknown	Region 04	Georgia	Macon

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22117	14220	Region 06	Louisiana	Washington
13167	20140	Region 04	Georgia	Johnson
20103	28140	Region 07	Kansas	Leavenworth
01119	Unknown	Region 04	Alabama	Sumter
08123	24540	Region 08	Colorado	Weld
26125	19820	Region 05	Michigan	Oakland
19049	19780	Region 07	Iowa	Dallas
20031	Unknown	Region 07	Kansas	Coffey
22111	33740	Region 06	Louisiana	Union
30101	Unknown	Region 08	Montana	Toole
35045	22140	Region 06	New Mexico	San Juan
17097	16980	Region 05	Illinois	Lake
34011	47220	Region 02	New Jersey	Cumberland
28083	24900	Region 04	Mississippi	Leflore
13201	Unknown	Region 04	Georgia	Miller
48421	Unknown	Region 06	Texas	Sherman
09005	45860	Region 01	Connecticut	Litchfield
48365	Unknown	Region 06	Texas	Panola
22013	Unknown	Region 06	Louisiana	Bienville
17157	Unknown	Region 05	Illinois	Randolph
51510	47900	Region 03	Virginia	Alexandria
48319	Unknown	Region 06	Texas	Mason
37191	24140	Region 04	North Carolina	Wayne
27091	Unknown	Region 05	Minnesota	Martin
42091	37980	Region 03	Pennsylvania	Montgomery
31073	30420	Region 07	Nebraska	Gosper
16063	25200	Region 10	Idaho	Lincoln

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34019	35620	Region 02	New Jersey	Hunterdon
18117	Unknown	Region 05	Indiana	Orange
01013	Unknown	Region 04	Alabama	Butler
40147	12780	Region 06	Oklahoma	Washington
55009	24580	Region 05	Wisconsin	Brown
13009	33300	Region 04	Georgia	Baldwin
42017	37980	Region 03	Pennsylvania	Bucks
37037	20500	Region 04	North Carolina	Chatham
19099	35500	Region 07	Iowa	Jasper
42075	30140	Region 03	Pennsylvania	Lebanon
22005	12940	Region 06	Louisiana	Ascension
53077	49420	Region 10	Washington	Yakima
28163	27140	Region 04	Mississippi	Yazoo
22103	35380	Region 06	Louisiana	St. Tammany
28075	32940	Region 04	Mississippi	Lauderdale
22073	33740	Region 06	Louisiana	Ouachita
13197	17980	Region 04	Georgia	Marion
20209	28140	Region 07	Kansas	Wyandotte
18145	26900	Region 05	Indiana	Shelby
24031	47900	Region 03	Maryland	Montgomery
28095	Unknown	Region 04	Mississippi	Monroe
28129	Unknown	Region 04	Mississippi	Smith
31081	24260	Region 07	Nebraska	Hamilton
49051	25720	Region 08	Utah	Wasatch
20093	23780	Region 07	Kansas	Kearny
08031	19740	Region 08	Colorado	Denver
28001	35020	Region 04	Mississippi	Adams

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42069	42540	Region 03	Pennsylvania	Lackawanna
22033	12940	Region 06	Louisiana	East Baton Rouge
31141	18100	Region 07	Nebraska	Platte
51685	47900	Region 03	Virginia	Manassas Park
22077	12940	Region 06	Louisiana	Pointe Coupee
34015	37980	Region 02	New Jersey	Gloucester
51013	47900	Region 03	Virginia	Arlington
51595	Unknown	Region 03	Virginia	Emporia
22025	Unknown	Region 06	Louisiana	Catahoula
17079	Unknown	Region 05	Illinois	Jasper
24029	Unknown	Region 03	Maryland	Kent
24045	41540	Region 03	Maryland	Wicomico
08117	14720	Region 08	Colorado	Summit
12086	33100	Region 04	Florida	Miami-Dade
10001	20100	Region 03	Delaware	Kent
51139	Unknown	Region 03	Virginia	Page
17187	Unknown	Region 05	Illinois	Warren
18063	26900	Region 05	Indiana	Hendricks
48419	Unknown	Region 06	Texas	Shelby
22099	29180	Region 06	Louisiana	St. Martin
21107	31580	Region 04	Kentucky	Hopkins
18081	26900	Region 05	Indiana	Johnson
37131	40260	Region 04	North Carolina	Northampton
54035	Unknown	Region 03	West Virginia	Jackson
25001	12700	Region 01	Massachusetts	Barnstable
28085	15020	Region 04	Mississippi	Lincoln
42037	14100	Region 03	Pennsylvania	Columbia

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21109	Unknown	Region 04	Kentucky	Jackson
22105	25220	Region 06	Louisiana	Tangipahoa
28017	Unknown	Region 04	Mississippi	Chickasaw
18111	16980	Region 05	Indiana	Newton
51153	47900	Region 03	Virginia	Prince William
44003	39300	Region 01	Rhode Island	Kent
09007	25540	Region 01	Connecticut	Middlesex
28101	Unknown	Region 04	Mississippi	Newton
34033	37980	Region 02	New Jersey	Salem
21177	Unknown	Region 04	Kentucky	Muhlenberg
13275	45620	Region 04	Georgia	Thomas
18047	Unknown	Region 05	Indiana	Franklin
21001	Unknown	Region 04	Kentucky	Adair
31119	35740	Region 07	Nebraska	Madison
08005	19740	Region 08	Colorado	Arapahoe
47037	34980	Region 04	Tennessee	Davidson
01059	Unknown	Region 04	Alabama	Franklin
18089	16980	Region 05	Indiana	Lake
22121	12940	Region 06	Louisiana	West Baton Rouge
36001	10580	Region 02	New York	Albany
34001	12100	Region 02	New Jersey	Atlantic
48477	14780	Region 06	Texas	Washington
48471	26660	Region 06	Texas	Walker
22109	26380	Region 06	Louisiana	Terrebonne
13071	34220	Region 04	Georgia	Colquitt
39099	49660	Region 05	Ohio	Mahoning
47003	43180	Region 04	Tennessee	Bedford

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22101	34020	Region 06	Louisiana	St. Mary
17197	16980	Region 05	Illinois	Will
29510	41180	Region 07	Missouri	St. Louis
28029	27140	Region 04	Mississippi	Copiah
05035	32820	Region 06	Arkansas	Crittenden
13263	Unknown	Region 04	Georgia	Talbot
36029	15380	Region 02	New York	Erie
24005	12580	Region 03	Maryland	Baltimore County
26039	Unknown	Region 05	Michigan	Crawford
26049	22420	Region 05	Michigan	Genesee
28077	Unknown	Region 04	Mississippi	Lawrence
05075	Unknown	Region 06	Arkansas	Lawrence
45061	Unknown	Region 04	South Carolina	Lee
13259	Unknown	Region 04	Georgia	Stewart
13001	Unknown	Region 04	Georgia	Appling
17043	16980	Region 05	Illinois	DuPage
24021	47900	Region 03	Maryland	Frederick
24017	47900	Region 03	Maryland	Charles
28113	32620	Region 04	Mississippi	Pike
13027	46660	Region 04	Georgia	Brooks
27067	48820	Region 05	Minnesota	Kandiyohi
28023	32940	Region 04	Mississippi	Clarke
13319	Unknown	Region 04	Georgia	Wilkinson
38087	Unknown	Region 08	North Dakota	Slope
38035	24220	Region 08	North Dakota	Grand Forks
26137	Unknown	Region 05	Michigan	Otsego
51059	47900	Region 03	Virginia	Fairfax County

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26145	40980	Region 05	Michigan	Saginaw
53021	28420	Region 10	Washington	Franklin
24510	12580	Region 03	Maryland	Baltimore City
25011	24640	Region 01	Massachusetts	Franklin
22045	29180	Region 06	Louisiana	Iberia
28013	Unknown	Region 04	Mississippi	Calhoun
01023	Unknown	Region 04	Alabama	Choctaw
13307	Unknown	Region 04	Georgia	Webster
13033	12260	Region 04	Georgia	Burke
22081	Unknown	Region 06	Louisiana	Red River
34009	36140	Region 02	New Jersey	Cape May
51047	47900	Region 03	Virginia	Culpeper
05123	22620	Region 06	Arkansas	St. Francis
04005	22380	Region 09	Arizona	Coconino
18071	42980	Region 05	Indiana	Jackson
27145	41060	Region 05	Minnesota	Stearns
21083	32460	Region 04	Kentucky	Graves
45055	17900	Region 04	South Carolina	Kershaw
22083	Unknown	Region 06	Louisiana	Richland
13253	Unknown	Region 04	Georgia	Seminole
17153	Unknown	Region 05	Illinois	Pulaski
08053	Unknown	Region 08	Colorado	Hinsdale
42071	29540	Region 03	Pennsylvania	Lancaster
19157	Unknown	Region 07	Iowa	Poweshiek
17089	16980	Region 05	Illinois	Kane
01095	10700	Region 04	Alabama	Marshall
25003	38340	Region 01	Massachusetts	Berkshire

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22027	Unknown	Region 06	Louisiana	Claiborne
28065	Unknown	Region 04	Mississippi	Jefferson Davis
13299	48180	Region 04	Georgia	Ware
28143	32820	Region 04	Mississippi	Tunica
30037	13740	Region 08	Montana	Golden Valley
25015	44140	Region 01	Massachusetts	Hampshire
08001	19740	Region 08	Colorado	Adams
36021	26460	Region 02	New York	Columbia
28031	Unknown	Region 04	Mississippi	Covington
47165	34980	Region 04	Tennessee	Sumner
42067	Unknown	Region 03	Pennsylvania	Juniata
22003	Unknown	Region 06	Louisiana	Allen
51117	Unknown	Region 03	Virginia	Mecklenburg
01065	46220	Region 04	Alabama	Hale
35019	Unknown	Region 06	New Mexico	Guadalupe
20197	45820	Region 07	Kansas	Wabaunsee
13239	Unknown	Region 04	Georgia	Quitman
36093	10580	Region 02	New York	Schenectady
10003	37980	Region 03	Delaware	New Castle
55079	33340	Region 05	Wisconsin	Milwaukee
24003	12580	Region 03	Maryland	Anne Arundel
18095	26900	Region 05	Indiana	Madison
13069	20060	Region 04	Georgia	Coffee
51081	Unknown	Region 03	Virginia	Greenville
28011	17380	Region 04	Mississippi	Bolivar
38061	Unknown	Region 08	North Dakota	Mountrail
13087	12460	Region 04	Georgia	Decatur

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01111	Unknown	Region 04	Alabama	Randolph
51075	40060	Region 03	Virginia	Goochland
18061	31140	Region 05	Indiana	Harrison
18181	Unknown	Region 05	Indiana	White
08015	Unknown	Region 08	Colorado	Chaffee
51171	Unknown	Region 03	Virginia	Shenandoah
38017	22020	Region 08	North Dakota	Cass
18137	Unknown	Region 05	Indiana	Ripley
29189	41180	Region 07	Missouri	St. Louis
51165	25500	Region 03	Virginia	Rockingham
13255	12060	Region 04	Georgia	Spalding
13257	45740	Region 04	Georgia	Stephens
19103	26980	Region 07	Iowa	Johnson
17091	28100	Region 05	Illinois	Kankakee
13221	12020	Region 04	Georgia	Oglethorpe
13045	12060	Region 04	Georgia	Carroll
28061	29860	Region 04	Mississippi	Jasper
45081	17900	Region 04	South Carolina	Saluda
17017	Unknown	Region 05	Illinois	Cass
08009	Unknown	Region 08	Colorado	Baca
37105	41820	Region 04	North Carolina	Lee
19113	16300	Region 07	Iowa	Linn
39095	45780	Region 05	Ohio	Lucas
12121	Unknown	Region 04	Florida	Suwannee
18005	18020	Region 05	Indiana	Bartholomew
12079	Unknown	Region 04	Florida	Madison
55059	16980	Region 05	Wisconsin	Kenosha

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36039	Unknown	Region 02	New York	Greene
51570	40060	Region 03	Virginia	Colonial Heights
28109	38100	Region 04	Mississippi	Pearl River
28097	Unknown	Region 04	Mississippi	Montgomery
18103	37940	Region 05	Indiana	Miami
13133	Unknown	Region 04	Georgia	Greene
56013	40180	Region 08	Wyoming	Fremont
53061	42660	Region 10	Washington	Snohomish
13015	12060	Region 04	Georgia	Bartow
28035	25620	Region 04	Mississippi	Forrest
13277	45700	Region 04	Georgia	Tift
44001	39300	Region 01	Rhode Island	Bristol
09013	25540	Region 01	Connecticut	Tolland
13249	11140	Region 04	Georgia	Schley
48253	10180	Region 06	Texas	Jones
28063	Unknown	Region 04	Mississippi	Jefferson
22021	Unknown	Region 06	Louisiana	Caldwell
28021	46980	Region 04	Mississippi	Claiborne
19153	19780	Region 07	Iowa	Polk
36115	24020	Region 02	New York	Washington
47157	32820	Region 04	Tennessee	Shelby
17161	19340	Region 05	Illinois	Rock Island
37047	Unknown	Region 04	North Carolina	Columbus
24027	12580	Region 03	Maryland	Howard
21085	Unknown	Region 04	Kentucky	Grayson
18079	35860	Region 05	Indiana	Jennings
28091	Unknown	Region 04	Mississippi	Marion

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18055	Unknown	Region 05	Indiana	Greene
01091	Unknown	Region 04	Alabama	Marengo
26161	11460	Region 05	Michigan	Washtenaw
17027	41180	Region 05	Illinois	Clinton
28027	17260	Region 04	Mississippi	Coahoma
18011	26900	Region 05	Indiana	Boone
18059	26900	Region 05	Indiana	Hancock
22127	Unknown	Region 06	Louisiana	Winn
31053	23340	Region 07	Nebraska	Dodge
45039	17900	Region 04	South Carolina	Fairfield
19047	Unknown	Region 07	Iowa	Crawford
26007	10980	Region 05	Michigan	Alpena
36113	24020	Region 02	New York	Warren
53033	42660	Region 10	Washington	King
01097	33660	Region 04	Alabama	Mobile
51087	40060	Region 03	Virginia	Henrico
42029	37980	Region 03	Pennsylvania	Chester
13089	12060	Region 04	Georgia	DeKalb
35043	10740	Region 06	New Mexico	Sandoval
45089	Unknown	Region 04	South Carolina	Williamsburg
24013	12580	Region 03	Maryland	Carroll
26059	25880	Region 05	Michigan	Hillsdale
24011	Unknown	Region 03	Maryland	Caroline
51620	Unknown	Region 03	Virginia	Franklin
56039	27220	Region 08	Wyoming	Teton
05023	Unknown	Region 06	Arkansas	Cleburne
08063	Unknown	Region 08	Colorado	Kit Carson

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13235	47580	Region 04	Georgia	Pulaski
40001	Unknown	Region 06	Oklahoma	Adair
28053	Unknown	Region 04	Mississippi	Humphreys
46073	Unknown	Region 08	South Dakota	Jerauld
32013	49080	Region 09	Nevada	Humboldt
22091	12940	Region 06	Louisiana	St. Helena
44009	39300	Region 01	Rhode Island	Washington
21227	14540	Region 04	Kentucky	Warren
51065	16820	Region 03	Virginia	Fluvanna
33015	14460	Region 01	New Hampshire	Rockingham
27027	22020	Region 05	Minnesota	Clay
53057	34580	Region 10	Washington	Skagit
13121	12060	Region 04	Georgia	Fulton
46083	43620	Region 08	South Dakota	Lincoln
51183	40060	Region 03	Virginia	Sussex
42107	39060	Region 03	Pennsylvania	Schuylkill
01093	Unknown	Region 04	Alabama	Marion
08097	24060	Region 08	Colorado	Pitkin
42025	10900	Region 03	Pennsylvania	Carbon
18019	31140	Region 05	Indiana	Clark
01107	46220	Region 04	Alabama	Pickens
01037	45180	Region 04	Alabama	Coosa
26081	24340	Region 05	Michigan	Kent
51093	47260	Region 03	Virginia	Isle of Wight
12011	33100	Region 04	Florida	Broward
37159	16740	Region 04	North Carolina	Rowan
33011	31700	Region 01	New Hampshire	Hillsborough

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35053	Unknown	Region 06	New Mexico	Socorro
26155	37020	Region 05	Michigan	Shiawassee
28057	46180	Region 04	Mississippi	Itawamba
13229	48180	Region 04	Georgia	Pierce
13063	12060	Region 04	Georgia	Clayton
39029	41400	Region 05	Ohio	Columbiana
36037	12860	Region 02	New York	Genesee
05069	38220	Region 06	Arkansas	Jefferson
42093	14100	Region 03	Pennsylvania	Montour
18029	17140	Region 05	Indiana	Dearborn
29021	41140	Region 07	Missouri	Buchanan
48179	37420	Region 06	Texas	Gray
50007	15540	Region 01	Vermont	Chittenden
13311	Unknown	Region 04	Georgia	White
53005	28420	Region 10	Washington	Benton
48347	34860	Region 06	Texas	Nacogdoches
17007	40420	Region 05	Illinois	Boone
28159	Unknown	Region 04	Mississippi	Winston
13085	12060	Region 04	Georgia	Dawson
13199	12060	Region 04	Georgia	Meriwether
42007	38300	Region 03	Pennsylvania	Beaver
28089	27140	Region 04	Mississippi	Madison
28139	Unknown	Region 04	Mississippi	Tippah
18043	31140	Region 05	Indiana	Floyd
08065	Unknown	Region 08	Colorado	Lake
29135	27620	Region 07	Missouri	Moniteau
18107	18820	Region 05	Indiana	Montgomery

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13131	Unknown	Region 04	Georgia	Grady
37077	37080	Region 04	North Carolina	Granville
22049	Unknown	Region 06	Louisiana	Jackson
46117	38180	Region 08	South Dakota	Stanley
31093	24260	Region 07	Nebraska	Howard
08079	Unknown	Region 08	Colorado	Mineral
40007	Unknown	Region 06	Oklahoma	Beaver
06037	31080	Region 09	California	Los Angeles
48441	10180	Region 06	Texas	Taylor
28067	29860	Region 04	Mississippi	Jones
13317	Unknown	Region 04	Georgia	Wilkes
17141	40300	Region 05	Illinois	Ogle
18057	26900	Region 05	Indiana	Hamilton
01031	21460	Region 04	Alabama	Coffee
08085	33940	Region 08	Colorado	Montrose
37181	25780	Region 04	North Carolina	Vance
37015	Unknown	Region 04	North Carolina	Bertie
28025	Unknown	Region 04	Mississippi	Clay
13301	Unknown	Region 04	Georgia	Warren
35006	24380	Region 06	New Mexico	Cibola
47147	34980	Region 04	Tennessee	Robertson
27033	Unknown	Region 05	Minnesota	Cottonwood
38025	Unknown	Region 08	North Dakota	Dunn
31121	24260	Region 07	Nebraska	Merrick
31105	Unknown	Region 07	Nebraska	Kimball
13123	Unknown	Region 04	Georgia	Gilmer
17077	16060	Region 05	Illinois	Jackson

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39013	48540	Region 05	Ohio	Belmont
18141	43780	Region 05	Indiana	St. Joseph
37063	20500	Region 04	North Carolina	Durham
08059	19740	Region 08	Colorado	Jefferson
51147	Unknown	Region 03	Virginia	Prince Edward
45041	22500	Region 04	South Carolina	Florence
01081	12220	Region 04	Alabama	Lee
22119	43340	Region 06	Louisiana	Webster
36073	40380	Region 02	New York	Orleans
17093	16980	Region 05	Illinois	Kendall
45085	44940	Region 04	South Carolina	Sumter
08014	19740	Region 08	Colorado	Broomfield
40015	Unknown	Region 06	Oklahoma	Caddo
53001	36830	Region 10	Washington	Adams
17111	16980	Region 05	Illinois	McHenry
45033	Unknown	Region 04	South Carolina	Dillon
31041	Unknown	Region 07	Nebraska	Custer
47167	32820	Region 04	Tennessee	Tipton
13005	Unknown	Region 04	Georgia	Bacon
28111	25620	Region 04	Mississippi	Perry
12051	17500	Region 04	Florida	Hendry
51610	47900	Region 03	Virginia	Falls Church
51036	40060	Region 03	Virginia	Charles City
20119	Unknown	Region 07	Kansas	Meade
42055	16540	Region 03	Pennsylvania	Franklin
49035	41620	Region 08	Utah	Salt Lake
16083	46300	Region 10	Idaho	Twin Falls

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13067	12060	Region 04	Georgia	Cobb
45079	17900	Region 04	South Carolina	Richland
36101	18500	Region 02	New York	Steuben
18093	13260	Region 05	Indiana	Lawrence
36063	15380	Region 02	New York	Niagara
09011	35980	Region 01	Connecticut	New London
13151	12060	Region 04	Georgia	Henry
42043	25420	Region 03	Pennsylvania	Dauphin
51107	47900	Region 03	Virginia	Loudoun
26075	27100	Region 05	Michigan	Jackson
16053	46300	Region 10	Idaho	Jerome
31019	28260	Region 07	Nebraska	Buffalo
18091	33140	Region 05	Indiana	LaPorte
22015	43340	Region 06	Louisiana	Bossier
18067	29020	Region 05	Indiana	Howard
22069	35060	Region 06	Louisiana	Natchitoches
17081	34500	Region 05	Illinois	Jefferson
08113	Unknown	Region 08	Colorado	San Miguel
13097	12060	Region 04	Georgia	Douglas
18109	26900	Region 05	Indiana	Morgan
12039	45220	Region 04	Florida	Gadsden
28147	Unknown	Region 04	Mississippi	Walthall
28005	32620	Region 04	Mississippi	Amite
01129	Unknown	Region 04	Alabama	Washington
31051	43580	Region 07	Nebraska	Dixon
48405	Unknown	Region 06	Texas	San Augustine
18131	Unknown	Region 05	Indiana	Pulaski

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39049	18140	Region 05	Ohio	Franklin
48099	28660	Region 06	Texas	Coryell
13285	29300	Region 04	Georgia	Troup
22019	29340	Region 06	Louisiana	Calcasieu
08107	44460	Region 08	Colorado	Routt
22079	10780	Region 06	Louisiana	Rapides
18053	31980	Region 05	Indiana	Grant
55101	39540	Region 05	Wisconsin	Racine
24019	15700	Region 03	Maryland	Dorchester
22097	36660	Region 06	Louisiana	St. Landry
26157	Unknown	Region 05	Michigan	Tuscola
37161	22580	Region 04	North Carolina	Rutherford
54099	26580	Region 03	West Virginia	Wayne
13247	12060	Region 04	Georgia	Rockdale
22001	29180	Region 06	Louisiana	Acadia
13303	Unknown	Region 04	Georgia	Washington
18143	31140	Region 05	Indiana	Scott
28133	26940	Region 04	Mississippi	Sunflower
01109	45980	Region 04	Alabama	Pike
22067	12820	Region 06	Louisiana	Morehouse
13269	Unknown	Region 04	Georgia	Taylor
29157	Unknown	Region 07	Missouri	Perry
01087	Unknown	Region 04	Alabama	Macon
28037	Unknown	Region 04	Mississippi	Franklin
17133	41180	Region 05	Illinois	Monroe
19143	Unknown	Region 07	Iowa	Osceola
48393	Unknown	Region 06	Texas	Roberts

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26069	Unknown	Region 05	Michigan	Iosco
36065	46540	Region 02	New York	Oneida
36067	45060	Region 02	New York	Onondaga
36055	40380	Region 02	New York	Monroe
12099	33100	Region 04	Florida	Palm Beach
26147	19820	Region 05	Michigan	St. Clair
13135	12060	Region 04	Georgia	Gwinnett
21059	36980	Region 04	Kentucky	Daviess
32031	39900	Region 09	Nevada	Washoe
13021	31420	Region 04	Georgia	Bibb
51800	47260	Region 03	Virginia	Suffolk
21183	Unknown	Region 04	Kentucky	Ohio
45031	22500	Region 04	South Carolina	Darlington
36017	Unknown	Region 02	New York	Chenango
17163	41180	Region 05	Illinois	St. Clair
13171	12060	Region 04	Georgia	Lamar
51095	47260	Region 03	Virginia	James City
39117	18140	Region 05	Ohio	Morrow
36053	45060	Region 02	New York	Madison
47111	34980	Region 04	Tennessee	Macon
37195	48980	Region 04	North Carolina	Wilson
19017	47940	Region 07	Iowa	Bremer
40041	Unknown	Region 06	Oklahoma	Delaware
48203	32220	Region 06	Texas	Harrison
13231	12060	Region 04	Georgia	Pike
28049	27140	Region 04	Mississippi	Hinds
42127	Unknown	Region 03	Pennsylvania	Wayne

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42115	Unknown	Region 03	Pennsylvania	Susquehanna
13245	12260	Region 04	Georgia	Richmond
47061	Unknown	Region 04	Tennessee	Grundy
48115	29500	Region 06	Texas	Dawson
26115	33780	Region 05	Michigan	Monroe
27101	Unknown	Region 05	Minnesota	Murray
28119	Unknown	Region 04	Mississippi	Quitman
40105	Unknown	Region 06	Oklahoma	Nowata
13189	12260	Region 04	Georgia	McDuffie
21061	14540	Region 04	Kentucky	Edmonson
19077	19780	Region 07	Iowa	Guthrie
37061	Unknown	Region 04	North Carolina	Duplin
48381	11100	Region 06	Texas	Randall
17201	40420	Region 05	Illinois	Winnebago
36083	10580	Region 02	New York	Rensselaer
08013	14500	Region 08	Colorado	Boulder
53029	36020	Region 10	Washington	Island
27115	Unknown	Region 05	Minnesota	Pine
18133	26900	Region 05	Indiana	Putnam
13225	47580	Region 04	Georgia	Peach
13129	15660	Region 04	Georgia	Gordon
22029	35020	Region 06	Louisiana	Concordia
50011	15540	Region 01	Vermont	Franklin
13013	12060	Region 04	Georgia	Barrow
29201	43460	Region 07	Missouri	Scott
37065	40580	Region 04	North Carolina	Edgecombe
06025	20940	Region 09	California	Imperial

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39137	Unknown	Region 05	Ohio	Putnam
18139	Unknown	Region 05	Indiana	Rush
37187	Unknown	Region 04	North Carolina	Washington
29155	Unknown	Region 07	Missouri	Pemiscot
22053	Unknown	Region 06	Louisiana	Jefferson Davis
13165	Unknown	Region 04	Georgia	Jenkins
48069	Unknown	Region 06	Texas	Castro
12065	45220	Region 04	Florida	Jefferson
20189	Unknown	Region 07	Kansas	Stevens
46127	43580	Region 08	South Dakota	Union
46125	43620	Region 08	South Dakota	Turner
20187	Unknown	Region 07	Kansas	Stanton
18015	29200	Region 05	Indiana	Carroll
13217	12060	Region 04	Georgia	Newton
44005	39300	Region 01	Rhode Island	Newport
32003	29820	Region 09	Nevada	Clark
23005	38860	Region 01	Maine	Cumberland
26021	35660	Region 05	Michigan	Berrien
47107	11940	Region 04	Tennessee	McMinn
12033	37860	Region 04	Florida	Escambia
51061	47900	Region 03	Virginia	Fauquier
24025	12580	Region 03	Maryland	Harford
39035	17460	Region 05	Ohio	Cuyahoga
36107	13780	Region 02	New York	Tioga
51740	47260	Region 03	Virginia	Portsmouth
37103	35100	Region 04	North Carolina	Jones
28073	25620	Region 04	Mississippi	Lamar

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55127	48580	Region 05	Wisconsin	Walworth
13057	12060	Region 04	Georgia	Cherokee
53017	48300	Region 10	Washington	Douglas
22055	29180	Region 06	Louisiana	Lafayette
48357	Unknown	Region 06	Texas	Ochiltree
27109	40340	Region 05	Minnesota	Olmsted
13187	Unknown	Region 04	Georgia	Lumpkin
22061	40820	Region 06	Louisiana	Lincoln
28059	25060	Region 04	Mississippi	Jackson
13237	Unknown	Region 04	Georgia	Putnam
47189	34980	Region 04	Tennessee	Wilson
26093	19820	Region 05	Michigan	Livingston
21117	17140	Region 04	Kentucky	Kenton
48167	26420	Region 06	Texas	Galveston
26011	Unknown	Region 05	Michigan	Arenac
26087	19820	Region 05	Michigan	Lapeer
45069	13500	Region 04	South Carolina	Marlboro
40087	36420	Region 06	Oklahoma	McClain
48117	25820	Region 06	Texas	Deaf Smith
28155	Unknown	Region 04	Mississippi	Webster
01007	13820	Region 04	Alabama	Bibb
31035	Unknown	Region 07	Nebraska	Clay
18169	47340	Region 05	Indiana	Wabash
20207	Unknown	Region 07	Kansas	Woodson
51640	Unknown	Region 03	Virginia	Galax
40141	Unknown	Region 06	Oklahoma	Tillman
38089	19860	Region 08	North Dakota	Stark

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26121	34740	Region 05	Michigan	Muskegon
21111	31140	Region 04	Kentucky	Jefferson
51179	47900	Region 03	Virginia	Stafford
06075	41860	Region 09	California	San Francisco
01101	33860	Region 04	Alabama	Montgomery
37091	Unknown	Region 04	North Carolina	Hertford
26025	12980	Region 05	Michigan	Calhoun
37093	22180	Region 04	North Carolina	Hoke
24009	47900	Region 03	Maryland	Calvert
47149	34980	Region 04	Tennessee	Rutherford
48303	31180	Region 06	Texas	Lubbock
09015	49340	Region 01	Connecticut	Windham
48199	13140	Region 06	Texas	Hardin
01005	Unknown	Region 04	Alabama	Barbour
51760	40060	Region 03	Virginia	Richmond
28149	46980	Region 04	Mississippi	Warren
47081	34980	Region 04	Tennessee	Hickman
12119	45540	Region 04	Florida	Sumter
47187	34980	Region 04	Tennessee	Williamson
31067	13100	Region 07	Nebraska	Gage
24015	37980	Region 03	Maryland	Cecil
13271	Unknown	Region 04	Georgia	Telfair
22009	Unknown	Region 06	Louisiana	Avoyelles
01025	Unknown	Region 04	Alabama	Clarke
13145	17980	Region 04	Georgia	Harris
22039	Unknown	Region 06	Louisiana	Evangeline
21233	Unknown	Region 04	Kentucky	Webster

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27063	Unknown	Region 05	Minnesota	Jackson
27167	47420	Region 05	Minnesota	Wilkin
28127	27140	Region 04	Mississippi	Simpson
06051	Unknown	Region 09	California	Mono
20081	Unknown	Region 07	Kansas	Haskell
40117	46140	Region 06	Oklahoma	Pawnee
06003	Unknown	Region 09	California	Alpine
26077	28020	Region 05	Michigan	Kalamazoo
27053	33460	Region 05	Minnesota	Hennepin
36007	13780	Region 02	New York	Broome
06065	40140	Region 09	California	Riverside
37151	24660	Region 04	North Carolina	Randolph
49049	39340	Region 08	Utah	Utah
26065	29620	Region 05	Michigan	Ingham
39061	17140	Region 05	Ohio	Hamilton
39167	31930	Region 05	Ohio	Washington
17195	44580	Region 05	Illinois	Whiteside
13215	17980	Region 04	Georgia	Muscogee
24001	19060	Region 03	Maryland	Allegany
51041	40060	Region 03	Virginia	Chesterfield
47141	18260	Region 04	Tennessee	Putnam
18035	34620	Region 05	Indiana	Delaware
13281	Unknown	Region 04	Georgia	Towns
39155	49660	Region 05	Ohio	Trumbull
28071	37060	Region 04	Mississippi	Lafayette
28151	24740	Region 04	Mississippi	Washington
13017	22340	Region 04	Georgia	Ben Hill

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53025	34180	Region 10	Washington	Grant
36121	Unknown	Region 02	New York	Wyoming
22063	12940	Region 06	Louisiana	Livingston
13159	12060	Region 04	Georgia	Jasper
48321	13060	Region 06	Texas	Matagorda
13219	12020	Region 04	Georgia	Oconee
50025	Unknown	Region 01	Vermont	Windham
27017	20260	Region 05	Minnesota	Carlton
12021	34940	Region 04	Florida	Collier
37089	11700	Region 04	North Carolina	Henderson
51840	49020	Region 03	Virginia	Winchester
05141	Unknown	Region 06	Arkansas	Van Buren
18113	28340	Region 05	Indiana	Noble
18025	Unknown	Region 05	Indiana	Crawford
39055	17460	Region 05	Ohio	Geauga
01027	Unknown	Region 04	Alabama	Clay
48111	Unknown	Region 06	Texas	Dallam
22059	Unknown	Region 06	Louisiana	LaSalle
13155	Unknown	Region 04	Georgia	Irwin
18023	23140	Region 05	Indiana	Clinton
12007	Unknown	Region 04	Florida	Bradford
31143	Unknown	Region 07	Nebraska	Polk
17181	Unknown	Region 05	Illinois	Union
01041	Unknown	Region 04	Alabama	Crenshaw
19179	36900	Region 07	Iowa	Wapello
31061	Unknown	Region 07	Nebraska	Franklin
21149	36980	Region 04	Kentucky	McLean

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19031	Unknown	Region 07	Iowa	Cedar
48483	Unknown	Region 06	Texas	Wheeler
27133	Unknown	Region 05	Minnesota	Rock
37119	16740	Region 04	North Carolina	Mecklenburg
36091	10580	Region 02	New York	Saratoga
41047	41420	Region 10	Oregon	Marion
06107	47300	Region 09	California	Tulare
36089	36300	Region 02	New York	St. Lawrence
55105	27500	Region 05	Wisconsin	Rock
08045	24060	Region 08	Colorado	Garfield
06081	41860	Region 09	California	San Mateo
13153	47580	Region 04	Georgia	Houston
12081	35840	Region 04	Florida	Manatee
18003	23060	Region 05	Indiana	Allen
53053	42660	Region 10	Washington	Pierce
26023	17740	Region 05	Michigan	Branch
08029	Unknown	Region 08	Colorado	Delta
39093	17460	Region 05	Ohio	Lorain
50001	Unknown	Region 01	Vermont	Addison
28033	32820	Region 04	Mississippi	DeSoto
18175	31140	Region 05	Indiana	Washington
12107	37260	Region 04	Florida	Putnam
13113	12060	Region 04	Georgia	Fayette
21143	Unknown	Region 04	Kentucky	Lyon
18173	21780	Region 05	Indiana	Warrick
37069	39580	Region 04	North Carolina	Franklin
13077	12060	Region 04	Georgia	Coweta

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19087	Unknown	Region 07	Iowa	Henry
28043	24980	Region 04	Mississippi	Grenada
01067	20020	Region 04	Alabama	Henry
47047	32820	Region 04	Tennessee	Fayette
21213	Unknown	Region 04	Kentucky	Simpson
17145	Unknown	Region 05	Illinois	Perry
01127	13820	Region 04	Alabama	Walker
28019	Unknown	Region 04	Mississippi	Choctaw
13105	Unknown	Region 04	Georgia	Elbert
13075	Unknown	Region 04	Georgia	Cook
28161	Unknown	Region 04	Mississippi	Yalobusha
40113	46140	Region 06	Oklahoma	Osage
13011	Unknown	Region 04	Georgia	Banks
13023	Unknown	Region 04	Georgia	Bleckley
01105	Unknown	Region 04	Alabama	Perry
18049	Unknown	Region 05	Indiana	Fulton
08121	Unknown	Region 08	Colorado	Washington
36035	24100	Region 02	New York	Fulton
24037	15680	Region 03	Maryland	St. Mary's
12071	15980	Region 04	Florida	Lee
31055	36540	Region 07	Nebraska	Douglas
51187	47900	Region 03	Virginia	Warren
36015	21300	Region 02	New York	Chemung
16001	14260	Region 10	Idaho	Ada
26017	13020	Region 05	Michigan	Bay
42041	25420	Region 03	Pennsylvania	Cumberland
51193	Unknown	Region 03	Virginia	Westmoreland

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05139	20980	Region 06	Arkansas	Union
37155	31300	Region 04	North Carolina	Robeson
24043	25180	Region 03	Maryland	Washington
45045	24860	Region 04	South Carolina	Greenville
48113	19100	Region 06	Texas	Dallas
18039	21140	Region 05	Indiana	Elkhart
13115	40660	Region 04	Georgia	Floyd
48469	47020	Region 06	Texas	Victoria
08035	19740	Region 08	Colorado	Douglas
13181	12260	Region 04	Georgia	Lincoln
18127	16980	Region 05	Indiana	Porter
42133	49620	Region 03	Pennsylvania	York
26037	29620	Region 05	Michigan	Clinton
37025	16740	Region 04	North Carolina	Cabarrus
18027	47780	Region 05	Indiana	Daviess
01073	13820	Region 04	Alabama	Jefferson
16069	30300	Region 10	Idaho	Nez Perce
47043	34980	Region 04	Tennessee	Dickson
29183	41180	Region 07	Missouri	St. Charles
37135	20500	Region 04	North Carolina	Orange
13211	12060	Region 04	Georgia	Morgan
39007	11780	Region 05	Ohio	Ashtabula
40027	36420	Region 06	Oklahoma	Cleveland
01117	13820	Region 04	Alabama	Shelby
13157	27600	Region 04	Georgia	Jackson
46013	10100	Region 08	South Dakota	Brown
01047	42820	Region 04	Alabama	Dallas

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28137	32820	Region 04	Mississippi	Tate
48039	26420	Region 06	Texas	Brazoria
51830	47260	Region 03	Virginia	Williamsburg
48057	38920	Region 06	Texas	Calhoun
39097	18140	Region 05	Ohio	Madison
39037	24820	Region 05	Ohio	Darke
53007	48300	Region 10	Washington	Chelan
39133	10420	Region 05	Ohio	Portage
40145	46140	Region 06	Oklahoma	Wagoner
47135	Unknown	Region 04	Tennessee	Perry
28009	32820	Region 04	Mississippi	Benton
13079	31420	Region 04	Georgia	Crawford
48315	Unknown	Region 06	Texas	Marion
20075	Unknown	Region 07	Kansas	Hamilton
35021	Unknown	Region 06	New Mexico	Harding
46037	Unknown	Region 08	South Dakota	Day
45013	25940	Region 04	South Carolina	Beaufort
19061	20220	Region 07	Iowa	Dubuque
53073	13380	Region 10	Washington	Whatcom
35001	10740	Region 06	New Mexico	Bernalillo
26067	26960	Region 05	Michigan	Ionia
51177	47900	Region 03	Virginia	Spotsylvania
48479	29700	Region 06	Texas	Webb
48453	12420	Region 06	Texas	Travis
08041	17820	Region 08	Colorado	El Paso
13297	12060	Region 04	Georgia	Walton
54003	25180	Region 03	West Virginia	Berkeley

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48201	26420	Region 06	Texas	Harris
13185	46660	Region 04	Georgia	Lowndes
24047	41540	Region 03	Maryland	Worcester
45063	17900	Region 04	South Carolina	Lexington
13233	16340	Region 04	Georgia	Polk
19163	19340	Region 07	Iowa	Scott
47113	27180	Region 04	Tennessee	Madison
51069	49020	Region 03	Virginia	Frederick
53071	47460	Region 10	Washington	Walla Walla
37107	28820	Region 04	North Carolina	Lenoir
05119	30780	Region 06	Arkansas	Pulaski
54037	47900	Region 03	West Virginia	Jefferson
29095	28140	Region 07	Missouri	Jackson
37163	Unknown	Region 04	North Carolina	Sampson
12097	36740	Region 04	Florida	Osceola
13175	20140	Region 04	Georgia	Laurens
42001	23900	Region 03	Pennsylvania	Adams
01055	23460	Region 04	Alabama	Etowah
13117	12060	Region 04	Georgia	Forsyth
17119	41180	Region 05	Illinois	Madison
21101	21780	Region 04	Kentucky	Henderson
48157	26420	Region 06	Texas	Fort Bend
36025	Unknown	Region 02	New York	Delaware
05019	11660	Region 06	Arkansas	Clark
39173	45780	Region 05	Ohio	Wood
13091	Unknown	Region 04	Georgia	Dodge
50003	13540	Region 01	Vermont	Bennington

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36095	10580	Region 02	New York	Schoharie
17177	23300	Region 05	Illinois	Stephenson
28045	25060	Region 04	Mississippi	Hancock
17075	Unknown	Region 05	Illinois	Iroquois
13029	42340	Region 04	Georgia	Bryan
05037	Unknown	Region 06	Arkansas	Cross
05041	Unknown	Region 06	Arkansas	Desha
47075	Unknown	Region 04	Tennessee	Haywood
18155	Unknown	Region 05	Indiana	Switzerland
37033	Unknown	Region 04	North Carolina	Caswell
08019	19740	Region 08	Colorado	Clear Creek
05025	38220	Region 06	Arkansas	Cleveland
01011	Unknown	Region 04	Alabama	Bullock
20089	Unknown	Region 07	Kansas	Jewell
48101	Unknown	Region 06	Texas	Cottle
31181	Unknown	Region 07	Nebraska	Webster
38013	Unknown	Region 08	North Dakota	Burke
13065	Unknown	Region 04	Georgia	Clinch
48359	11100	Region 06	Texas	Oldham
20047	Unknown	Region 07	Kansas	Edwards
30031	14580	Region 08	Montana	Gallatin
48245	13140	Region 06	Texas	Jefferson
37153	40460	Region 04	North Carolina	Richmond
33013	18180	Region 01	New Hampshire	Merrimack
47035	18900	Region 04	Tennessee	Cumberland
51099	Unknown	Region 03	Virginia	King George
37085	20380	Region 04	North Carolina	Harnett

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12015	39460	Region 04	Florida	Charlotte
13291	Unknown	Region 04	Georgia	Union
39157	35420	Region 05	Ohio	Tuscarawas
36109	27060	Region 02	New York	Tompkins
04019	46060	Region 09	Arizona	Pima
36051	40380	Region 02	New York	Livingston
48277	37580	Region 06	Texas	Lamar
51109	Unknown	Region 03	Virginia	Louisa
51540	16820	Region 03	Virginia	Charlottesville
39153	10420	Region 05	Ohio	Summit
51011	31340	Region 03	Virginia	Appomattox
45025	Unknown	Region 04	South Carolina	Chesterfield
24039	41540	Region 03	Maryland	Somerset
28121	27140	Region 04	Mississippi	Rankin
18041	18220	Region 05	Indiana	Fayette
01051	33860	Region 04	Alabama	Elmore
01021	13820	Region 04	Alabama	Chilton
12085	38940	Region 04	Florida	Martin
51085	40060	Region 03	Virginia	Hanover
13279	47080	Region 04	Georgia	Toombs
36099	42900	Region 02	New York	Seneca
39169	49300	Region 05	Ohio	Wayne
39033	15340	Region 05	Ohio	Crawford
21047	17300	Region 04	Kentucky	Christian
21015	17140	Region 04	Kentucky	Boone
39109	19380	Region 05	Ohio	Miami
12019	27260	Region 04	Florida	Clay

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51049	Unknown	Region 03	Virginia	Cumberland
27119	24220	Region 05	Minnesota	Polk
37123	Unknown	Region 04	North Carolina	Montgomery
51630	47900	Region 03	Virginia	Fredericksburg
37193	35900	Region 04	North Carolina	Wilkes
13161	Unknown	Region 04	Georgia	Jeff Davis
45049	Unknown	Region 04	South Carolina	Hampton
28117	Unknown	Region 04	Mississippi	Prentiss
48177	Unknown	Region 06	Texas	Gonzales
12023	29380	Region 04	Florida	Columbia
47021	34980	Region 04	Tennessee	Cheatham
27169	49100	Region 05	Minnesota	Winona
29107	28140	Region 07	Missouri	Lafayette
56019	Unknown	Region 08	Wyoming	Johnson
45005	Unknown	Region 04	South Carolina	Allendale
28093	32820	Region 04	Mississippi	Marshall
19011	16300	Region 07	Iowa	Benton
48195	Unknown	Region 06	Texas	Hansford
45001	24940	Region 04	South Carolina	Abbeville
27165	Unknown	Region 05	Minnesota	Watonwan
51600	47900	Region 03	Virginia	Fairfax City
18159	Unknown	Region 05	Indiana	Tipton
22035	Unknown	Region 06	Louisiana	East Carroll
32015	Unknown	Region 09	Nevada	Lander
19095	Unknown	Region 07	Iowa	Iowa
18171	Unknown	Region 05	Indiana	Warren
13003	Unknown	Region 04	Georgia	Atkinson

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21007	37140	Region 04	Kentucky	Ballard
18007	29200	Region 05	Indiana	Benton
13101	46660	Region 04	Georgia	Echols
48141	21340	Region 06	Texas	El Paso
06073	41740	Region 09	California	San Diego
24035	12580	Region 03	Maryland	Queen Anne's
24041	20660	Region 03	Maryland	Talbot
48439	19100	Region 06	Texas	Tarrant
37083	40260	Region 04	North Carolina	Halifax
16027	14260	Region 10	Idaho	Canyon
06085	41940	Region 09	California	Santa Clara
12035	19660	Region 04	Florida	Flagler
13223	12060	Region 04	Georgia	Paulding
26045	29620	Region 05	Michigan	Eaton
05051	26300	Region 06	Arkansas	Garland
06083	42200	Region 09	California	Santa Barbara
13059	12020	Region 04	Georgia	Clarke
33017	14460	Region 01	New Hampshire	Strafford
39003	30620	Region 05	Ohio	Allen
17115	19500	Region 05	Illinois	Macon
37023	25860	Region 04	North Carolina	Burke
13111	Unknown	Region 04	Georgia	Fannin
17037	16980	Region 05	Illinois	DeKalb
28107	Unknown	Region 04	Mississippi	Panola
05071	Unknown	Region 06	Arkansas	Johnson
13313	19140	Region 04	Georgia	Whitfield
46135	49460	Region 08	South Dakota	Yankton

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29099	41180	Region 07	Missouri	Jefferson
37007	Unknown	Region 04	North Carolina	Anson
18119	14020	Region 05	Indiana	Owen
25007	47240	Region 01	Massachusetts	Dukes
42061	26500	Region 03	Pennsylvania	Huntingdon
23027	Unknown	Region 01	Maine	Waldo
51670	40060	Region 03	Virginia	Hopewell
17109	31380	Region 05	Illinois	McDonough
28153	Unknown	Region 04	Mississippi	Wayne
29071	41180	Region 07	Missouri	Franklin
22011	19760	Region 06	Louisiana	Beauregard
13025	15260	Region 04	Georgia	Brantley
01039	Unknown	Region 04	Alabama	Covington
45067	Unknown	Region 04	South Carolina	Marion
45011	Unknown	Region 04	South Carolina	Barnwell
48437	Unknown	Region 06	Texas	Swisher
51007	40060	Region 03	Virginia	Amelia
18013	26900	Region 05	Indiana	Brown
08039	19740	Region 08	Colorado	Elbert
45037	12260	Region 04	South Carolina	Edgefield
28131	Unknown	Region 04	Mississippi	Stone
08095	Unknown	Region 08	Colorado	Phillips
19105	16300	Region 07	Iowa	Jones
48003	11380	Region 06	Texas	Andrews
02195	Unknown	Region 10	Alaska	Petersburg
37149	Unknown	Region 04	North Carolina	Polk
19119	Unknown	Region 07	Iowa	Lyon

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13149	12060	Region 04	Georgia	Heard
46111	Unknown	Region 08	South Dakota	Sanborn
20163	Unknown	Region 07	Kansas	Rooks
19075	47940	Region 07	Iowa	Grundy
17129	44100	Region 05	Illinois	Menard
05073	Unknown	Region 06	Arkansas	Lafayette
12049	48100	Region 04	Florida	Hardee
27107	Unknown	Region 05	Minnesota	Norman
13053	17980	Region 04	Georgia	Chattahoochee
20019	Unknown	Region 07	Kansas	Chautauqua
19133	Unknown	Region 07	Iowa	Monona
19073	Unknown	Region 07	Iowa	Greene
17167	44100	Region 05	Illinois	Sangamon
08069	22660	Region 08	Colorado	Larimer
08067	20420	Region 08	Colorado	La Plata
37179	16740	Region 04	North Carolina	Union
02130	28540	Region 10	Alaska	Ketchikan Gateway
42003	38300	Region 03	Pennsylvania	Allegheny
36057	11220	Region 02	New York	Montgomery
40109	36420	Region 06	Oklahoma	Oklahoma
12031	27260	Region 04	Florida	Duval
51550	47260	Region 03	Virginia	Chesapeake
46005	26700	Region 08	South Dakota	Beadle
37057	49180	Region 04	North Carolina	Davidson
45019	16700	Region 04	South Carolina	Charleston
51113	Unknown	Region 03	Virginia	Madison
16039	34300	Region 10	Idaho	Elmore

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01049	Unknown	Region 04	Alabama	DeKalb
36077	36580	Region 02	New York	Otsego
42129	38300	Region 03	Pennsylvania	Westmoreland
39151	15940	Region 05	Ohio	Stark
40071	38620	Region 06	Oklahoma	Kay
42097	44980	Region 03	Pennsylvania	Northumberland
12001	23540	Region 04	Florida	Alachua
27047	10660	Region 05	Minnesota	Freeborn
45057	16740	Region 04	South Carolina	Lancaster
13073	12260	Region 04	Georgia	Columbia
48339	26420	Region 06	Texas	Montgomery
06029	12540	Region 09	California	Kern
06031	25260	Region 09	California	Kings
19045	17540	Region 07	Iowa	Clinton
01113	17980	Region 04	Alabama	Russell
51730	40060	Region 03	Virginia	Petersburg
39175	Unknown	Region 05	Ohio	Wyandot
47159	34980	Region 04	Tennessee	Smith
19089	Unknown	Region 07	Iowa	Howard
26091	10300	Region 05	Michigan	Lenawee
20099	37660	Region 07	Kansas	Labette
21157	Unknown	Region 04	Kentucky	Marshall
40115	33060	Region 06	Oklahoma	Ottawa
45023	16740	Region 04	South Carolina	Chester
12087	28580	Region 04	Florida	Monroe
13251	Unknown	Region 04	Georgia	Screven
29101	47660	Region 07	Missouri	Johnson

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26113	15620	Region 05	Michigan	Missaukee
40037	46140	Region 06	Oklahoma	Creek
08119	17820	Region 08	Colorado	Teller
18073	16980	Region 05	Indiana	Jasper
19065	Unknown	Region 07	Iowa	Fayette
19085	36540	Region 07	Iowa	Harrison
51127	40060	Region 03	Virginia	New Kent
21023	17140	Region 04	Kentucky	Bracken
31177	36540	Region 07	Nebraska	Washington
27039	40340	Region 05	Minnesota	Dodge
19177	Unknown	Region 07	Iowa	Van Buren
28125	Unknown	Region 04	Mississippi	Sharkey
20129	Unknown	Region 07	Kansas	Morton
06027	Unknown	Region 09	California	Inyo
48011	11100	Region 06	Texas	Armstrong
31109	30700	Region 07	Nebraska	Lancaster
04013	38060	Region 09	Arizona	Maricopa
26005	26090	Region 05	Michigan	Allegan
28087	18060	Region 04	Mississippi	Lowndes
48061	15180	Region 06	Texas	Cameron
12095	36740	Region 04	Florida	Orange
23031	38860	Region 01	Maine	York
56021	16940	Region 08	Wyoming	Laramie
06001	41860	Region 09	California	Alameda
25019	Unknown	Region 01	Massachusetts	Nantucket
51003	16820	Region 03	Virginia	Albemarle
40143	46140	Region 06	Oklahoma	Tulsa

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45075	36700	Region 04	South Carolina	Orangeburg
29159	42740	Region 07	Missouri	Pettis
06071	40140	Region 09	California	San Bernardino
51137	Unknown	Region 03	Virginia	Orange
28105	44260	Region 04	Mississippi	Oktibbeha
51530	Unknown	Region 03	Virginia	Buena Vista
17073	19340	Region 05	Illinois	Henry
45083	43900	Region 04	South Carolina	Spartanburg
39045	18140	Region 05	Ohio	Fairfield
54061	34060	Region 03	West Virginia	Monongalia
51033	40060	Region 03	Virginia	Caroline
04021	38060	Region 09	Arizona	Pinal
37127	40580	Region 04	North Carolina	Nash
39171	Unknown	Region 05	Ohio	Williams
17095	23660	Region 05	Illinois	Knox
01125	46220	Region 04	Alabama	Tuscaloosa
01071	42460	Region 04	Alabama	Jackson
48021	12420	Region 06	Texas	Bastrop
05121	Unknown	Region 06	Arkansas	Randolph
36043	46540	Region 02	New York	Herkimer
47053	Unknown	Region 04	Tennessee	Gibson
13143	12060	Region 04	Georgia	Haralson
21037	17140	Region 04	Kentucky	Campbell
55111	12660	Region 05	Wisconsin	Sauk
42019	38300	Region 03	Pennsylvania	Butler
47045	20540	Region 04	Tennessee	Dyer
38053	Unknown	Region 08	North Dakota	McKenzie

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26079	45900	Region 05	Michigan	Kalkaska
50015	Unknown	Region 01	Vermont	Lamoille
39103	17460	Region 05	Ohio	Medina
49045	41620	Region 08	Utah	Tooele
56009	Unknown	Region 08	Wyoming	Converse
37143	21020	Region 04	North Carolina	Perquimans
13169	31420	Region 04	Georgia	Jones
05061	Unknown	Region 06	Arkansas	Howard
05111	27860	Region 06	Arkansas	Poinsett
55089	33340	Region 05	Wisconsin	Ozaukee
47115	16860	Region 04	Tennessee	Marion
23007	Unknown	Region 01	Maine	Franklin
17125	Unknown	Region 05	Illinois	Mason
51057	Unknown	Region 03	Virginia	Essex
21081	17140	Region 04	Kentucky	Grant
05011	Unknown	Region 06	Arkansas	Bradley
17135	Unknown	Region 05	Illinois	Montgomery
47041	Unknown	Region 04	Tennessee	DeKalb
39123	38840	Region 05	Ohio	Ottawa
17041	Unknown	Region 05	Illinois	Douglas
08091	Unknown	Region 08	Colorado	Ouray
37177	28620	Region 04	North Carolina	Tyrrell
51775	40220	Region 03	Virginia	Salem
35057	10740	Region 06	New Mexico	Torrance
42053	Unknown	Region 03	Pennsylvania	Forest
48071	26420	Region 06	Texas	Chambers
19165	Unknown	Region 07	Iowa	Shelby

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21219	Unknown	Region 04	Kentucky	Todd
46109	Unknown	Region 08	South Dakota	Roberts
13289	31420	Region 04	Georgia	Twiggs
13163	Unknown	Region 04	Georgia	Jefferson
18161	17140	Region 05	Indiana	Union
12013	Unknown	Region 04	Florida	Calhoun
20067	Unknown	Region 07	Kansas	Grant
26139	24340	Region 05	Michigan	Ottawa
08101	39380	Region 08	Colorado	Pueblo
18105	14020	Region 05	Indiana	Monroe
51810	47260	Region 03	Virginia	Virginia Beach
12115	35840	Region 04	Florida	Sarasota
21145	37140	Region 04	Kentucky	McCracken
37139	21020	Region 04	North Carolina	Pasquotank
41051	38900	Region 10	Oregon	Multnomah
13227	12060	Region 04	Georgia	Pickens
48041	17780	Region 06	Texas	Brazos
28047	25060	Region 04	Mississippi	Harrison
06059	31080	Region 09	California	Orange
12127	19660	Region 04	Florida	Volusia
48049	15220	Region 06	Texas	Brown
06041	41860	Region 09	California	Marin
23011	12300	Region 01	Maine	Kennebec
12057	45300	Region 04	Florida	Hillsborough
41067	38900	Region 10	Oregon	Washington
26073	34380	Region 05	Michigan	Isabella
01069	20020	Region 04	Alabama	Houston

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54039	16620	Region 03	West Virginia	Kanawha
51650	47260	Region 03	Virginia	Hampton
55133	33340	Region 05	Wisconsin	Waukesha
36069	40380	Region 02	New York	Ontario
39017	17140	Region 05	Ohio	Butler
27123	33460	Region 05	Minnesota	Ramsey
40121	32540	Region 06	Oklahoma	Pittsburg
31157	42420	Region 07	Nebraska	Scotts Bluff
12113	37860	Region 04	Florida	Santa Rosa
49011	36260	Region 08	Utah	Davis
01003	19300	Region 04	Alabama	Baldwin
51710	47260	Region 03	Virginia	Norfolk
21067	30460	Region 04	Kentucky	Fayette
51590	19260	Region 03	Virginia	Danville
31111	35820	Region 07	Nebraska	Lincoln
01015	11500	Region 04	Alabama	Calhoun
39041	18140	Region 05	Ohio	Delaware
21035	34660	Region 04	Kentucky	Calloway
26141	Unknown	Region 05	Michigan	Presque Isle
53031	Unknown	Region 10	Washington	Jefferson
55043	38420	Region 05	Wisconsin	Grant
48121	19100	Region 06	Texas	Denton
45007	24860	Region 04	South Carolina	Anderson
17121	16460	Region 05	Illinois	Marion
47051	46100	Region 04	Tennessee	Franklin
32510	16180	Region 09	Nevada	Carson City
18077	31500	Region 05	Indiana	Jefferson

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18065	35220	Region 05	Indiana	Henry
05043	Unknown	Region 06	Arkansas	Drew
26151	Unknown	Region 05	Michigan	Sanilac
21097	Unknown	Region 04	Kentucky	Harrison
19191	Unknown	Region 07	Iowa	Winneshiek
01001	33860	Region 04	Alabama	Autauga
37079	Unknown	Region 04	North Carolina	Greene
27079	33460	Region 05	Minnesota	Le Sueur
51149	40060	Region 03	Virginia	Prince George
13119	Unknown	Region 04	Georgia	Franklin
31185	Unknown	Region 07	Nebraska	York
51025	Unknown	Region 03	Virginia	Brunswick
47097	Unknown	Region 04	Tennessee	Lauderdale
17021	45380	Region 05	Illinois	Christian
21207	Unknown	Region 04	Kentucky	Russell
21155	Unknown	Region 04	Kentucky	Marion
13107	Unknown	Region 04	Georgia	Emanuel
13207	31420	Region 04	Georgia	Monroe
01115	13820	Region 04	Alabama	St. Clair
45087	43900	Region 04	South Carolina	Union
48139	19100	Region 06	Texas	Ellis
48481	20900	Region 06	Texas	Wharton
30057	Unknown	Region 08	Montana	Madison
46129	Unknown	Region 08	South Dakota	Walworth
13019	Unknown	Region 04	Georgia	Berrien
12027	11580	Region 04	Florida	DeSoto
08125	Unknown	Region 08	Colorado	Yuma

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42131	42540	Region 03	Pennsylvania	Wyoming
48189	38380	Region 06	Texas	Hale
28145	Unknown	Region 04	Mississippi	Union
19043	Unknown	Region 07	Iowa	Clayton
37117	Unknown	Region 04	North Carolina	Martin
13083	16860	Region 04	Georgia	Dade
48219	30220	Region 06	Texas	Hockley
21033	Unknown	Region 04	Kentucky	Caldwell
48205	Unknown	Region 06	Texas	Hartley
13173	46660	Region 04	Georgia	Lanier
05017	Unknown	Region 06	Arkansas	Chicot
55061	24580	Region 05	Wisconsin	Kewaunee
28135	Unknown	Region 04	Mississippi	Tallahatchie
19019	Unknown	Region 07	Iowa	Buchanan
20157	Unknown	Region 07	Kansas	Republic
19149	43580	Region 07	Iowa	Plymouth
19015	14340	Region 07	Iowa	Boone
17189	Unknown	Region 05	Illinois	Washington
32021	Unknown	Region 09	Nevada	Mineral
48175	47020	Region 06	Texas	Goliad
48445	Unknown	Region 06	Texas	Terry
48239	Unknown	Region 06	Texas	Jackson
13049	Unknown	Region 04	Georgia	Charlton
40033	30020	Region 06	Oklahoma	Cotton
51091	Unknown	Region 03	Virginia	Highland
46101	Unknown	Region 08	South Dakota	Moody
16025	25200	Region 10	Idaho	Camas

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18115	17140	Region 05	Indiana	Ohio
48305	31180	Region 06	Texas	Lynn
19009	Unknown	Region 07	Iowa	Audubon
53055	Unknown	Region 10	Washington	San Juan
02090	21820	Region 10	Alaska	Fairbanks North Star
37183	39580	Region 04	North Carolina	Wake
37051	22180	Region 04	North Carolina	Cumberland
37081	24660	Region 04	North Carolina	Guilford
12111	38940	Region 04	Florida	St. Lucie
02110	27940	Region 10	Alaska	Juneau
13051	42340	Region 04	Georgia	Chatham
12117	36740	Region 04	Florida	Seminole
48029	41700	Region 06	Texas	Bexar
17019	16580	Region 05	Illinois	Champaign
51770	40220	Region 03	Virginia	Roanoke
29113	41180	Region 07	Missouri	Lincoln
31153	36540	Region 07	Nebraska	Sarpy
41059	25840	Region 10	Oregon	Umatilla
29029	Unknown	Region 07	Missouri	Camden
55025	31540	Region 05	Wisconsin	Dane
42087	30380	Region 03	Pennsylvania	Mifflin
26103	32100	Region 05	Michigan	Marquette
38015	13900	Region 08	North Dakota	Burleigh
12103	45300	Region 04	Florida	Pinellas
18157	29200	Region 05	Indiana	Tippecanoe
42109	42780	Region 03	Pennsylvania	Snyder
20173	48620	Region 07	Kansas	Sedgwick

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12091	18880	Region 04	Florida	Okaloosa
06013	41860	Region 09	California	Contra Costa
26159	28020	Region 05	Michigan	Van Buren
36117	40380	Region 02	New York	Wayne
40031	30020	Region 06	Oklahoma	Comanche
01121	45180	Region 04	Alabama	Talladega
45015	16700	Region 04	South Carolina	Berkeley
39043	41780	Region 05	Ohio	Erie
51680	31340	Region 03	Virginia	Lynchburg
45091	16740	Region 04	South Carolina	York
45047	24940	Region 04	South Carolina	Greenwood
50021	40860	Region 01	Vermont	Rutland
36019	38460	Region 02	New York	Clinton
48085	19100	Region 06	Texas	Collin
12109	27260	Region 04	Florida	St. Johns
18163	21780	Region 05	Indiana	Vanderburgh
48233	14420	Region 06	Texas	Hutchinson
06077	44700	Region 09	California	San Joaquin
37101	39580	Region 04	North Carolina	Johnston
37125	38240	Region 04	North Carolina	Moore
48209	12420	Region 06	Texas	Hays
20091	28140	Region 07	Kansas	Johnson
48037	45500	Region 06	Texas	Bowie
12073	45220	Region 04	Florida	Leon
36003	Unknown	Region 02	New York	Allegany
28081	46180	Region 04	Mississippi	Lee
48361	13140	Region 06	Texas	Orange

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12055	42700	Region 04	Florida	Highlands
27003	33460	Region 05	Minnesota	Anoka
42119	30260	Region 03	Pennsylvania	Union
54049	21900	Region 03	West Virginia	Marion
13213	19140	Region 04	Georgia	Murray
50027	17200	Region 01	Vermont	Windsor
42063	26860	Region 03	Pennsylvania	Indiana
51023	40220	Region 03	Virginia	Botetourt
06113	40900	Region 09	California	Yolo
13195	12020	Region 04	Georgia	Madison
42035	30820	Region 03	Pennsylvania	Clinton
42073	35260	Region 03	Pennsylvania	Lawrence
53003	30300	Region 10	Washington	Asotin
18151	11420	Region 05	Indiana	Steuben
38059	13900	Region 08	North Dakota	Morton
18021	45460	Region 05	Indiana	Clay
17063	16980	Region 05	Illinois	Grundy
36031	Unknown	Region 02	New York	Essex
48397	19100	Region 06	Texas	Rockwall
37165	29900	Region 04	North Carolina	Scotland
36123	40380	Region 02	New York	Yates
05003	Unknown	Region 06	Arkansas	Ashley
39011	47540	Region 05	Ohio	Auglaize
54069	48540	Region 03	West Virginia	Ohio
53039	Unknown	Region 10	Washington	Klickitat
16047	Unknown	Region 10	Idaho	Gooding
42005	38300	Region 03	Pennsylvania	Armstrong

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13241	Unknown	Region 04	Georgia	Rabun
27009	41060	Region 05	Minnesota	Benton
06069	41940	Region 09	California	San Benito
20113	32700	Region 07	Kansas	McPherson
05091	45500	Region 06	Arkansas	Miller
39065	Unknown	Region 05	Ohio	Hardin
29069	28380	Region 07	Missouri	Dunklin
45029	Unknown	Region 04	South Carolina	Colleton
37017	Unknown	Region 04	North Carolina	Bladen
45071	35140	Region 04	South Carolina	Newberry
01053	Unknown	Region 04	Alabama	Escambia
31033	Unknown	Region 07	Nebraska	Cheyenne
51027	Unknown	Region 03	Virginia	Buchanan
51135	Unknown	Region 03	Virginia	Nottoway
32023	37220	Region 09	Nevada	Nye
18045	Unknown	Region 05	Indiana	Fountain
48051	17780	Region 06	Texas	Burleson
47069	Unknown	Region 04	Tennessee	Hardeman
48185	Unknown	Region 06	Texas	Grimes
45009	Unknown	Region 04	South Carolina	Bamberg
51678	Unknown	Region 03	Virginia	Lexington
18153	45460	Region 05	Indiana	Sullivan
08093	19740	Region 08	Colorado	Park
01075	Unknown	Region 04	Alabama	Lamar
39019	15940	Region 05	Ohio	Carroll
21057	Unknown	Region 04	Kentucky	Cumberland
31039	Unknown	Region 07	Nebraska	Cuming

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40035	Unknown	Region 06	Oklahoma	Craig
37185	Unknown	Region 04	North Carolina	Warren
18075	Unknown	Region 05	Indiana	Jay
51037	Unknown	Region 03	Virginia	Charlotte
01029	Unknown	Region 04	Alabama	Cleburne
19141	Unknown	Region 07	Iowa	O'Brien
16081	27220	Region 10	Idaho	Teton
47015	34980	Region 04	Tennessee	Cannon
31167	35740	Region 07	Nebraska	Stanton
37073	47260	Region 04	North Carolina	Gates
48369	Unknown	Region 06	Texas	Parmer
12003	27260	Region 04	Florida	Baker
31077	Unknown	Region 07	Nebraska	Greeley
31065	Unknown	Region 07	Nebraska	Furnas
29199	Unknown	Region 07	Missouri	Scotland
18009	Unknown	Region 05	Indiana	Blackford
08023	Unknown	Region 08	Colorado	Costilla
41049	25840	Region 10	Oregon	Morrow
20181	Unknown	Region 07	Kansas	Sherman
05129	Unknown	Region 06	Arkansas	Searcy
51157	47900	Region 03	Virginia	Rappahannock
46085	Unknown	Region 08	South Dakota	Lyman
05053	30780	Region 06	Arkansas	Grant
20069	Unknown	Region 07	Kansas	Gray
31021	Unknown	Region 07	Nebraska	Burt
31125	Unknown	Region 07	Nebraska	Nance
31097	Unknown	Region 07	Nebraska	Johnson

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20179	Unknown	Region 07	Kansas	Sheridan
48345	Unknown	Region 06	Texas	Motley
46069	Unknown	Region 08	South Dakota	Hyde
31173	Unknown	Region 07	Nebraska	Thurston
20023	Unknown	Region 07	Kansas	Cheyenne
20097	Unknown	Region 07	Kansas	Kiowa
15009	27980	Region 09	Hawaii	Maui
13127	15260	Region 04	Georgia	Glynn
20177	45820	Region 07	Kansas	Shawnee
37147	24780	Region 04	North Carolina	Pitt
53063	44060	Region 10	Washington	Spokane
42081	48700	Region 03	Pennsylvania	Lycoming
37067	49180	Region 04	North Carolina	Forsyth
12105	29460	Region 04	Florida	Polk
45051	34820	Region 04	South Carolina	Horry
35013	29740	Region 06	New Mexico	Dona Ana
05115	40780	Region 06	Arkansas	Pope
06067	40900	Region 09	California	Sacramento
26117	24340	Region 05	Michigan	Montcalm
05031	27860	Region 06	Arkansas	Craighead
41043	10540	Region 10	Oregon	Linn
26111	33220	Region 05	Michigan	Midland
51700	47260	Region 03	Virginia	Newport News
20161	31740	Region 07	Kansas	Riley
12017	26140	Region 04	Florida	Citrus
39139	31900	Region 05	Ohio	Richland
36011	12180	Region 02	New York	Cayuga

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47125	17300	Region 04	Tennessee	Montgomery
13039	41220	Region 04	Georgia	Camden
53011	38900	Region 10	Washington	Clark
37001	15500	Region 04	North Carolina	Alamance
06079	42020	Region 09	California	San Luis Obispo
51073	47260	Region 03	Virginia	Gloucester
01043	18980	Region 04	Alabama	Cullman
27013	31860	Region 05	Minnesota	Blue Earth
21199	43700	Region 04	Kentucky	Pulaski
51133	Unknown	Region 03	Virginia	Northumberland
35049	42140	Region 06	New Mexico	Santa Fe
26031	Unknown	Region 05	Michigan	Cheboygan
12069	36740	Region 04	Florida	Lake
37071	16740	Region 04	North Carolina	Gaston
13047	16860	Region 04	Georgia	Catoosa
06099	33700	Region 09	California	Stanislaus
39081	48260	Region 05	Ohio	Jefferson
35061	10740	Region 06	New Mexico	Valencia
37097	16740	Region 04	North Carolina	Iredell
29051	27620	Region 07	Missouri	Cole
48183	30980	Region 06	Texas	Gregg
26143	Unknown	Region 05	Michigan	Roscommon
55039	22540	Region 05	Wisconsin	Fond du Lac
39089	18140	Region 05	Ohio	Licking
26063	Unknown	Region 05	Michigan	Huron
06111	37100	Region 09	California	Ventura
47031	46100	Region 04	Tennessee	Coffee

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13295	16860	Region 04	Georgia	Walker
37039	Unknown	Region 04	North Carolina	Cherokee
17103	19940	Region 05	Illinois	Lee
01077	22520	Region 04	Alabama	Lauderdale
40051	36420	Region 06	Oklahoma	Grady
29169	22780	Region 07	Missouri	Pulaski
39085	17460	Region 05	Ohio	Lake
40065	11060	Region 06	Oklahoma	Jackson
01033	22520	Region 04	Alabama	Colbert
54057	19060	Region 03	West Virginia	Mineral
21113	30460	Region 04	Kentucky	Jessamine
21019	26580	Region 04	Kentucky	Boyd
51191	28700	Region 03	Virginia	Washington
39165	17140	Region 05	Ohio	Warren
51199	47260	Region 03	Virginia	York
22085	Unknown	Region 06	Louisiana	Sabine
21029	31140	Region 04	Kentucky	Bullitt
12131	18880	Region 04	Florida	Walton
36009	36460	Region 02	New York	Cattaraugus
01045	37120	Region 04	Alabama	Dale
33003	Unknown	Region 01	New Hampshire	Carroll
48257	19100	Region 06	Texas	Kaufman
47105	28940	Region 04	Tennessee	Loudon
40017	36420	Region 06	Oklahoma	Canadian
05133	Unknown	Region 06	Arkansas	Sevier
18099	38500	Region 05	Indiana	Marshall
46065	38180	Region 08	South Dakota	Hughes

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08003	Unknown	Region 08	Colorado	Alamosa
42099	25420	Region 03	Pennsylvania	Perry
55131	33340	Region 05	Wisconsin	Washington
16075	36620	Region 10	Idaho	Payette
26129	Unknown	Region 05	Michigan	Ogemaw
39027	48940	Region 05	Ohio	Clinton
47183	32280	Region 04	Tennessee	Weakley
12089	27260	Region 04	Florida	Nassau
39073	18140	Region 05	Ohio	Hocking
39107	16380	Region 05	Ohio	Mercer
17137	27300	Region 05	Illinois	Morgan
42059	Unknown	Region 03	Pennsylvania	Greene
45043	23860	Region 04	South Carolina	Georgetown
18087	Unknown	Region 05	Indiana	LaGrange
12129	45220	Region 04	Florida	Wakulla
29207	Unknown	Region 07	Missouri	Stoddard
17117	41180	Region 05	Illinois	Macoupin
40131	46140	Region 06	Oklahoma	Rogers
17051	Unknown	Region 05	Illinois	Fayette
17105	38700	Region 05	Illinois	Livingston
48493	41700	Region 06	Texas	Wilson
48401	30980	Region 06	Texas	Rusk
47117	30280	Region 04	Tennessee	Marshall
48123	Unknown	Region 06	Texas	DeWitt
55103	Unknown	Region 05	Wisconsin	Richland
37059	49180	Region 04	North Carolina	Davie
40125	43060	Region 06	Oklahoma	Pottawatomie

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04023	35700	Region 09	Arizona	Santa Cruz
27099	12380	Region 05	Minnesota	Mower
01009	13820	Region 04	Alabama	Blount
01133	Unknown	Region 04	Alabama	Winston
28115	46180	Region 04	Mississippi	Pontotoc
45053	25940	Region 04	South Carolina	Jasper
39135	Unknown	Region 05	Ohio	Preble
29081	Unknown	Region 07	Missouri	Harrison
18121	Unknown	Region 05	Indiana	Parke
39047	47920	Region 05	Ohio	Fayette
21211	31140	Region 04	Kentucky	Shelby
51119	Unknown	Region 03	Virginia	Middlesex
54065	Unknown	Region 03	West Virginia	Morgan
22043	10780	Region 06	Louisiana	Grant
48331	Unknown	Region 06	Texas	Milam
21239	30460	Region 04	Kentucky	Woodford
20005	11860	Region 07	Kansas	Atchison
18101	Unknown	Region 05	Indiana	Martin
19123	36820	Region 07	Iowa	Mahaska
55057	Unknown	Region 05	Wisconsin	Juneau
17015	Unknown	Region 05	Illinois	Carroll
51043	47900	Region 03	Virginia	Clarke
21003	14540	Region 04	Kentucky	Allen
18149	Unknown	Region 05	Indiana	Starke
16045	14260	Region 10	Idaho	Gem
01035	Unknown	Region 04	Alabama	Conecuh
47139	17420	Region 04	Tennessee	Polk

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38099	Unknown	Region 08	North Dakota	Walsh
56011	Unknown	Region 08	Wyoming	Crook
30007	Unknown	Region 08	Montana	Broadwater
29041	Unknown	Region 07	Missouri	Chariton
22065	Unknown	Region 06	Louisiana	Madison
21091	36980	Region 04	Kentucky	Hancock
20059	36840	Region 07	Kansas	Franklin
17053	16580	Region 05	Illinois	Ford
31137	Unknown	Region 07	Nebraska	Phelps
47121	Unknown	Region 04	Tennessee	Meigs
16003	Unknown	Region 10	Idaho	Adams
35059	Unknown	Region 06	New Mexico	Union
05065	Unknown	Region 06	Arkansas	Izard
21215	31140	Region 04	Kentucky	Spencer
16073	14260	Region 10	Idaho	Owyhee
17071	15460	Region 05	Illinois	Henderson
48343	Unknown	Region 06	Texas	Morris
46119	38180	Region 08	South Dakota	Sully
31023	Unknown	Region 07	Nebraska	Butler
20143	41460	Region 07	Kansas	Ottawa
04012	Unknown	Region 09	Arizona	La Paz
46087	43620	Region 08	South Dakota	McCook
49029	36260	Region 08	Utah	Morgan
17003	16020	Region 05	Illinois	Alexander
36041	Unknown	Region 02	New York	Hamilton
05105	30780	Region 06	Arkansas	Perry
06043	Unknown	Region 09	California	Mariposa

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31163	Unknown	Region 07	Nebraska	Sherman
08025	Unknown	Region 08	Colorado	Crowley
48173	13700	Region 06	Texas	Glasscock
48045	Unknown	Region 06	Texas	Briscoe
48491	12420	Region 06	Texas	Williamson
23019	12620	Region 01	Maine	Penobscot
06019	23420	Region 09	California	Fresno
17099	36860	Region 05	Illinois	LaSalle
13179	25980	Region 04	Georgia	Liberty
01089	26620	Region 04	Alabama	Madison
17143	37900	Region 05	Illinois	Peoria
48005	31260	Region 06	Texas	Angelina
18167	45460	Region 05	Indiana	Vigo
17001	39500	Region 05	Illinois	Adams
42027	44300	Region 03	Pennsylvania	Centre
02020	11260	Region 10	Alaska	Anchorage
06095	46700	Region 09	California	Solano
01103	19460	Region 04	Alabama	Morgan
36045	48060	Region 02	New York	Jefferson
51015	44420	Region 03	Virginia	Augusta
17113	14010	Region 05	Illinois	McLean
49057	36260	Region 08	Utah	Weber
51121	13980	Region 03	Virginia	Montgomery
39113	19380	Region 05	Ohio	Montgomery
27163	33460	Region 05	Minnesota	Washington
29023	38740	Region 07	Missouri	Butler
35055	45340	Region 06	New Mexico	Taos

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53035	14740	Region 10	Washington	Kitsap
36075	45060	Region 02	New York	Oswego
29031	16020	Region 07	Missouri	Cape Girardeau
51181	Unknown	Region 03	Virginia	Surry
26047	Unknown	Region 05	Michigan	Emmet
48001	37300	Region 06	Texas	Anderson
45035	16700	Region 04	South Carolina	Dorchester
35017	43500	Region 06	New Mexico	Grant
04015	29420	Region 09	Arizona	Mohave
26127	Unknown	Region 05	Michigan	Oceana
51161	40220	Region 03	Virginia	Roanoke
47059	24620	Region 04	Tennessee	Greene
48449	34420	Region 06	Texas	Titus
18177	39980	Region 05	Indiana	Wayne
12061	42680	Region 04	Florida	Indian River
42051	38300	Region 03	Pennsylvania	Fayette
48349	18620	Region 06	Texas	Navarro
50023	12740	Region 01	Vermont	Washington
48423	46340	Region 06	Texas	Smith
29019	17860	Region 07	Missouri	Boone
33009	17200	Region 01	New Hampshire	Grafton
33001	29060	Region 01	New Hampshire	Belknap
26015	24340	Region 05	Michigan	Barry
45003	12260	Region 04	South Carolina	Aiken
05125	30780	Region 06	Arkansas	Saline
39149	43380	Region 05	Ohio	Shelby
27147	36940	Region 05	Minnesota	Steele

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21021	19220	Region 04	Kentucky	Boyle
13103	42340	Region 04	Georgia	Effingham
40021	45140	Region 06	Oklahoma	Cherokee
29219	41180	Region 07	Missouri	Warren
42125	38300	Region 03	Pennsylvania	Washington
42085	49660	Region 03	Pennsylvania	Mercer
42031	Unknown	Region 03	Pennsylvania	Clarion
26149	44780	Region 05	Michigan	St. Joseph
51820	44420	Region 03	Virginia	Waynesboro
22113	29180	Region 06	Louisiana	Vermilion
39143	23380	Region 05	Ohio	Sandusky
36023	18660	Region 02	New York	Cortland
05045	30780	Region 06	Arkansas	Faulkner
42015	42380	Region 03	Pennsylvania	Bradford
26027	43780	Region 05	Michigan	Cass
48149	Unknown	Region 06	Texas	Fayette
40097	Unknown	Region 06	Oklahoma	Mayes
29163	Unknown	Region 07	Missouri	Pike
08083	Unknown	Region 08	Colorado	Montezuma
41035	28900	Region 10	Oregon	Klamath
08105	Unknown	Region 08	Colorado	Rio Grande
29037	28140	Region 07	Missouri	Cass
20125	17700	Region 07	Kansas	Montgomery
13055	44900	Region 04	Georgia	Chattooga
18037	27540	Region 05	Indiana	Dubois
51195	13720	Region 03	Virginia	Wise
05059	31680	Region 06	Arkansas	Hot Spring

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48371	Unknown	Region 06	Texas	Pecos
05085	30780	Region 06	Arkansas	Lonoke
32019	22280	Region 09	Nevada	Lyon
26051	Unknown	Region 05	Michigan	Gladwin
05029	Unknown	Region 06	Arkansas	Conway
35039	21580	Region 06	New Mexico	Rio Arriba
45059	24860	Region 04	South Carolina	Laurens
37111	32000	Region 04	North Carolina	McDowell
26097	Unknown	Region 05	Michigan	Mackinac
47017	Unknown	Region 04	Tennessee	Carroll
47085	Unknown	Region 04	Tennessee	Humphreys
20155	26740	Region 07	Kansas	Reno
18135	Unknown	Region 05	Indiana	Randolph
51053	40060	Region 03	Virginia	Dinwiddie
17085	Unknown	Region 05	Illinois	Jo Daviess
29139	Unknown	Region 07	Missouri	Montgomery
05027	31620	Region 06	Arkansas	Columbia
18123	Unknown	Region 05	Indiana	Perry
26057	10940	Region 05	Michigan	Gratiot
21049	30460	Region 04	Kentucky	Clark
01099	Unknown	Region 04	Alabama	Monroe
18183	23060	Region 05	Indiana	Whitley
21203	40080	Region 04	Kentucky	Rockcastle
08007	Unknown	Region 08	Colorado	Archuleta
48293	Unknown	Region 06	Texas	Limestone
51083	Unknown	Region 03	Virginia	Halifax
29143	Unknown	Region 07	Missouri	New Madrid

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21225	Unknown	Region 04	Kentucky	Union
47087	18260	Region 04	Tennessee	Jackson
55019	Unknown	Region 05	Wisconsin	Clark
01019	Unknown	Region 04	Alabama	Cherokee
37145	20500	Region 04	North Carolina	Person
27093	Unknown	Region 05	Minnesota	Meeker
37197	49180	Region 04	North Carolina	Yadkin
45065	Unknown	Region 04	South Carolina	McCormick
21147	Unknown	Region 04	Kentucky	McCreary
37137	35100	Region 04	North Carolina	Pamlico
39051	45780	Region 05	Ohio	Fulton
56043	Unknown	Region 08	Wyoming	Washakie
13043	Unknown	Region 04	Georgia	Candler
47023	27180	Region 04	Tennessee	Chester
47027	Unknown	Region 04	Tennessee	Clay
31095	Unknown	Region 07	Nebraska	Jefferson
29111	39500	Region 07	Missouri	Lewis
48193	Unknown	Region 06	Texas	Hamilton
17083	41180	Region 05	Illinois	Jersey
05137	Unknown	Region 06	Arkansas	Stone
26135	Unknown	Region 05	Michigan	Oscoda
28039	Unknown	Region 04	Mississippi	George
54093	Unknown	Region 03	West Virginia	Tucker
21171	Unknown	Region 04	Kentucky	Monroe
21221	17300	Region 04	Kentucky	Trigg
27141	33460	Region 05	Minnesota	Sherburne
48489	39700	Region 06	Texas	Willacy

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48473	26420	Region 06	Texas	Waller
27045	40340	Region 05	Minnesota	Fillmore
55053	Unknown	Region 05	Wisconsin	Jackson
19023	Unknown	Region 07	Iowa	Butler
20149	31740	Region 07	Kansas	Pottawatomie
47083	Unknown	Region 04	Tennessee	Houston
13309	Unknown	Region 04	Georgia	Wheeler
05095	Unknown	Region 06	Arkansas	Monroe
49017	Unknown	Region 08	Utah	Garfield
46009	Unknown	Region 08	South Dakota	Bon Homme
48295	Unknown	Region 06	Texas	Lipscomb
49023	39340	Region 08	Utah	Juab
20183	Unknown	Region 07	Kansas	Smith
31099	28260	Region 07	Nebraska	Kearney
19121	19780	Region 07	Iowa	Madison
48247	Unknown	Region 06	Texas	Jim Hogg
27155	Unknown	Region 05	Minnesota	Traverse
40075	Unknown	Region 06	Oklahoma	Kiowa
30009	13740	Region 08	Montana	Carbon
50013	15540	Region 01	Vermont	Grand Isle
20141	Unknown	Region 07	Kansas	Osborne
21139	37140	Region 04	Kentucky	Livingston
30085	Unknown	Region 08	Montana	Roosevelt
41055	Unknown	Region 10	Oregon	Sherman
51045	40220	Region 03	Virginia	Craig
13265	Unknown	Region 04	Georgia	Taliaferro
55029	Unknown	Region 05	Wisconsin	Door

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48485	48660	Region 06	Texas	Wichita
48451	41660	Region 06	Texas	Tom Green
40119	44660	Region 06	Oklahoma	Payne
56025	16220	Region 08	Wyoming	Natrona
12009	37340	Region 04	Florida	Brevard
06053	41500	Region 09	California	Monterey
48027	28660	Region 06	Texas	Bell
30111	13740	Region 08	Montana	Yellowstone
39141	17060	Region 05	Ohio	Ross
39023	44220	Region 05	Ohio	Clark
47093	28940	Region 04	Tennessee	Knox
06097	42220	Region 09	California	Sonoma
54107	37620	Region 03	West Virginia	Wood
47065	16860	Region 04	Tennessee	Hamilton
53015	31020	Region 10	Washington	Cowlitz
48135	36220	Region 06	Texas	Ector
12053	45300	Region 04	Florida	Hernando
47155	42940	Region 04	Tennessee	Sevier
12083	36100	Region 04	Florida	Marion
48329	33260	Region 06	Texas	Midland
47119	34980	Region 04	Tennessee	Maury
47011	17420	Region 04	Tennessee	Bradley
41005	38900	Region 10	Oregon	Clackamas
47009	28940	Region 04	Tennessee	Blount
23001	30340	Region 01	Maine	Androscoggin
41053	41420	Region 10	Oregon	Polk
17199	16060	Region 05	Illinois	Williamson

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48187	41700	Region 06	Texas	Guadalupe
13031	44340	Region 04	Georgia	Bulloch
12029	Unknown	Region 04	Florida	Dixie
55117	43100	Region 05	Wisconsin	Sheboygan
46029	47980	Region 08	South Dakota	Codington
12101	45300	Region 04	Florida	Pasco
16067	15420	Region 10	Idaho	Minidoka
21179	12680	Region 04	Kentucky	Nelson
06055	34900	Region 09	California	Napa
18085	47700	Region 05	Indiana	Kosciusko
06047	32900	Region 09	California	Merced
54033	17220	Region 03	West Virginia	Harrison
01083	26620	Region 04	Alabama	Limestone
06087	42100	Region 09	California	Santa Cruz
26123	Unknown	Region 05	Michigan	Newaygo
39025	17140	Region 05	Ohio	Clermont
04027	49740	Region 09	Arizona	Yuma
26029	Unknown	Region 05	Michigan	Charlevoix
54079	26580	Region 03	West Virginia	Putnam
37167	10620	Region 04	North Carolina	Stanly
37045	43140	Region 04	North Carolina	Cleveland
49021	16260	Region 08	Utah	Iron
33005	28300	Region 01	New Hampshire	Cheshire
18083	47180	Region 05	Indiana	Knox
54011	26580	Region 03	West Virginia	Cabell
27037	33460	Region 05	Minnesota	Dakota
48251	19100	Region 06	Texas	Johnson

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45077	24860	Region 04	South Carolina	Pickens
29229	Unknown	Region 07	Missouri	Wright
48231	19100	Region 06	Texas	Hunt
53047	Unknown	Region 10	Washington	Okanogan
39063	22300	Region 05	Ohio	Hancock
42009	Unknown	Region 03	Pennsylvania	Bedford
55055	48020	Region 05	Wisconsin	Jefferson
47123	Unknown	Region 04	Tennessee	Monroe
29001	28860	Region 07	Missouri	Adair
21167	Unknown	Region 04	Kentucky	Mercer
19057	15460	Region 07	Iowa	Des Moines
40137	20340	Region 06	Oklahoma	Stephens
51115	47260	Region 03	Virginia	Mathews
19181	19780	Region 07	Iowa	Warren
48241	Unknown	Region 06	Texas	Jasper
51790	44420	Region 03	Virginia	Staunton
29027	27620	Region 07	Missouri	Callaway
55021	31540	Region 05	Wisconsin	Columbia
39077	35940	Region 05	Ohio	Huron
21163	21060	Region 04	Kentucky	Meade
47073	28700	Region 04	Tennessee	Hawkins
19155	36540	Region 07	Iowa	Pottawattamie
05135	Unknown	Region 06	Arkansas	Sharp
51079	16820	Region 03	Virginia	Greene
30067	Unknown	Region 08	Montana	Park
50005	Unknown	Region 01	Vermont	Caledonia
54087	Unknown	Region 03	West Virginia	Roane

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23023	38860	Region 01	Maine	Sagadahoc
39039	19580	Region 05	Ohio	Defiance
48217	Unknown	Region 06	Texas	Hill
08043	15860	Region 08	Colorado	Fremont
39059	15740	Region 05	Ohio	Guernsey
17033	Unknown	Region 05	Illinois	Crawford
39031	18740	Region 05	Ohio	Coshocton
48163	Unknown	Region 06	Texas	Frio
12059	Unknown	Region 04	Florida	Holmes
47151	Unknown	Region 04	Tennessee	Scott
16031	15420	Region 10	Idaho	Cassia
47131	46460	Region 04	Tennessee	Obion
40049	Unknown	Region 06	Oklahoma	Garvin
40133	Unknown	Region 06	Oklahoma	Seminole
21185	31140	Region 04	Kentucky	Oldham
48089	Unknown	Region 06	Texas	Colorado
12133	Unknown	Region 04	Florida	Washington
51125	16820	Region 03	Virginia	Nelson
38093	27420	Region 08	North Dakota	Stutsman
26119	Unknown	Region 05	Michigan	Montmorency
19167	Unknown	Region 07	Iowa	Sioux
12075	Unknown	Region 04	Florida	Levy
51035	Unknown	Region 03	Virginia	Carroll
29049	28140	Region 07	Missouri	Clinton
41065	45520	Region 10	Oregon	Wasco
19145	Unknown	Region 07	Iowa	Page
17173	Unknown	Region 05	Illinois	Shelby

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27049	39860	Region 05	Minnesota	Goodhue
48455	26660	Region 06	Texas	Trinity
41031	Unknown	Region 10	Oregon	Jefferson
51101	40060	Region 03	Virginia	King William
35041	38780	Region 06	New Mexico	Roosevelt
18033	12140	Region 05	Indiana	DeKalb
48147	Unknown	Region 06	Texas	Fannin
48505	49820	Region 06	Texas	Zapata
08081	18780	Region 08	Colorado	Moffat
20029	Unknown	Region 07	Kansas	Cloud
54051	48540	Region 03	West Virginia	Marshall
31159	30700	Region 07	Nebraska	Seward
19083	Unknown	Region 07	Iowa	Hardin
51145	40060	Region 03	Virginia	Powhatan
51735	47260	Region 03	Virginia	Poquoson
18165	45460	Region 05	Indiana	Vermillion
48063	Unknown	Region 06	Texas	Camp
54031	Unknown	Region 03	West Virginia	Hardy
48291	26420	Region 06	Texas	Liberty
21103	31140	Region 04	Kentucky	Henry
40077	Unknown	Region 06	Oklahoma	Latimer
46023	Unknown	Region 08	South Dakota	Charles Mix
48067	Unknown	Region 06	Texas	Cass
49015	Unknown	Region 08	Utah	Emery
21141	Unknown	Region 04	Kentucky	Logan
46027	46820	Region 08	South Dakota	Clay
18129	21780	Region 05	Indiana	Posey

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05093	14180	Region 06	Arkansas	Mississippi
20123	Unknown	Region 07	Kansas	Mitchell
48055	12420	Region 06	Texas	Caldwell
47185	Unknown	Region 04	Tennessee	White
19079	Unknown	Region 07	Iowa	Hamilton
17131	19340	Region 05	Illinois	Mercer
29035	Unknown	Region 07	Missouri	Carter
04009	40940	Region 09	Arizona	Graham
20087	45820	Region 07	Kansas	Jefferson
29053	Unknown	Region 07	Missouri	Cooper
08089	Unknown	Region 08	Colorado	Otero
47033	27180	Region 04	Tennessee	Crockett
39163	Unknown	Region 05	Ohio	Vinton
20107	28140	Region 07	Kansas	Linn
35037	Unknown	Region 06	New Mexico	Quay
12047	Unknown	Region 04	Florida	Hamilton
16037	Unknown	Region 10	Idaho	Custer
55083	24580	Region 05	Wisconsin	Oconto
31027	Unknown	Region 07	Nebraska	Cedar
46097	Unknown	Region 08	South Dakota	Miner
29177	28140	Region 07	Missouri	Ray
20073	Unknown	Region 07	Kansas	Greenwood
21193	Unknown	Region 04	Kentucky	Perry
13109	Unknown	Region 04	Georgia	Evans
21165	34460	Region 04	Kentucky	Menifee
55037	27020	Region 05	Wisconsin	Florence
40103	Unknown	Region 06	Oklahoma	Noble

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20043	41140	Region 07	Kansas	Doniphan
46115	Unknown	Region 08	South Dakota	Spink
20127	Unknown	Region 07	Kansas	Morris
20027	Unknown	Region 07	Kansas	Clay
47161	Unknown	Region 04	Tennessee	Stewart
48237	Unknown	Region 06	Texas	Jack
38069	Unknown	Region 08	North Dakota	Pierce
27081	Unknown	Region 05	Minnesota	Lincoln
27157	40340	Region 05	Minnesota	Wabasha
38103	Unknown	Region 08	North Dakota	Wells
54105	37620	Region 03	West Virginia	Wirt
47127	46100	Region 04	Tennessee	Moore
37005	Unknown	Region 04	North Carolina	Alleghany
45017	17900	Region 04	South Carolina	Calhoun
31003	Unknown	Region 07	Nebraska	Antelope
48031	Unknown	Region 06	Texas	Blanco
46017	Unknown	Region 08	South Dakota	Buffalo
38055	Unknown	Region 08	North Dakota	McLean
40073	Unknown	Region 06	Oklahoma	Kingfisher
51720	13720	Region 03	Virginia	Norton
40025	Unknown	Region 06	Oklahoma	Cimarron
53069	Unknown	Region 10	Washington	Wahkiakum
40053	Unknown	Region 06	Oklahoma	Grant
29227	Unknown	Region 07	Missouri	Worth
48065	11100	Region 06	Texas	Carson
48153	Unknown	Region 06	Texas	Floyd
20025	Unknown	Region 07	Kansas	Clark

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08073	Unknown	Region 08	Colorado	Lincoln
38065	13900	Region 08	North Dakota	Oliver
27089	Unknown	Region 05	Minnesota	Marshall
30059	Unknown	Region 08	Montana	Meagher
48169	Unknown	Region 06	Texas	Garza
15001	25900	Region 09	Hawaii	Hawaii
15003	46520	Region 09	Hawaii	Honolulu
49053	41100	Region 08	Utah	Washington
05007	22220	Region 06	Arkansas	Benton
37055	28620	Region 04	North Carolina	Dare
48215	32580	Region 06	Texas	Hidalgo
06023	21700	Region 09	California	Humboldt
12005	37460	Region 04	Florida	Bay
41017	13460	Region 10	Oregon	Deschutes
23013	Unknown	Region 01	Maine	Knox
48309	47380	Region 06	Texas	McLennan
27137	20260	Region 05	Minnesota	St. Louis
17029	16660	Region 05	Illinois	Coles
05143	22220	Region 06	Arkansas	Washington
51067	40220	Region 03	Virginia	Franklin
17179	37900	Region 05	Illinois	Tazewell
37049	35100	Region 04	North Carolina	Craven
37031	33980	Region 04	North Carolina	Carteret
55087	11540	Region 05	Wisconsin	Outagamie
26041	21540	Region 05	Michigan	Delta
55139	36780	Region 05	Wisconsin	Winnebago
53067	36500	Region 10	Washington	Thurston

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38101	33500	Region 08	North Dakota	Ward
37035	25860	Region 04	North Carolina	Catawba
06061	40900	Region 09	California	Placer
51019	31340	Region 03	Virginia	Bedford
30029	28060	Region 08	Montana	Flathead
05145	42620	Region 06	Arkansas	White
47179	27740	Region 04	Tennessee	Washington
26105	31220	Region 05	Michigan	Mason
54045	30880	Region 03	West Virginia	Logan
56033	43260	Region 08	Wyoming	Sheridan
40101	34780	Region 06	Oklahoma	Muskogee
48091	41700	Region 06	Texas	Comal
29187	22100	Region 07	Missouri	St. Francois
41071	38900	Region 10	Oregon	Yamhill
21173	34460	Region 04	Kentucky	Montgomery
06057	46020	Region 09	California	Nevada
20169	41460	Region 07	Kansas	Saline
48373	Unknown	Region 06	Texas	Polk
16055	17660	Region 10	Idaho	Kootenai
37027	25860	Region 04	North Carolina	Caldwell
35005	40740	Region 06	New Mexico	Chaves
51089	32300	Region 03	Virginia	Henry
41011	18300	Region 10	Oregon	Coos
39091	13340	Region 05	Ohio	Logan
47001	28940	Region 04	Tennessee	Anderson
32005	23820	Region 09	Nevada	Douglas
35009	17580	Region 06	New Mexico	Curry

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26089	45900	Region 05	Michigan	Leelanau
46011	15100	Region 08	South Dakota	Brookings
42111	43740	Region 03	Pennsylvania	Somerset
37013	47820	Region 04	North Carolina	Beaufort
23015	Unknown	Region 01	Maine	Lincoln
47099	29980	Region 04	Tennessee	Lawrence
20045	29940	Region 07	Kansas	Douglas
48323	20580	Region 06	Texas	Maverick
26101	Unknown	Region 05	Michigan	Manistee
55017	20740	Region 05	Wisconsin	Chippewa
04025	39140	Region 09	Arizona	Yavapai
55027	13180	Region 05	Wisconsin	Dodge
47029	35460	Region 04	Tennessee	Cocke
51197	Unknown	Region 03	Virginia	Wythe
26009	Unknown	Region 05	Michigan	Antrim
05113	Unknown	Region 06	Arkansas	Polk
13305	27700	Region 04	Georgia	Wayne
51173	Unknown	Region 03	Virginia	Smyth
21009	23980	Region 04	Kentucky	Barren
29015	Unknown	Region 07	Missouri	Benton
47109	Unknown	Region 04	Tennessee	McNairy
27139	33460	Region 05	Minnesota	Scott
26035	Unknown	Region 05	Michigan	Clare
39087	26580	Region 05	Ohio	Lawrence
21093	21060	Region 04	Kentucky	Hardin
02122	Unknown	Region 10	Alaska	Kenai Peninsula
40039	48220	Region 06	Oklahoma	Custer

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47013	28940	Region 04	Tennessee	Campbell
05055	37500	Region 06	Arkansas	Greene
42117	Unknown	Region 03	Pennsylvania	Tioga
47089	34100	Region 04	Tennessee	Jefferson
47079	37540	Region 04	Tennessee	Henry
53041	16500	Region 10	Washington	Lewis
21209	30460	Region 04	Kentucky	Scott
51009	31340	Region 03	Virginia	Amherst
30053	Unknown	Region 08	Montana	Lincoln
47133	18260	Region 04	Tennessee	Overton
13267	Unknown	Region 04	Georgia	Tattnell
20061	27920	Region 07	Kansas	Geary
37099	19000	Region 04	North Carolina	Jackson
35007	Unknown	Region 06	New Mexico	Colfax
37041	Unknown	Region 04	North Carolina	Chowan
21027	Unknown	Region 04	Kentucky	Breckinridge
27103	31860	Region 05	Minnesota	Nicollet
39127	18140	Region 05	Ohio	Perry
39021	46500	Region 05	Ohio	Champaign
54077	34060	Region 03	West Virginia	Preston
27171	33460	Region 05	Minnesota	Wright
53045	43220	Region 10	Washington	Mason
17011	36860	Region 05	Illinois	Bureau
21005	23180	Region 04	Kentucky	Anderson
29225	44180	Region 07	Missouri	Webster
47103	Unknown	Region 04	Tennessee	Lincoln
48325	41700	Region 06	Texas	Medina

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54053	38580	Region 03	West Virginia	Mason
48013	41700	Region 06	Texas	Atascosa
48015	26420	Region 06	Texas	Austin
08109	Unknown	Region 08	Colorado	Saguache
27083	32140	Region 05	Minnesota	Lyon
39159	18140	Region 05	Ohio	Union
13147	Unknown	Region 04	Georgia	Hart
37043	Unknown	Region 04	North Carolina	Clay
19037	Unknown	Region 07	Iowa	Chickasaw
51005	Unknown	Region 03	Virginia	Alleghany
48053	Unknown	Region 06	Texas	Burnet
19111	22800	Region 07	Iowa	Lee
26153	Unknown	Region 05	Michigan	Schoolcraft
29181	Unknown	Region 07	Missouri	Ripley
01079	19460	Region 04	Alabama	Lawrence
26001	Unknown	Region 05	Michigan	Alcona
29115	Unknown	Region 07	Missouri	Linn
51105	Unknown	Region 03	Virginia	Lee
21055	Unknown	Region 04	Kentucky	Crittenden
48259	41700	Region 06	Texas	Kendall
38067	Unknown	Region 08	North Dakota	Pembina
48459	30980	Region 06	Texas	Upshur
20011	Unknown	Region 07	Kansas	Bourbon
29151	27620	Region 07	Missouri	Osage
47005	Unknown	Region 04	Tennessee	Benton
21229	Unknown	Region 04	Kentucky	Washington
01061	20020	Region 04	Alabama	Geneva

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17067	22800	Region 05	Illinois	Hancock
41045	36620	Region 10	Oregon	Malheur
48297	Unknown	Region 06	Texas	Live Oak
29186	Unknown	Region 07	Missouri	Ste. Genevieve
49027	Unknown	Region 08	Utah	Millard
22123	Unknown	Region 06	Louisiana	West Carroll
20021	Unknown	Region 07	Kansas	Cherokee
36097	Unknown	Region 02	New York	Schuyler
13191	15260	Region 04	Georgia	McIntosh
54063	Unknown	Region 03	West Virginia	Monroe
29039	Unknown	Region 07	Missouri	Cedar
17147	16580	Region 05	Illinois	Piatt
19125	Unknown	Region 07	Iowa	Marion
54029	48260	Region 03	West Virginia	Hancock
40111	46140	Region 06	Oklahoma	Okmulgee
38077	47420	Region 08	North Dakota	Richland
39125	Unknown	Region 05	Ohio	Paulding
55115	43020	Region 05	Wisconsin	Shawano
55065	Unknown	Region 05	Wisconsin	Lafayette
55045	31540	Region 05	Wisconsin	Green
27043	Unknown	Region 05	Minnesota	Faribault
55051	Unknown	Region 05	Wisconsin	Iron
29061	Unknown	Region 07	Missouri	Daviess
48497	19100	Region 06	Texas	Wise
55015	11540	Region 05	Wisconsin	Calumet
28141	Unknown	Region 04	Mississippi	Tishomingo
29013	28140	Region 07	Missouri	Bates

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30023	Unknown	Region 08	Montana	Deer Lodge
21017	30460	Region 04	Kentucky	Bourbon
54091	17220	Region 03	West Virginia	Taylor
42057	Unknown	Region 03	Pennsylvania	Fulton
01057	Unknown	Region 04	Alabama	Fayette
40081	36420	Region 06	Oklahoma	Lincoln
19021	44740	Region 07	Iowa	Buena Vista
19091	Unknown	Region 07	Iowa	Humboldt
13283	Unknown	Region 04	Georgia	Treutlen
31155	36540	Region 07	Nebraska	Saunders
56027	Unknown	Region 08	Wyoming	Niobrara
21223	31140	Region 04	Kentucky	Trimble
51103	Unknown	Region 03	Virginia	Lancaster
20115	Unknown	Region 07	Kansas	Marion
40061	Unknown	Region 06	Oklahoma	Haskell
17005	41180	Region 05	Illinois	Bond
48307	Unknown	Region 06	Texas	McCulloch
54071	Unknown	Region 03	West Virginia	Pendleton
17059	Unknown	Region 05	Illinois	Gallatin
05101	25460	Region 06	Arkansas	Newton
46067	Unknown	Region 08	South Dakota	Hutchinson
39067	Unknown	Region 05	Ohio	Harrison
49013	Unknown	Region 08	Utah	Duchesne
51097	Unknown	Region 03	Virginia	King and Queen
29005	Unknown	Region 07	Missouri	Atchison
31087	Unknown	Region 07	Nebraska	Hitchcock
38003	Unknown	Region 08	North Dakota	Barnes

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27011	Unknown	Region 05	Minnesota	Big Stone
48161	Unknown	Region 06	Texas	Freestone
48125	Unknown	Region 06	Texas	Dickens
28041	Unknown	Region 04	Mississippi	Greene
40093	Unknown	Region 06	Oklahoma	Major
38023	Unknown	Region 08	North Dakota	Divide
38027	Unknown	Region 08	North Dakota	Eddy
30107	Unknown	Region 08	Montana	Wheatland
38051	Unknown	Region 08	North Dakota	McIntosh
30035	Unknown	Region 08	Montana	Glacier
40043	Unknown	Region 06	Oklahoma	Dewey
27087	Unknown	Region 05	Minnesota	Mahnomen
48495	Unknown	Region 06	Texas	Winkler
41027	26220	Region 10	Oregon	Hood River
38037	Unknown	Region 08	North Dakota	Grant
21189	Unknown	Region 04	Kentucky	Owsley
12043	Unknown	Region 04	Florida	Glades
46003	Unknown	Region 08	South Dakota	Aurora
49025	Unknown	Region 08	Utah	Kane
31059	Unknown	Region 07	Nebraska	Fillmore
30051	Unknown	Region 08	Montana	Liberty
31063	Unknown	Region 07	Nebraska	Frontier
20017	Unknown	Region 07	Kansas	Chase
48103	Unknown	Region 06	Texas	Crane
20063	Unknown	Region 07	Kansas	Gove
22023	29340	Region 06	Louisiana	Cameron
08027	Unknown	Region 08	Colorado	Custer

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46049	Unknown	Region 08	South Dakota	Faulk
21131	Unknown	Region 04	Kentucky	Leslie
46089	Unknown	Region 08	South Dakota	McPherson
21039	Unknown	Region 04	Kentucky	Carlisle
19035	Unknown	Region 07	Iowa	Cherokee
48079	Unknown	Region 06	Texas	Cochran
22107	Unknown	Region 06	Louisiana	Tensas
19151	Unknown	Region 07	Iowa	Pocahontas
38075	33500	Region 08	North Dakota	Renville
20137	Unknown	Region 07	Kansas	Norton
15007	28180	Region 09	Hawaii	Kauai
37129	48900	Region 04	North Carolina	New Hanover
08077	24300	Region 08	Colorado	Mesa
37133	27340	Region 04	North Carolina	Onslow
48355	18580	Region 06	Texas	Nueces
42049	21500	Region 03	Pennsylvania	Erie
37021	11700	Region 04	North Carolina	Buncombe
56005	23940	Region 08	Wyoming	Campbell
37019	34820	Region 04	North Carolina	Brunswick
27035	14660	Region 05	Minnesota	Crow Wing
48465	19620	Region 06	Texas	Val Verde
49005	30860	Region 08	Utah	Cache
29077	44180	Region 07	Missouri	Greene
47163	28700	Region 04	Tennessee	Sullivan
06039	31460	Region 09	California	Madera
30093	15580	Region 08	Montana	Silver Bow
21073	23180	Region 04	Kentucky	Franklin

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41003	18700	Region 10	Oregon	Benton
30063	33540	Region 08	Montana	Missoula
29047	28140	Region 07	Missouri	Clay
48221	19100	Region 06	Texas	Hood
39057	19380	Region 05	Ohio	Greene
55035	20740	Region 05	Wisconsin	Eau Claire
41033	24420	Region 10	Oregon	Josephine
19033	32380	Region 07	Iowa	Cerro Gordo
47063	34100	Region 04	Tennessee	Hamblen
04003	43420	Region 09	Arizona	Cochise
26107	13660	Region 05	Michigan	Mecosta
21151	40080	Region 04	Kentucky	Madison
45073	42860	Region 04	South Carolina	Oconee
42021	27780	Region 03	Pennsylvania	Cambria
21161	32500	Region 04	Kentucky	Mason
19169	11180	Region 07	Iowa	Story
56037	40540	Region 08	Wyoming	Sweetwater
36013	27460	Region 02	New York	Chautauqua
38105	48780	Region 08	North Dakota	Williams
36033	31660	Region 02	New York	Franklin
27131	22060	Region 05	Minnesota	Rice
29165	28140	Region 07	Missouri	Platte
32007	21220	Region 09	Nevada	Elko
48143	44500	Region 06	Texas	Erath
50019	Unknown	Region 01	Vermont	Orleans
48213	11980	Region 06	Texas	Henderson
55075	31940	Region 05	Wisconsin	Marinette

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21125	30940	Region 04	Kentucky	Laurel
21217	15820	Region 04	Kentucky	Taylor
37157	24660	Region 04	North Carolina	Rockingham
46035	33580	Region 08	South Dakota	Davison
06101	49700	Region 09	California	Sutter
21071	Unknown	Region 04	Kentucky	Floyd
23025	Unknown	Region 01	Maine	Somerset
40047	21420	Region 06	Oklahoma	Garfield
39015	17140	Region 05	Ohio	Brown
21231	Unknown	Region 04	Kentucky	Wayne
39083	34540	Region 05	Ohio	Knox
54027	49020	Region 03	West Virginia	Hampshire
48181	43300	Region 06	Texas	Grayson
26133	Unknown	Region 05	Michigan	Osceola
55081	Unknown	Region 05	Wisconsin	Monroe
22115	22860	Region 06	Louisiana	Vernon
54019	13220	Region 03	West Virginia	Fayette
02198	Unknown	Region 10	Alaska	Prince of Wales-Hyder
26165	15620	Region 05	Michigan	Wexford
37109	16740	Region 04	North Carolina	Lincoln
39147	45660	Region 05	Ohio	Seneca
05057	Unknown	Region 06	Arkansas	Hempstead
42033	20180	Region 03	Pennsylvania	Clearfield
46081	43940	Region 08	South Dakota	Lawrence
23017	Unknown	Region 01	Maine	Oxford
51155	13980	Region 03	Virginia	Pulaski
45021	23500	Region 04	South Carolina	Cherokee

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49003	36260	Region 08	Utah	Box Elder
48367	19100	Region 06	Texas	Parker
26053	Unknown	Region 05	Michigan	Gogebic
40123	10220	Region 06	Oklahoma	Pontotoc
56041	21740	Region 08	Wyoming	Uinta
28003	18420	Region 04	Mississippi	Alcorn
37141	48900	Region 04	North Carolina	Pender
27111	22260	Region 05	Minnesota	Otter Tail
29083	Unknown	Region 07	Missouri	Henry
29055	Unknown	Region 07	Missouri	Crawford
27015	35580	Region 05	Minnesota	Brown
48467	Unknown	Region 06	Texas	Van Zandt
20051	25700	Region 07	Kansas	Ellis
17203	37900	Region 05	Illinois	Woodford
21089	26580	Region 04	Kentucky	Greenup
35028	31060	Region 06	New Mexico	Los Alamos
16065	39940	Region 10	Idaho	Madison
49041	Unknown	Region 08	Utah	Sevier
19059	44020	Region 07	Iowa	Dickinson
29221	Unknown	Region 07	Missouri	Washington
48337	Unknown	Region 06	Texas	Montague
47055	Unknown	Region 04	Tennessee	Giles
17055	Unknown	Region 05	Illinois	Franklin
05063	12900	Region 06	Arkansas	Independence
13183	25980	Region 04	Georgia	Long
21235	30940	Region 04	Kentucky	Whitley
31145	Unknown	Region 07	Nebraska	Red Willow

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05103	15780	Region 06	Arkansas	Ouachita
40135	22900	Region 06	Oklahoma	Sequoyah
48363	33420	Region 06	Texas	Palo Pinto
40079	22900	Region 06	Oklahoma	Le Flore
33019	17200	Region 01	New Hampshire	Sullivan
38071	Unknown	Region 08	North Dakota	Ramsey
48407	Unknown	Region 06	Texas	San Jacinto
37121	Unknown	Region 04	North Carolina	Mitchell
56023	Unknown	Region 08	Wyoming	Lincoln
12063	Unknown	Region 04	Florida	Jackson
21053	Unknown	Region 04	Kentucky	Clinton
19101	21840	Region 07	Iowa	Jefferson
29025	28140	Region 07	Missouri	Caldwell
29175	33620	Region 07	Missouri	Randolph
48457	Unknown	Region 06	Texas	Tyler
06009	Unknown	Region 09	California	Calaveras
47077	Unknown	Region 04	Tennessee	Henderson
48073	27380	Region 06	Texas	Cherokee
20009	24460	Region 07	Kansas	Barton
51111	Unknown	Region 03	Virginia	Lunenburg
47129	28940	Region 04	Tennessee	Morgan
55033	32860	Region 05	Wisconsin	Dunn
36049	Unknown	Region 02	New York	Lewis
17139	Unknown	Region 05	Illinois	Moultrie
21011	34460	Region 04	Kentucky	Bath
27153	Unknown	Region 05	Minnesota	Todd
21123	21060	Region 04	Kentucky	Larue

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51163	Unknown	Region 03	Virginia	Rockbridge
29179	Unknown	Region 07	Missouri	Reynolds
53075	39420	Region 10	Washington	Whitman
21191	17140	Region 04	Kentucky	Pendleton
41009	38900	Region 10	Oregon	Columbia
48285	Unknown	Region 06	Texas	Lavaca
05109	Unknown	Region 06	Arkansas	Pike
17023	Unknown	Region 05	Illinois	Clark
49007	39220	Region 08	Utah	Carbon
27019	33460	Region 05	Minnesota	Carver
05107	25760	Region 06	Arkansas	Phillips
35029	19700	Region 06	New Mexico	Luna
47071	Unknown	Region 04	Tennessee	Hardin
47039	Unknown	Region 04	Tennessee	Decatur
40083	36420	Region 06	Oklahoma	Logan
54095	Unknown	Region 03	West Virginia	Tyler
55023	Unknown	Region 05	Wisconsin	Crawford
48273	28780	Region 06	Texas	Kleberg
39115	Unknown	Region 05	Ohio	Morgan
55107	Unknown	Region 05	Wisconsin	Rusk
54047	Unknown	Region 03	West Virginia	McDowell
51169	28700	Region 03	Virginia	Scott
39121	Unknown	Region 05	Ohio	Noble
19041	43980	Region 07	Iowa	Clay
48289	Unknown	Region 06	Texas	Leon
48225	Unknown	Region 06	Texas	Houston
32033	Unknown	Region 09	Nevada	White Pine

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19055	Unknown	Region 07	Iowa	Delaware
17087	Unknown	Region 05	Illinois	Johnson
47153	16860	Region 04	Tennessee	Sequatchie
17035	16660	Region 05	Illinois	Cumberland
40151	Unknown	Region 06	Oklahoma	Woods
55049	31540	Region 05	Wisconsin	Iowa
46057	Unknown	Region 08	South Dakota	Hamlin
27173	Unknown	Region 05	Minnesota	Yellow Medicine
53037	21260	Region 10	Washington	Kittitas
19097	Unknown	Region 07	Iowa	Jackson
05077	Unknown	Region 06	Arkansas	Lee
18069	26540	Region 05	Indiana	Huntington
27161	Unknown	Region 05	Minnesota	Waseca
27129	Unknown	Region 05	Minnesota	Renville
29017	16020	Region 07	Missouri	Bollinger
48077	48660	Region 06	Texas	Clay
08049	Unknown	Region 08	Colorado	Grand
04007	37740	Region 09	Arizona	Gila
20139	45820	Region 07	Kansas	Osage
17101	Unknown	Region 05	Illinois	Lawrence
19039	Unknown	Region 07	Iowa	Clarke
12093	36380	Region 04	Florida	Okeechobee
54001	Unknown	Region 03	West Virginia	Barbour
30083	Unknown	Region 08	Montana	Richland
54005	16620	Region 03	West Virginia	Boone
55011	Unknown	Region 05	Wisconsin	Buffalo
47057	28940	Region 04	Tennessee	Grainger

46079	Unknown	Region 08	South Dakota	Lake
56007	Unknown	Region 08	Wyoming	Carbon
48019	41700	Region 06	Texas	Bandera
20159	Unknown	Region 07	Kansas	Rice
19081	Unknown	Region 07	Iowa	Hancock
17123	37900	Region 05	Illinois	Marshall
40069	Unknown	Region 06	Oklahoma	Johnston
38011	Unknown	Region 08	North Dakota	Bowman
27117	Unknown	Region 05	Minnesota	Pipestone
17127	37140	Region 05	Illinois	Massac
30073	Unknown	Region 08	Montana	Pondera
12041	23540	Region 04	Florida	Gilchrist
46059	Unknown	Region 08	South Dakota	Hand
50009	13620	Region 01	Vermont	Essex
29003	41140	Region 07	Missouri	Andrew
27023	Unknown	Region 05	Minnesota	Chippewa
21159	Unknown	Region 04	Kentucky	Martin
16077	Unknown	Region 10	Idaho	Power
37173	Unknown	Region 04	North Carolina	Swain
54073	Unknown	Region 03	West Virginia	Pleasants
46047	Unknown	Region 08	South Dakota	Fall River
47175	Unknown	Region 04	Tennessee	Van Buren
21119	Unknown	Region 04	Kentucky	Knott
40067	Unknown	Region 06	Oklahoma	Jefferson
19131	Unknown	Region 07	Iowa	Mitchell
19107	Unknown	Region 07	Iowa	Keokuk
48131	Unknown	Region 06	Texas	Duval

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48275	Unknown	Region 06	Texas	Knox
46043	Unknown	Region 08	South Dakota	Douglas
27005	Unknown	Region 05	Minnesota	Becker
46025	Unknown	Region 08	South Dakota	Clark
27125	Unknown	Region 05	Minnesota	Red Lake
19069	Unknown	Region 07	Iowa	Franklin
38031	Unknown	Region 08	North Dakota	Foster
49019	Unknown	Region 08	Utah	Grand
46121	Unknown	Region 08	South Dakota	Todd
17069	Unknown	Region 05	Illinois	Hardin
35003	Unknown	Region 06	New Mexico	Catron
08055	Unknown	Region 08	Colorado	Huerfano
38081	Unknown	Region 08	North Dakota	Sargent
48279	Unknown	Region 06	Texas	Lamb
21075	46460	Region 04	Kentucky	Fulton
48211	Unknown	Region 06	Texas	Hemphill
12125	Unknown	Region 04	Florida	Union
48317	33260	Region 06	Texas	Martin
40059	Unknown	Region 06	Oklahoma	Harper
38063	Unknown	Region 08	North Dakota	Nelson
53059	38900	Region 10	Washington	Skamania
38029	Unknown	Region 08	North Dakota	Emmons
48107	31180	Region 06	Texas	Crosby
41029	32780	Region 10	Oregon	Jackson
53009	38820	Region 10	Washington	Clallam
51690	32300	Region 03	Virginia	Martinsville
26055	45900	Region 05	Michigan	Grand Traverse

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55063	29100	Region 05	Wisconsin	La Crosse
29097	27900	Region 07	Missouri	Jasper
16019	26820	Region 10	Idaho	Bonneville
06089	39820	Region 09	California	Shasta
06017	40900	Region 09	California	El Dorado
17183	19180	Region 05	Illinois	Vermilion
41019	40700	Region 10	Oregon	Douglas
02170	11260	Region 10	Alaska	Matanuska-Susitna
42013	11020	Region 03	Pennsylvania	Blair
55109	33460	Region 05	Wisconsin	St. Croix
06115	49700	Region 09	California	Yuba
29213	14700	Region 07	Missouri	Taney
29043	44180	Region 07	Missouri	Christian
30049	25740	Region 08	Montana	Lewis and Clark
51143	19260	Region 03	Virginia	Pittsylvania
48025	13300	Region 06	Texas	Bee
30013	24500	Region 08	Montana	Cascade
51031	31340	Region 03	Virginia	Campbell
39071	Unknown	Region 05	Ohio	Highland
35015	16100	Region 06	New Mexico	Eddy
48463	46620	Region 06	Texas	Uvalde
53027	10140	Region 10	Washington	Grays Harbor
55093	33460	Region 05	Wisconsin	Pierce
39145	39020	Region 05	Ohio	Scioto
39119	49780	Region 05	Ohio	Muskingum
26109	31940	Region 05	Michigan	Menominee
23009	Unknown	Region 01	Maine	Hancock

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26019	45900	Region 05	Michigan	Benzie
42039	32740	Region 03	Pennsylvania	Crawford
27025	33460	Region 05	Minnesota	Chisago
35025	26020	Region 06	New Mexico	Lea
37171	34340	Region 04	North Carolina	Surry
54067	Unknown	Region 03	West Virginia	Nicholas
55085	Unknown	Region 05	Wisconsin	Oneida
48409	18580	Region 06	Texas	San Patricio
47019	27740	Region 04	Tennessee	Carter
49047	46860	Region 08	Utah	Uintah
55007	Unknown	Region 05	Wisconsin	Bayfield
47177	32660	Region 04	Tennessee	Warren
54055	14140	Region 03	West Virginia	Mercer
21195	Unknown	Region 04	Kentucky	Pike
29145	27900	Region 07	Missouri	Newton
37009	Unknown	Region 04	North Carolina	Ashe
12037	Unknown	Region 04	Florida	Franklin
37087	11700	Region 04	North Carolina	Haywood
50017	17200	Region 01	Vermont	Orange
56001	29660	Region 08	Wyoming	Albany
40089	Unknown	Region 06	Oklahoma	McCurtain
40009	21120	Region 06	Oklahoma	Beckham
20015	48620	Region 07	Kansas	Butler
55125	Unknown	Region 05	Wisconsin	Vilas
17049	20820	Region 05	Illinois	Effingham
41007	11820	Region 10	Oregon	Clatsop
55031	20260	Region 05	Wisconsin	Douglas

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06021	Unknown	Region 09	California	Glenn
55071	31820	Region 05	Wisconsin	Manitowoc
29141	Unknown	Region 07	Missouri	Morgan
37053	47260	Region 04	North Carolina	Currituck
13209	47080	Region 04	Georgia	Montgomery
55077	Unknown	Region 05	Wisconsin	Marquette
40013	20460	Region 06	Oklahoma	Bryan
48503	Unknown	Region 06	Texas	Young
41061	29260	Region 10	Oregon	Union
19187	22700	Region 07	Iowa	Webster
55005	Unknown	Region 05	Wisconsin	Barron
41057	Unknown	Region 10	Oregon	Tillamook
53049	Unknown	Region 10	Washington	Pacific
21137	19220	Region 04	Kentucky	Lincoln
48499	Unknown	Region 06	Texas	Wood
37169	49180	Region 04	North Carolina	Stokes
05015	Unknown	Region 06	Arkansas	Carroll
27059	33460	Region 05	Minnesota	Isanti
55135	Unknown	Region 05	Wisconsin	Waupaca
26043	27020	Region 05	Michigan	Dickinson
21121	30940	Region 04	Kentucky	Knox
29217	Unknown	Region 07	Missouri	Vernon
48223	44860	Region 06	Texas	Hopkins
56017	Unknown	Region 08	Wyoming	Hot Springs
30047	Unknown	Region 08	Montana	Lake
21099	Unknown	Region 04	Kentucky	Hart
41015	15060	Region 10	Oregon	Curry

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16085	Unknown	Region 10	Idaho	Valley
29147	32340	Region 07	Missouri	Nodaway
56015	Unknown	Region 08	Wyoming	Goshen
55113	Unknown	Region 05	Wisconsin	Sawyer
18147	Unknown	Region 05	Indiana	Spencer
17107	30660	Region 05	Illinois	Logan
27097	Unknown	Region 05	Minnesota	Morrison
27021	14660	Region 05	Minnesota	Cass
56003	Unknown	Region 08	Wyoming	Big Horn
20037	38260	Region 07	Kansas	Crawford
39053	38580	Region 05	Ohio	Gallia
47025	Unknown	Region 04	Tennessee	Claiborne
31025	36540	Region 07	Nebraska	Cass
47181	Unknown	Region 04	Tennessee	Wayne
53065	44060	Region 10	Washington	Stevens
21043	Unknown	Region 04	Kentucky	Carter
42105	Unknown	Region 03	Pennsylvania	Potter
18001	19540	Region 05	Indiana	Adams
29063	41140	Region 07	Missouri	DeKalb
16051	26820	Region 10	Idaho	Jefferson
47049	Unknown	Region 04	Tennessee	Fentress
39005	11740	Region 05	Ohio	Ashland
48035	Unknown	Region 06	Texas	Bosque
54021	Unknown	Region 03	West Virginia	Gilmer
17061	Unknown	Region 05	Illinois	Greene
40023	Unknown	Region 06	Oklahoma	Choctaw
05021	Unknown	Region 06	Arkansas	Clay

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48255	Unknown	Region 06	Texas	Karnes
48097	23620	Region 06	Texas	Cooke
21041	Unknown	Region 04	Kentucky	Carroll
17159	Unknown	Region 05	Illinois	Richland
18051	Unknown	Region 05	Indiana	Gibson
18179	23060	Region 05	Indiana	Wells
47143	19420	Region 04	Tennessee	Rhea
06063	Unknown	Region 09	California	Plumas
39111	Unknown	Region 05	Ohio	Monroe
26085	Unknown	Region 05	Michigan	Lake
16043	39940	Region 10	Idaho	Fremont
21025	Unknown	Region 04	Kentucky	Breathitt
27061	Unknown	Region 05	Minnesota	Itasca
29033	Unknown	Region 07	Missouri	Carroll
29119	22220	Region 07	Missouri	McDonald
49039	Unknown	Region 08	Utah	Sanpete
54097	Unknown	Region 03	West Virginia	Upshur
39001	Unknown	Region 05	Ohio	Adams
08071	Unknown	Region 08	Colorado	Las Animas
17165	Unknown	Region 05	Illinois	Saline
54041	Unknown	Region 03	West Virginia	Lewis
06005	Unknown	Region 09	California	Amador
48093	Unknown	Region 06	Texas	Comanche
54075	Unknown	Region 03	West Virginia	Pocahontas
37175	14820	Region 04	North Carolina	Transylvania
48145	47380	Region 06	Texas	Falls
31175	Unknown	Region 07	Nebraska	Valley

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17039	14010	Region 05	Illinois	De Witt
55001	Unknown	Region 05	Wisconsin	Adams
51071	13980	Region 03	Virginia	Giles
51750	13980	Region 03	Virginia	Radford
30043	25740	Region 08	Montana	Jefferson
16049	Unknown	Region 10	Idaho	Idaho
48133	Unknown	Region 06	Texas	Eastland
48379	Unknown	Region 06	Texas	Rains
27069	Unknown	Region 05	Minnesota	Kittson
19027	Unknown	Region 07	Iowa	Carroll
29125	Unknown	Region 07	Missouri	Maries
48281	28660	Region 06	Texas	Lampasas
48395	17780	Region 06	Texas	Robertson
39079	27160	Region 05	Ohio	Jackson
54025	Unknown	Region 03	West Virginia	Greenbrier
51167	Unknown	Region 03	Virginia	Russell
12067	Unknown	Region 04	Florida	Lafayette
30003	Unknown	Region 08	Montana	Big Horn
55078	43020	Region 05	Wisconsin	Menominee
27127	Unknown	Region 05	Minnesota	Redwood
29205	Unknown	Region 07	Missouri	Shelby
17065	Unknown	Region 05	Illinois	Hamilton
20077	Unknown	Region 07	Kansas	Harper
05149	40780	Region 06	Arkansas	Yell
19197	Unknown	Region 07	Iowa	Wright
20079	48620	Region 07	Kansas	Harvey
54103	Unknown	Region 03	West Virginia	Wetzel

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46031	Unknown	Region 08	South Dakota	Corson
21135	Unknown	Region 04	Kentucky	Lewis
27151	Unknown	Region 05	Minnesota	Swift
31107	Unknown	Region 07	Nebraska	Knox
47101	Unknown	Region 04	Tennessee	Lewis
29185	Unknown	Region 07	Missouri	St. Clair
19007	Unknown	Region 07	Iowa	Appanoose
38085	13900	Region 08	North Dakota	Sioux
05117	Unknown	Region 06	Arkansas	Prairie
29093	Unknown	Region 07	Missouri	Iron
27029	Unknown	Region 05	Minnesota	Clearwater
19189	Unknown	Region 07	Iowa	Winnebago
20007	Unknown	Region 07	Kansas	Barber
51063	13980	Region 03	Virginia	Floyd
29087	Unknown	Region 07	Missouri	Holt
38049	33500	Region 08	North Dakota	McHenry
26095	Unknown	Region 05	Michigan	Luce
47091	Unknown	Region 04	Tennessee	Johnson
20147	Unknown	Region 07	Kansas	Phillips
39069	Unknown	Region 05	Ohio	Henry
47173	28940	Region 04	Tennessee	Union
29149	Unknown	Region 07	Missouri	Oregon
17025	Unknown	Region 05	Illinois	Clay
31031	Unknown	Region 07	Nebraska	Cherry
29075	Unknown	Region 07	Missouri	Gentry
04011	Unknown	Region 09	Arizona	Greenlee
40085	Unknown	Region 06	Oklahoma	Love

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27073	Unknown	Region 05	Minnesota	Lac qui Parle
20171	Unknown	Region 07	Kansas	Scott
05001	Unknown	Region 06	Arkansas	Arkansas
19173	Unknown	Region 07	Iowa	Taylor
29089	Unknown	Region 07	Missouri	Howard
37095	Unknown	Region 04	North Carolina	Hyde
19129	36540	Region 07	Iowa	Mills
51580	Unknown	Region 03	Virginia	Covington
46091	Unknown	Region 08	South Dakota	Marshall
55047	Unknown	Region 05	Wisconsin	Green Lake
31123	Unknown	Region 07	Nebraska	Morrill
46039	Unknown	Region 08	South Dakota	Deuel
08103	Unknown	Region 08	Colorado	Rio Blanco
20085	45820	Region 07	Kansas	Jackson
42023	Unknown	Region 03	Pennsylvania	Cameron
37029	21020	Region 04	North Carolina	Camden
20191	48620	Region 07	Kansas	Sumner
30065	Unknown	Region 08	Montana	Musselshell
18125	27540	Region 05	Indiana	Pike
48159	Unknown	Region 06	Texas	Franklin
02290	Unknown	Region 10	Alaska	Yukon-Koyukuk
21105	Unknown	Region 04	Kentucky	Hickman
40003	Unknown	Region 06	Oklahoma	Alfalfa
48095	Unknown	Region 06	Texas	Concho
17013	41180	Region 05	Illinois	Calhoun
53013	47460	Region 10	Washington	Columbia
05147	Unknown	Region 06	Arkansas	Woodruff

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48119	Unknown	Region 06	Texas	Delta
53043	Unknown	Region 10	Washington	Lincoln
38073	Unknown	Region 08	North Dakota	Ransom
42113	Unknown	Region 03	Pennsylvania	Sullivan
08047	19740	Region 08	Colorado	Gilpin
17175	37900	Region 05	Illinois	Stark
20185	Unknown	Region 07	Kansas	Stafford
48399	Unknown	Region 06	Texas	Runnels
17009	Unknown	Region 05	Illinois	Brown
27051	Unknown	Region 05	Minnesota	Grant
46041	Unknown	Region 08	South Dakota	Dewey
29211	Unknown	Region 07	Missouri	Sullivan
19185	Unknown	Region 07	Iowa	Wayne
41039	21660	Region 10	Oregon	Lane
16005	38540	Region 10	Idaho	Bannock
06007	17020	Region 09	California	Butte
55073	48140	Region 05	Wisconsin	Marathon
06045	46380	Region 09	California	Mendocino
46103	39660	Region 08	South Dakota	Pennington
37189	14380	Region 04	North Carolina	Watauga
05131	22900	Region 06	Arkansas	Sebastian
12123	Unknown	Region 04	Florida	Taylor
05005	34260	Region 06	Arkansas	Baxter
42083	14620	Region 03	Pennsylvania	McKean
48265	28500	Region 06	Texas	Kerr
29091	48460	Region 07	Missouri	Howell
48227	13700	Region 06	Texas	Howard

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27007	13420	Region 05	Minnesota	Beltrami
48299	Unknown	Region 06	Texas	Llano
54081	13220	Region 03	West Virginia	Raleigh
16057	34140	Region 10	Idaho	Latah
05009	25460	Region 06	Arkansas	Boone
48427	40100	Region 06	Texas	Starr
42121	36340	Region 03	Pennsylvania	Venango
41041	35440	Region 10	Oregon	Lincoln
55003	Unknown	Region 05	Wisconsin	Ashland
27085	26780	Region 05	Minnesota	McLeod
29209	14700	Region 07	Missouri	Stone
29127	25300	Region 07	Missouri	Marion
29117	Unknown	Region 07	Missouri	Livingston
55095	Unknown	Region 05	Wisconsin	Polk
06011	Unknown	Region 09	California	Colusa
29009	Unknown	Region 07	Missouri	Barry
26033	42300	Region 05	Michigan	Chippewa
24023	Unknown	Region 03	Maryland	Garrett
47145	28940	Region 04	Tennessee	Roane
17193	Unknown	Region 05	Illinois	White
37113	Unknown	Region 04	North Carolina	Macon
23003	Unknown	Region 01	Maine	Aroostook
06033	17340	Region 09	California	Lake
51185	14140	Region 03	Virginia	Tazewell
54083	21180	Region 03	West Virginia	Randolph
56035	Unknown	Region 08	Wyoming	Sublette
42065	Unknown	Region 03	Pennsylvania	Jefferson

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20133	Unknown	Region 07	Kansas	Neosho
26061	26340	Region 05	Michigan	Houghton
42047	Unknown	Region 03	Pennsylvania	Elk
06015	18860	Region 09	California	Del Norte
30081	Unknown	Region 08	Montana	Ravalli
21115	Unknown	Region 04	Kentucky	Johnson
06093	Unknown	Region 09	California	Siskiyou
55097	44620	Region 05	Wisconsin	Portage
48415	43660	Region 06	Texas	Scurry
02220	Unknown	Region 10	Alaska	Sitka
21205	Unknown	Region 04	Kentucky	Rowan
06109	43760	Region 09	California	Tuolumne
02180	Unknown	Region 10	Alaska	Nome
16011	13940	Region 10	Idaho	Bingham
54007	Unknown	Region 03	West Virginia	Braxton
21069	Unknown	Region 04	Kentucky	Fleming
37003	25860	Region 04	North Carolina	Alexander
35047	29780	Region 06	New Mexico	San Miguel
29121	Unknown	Region 07	Missouri	Macon
39009	11900	Region 05	Ohio	Athens
21197	Unknown	Region 04	Kentucky	Powell
51141	Unknown	Region 03	Virginia	Patrick
39075	Unknown	Region 05	Ohio	Holmes
21079	Unknown	Region 04	Kentucky	Garrard
33007	13620	Region 01	New Hampshire	Coos
19109	Unknown	Region 07	Iowa	Kossuth
35027	Unknown	Region 06	New Mexico	Lincoln

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29073	Unknown	Region 07	Missouri	Gasconade
48165	Unknown	Region 06	Texas	Gaines
39131	Unknown	Region 05	Ohio	Pike
02150	Unknown	Region 10	Alaska	Kodiak Island
30027	Unknown	Region 08	Montana	Fergus
35035	10460	Region 06	New Mexico	Otero
20121	28140	Region 07	Kansas	Miami
16059	Unknown	Region 10	Idaho	Lemhi
17169	Unknown	Region 05	Illinois	Schuyler
27143	33460	Region 05	Minnesota	Sibley
31127	Unknown	Region 07	Nebraska	Nemaha
40019	11620	Region 06	Oklahoma	Carter
40091	Unknown	Region 06	Oklahoma	McIntosh
16087	Unknown	Region 10	Idaho	Washington
21087	Unknown	Region 04	Kentucky	Green
05033	22900	Region 06	Arkansas	Crawford
27095	33460	Region 05	Minnesota	Mille Lacs
17191	Unknown	Region 05	Illinois	Wayne
48075	Unknown	Region 06	Texas	Childress
54009	48260	Region 03	West Virginia	Brooke
05083	Unknown	Region 06	Arkansas	Logan
08099	Unknown	Region 08	Colorado	Prowers
21181	Unknown	Region 04	Kentucky	Nicholas
17057	15900	Region 05	Illinois	Fulton
48403	Unknown	Region 06	Texas	Sabine
30041	Unknown	Region 08	Montana	Hill
37075	Unknown	Region 04	North Carolina	Graham

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16017	41760	Region 10	Idaho	Bonner
20205	Unknown	Region 07	Kansas	Wilson
30001	Unknown	Region 08	Montana	Beaverhead
55137	Unknown	Region 05	Wisconsin	Waushara
48249	10860	Region 06	Texas	Jim Wells
19175	Unknown	Region 07	Iowa	Union
38079	Unknown	Region 08	North Dakota	Rolette
29045	22800	Region 07	Missouri	Clark
40095	Unknown	Region 06	Oklahoma	Marshall
27135	Unknown	Region 05	Minnesota	Roseau
27041	10820	Region 05	Minnesota	Douglas
05039	Unknown	Region 06	Arkansas	Dallas
48507	Unknown	Region 06	Texas	Zavala
19001	Unknown	Region 07	Iowa	Adair
20131	Unknown	Region 07	Kansas	Nemaha
55129	Unknown	Region 05	Wisconsin	Washburn
54023	Unknown	Region 03	West Virginia	Grant
23029	Unknown	Region 01	Maine	Washington
32001	21980	Region 09	Nevada	Churchill
29173	25300	Region 07	Missouri	Ralls
31139	35740	Region 07	Nebraska	Pierce
48007	18580	Region 06	Texas	Aransas
20041	Unknown	Region 07	Kansas	Dickinson
48287	Unknown	Region 06	Texas	Lee
54059	Unknown	Region 03	West Virginia	Mingo
31179	Unknown	Region 07	Nebraska	Wayne
39105	Unknown	Region 05	Ohio	Meigs

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48429	Unknown	Region 06	Texas	Stephens
05099	Unknown	Region 06	Arkansas	Nevada
48171	23240	Region 06	Texas	Gillespie
39161	46780	Region 05	Ohio	Van Wert
48351	13140	Region 06	Texas	Newton
41023	Unknown	Region 10	Oregon	Grant
21187	Unknown	Region 04	Kentucky	Owen
31013	Unknown	Region 07	Nebraska	Box Butte
21133	Unknown	Region 04	Kentucky	Letcher
29123	Unknown	Region 07	Missouri	Madison
21169	23980	Region 04	Kentucky	Metcalfe
48059	10180	Region 06	Texas	Callahan
05047	Unknown	Region 06	Arkansas	Franklin
53019	Unknown	Region 10	Washington	Ferry
29059	44180	Region 07	Missouri	Dallas
29131	Unknown	Region 07	Missouri	Miller
21077	17140	Region 04	Kentucky	Gallatin
40127	Unknown	Region 06	Oklahoma	Pushmataha
17185	Unknown	Region 05	Illinois	Wabash
02240	Unknown	Region 10	Alaska	Southeast Fairbanks
27113	Unknown	Region 05	Minnesota	Pennington
48501	Unknown	Region 06	Texas	Yoakum
55099	Unknown	Region 05	Wisconsin	Price
40005	Unknown	Region 06	Oklahoma	Atoka
21175	Unknown	Region 04	Kentucky	Morgan
20151	Unknown	Region 07	Kansas	Pratt
35051	Unknown	Region 06	New Mexico	Sierra

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05049	Unknown	Region 06	Arkansas	Fulton
02050	Unknown	Region 10	Alaska	Bethel
55121	Unknown	Region 05	Wisconsin	Trempealeau
20035	11680	Region 07	Kansas	Cowley
40107	Unknown	Region 06	Oklahoma	Okfuskee
30095	Unknown	Region 08	Montana	Stillwater
48335	Unknown	Region 06	Texas	Mitchell
12045	37460	Region 04	Florida	Gulf
48487	46900	Region 06	Texas	Wilbarger
48283	Unknown	Region 06	Texas	La Salle
40099	Unknown	Region 06	Oklahoma	Murray
48127	Unknown	Region 06	Texas	Dimmit
19195	32380	Region 07	Iowa	Worth
05089	Unknown	Region 06	Arkansas	Marion
31131	Unknown	Region 07	Nebraska	Otoe
41063	Unknown	Region 10	Oregon	Wallowa
17149	Unknown	Region 05	Illinois	Pike
19051	36900	Region 07	Iowa	Davis
54043	26580	Region 03	West Virginia	Lincoln
53051	44060	Region 10	Washington	Pend Oreille
27159	Unknown	Region 05	Minnesota	Wadena
51077	Unknown	Region 03	Virginia	Grayson
05097	Unknown	Region 06	Arkansas	Montgomery
21127	Unknown	Region 04	Kentucky	Lawrence
21045	Unknown	Region 04	Kentucky	Casey
47171	27740	Region 04	Tennessee	Unicoi
23021	Unknown	Region 01	Maine	Piscataquis

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27055	29100	Region 05	Minnesota	Houston
48313	Unknown	Region 06	Texas	Madison
19029	Unknown	Region 07	Iowa	Cass
46102	Unknown	Region 08	South Dakota	Oglala Lakota
19137	Unknown	Region 07	Iowa	Montgomery
16029	Unknown	Region 10	Idaho	Caribou
48387	Unknown	Region 06	Texas	Red River
54089	Unknown	Region 03	West Virginia	Summers
27071	Unknown	Region 05	Minnesota	Koochiching
51520	28700	Region 03	Virginia	Bristol
48083	Unknown	Region 06	Texas	Coleman
05127	Unknown	Region 06	Arkansas	Scott
48353	45020	Region 06	Texas	Nolan
27001	Unknown	Region 05	Minnesota	Aitkin
05067	Unknown	Region 06	Arkansas	Jackson
05087	22220	Region 06	Arkansas	Madison
48047	Unknown	Region 06	Texas	Brooks
41025	Unknown	Region 10	Oregon	Harney
27065	Unknown	Region 05	Minnesota	Kanabec
26013	Unknown	Region 05	Michigan	Baraga
19067	Unknown	Region 07	Iowa	Floyd
54085	Unknown	Region 03	West Virginia	Ritchie
31101	Unknown	Region 07	Nebraska	Keith
37199	Unknown	Region 04	North Carolina	Yancey
48043	Unknown	Region 06	Texas	Brewster
19161	Unknown	Region 07	Iowa	Sac
19135	Unknown	Region 07	Iowa	Monroe

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19025	Unknown	Region 07	Iowa	Calhoun
31089	Unknown	Region 07	Nebraska	Holt
29133	Unknown	Region 07	Missouri	Mississippi
48389	37780	Region 06	Texas	Reeves
31045	Unknown	Region 07	Nebraska	Dawes
29161	40620	Region 07	Missouri	Phelps
54013	Unknown	Region 03	West Virginia	Calhoun
16021	Unknown	Region 10	Idaho	Boundary
21065	Unknown	Region 04	Kentucky	Estill
55141	49220	Region 05	Wisconsin	Wood
40153	49260	Region 06	Oklahoma	Woodward
20049	Unknown	Region 07	Kansas	Elk
41013	39260	Region 10	Oregon	Crook
20201	Unknown	Region 07	Kansas	Washington
56029	Unknown	Region 08	Wyoming	Park
46093	39660	Region 08	South Dakota	Meade
06103	39780	Region 09	California	Tehama
21051	Unknown	Region 04	Kentucky	Clay
37115	11700	Region 04	North Carolina	Madison
29007	33020	Region 07	Missouri	Audrain
54109	Unknown	Region 03	West Virginia	Wyoming
55123	Unknown	Region 05	Wisconsin	Vernon
29167	44180	Region 07	Missouri	Polk
42123	47620	Region 03	Pennsylvania	Warren
20083	Unknown	Region 07	Kansas	Hodgeman
16023	26820	Region 10	Idaho	Butte
20101	Unknown	Region 07	Kansas	Lane

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20135	Unknown	Region 07	Kansas	Ness
19093	Unknown	Region 07	Iowa	Ida
31011	Unknown	Region 07	Nebraska	Boone
38091	Unknown	Region 08	North Dakota	Steele
38097	Unknown	Region 08	North Dakota	Trail
38007	Unknown	Region 08	North Dakota	Billings
38041	Unknown	Region 08	North Dakota	Hettinger
38057	Unknown	Region 08	North Dakota	Mercer
08115	Unknown	Region 08	Colorado	Sedgwick
19063	Unknown	Region 07	Iowa	Emmet
48151	Unknown	Region 06	Texas	Fisher
48087	Unknown	Region 06	Texas	Collingsworth
20003	Unknown	Region 07	Kansas	Anderson
20001	Unknown	Region 07	Kansas	Allen
32017	Unknown	Region 09	Nevada	Lincoln
48229	21340	Region 06	Texas	Hudspeth
16015	14260	Region 10	Idaho	Boise
15005	27980	Region 09	Hawaii	Kalawao
02068	Unknown	Region 10	Alaska	Denali
48311	Unknown	Region 06	Texas	McMullen
40057	Unknown	Region 06	Oklahoma	Harmon
05013	15780	Region 06	Arkansas	Calhoun
31169	Unknown	Region 07	Nebraska	Thayer
32027	Unknown	Region 09	Nevada	Pershing
32029	39900	Region 09	Nevada	Storey
06091	Unknown	Region 09	California	Sierra
41037	Unknown	Region 10	Oregon	Lake

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06035	45000	Region 09	California	Lassen
06049	Unknown	Region 09	California	Modoc
08057	Unknown	Region 08	Colorado	Jackson
55013	Unknown	Region 05	Wisconsin	Burnett
08111	Unknown	Region 08	Colorado	San Juan
08033	Unknown	Region 08	Colorado	Dolores
02100	Unknown	Region 10	Alaska	Haines
02105	Unknown	Region 10	Alaska	Hoonah-Angoon
48391	Unknown	Region 06	Texas	Refugio
27121	Unknown	Region 05	Minnesota	Pope
21129	Unknown	Region 04	Kentucky	Lee
17045	Unknown	Region 05	Illinois	Edgar
02275	Unknown	Region 10	Alaska	Wrangell
16035	Unknown	Region 10	Idaho	Clearwater
16061	Unknown	Region 10	Idaho	Lewis
17155	36860	Region 05	Illinois	Putnam
29105	30060	Region 07	Missouri	Laclede
29085	Unknown	Region 07	Missouri	Hickory
31007	42420	Region 07	Nebraska	Banner
56031	Unknown	Region 08	Wyoming	Platte
26003	Unknown	Region 05	Michigan	Alger
26071	Unknown	Region 05	Michigan	Iron
46077	Unknown	Region 08	South Dakota	Kingsbury
38043	Unknown	Region 08	North Dakota	Kidder
38083	Unknown	Region 08	North Dakota	Sheridan
48411	Unknown	Region 06	Texas	San Saba
48333	Unknown	Region 06	Texas	Mills

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16009	Unknown	Region 10	Idaho	Benewah
49033	Unknown	Region 08	Utah	Rich
49009	Unknown	Region 08	Utah	Daggett
28055	Unknown	Region 04	Mississippi	Issaquena
13125	Unknown	Region 04	Georgia	Glascock
48191	Unknown	Region 06	Texas	Hall
20095	48620	Region 07	Kansas	Kingman
48009	48660	Region 06	Texas	Archer
48023	Unknown	Region 06	Texas	Baylor
48383	Unknown	Region 06	Texas	Reagan
48081	Unknown	Region 06	Texas	Coke
48235	41660	Region 06	Texas	Irion
48327	Unknown	Region 06	Texas	Menard
48413	Unknown	Region 06	Texas	Schleicher
48431	Unknown	Region 06	Texas	Sterling
02261	Unknown	Region 10	Alaska	Valdez-Cordova
54015	16620	Region 03	West Virginia	Clay
20117	Unknown	Region 07	Kansas	Marshall
37011	Unknown	Region 04	North Carolina	Avery
48261	28780	Region 06	Texas	Kenedy
06105	Unknown	Region 09	California	Trinity
30087	Unknown	Region 08	Montana	Rosebud
30103	Unknown	Region 08	Montana	Treasure
51017	Unknown	Region 03	Virginia	Bath
40063	Unknown	Region 06	Oklahoma	Hughes
40029	Unknown	Region 06	Oklahoma	Coal
46045	10100	Region 08	South Dakota	Edmunds

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38021	Unknown	Region 08	North Dakota	Dickey
31165	42420	Region 07	Nebraska	Sioux
40149	Unknown	Region 06	Oklahoma	Washita
40011	Unknown	Region 06	Oklahoma	Blaine
08017	Unknown	Region 08	Colorado	Cheyenne
20199	Unknown	Region 07	Kansas	Wallace
31133	Unknown	Region 07	Nebraska	Pawnee
29223	Unknown	Region 07	Missouri	Wayne
35033	Unknown	Region 06	New Mexico	Mora
05081	45500	Region 06	Arkansas	Little River
08021	Unknown	Region 08	Colorado	Conejos
27075	Unknown	Region 05	Minnesota	Lake
48461	Unknown	Region 06	Texas	Upton
48475	Unknown	Region 06	Texas	Ward
31113	35820	Region 07	Nebraska	Logan
31085	Unknown	Region 07	Nebraska	Hayes
31117	35820	Region 07	Nebraska	McPherson
31135	Unknown	Region 07	Nebraska	Perkins
49055	Unknown	Region 08	Utah	Wayne
35023	Unknown	Region 06	New Mexico	Hidalgo
56045	Unknown	Region 08	Wyoming	Weston
30075	Unknown	Region 08	Montana	Powder River
48267	Unknown	Region 06	Texas	Kimble
48033	Unknown	Region 06	Texas	Borden
48433	Unknown	Region 06	Texas	Stonewall
48417	Unknown	Region 06	Texas	Shackelford
48207	Unknown	Region 06	Texas	Haskell

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31009	Unknown	Region 07	Nebraska	Blaine
31071	Unknown	Region 07	Nebraska	Garfield
31115	Unknown	Region 07	Nebraska	Loup
21201	Unknown	Region 04	Kentucky	Robertson
46051	Unknown	Region 08	South Dakota	Grant
35011	Unknown	Region 06	New Mexico	De Baca
48271	Unknown	Region 06	Texas	Kinney
48137	Unknown	Region 06	Texas	Edwards
48105	Unknown	Region 06	Texas	Crockett
48435	Unknown	Region 06	Texas	Sutton
48443	Unknown	Region 06	Texas	Terrell
29215	Unknown	Region 07	Missouri	Texas
53023	Unknown	Region 10	Washington	Garfield
30077	Unknown	Region 08	Montana	Powell
30089	Unknown	Region 08	Montana	Sanders
30099	Unknown	Region 08	Montana	Teton
16071	Unknown	Region 10	Idaho	Oneida
16007	Unknown	Region 10	Idaho	Bear Lake
16041	30860	Region 10	Idaho	Franklin
48197	Unknown	Region 06	Texas	Hardeman
54017	17220	Region 03	West Virginia	Doddridge
29057	Unknown	Region 07	Missouri	Dade
29109	Unknown	Region 07	Missouri	Lawrence
38033	Unknown	Region 08	North Dakota	Golden Valley
30109	Unknown	Region 08	Montana	Wibaux
49001	Unknown	Region 08	Utah	Beaver
29011	Unknown	Region 07	Missouri	Barton

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30039	Unknown	Region 08	Montana	Granite
30061	Unknown	Region 08	Montana	Mineral
20053	Unknown	Region 07	Kansas	Ellsworth
20105	Unknown	Region 07	Kansas	Lincoln
48425	19100	Region 06	Texas	Somervell
20203	Unknown	Region 07	Kansas	Wichita
46055	Unknown	Region 08	South Dakota	Haakon
46075	Unknown	Region 08	South Dakota	Jones
46137	Unknown	Region 08	South Dakota	Ziebach
08011	Unknown	Region 08	Colorado	Bent
29067	Unknown	Region 07	Missouri	Douglas
16079	Unknown	Region 10	Idaho	Shoshone
46015	Unknown	Region 08	South Dakota	Brule
29103	Unknown	Region 07	Missouri	Knox
29171	Unknown	Region 07	Missouri	Putnam
29197	28860	Region 07	Missouri	Schuyler
55091	Unknown	Region 05	Wisconsin	Pepin
17171	27300	Region 05	Illinois	Scott
48017	Unknown	Region 06	Texas	Bailey
21095	Unknown	Region 04	Kentucky	Harlan
51051	13720	Region 03	Virginia	Dickenson
19117	Unknown	Region 07	Iowa	Lucas
48243	Unknown	Region 06	Texas	Jeff Davis
46021	Unknown	Region 08	South Dakota	Campbell
46107	Unknown	Region 08	South Dakota	Potter
41021	Unknown	Region 10	Oregon	Gilliam
32009	Unknown	Region 09	Nevada	Esmeralda

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55119	Unknown	Region 05	Wisconsin	Taylor
31029	Unknown	Region 07	Nebraska	Chase
31057	Unknown	Region 07	Nebraska	Dundy
30091	Unknown	Region 08	Montana	Sheridan
47067	Unknown	Region 04	Tennessee	Hancock
51021	Unknown	Region 03	Virginia	Bland
30097	Unknown	Region 08	Montana	Sweet Grass
32011	21220	Region 09	Nevada	Eureka
02164	Unknown	Region 10	Alaska	Lake and Peninsula
40129	Unknown	Region 06	Oklahoma	Roger Mills
55041	Unknown	Region 05	Wisconsin	Forest
29153	Unknown	Region 07	Missouri	Ozark
31049	Unknown	Region 07	Nebraska	Deuel
31069	Unknown	Region 07	Nebraska	Garden
31129	Unknown	Region 07	Nebraska	Nuckolls
19053	Unknown	Region 07	Iowa	Decatur
19159	Unknown	Region 07	Iowa	Ringgold
29079	Unknown	Region 07	Missouri	Grundy
29129	Unknown	Region 07	Missouri	Mercer
46061	33580	Region 08	South Dakota	Hanson
21153	Unknown	Region 04	Kentucky	Magoffin
47137	Unknown	Region 04	Tennessee	Pickett
31083	Unknown	Region 07	Nebraska	Harlan
30015	Unknown	Region 08	Montana	Chouteau
30045	Unknown	Region 08	Montana	Judith Basin
48301	Unknown	Region 06	Texas	Loving
48109	Unknown	Region 06	Texas	Culberson

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48385	Unknown	Region 06	Texas	Real
38039	Unknown	Region 08	North Dakota	Griggs
38045	Unknown	Region 08	North Dakota	LaMoure
38047	Unknown	Region 08	North Dakota	Logan
46019	Unknown	Region 08	South Dakota	Butte
55067	Unknown	Region 05	Wisconsin	Langlade
55069	32980	Region 05	Wisconsin	Lincoln
20013	Unknown	Region 07	Kansas	Brown
26131	Unknown	Region 05	Michigan	Ontonagon
41069	Unknown	Region 10	Oregon	Wheeler
46033	39660	Region 08	South Dakota	Custer
46071	Unknown	Region 08	South Dakota	Jackson
19071	Unknown	Region 07	Iowa	Fremont
19003	Unknown	Region 07	Iowa	Adams
30025	Unknown	Region 08	Montana	Fallon
38001	Unknown	Region 08	North Dakota	Adams
29065	Unknown	Region 07	Missouri	Dent
38019	Unknown	Region 08	North Dakota	Cavalier
30011	Unknown	Region 08	Montana	Carter
20195	Unknown	Region 07	Kansas	Trego
20165	Unknown	Region 07	Kansas	Rush
20167	Unknown	Region 07	Kansas	Russell
20065	Unknown	Region 07	Kansas	Graham
21013	33180	Region 04	Kentucky	Bell
49031	Unknown	Region 08	Utah	Piute
19147	Unknown	Region 07	Iowa	Palo Alto
54101	Unknown	Region 03	West Virginia	Webster

40045	Unknown	Region 06	Oklahoma	Ellis
46053	Unknown	Region 08	South Dakota	Gregory
31015	Unknown	Region 07	Nebraska	Boyd
20153	Unknown	Region 07	Kansas	Rawlins
20039	Unknown	Region 07	Kansas	Decatur
29203	Unknown	Region 07	Missouri	Shannon
31183	Unknown	Region 07	Nebraska	Wheeler
41001	Unknown	Region 10	Oregon	Baker
38005	Unknown	Region 08	North Dakota	Benson
38095	Unknown	Region 08	North Dakota	Towner
48269	Unknown	Region 06	Texas	King
48155	Unknown	Region 06	Texas	Foard
29137	Unknown	Region 07	Missouri	Monroe
20145	Unknown	Region 07	Kansas	Pawnee
27057	Unknown	Region 05	Minnesota	Hubbard
27077	Unknown	Region 05	Minnesota	Lake of the Woods
20193	Unknown	Region 07	Kansas	Thomas
20109	Unknown	Region 07	Kansas	Logan
48447	Unknown	Region 06	Texas	Throckmorton
08061	Unknown	Region 08	Colorado	Kiowa
46095	Unknown	Region 08	South Dakota	Mellette
46123	Unknown	Region 08	South Dakota	Tripp
21237	Unknown	Region 04	Kentucky	Wolfe
31147	Unknown	Region 07	Nebraska	Richardson
21063	Unknown	Region 04	Kentucky	Elliott
17151	Unknown	Region 05	Illinois	Pope
20033	Unknown	Region 07	Kansas	Comanche

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38009	Unknown	Region 08	North Dakota	Bottineau
17047	Unknown	Region 05	Illinois	Edwards
16033	Unknown	Region 10	Idaho	Clark
31161	Unknown	Region 07	Nebraska	Sheridan
27149	Unknown	Region 05	Minnesota	Stevens
20071	Unknown	Region 07	Kansas	Greeley
26083	26340	Region 05	Michigan	Keweenaw
30021	Unknown	Region 08	Montana	Dawson
30055	Unknown	Region 08	Montana	McCone
48263	Unknown	Region 06	Texas	Kent
02158	Unknown	Region 10	Alaska	Kusilvak
02188	Unknown	Region 10	Alaska	Northwest Arctic
46063	Unknown	Region 08	South Dakota	Harding
30019	Unknown	Region 08	Montana	Daniels
30105	Unknown	Region 08	Montana	Valley
46105	Unknown	Region 08	South Dakota	Perkins
30005	Unknown	Region 08	Montana	Blaine
30069	Unknown	Region 08	Montana	Petroleum
30071	Unknown	Region 08	Montana	Phillips
31103	Unknown	Region 07	Nebraska	Keya Paha
46007	Unknown	Region 08	South Dakota	Bennett
31091	Unknown	Region 07	Nebraska	Hooker
31075	Unknown	Region 07	Nebraska	Grant
31017	Unknown	Region 07	Nebraska	Brown
31171	Unknown	Region 07	Nebraska	Thomas
02070	Unknown	Region 10	Alaska	Dillingham
02185	Unknown	Region 10	Alaska	North Slope

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

31005	Unknown	Region 07	Nebraska	Arthur
02013	Unknown	Region 10	Alaska	Aleutians East
02016	Unknown	Region 10	Alaska	Aleutians West
02060	Unknown	Region 10	Alaska	Bristol Bay
02230	Unknown	Region 10	Alaska	Skagway
02282	Unknown	Region 10	Alaska	Yakutat
27031	Unknown	Region 05	Minnesota	Cook
30017	Unknown	Region 08	Montana	Custer
30033	Unknown	Region 08	Montana	Garfield
30079	Unknown	Region 08	Montana	Prairie
31149	Unknown	Region 07	Nebraska	Rock
48377	Unknown	Region 06	Texas	Presidio

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Risk Category (GeoSpark)	GeoSpark Risk Rating (GeoSpark)	Highest Risk of Neighbor (GeoSpark)	4 Days Ago	3 Days Ago	2 Days Ago
Low	0.60	0.20	123	1,020	1,344
Medium	1.46	0.08	814	815	817
Medium	1.00	1.90	656	714	887
High	5.53	0.06	742	866	899
Low	0.83	0.28	594	595	596
High	2.15	5.26	11,708	11,812	11,945
High	4.89	0.19	2,196	2,276	2,294
Low	0.73	0.19	1,164	1,214	1,224
High	5.26	5.59	28,970	29,232	29,626
Low	0.67	0.74	1,724	1,724	1,724
High	2.94	5.59	37,244	37,785	38,450
High	5.59	6.26	35,854	36,161	36,519
High	2.17	3.27	12,449	12,814	13,082
High	10.00	4.53	11,811	11,937	12,094
High	5.01	1.25	500	514	539
Low	0.22	0.59	269	274	277
High	6.23	0.00	675	702	770
High	5.54	0.31	159	161	163
Medium	1.82	10.00	12,578	12,779	12,996
High	6.26	5.59	33,664	34,037	34,478
High	4.43	5.59	51,631	52,274	53,039
High	3.27	2.17	8,650	8,751	8,910
Medium	1.47	10.00	14,916	15,148	15,401
High	2.20	0.26	456	503	518
High	3.28	0.28	497	497	497

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.31	5.54	183	184	185
Low	0.65	0.21	214	214	214
High	3.04	0.70	1,025	1,111	1,160
Medium	1.26	1.12	327	350	363
Medium	1.74	2.17	13,682	13,994	14,248
High	4.53	10.00	44,872	45,519	46,275
Low	0.41	1.23	768	771	772
Medium	1.44	5.26	15,610	15,830	15,974
Medium	1.54	2.59	12,890	13,295	13,606
Low	0.33	4.45	266	270	278
High	2.46	0.44	1,505	1,530	1,534
Low	0.17	5.54	99	103	103
Medium	1.46	1.23	6,452	6,495	6,524
High	6.01	0.42	144	144	144
High	4.14	1.84	1,027	1,064	1,116
High	2.42	10.00	11,715	11,947	12,213
High	2.77	0.46	467	500	545
Low	0.61	0.58	69	116	153
Low	0.36	0.66	129	194	196
Medium	1.23	1.46	6,197	6,305	6,362
Low	0.47	0.86	450	459	472
Low	0.33	2.46	310	318	319
Medium	1.44	4.53	21,920	22,175	22,496
Low	0.81	1.35	372	384	395
Low	0.75	1.35	282	282	288
High	2.10	1.07	380	382	385
Low	0.34	2.71	316	339	354

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Medium	1.53	3.27	838	880	931
High	2.72	5.26	11,294	11,612	11,801
High	2.19	0.03	317	386	451
High	7.11	1.47	264	303	353
Low	0.95	2.42	3,937	4,077	4,271
High	2.39	2.59	8,673	9,028	9,362
Low	0.68	0.41	246	247	247
High	2.88	1.46	6,375	6,505	6,692
Medium	1.47	7.11	64	82	94
Medium	1.06	2.17	5,287	5,354	5,406
Medium	1.00	2.42	3,464	3,537	3,605
Low	0.42	0.04	65	65	65
Low	0.31	1.40	116	141	141
High	2.04	0.24	2,038	2,089	2,123
High	3.14	1.82	6,290	6,579	6,822
Low	0.44	2.46	317	321	326
Low	0.35	1.23	570	573	577
Medium	1.90	1.00	742	922	1,074
High	9.26	1.86	2,216	2,292	2,359
High	3.91	2.80	5,083	5,259	5,409
Medium	1.55	3.27	2,954	3,002	3,049
High	2.71	1.14	204	219	229
Low	0.69	5.26	970	990	1,003
Low	0.58	1.07	89	90	90
Low	0.25	1.46	464	469	474
Medium	1.46	2.88	6,033	6,132	6,198
High	2.29	1.86	544	544	546

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

High	4.45	0.33	1,140	1,195	1,255
Low	0.97	0.94	16,729	16,970	17,106
Medium	1.25	5.01	131	138	172
Low	0.62	2.10	129	129	131
Low	0.58	1.11	164	164	165
Low	0.49	0.41	115	129	142
High	2.59	2.39	14,208	14,607	15,048
High	2.46	2.72	7,536	7,900	8,024
Medium	1.35	1.14	133	153	159
Low	0.55	1.20	903	920	941
Low	0.16	0.82	369	373	375
Medium	1.08	3.91	5,896	6,065	6,187
Low	0.59	0.58	290	290	294
High	4.00	0.61	426	456	470
Medium	1.01	0.21	216	223	224
Low	0.20	0.72	182	189	194
High	2.09	0.13	184	190	193
Low	0.28	0.59	336	346	360
Low	0.25	1.07	68	68	69
Low	0.15	5.54	22	23	25
Medium	1.46	1.47	3,777	3,900	4,003
Medium	1.31	1.02	1,331	1,481	1,693
Medium	1.32	0.87	12,297	12,544	12,948
High	2.65	0.46	36,513	38,668	40,227
Medium	1.31	0.92	6,043	6,735	7,041
Low	0.98	0.71	58	94	137
Low	0.20	2.46	153	159	162

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.67	1.20	2,796	2,850	2,896
Low	0.87	1.32	3,519	3,646	3,773
Low	0.16	1.11	69	69	69
Low	0.13	0.06	55	55	55
Low	0.06	1.46	177	179	180
Medium	1.30	3.14	5,550	5,787	6,129
Low	0.20	0.78	57	64	67
Medium	1.52	3.27	1,279	1,298	1,327
Medium	1.18	0.65	200	200	201
Medium	1.07	2.10	166	167	167
Medium	1.02	1.31	256	326	342
Low	0.37	0.33	66	73	79
Low	0.16	0.64	24	24	25
High	4.38	0.64	200	210	245
Low	0.03	2.46	23	23	23
Medium	1.20	0.67	2,050	2,103	2,182
Medium	1.18	4.14	449	478	507
Low	0.68	1.32	3,696	3,848	3,999
Low	0.63	2.71	187	205	212
Low	0.58	0.59	285	286	290
Low	0.16	1.54	45	51	57
Medium	1.35	0.73	125	125	125
Low	0.60	3.27	378	383	394
Low	0.17	0.82	190	194	198
Medium	1.85	0.05	89	90	93
Medium	1.82	3.91	3,580	3,792	3,916
Medium	1.27	0.94	2,143	2,173	2,211

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.71	1.31	4,323	4,658	4,797
Low	0.22	0.33	65	67	70
Low	0.00	0.10	3	6	8
Medium	1.28	1.18	712	741	766
Low	0.14	0.19	54	54	55
Low	0.78	0.79	2,698	2,748	2,810
Low	0.57	3.27	921	936	949
Low	0.55	1.27	1,127	1,147	1,165
Medium	1.47	2.46	5,601	5,931	6,112
Low	0.58	2.88	2,690	2,769	2,879
Low	0.36	1.23	651	661	666
Low	0.34	0.33	210	214	218
Low	0.19	0.22	66	67	71
Low	0.15	0.24	141	144	145
Low	0.09	0.86	122	128	128
Low	0.94	0.97	5,513	5,623	5,666
Low	0.82	0.23	1,540	1,579	1,601
Medium	1.13	0.40	5,530	5,754	5,983
Low	0.90	0.16	125	130	131
Low	0.07	1.84	46	47	78
Medium	1.14	2.71	99	109	117
Medium	1.12	1.26	499	572	684
Medium	1.09	0.96	216	222	258
Low	0.70	3.04	164	187	202
Low	0.14	1.35	38	58	60
Low	0.60	0.87	141	151	151
Low	0.44	2.10	75	80	80

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.25	0.30	262	273	282
Low	0.14	0.16	49	51	59
Low	0.13	0.15	356	372	386
Low	0.11	0.78	64	68	72
Medium	1.35	0.81	1,776	1,802	1,836
Low	0.89	0.97	7,267	7,423	7,475
Low	0.74	2.11	318	408	515
Low	0.64	4.38	48	48	48
Low	0.17	0.63	117	125	131
Low	0.11	0.00	29	29	29
Medium	1.84	4.14	621	637	710
Low	0.46	2.65	3,509	3,766	3,975
High	2.55	3.06	723	746	809
Low	0.43	1.35	148	164	165
Low	0.21	0.65	33	33	33
Low	0.07	1.26	15	17	17
Low	0.37	2.72	963	1,014	1,036
Low	0.23	0.82	107	128	133
Low	0.14	0.21	76	76	76
Low	0.59	0.54	156	164	166
Low	0.20	1.31	754	802	848
Low	0.06	0.00	15	21	24
High	10.00	7.02	655	658	674
Low	0.72	0.10	88	109	109
Low	0.70	1.32	4,307	4,406	4,487
Low	0.04	2.20	9	10	11
Low	0.28	3.28	27	27	29

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.32	1.06	603	608	622
Low	0.29	0.44	76	101	104
Low	0.17	0.22	53	65	92
Low	0.10	0.15	256	263	268
Medium	1.78	0.06	1,057	1,175	1,272
Medium	1.54	0.16	215	226	229
Low	0.56	1.32	2,870	3,055	3,182
Low	0.53	1.32	316	343	375
Low	0.46	2.77	130	155	175
Low	0.46	0.79	676	694	710
Low	0.37	0.86	593	627	636
Low	0.26	0.83	1,128	1,203	1,272
Low	0.12	1.35	135	139	144
Low	0.27	1.46	1,220	1,270	1,321
Low	0.78	0.63	349	365	378
Low	0.63	0.17	706	730	755
Low	0.21	2.10	42	42	42
Low	0.15	0.19	677	710	755
Low	0.11	1.18	201	213	218
Low	0.92	1.31	4,300	4,754	4,919
Low	0.35	0.33	157	161	173
Low	0.06	0.60	74	76	78
Low	0.20	3.04	42	44	44
Low	0.06	0.82	148	155	156
Low	0.03	2.19	16	19	19
Medium	1.13	0.85	3,001	3,092	3,222
Medium	1.11	0.20	133	148	148

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.94	1.27	913	934	968
Low	0.86	0.47	1,874	1,989	2,054
Low	0.58	1.12	83	110	138
Low	0.48	1.09	61	68	76
Low	0.41	0.49	99	101	101
Low	0.38	2.55	1,251	1,282	1,334
Low	0.26	0.92	967	1,004	1,044
Low	0.24	0.30	23	23	23
Low	0.16	0.90	36	40	44
Low	0.14	0.01	44	44	45
Low	0.11	0.84	79	80	80
Medium	1.86	9.26	406	425	452
Medium	1.86	2.29	128	130	136
Medium	1.19	0.50	12,063	12,389	12,632
Low	0.84	9.26	759	773	793
Low	0.62	0.99	100	104	107
Low	0.56	0.07	62	70	75
Low	0.40	1.13	667	701	745
Low	0.29	0.33	106	117	117
Low	0.26	0.47	232	241	244
Low	0.21	0.20	196	201	201
Low	0.37	1.13	579	616	668
Low	0.35	1.35	82	87	89
Low	0.35	0.12	130	130	130
High	2.80	3.91	860	902	937
Low	0.54	0.28	141	143	150
Low	0.27	1.27	283	289	290

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.22	0.02	59	59	59
Low	0.21	0.41	553	565	584
Low	0.20	0.35	68	75	76
Low	0.04	0.22	46	60	61
Low	0.96	1.09	1,645	1,781	1,900
Low	0.90	3.14	622	638	675
Low	0.34	2.46	657	687	707
Low	0.31	2.71	81	87	88
Low	0.30	2.55	231	237	261
Low	0.20	0.31	123	125	125
Low	0.18	0.38	186	190	191
Low	0.05	1.18	97	97	97
Medium	1.14	0.03	81	81	81
Medium	1.12	0.58	115	132	148
Low	0.85	1.13	2,472	2,557	2,625
Low	0.68	0.20	2,612	2,652	2,773
Low	0.33	0.26	58	78	100
Low	0.14	2.65	1,846	1,929	1,993
Low	0.06	0.86	98	108	110
Medium	1.39	1.74	1,165	1,204	1,238
Medium	1.17	3.06	964	1,012	1,050
Low	0.91	0.20	142	144	145
Low	0.84	0.08	245	269	269
Low	0.72	0.36	437	450	456
Low	0.38	0.33	185	187	187
Low	0.36	0.16	828	853	883
Low	0.33	0.17	173	184	193

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.29	0.72	191	193	199
Low	0.26	2.65	2,492	2,617	2,796
Low	0.20	0.64	1,077	1,105	1,186
Low	0.08	0.54	96	108	114
Low	0.07	0.91	187	188	193
Low	0.02	1.01	26	26	26
Medium	1.65	0.42	3,319	3,481	3,598
Low	0.84	0.58	2,831	3,013	3,183
Low	0.57	0.93	53	53	56
Low	0.51	0.89	1,581	1,600	1,620
Low	0.23	0.54	45	46	50
Low	0.21	0.13	59	59	60
Low	0.11	0.28	63	65	68
Low	0.05	5.54	24	24	25
Low	0.57	0.18	70	72	72
Low	0.44	2.65	3,081	3,256	3,432
Low	0.40	0.93	918	942	976
Low	0.32	1.31	564	611	622
Low	0.28	0.54	148	149	153
Low	0.24	0.38	58	59	59
Low	0.23	0.21	91	135	145
Low	0.16	0.78	54	55	58
Low	0.08	1.54	35	35	35
Low	0.01	1.07	3	3	3
Medium	1.09	0.05	258	262	265
Low	0.93	0.57	92	92	93
Low	0.65	1.31	3,611	3,897	4,046

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Low	0.62	0.51	663	684	700
Low	0.42	0.38	279	309	348
Low	0.39	0.84	2,068	2,162	2,237
Low	0.36	1.30	257	260	263
Low	0.35	0.47	257	261	265
Low	0.14	0.20	50	52	54
Low	0.06	0.78	43	49	49
Low	0.05	5.54	10	10	10
Low	0.04	0.12	85	86	86
Low	0.02	0.82	25	29	32
High	3.06	2.55	323	334	337
Low	1.00	0.50	141	162	177
Low	0.72	0.07	83	84	87
Low	0.50	1.28	486	498	512
Low	0.35	0.55	138	157	163
Low	0.21	0.23	267	435	531
Low	0.20	0.26	131	137	137
Low	0.19	0.47	237	237	243
Low	0.10	0.90	58	66	73
Low	0.01	0.65	29	30	30
Low	0.01	0.26	18	20	20
Low	0.00	0.58	3	3	3
Low	0.79	0.78	1,765	1,820	1,904
Low	0.41	2.77	56	57	61
Low	0.32	2.65	1,526	1,677	1,803
Low	0.28	0.16	317	328	334
Low	0.27	1.55	442	444	448

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Low	0.13	0.40	58	58	58
Low	0.09	0.30	32	35	38
Low	0.08	0.40	121	128	129
Low	0.03	0.15	35	35	35
Low	0.00	0.11	3	3	3
Low	0.82	1.46	518	518	549
Low	0.49	1.35	1,585	1,665	1,730
Low	0.22	1.55	170	202	205
Low	0.21	0.60	62	66	66
Low	0.20	0.68	623	632	640
Low	0.12	0.93	83	84	84
Low	0.12	0.23	90	90	90
Low	0.12	0.24	100	103	104
Low	0.10	0.19	47	50	52
Low	0.05	0.01	14	14	14
Low	0.01	4.38	21	22	23
Low	0.01	5.54	4	5	5
Medium	1.74	1.39	501	514	521
Low	0.63	0.84	1,734	1,829	1,864
Low	0.61	0.20	2,940	3,044	3,147
Low	0.58	1.31	1,725	1,807	1,885
Low	0.47	0.35	420	428	434
Low	0.40	0.15	138	141	144
Low	0.30	1.35	39	39	39
Low	0.17	0.16	102	102	105
Low	0.14	0.05	35	35	35
Low	0.10	0.33	82	87	90

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.10	0.59	62	62	74
Low	0.08	0.71	76	78	78
Low	0.06	0.47	129	129	135
Low	0.01	0.73	47	51	57
Medium	1.11	0.58	66	67	67
Low	0.99	0.62	108	120	134
Low	0.73	0.47	513	542	572
Low	0.65	1.18	92	93	94
Low	0.64	0.21	3,049	3,151	3,244
Low	0.61	4.00	240	249	259
Low	0.55	0.60	208	214	215
Low	0.53	1.02	78	81	87
Low	0.24	0.68	461	475	487
Low	0.22	0.26	338	350	358
Low	0.18	0.95	48	49	50
Low	0.13	0.36	358	375	383
Low	0.10	0.78	42	48	54
Low	0.08	0.27	47	52	64
Low	0.05	0.44	33	34	40
Low	0.03	0.00	10	10	10
Medium	1.32	0.53	156	169	197
Low	0.68	0.24	669	673	705
Low	0.61	0.09	1,251	1,297	1,331
Low	0.61	0.37	130	139	141
Low	0.55	1.18	250	261	266
Low	0.37	0.61	55	58	58
Low	0.36	0.46	391	477	521

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.34	1.52	131	139	142
Low	0.14	0.23	54	54	57
Low	0.10	0.32	163	175	176
Low	0.10	1.14	28	29	32
Low	0.04	0.73	104	107	109
Low	0.95	0.18	54	54	54
Low	0.62	0.14	108	112	119
Low	0.57	0.83	2,433	2,453	2,493
Low	0.40	0.51	313	323	324
Low	0.32	0.60	207	219	226
Low	0.28	0.38	117	122	126
Low	0.25	3.14	142	142	144
Low	0.20	1.47	437	446	461
Low	0.07	2.10	16	16	16
Low	0.05	0.71	37	37	62
Low	0.04	1.11	18	20	21
Low	0.01	0.90	18	20	20
Low	0.01	0.14	22	23	27
High	2.11	0.74	985	1,176	1,350
Low	0.95	1.42	148	170	184
Low	0.91	0.11	2,507	2,599	2,672
Low	0.59	0.31	377	389	412
Low	0.46	0.39	139	149	164
Low	0.35	1.31	867	896	931
Low	0.32	0.31	65	69	69
Low	0.31	1.18	75	78	81
Low	0.30	0.27	72	75	75

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.20	0.44	56	90	95
Low	0.19	0.19	49	52	56
Low	0.16	0.97	1,075	1,091	1,101
Low	0.16	0.21	106	110	110
Low	0.15	0.17	61	64	66
Low	0.12	1.13	189	189	198
Low	0.11	1.13	218	227	229
Low	0.10	0.19	32	38	41
Low	0.06	0.62	55	60	73
Low	0.03	0.47	36	36	42
Low	0.01	1.90	21	24	31
High	2.10	0.08	82	82	82
Medium	1.42	0.95	176	182	185
Low	0.83	0.57	6,207	6,274	6,351
Low	0.64	0.14	1,057	1,099	1,172
Low	0.48	0.23	876	898	926
Low	0.45	0.79	1,375	1,432	1,469
Low	0.41	0.49	2,023	2,068	2,145
Low	0.36	4.14	389	396	410
Low	0.33	0.34	67	76	88
Low	0.26	0.84	436	460	480
Low	0.21	0.27	125	127	131
Low	0.20	9.26	71	74	79
Low	0.15	1.35	20	23	23
Low	0.14	0.88	65	65	66
Low	0.11	0.06	73	73	73
Low	0.11	0.02	21	21	21

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.10	0.62	30	31	31
Low	0.09	0.15	64	65	65
Low	0.03	1.35	23	24	24
Low	0.02	0.18	6	6	6
Low	0.02	0.35	37	44	44
Low	0.01	0.86	28	28	30
High	2.01	0.90	330	344	350
Medium	1.40	0.31	332	344	344
Low	0.71	0.98	73	74	76
Low	0.57	2.39	692	779	828
Low	0.47	0.73	157	165	169
Low	0.45	0.75	329	337	345
Low	0.36	0.51	2,808	2,889	2,925
Low	0.24	2.04	147	153	156
Low	0.23	1.35	31	31	31
Low	0.21	1.27	368	375	384
Low	0.16	0.35	75	78	82
Low	0.16	2.29	51	51	51
Low	0.11	1.27	175	181	182
Low	0.10	0.47	293	316	329
Low	0.06	0.37	48	50	54
Low	0.04	0.58	29	29	30
High	2.33	1.04	1,479	1,600	1,697
Low	0.73	1.35	99	99	99
Low	0.50	1.19	4,953	5,144	5,257
Low	0.48	0.21	381	382	388
Low	0.47	2.59	964	1,012	1,058

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.46	0.07	42	43	43
Low	0.35	0.62	180	183	184
Low	0.26	0.35	57	59	62
Low	0.18	0.57	52	52	52
Low	0.15	0.55	713	726	777
Low	0.14	0.36	253	267	274
Low	0.09	1.65	153	154	155
Low	0.08	1.46	169	176	178
Low	0.07	0.27	47	48	49
Low	0.04	0.65	104	117	119
Low	0.88	0.01	87	141	185
Low	0.64	0.16	47	58	58
Low	0.42	0.18	418	419	422
Low	0.41	1.31	59	63	78
Low	0.38	0.42	430	461	494
Low	0.33	0.29	157	160	172
Low	0.25	0.82	98	113	129
Low	0.21	2.71	42	44	47
Low	0.18	2.26	61	61	66
Low	0.14	1.01	54	54	54
Low	0.13	0.20	405	426	435
Low	0.12	2.71	229	251	268
Low	0.11	0.03	54	56	56
Low	0.08	0.47	178	182	200
Low	0.08	2.29	18	19	20
Low	0.06	0.06	40	41	41
Low	0.06	0.40	67	88	96

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.05	0.33	63	64	64
Low	0.05	0.40	136	137	157
Low	0.04	0.63	34	40	40
Low	0.03	0.03	7	8	8
Low	0.01	3.04	12	15	16
Low	0.01	0.02	2	2	2
Low	0.00	5.01	8	9	13
Medium	1.20	0.18	23,182	24,215	24,894
Low	0.71	0.05	291	319	327
Low	0.60	0.32	143	159	168
Low	0.52	0.24	25	25	25
Low	0.50	0.82	119	122	122
Low	0.35	1.13	755	794	810
Low	0.34	0.07	111	117	118
Low	0.32	0.58	96	98	102
Low	0.24	0.12	88	97	112
Low	0.23	0.35	44	44	47
Low	0.12	0.35	40	42	47
Low	0.10	0.52	12	12	13
Low	0.06	4.14	52	63	63
Low	0.06	0.68	148	157	168
Low	0.06	5.53	20	23	27
Low	0.05	1.07	10	10	11
Low	0.03	3.04	12	13	16
Low	0.00	1.35	9	9	9
High	2.26	0.23	68	69	73
Low	0.54	0.59	107	120	125

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.43	0.07	144	153	156
Low	0.43	0.47	634	642	645
Low	0.40	0.53	728	736	750
Low	0.39	1.13	1,338	1,373	1,384
Low	0.38	0.98	49	51	55
Low	0.28	0.34	304	325	329
Low	0.28	0.59	391	391	397
Low	0.21	0.21	85	92	92
Low	0.21	0.77	89	92	93
Low	0.20	0.44	266	281	291
Low	0.14	0.47	228	230	248
Low	0.13	1.35	150	157	163
Low	0.11	0.12	62	64	64
Low	0.09	0.42	47	47	48
Low	0.09	2.65	621	666	693
Low	0.06	0.46	52	54	67
Low	0.05	2.20	23	24	25
Low	0.05	0.91	98	98	99
Low	0.04	0.57	24	25	26
Low	0.04	0.60	27	27	27
Low	0.02	0.75	83	92	96
Low	0.01	0.65	26	26	26
Low	0.01	0.48	13	13	13
Low	0.00	6.23	5	6	10
Low	0.93	0.45	284	313	325
Low	0.82	0.45	2,438	2,526	2,609
Low	0.62	0.27	181	191	196

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.51	0.40	1,615	1,676	1,749
Low	0.47	0.27	899	913	946
Low	0.44	0.53	216	216	217
Low	0.44	0.36	99	99	105
Low	0.42	1.65	420	440	457
Low	0.38	2.01	564	603	623
Low	0.32	0.87	492	492	512
Low	0.31	0.79	584	601	617
Low	0.27	0.96	746	832	881
Low	0.27	0.44	361	361	361
Low	0.27	0.62	54	54	55
Low	0.26	3.04	101	111	113
Low	0.25	0.47	218	224	229
Low	0.21	0.82	286	287	292
Low	0.19	0.73	172	176	185
Low	0.19	0.23	84	86	87
Low	0.18	0.07	83	84	84
Low	0.12	0.32	19	19	19
Low	0.11	0.51	319	329	335
Low	0.11	1.13	152	156	160
Low	0.10	0.10	95	103	105
Low	0.07	0.54	31	32	32
Low	0.04	0.54	28	28	28
Low	0.02	0.64	34	35	37
Low	0.02	1.00	7	7	12
Low	0.01	0.33	16	19	19
Low	0.00	0.73	23	25	26

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.74	0.67	2,441	2,589	2,698
Low	0.51	0.11	155	158	160
Low	0.42	0.59	148	150	154
Low	0.42	0.06	389	437	449
Low	0.24	2.29	55	55	56
Low	0.23	0.19	265	270	273
Low	0.20	0.47	129	138	143
Low	0.20	0.61	355	393	408
Low	0.19	9.26	51	54	59
Low	0.19	0.41	180	181	185
Low	0.19	0.62	105	106	113
Low	0.15	0.12	139	140	142
Low	0.14	0.04	85	86	89
Low	0.12	0.87	186	191	194
Low	0.11	0.21	130	133	133
Low	0.10	1.54	42	43	44
Low	0.08	0.35	46	47	51
Low	0.07	0.43	53	55	55
Low	0.07	0.34	66	69	73
Low	0.07	0.63	52	52	54
Low	0.06	1.01	17	17	18
Low	0.05	0.59	43	43	43
Low	0.04	0.58	37	37	38
Low	0.03	1.11	16	16	16
Low	0.03	0.64	70	71	71
Low	0.01	5.53	9	10	10
Low	0.00	0.64	2	2	2

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

High	2.10	0.06	51	51	52
Medium	1.18	0.18	439	451	474
Low	0.85	0.18	832	860	903
Low	0.77	0.21	1,441	1,478	1,534
Low	0.53	0.50	2,963	3,041	3,080
Low	0.49	0.94	328	331	335
Low	0.49	1.31	1,786	1,844	1,932
Low	0.38	0.22	188	194	194
Low	0.35	0.05	848	873	949
Low	0.35	0.23	305	312	318
Low	0.25	1.35	169	175	178
Low	0.22	0.38	39	49	49
Low	0.22	0.28	126	130	135
Low	0.21	0.55	98	99	99
Low	0.21	0.64	475	492	507
Low	0.21	1.01	38	39	40
Low	0.20	0.73	158	160	161
Low	0.19	4.89	42	45	75
Low	0.18	1.18	131	139	149
Low	0.17	0.60	40	41	44
Low	0.17	10.00	157	162	173
Low	0.16	4.45	51	51	52
Low	0.15	0.15	90	91	91
Low	0.14	0.82	102	113	121
Low	0.14	1.01	40	40	40
Low	0.13	0.14	470	496	505
Low	0.12	1.53	100	102	104

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.12	0.94	84	84	84
Low	0.12	0.08	406	412	416
Low	0.08	0.05	28	28	28
Low	0.06	0.00	24	24	26
Low	0.05	0.97	287	296	303
Low	0.03	5.53	13	16	16
Low	0.02	0.15	14	15	15
Low	0.02	0.10	21	21	21
Low	0.02	0.52	45	45	45
Low	0.02	1.40	26	26	26
Low	0.02	0.74	12	13	19
High	7.02	10.00	92	103	113
Medium	1.06	1.12	213	234	256
Low	0.82	0.50	442	485	521
Low	0.57	1.39	287	298	311
Low	0.53	1.35	580	618	646
Low	0.44	0.57	168	169	169
Low	0.33	0.12	56	58	58
Low	0.33	0.40	66	71	71
Low	0.33	0.44	46	52	55
Low	0.23	2.26	92	113	113
Low	0.20	1.11	38	39	39
Low	0.18	0.42	91	98	98
Low	0.16	1.31	133	141	155
Low	0.15	0.26	64	70	76
Low	0.14	0.29	87	96	98
Low	0.14	0.50	333	358	358

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.12	0.15	67	68	69
Low	0.10	1.18	31	32	33
Low	0.09	0.23	24	24	24
Low	0.06	0.13	28	32	32
Low	0.05	0.42	62	63	64
Low	0.03	0.05	16	16	16
Low	0.02	1.06	13	15	15
Low	0.02	0.37	28	28	28
Low	0.01	5.01	9	9	10
Low	0.01	1.90	18	21	27
Low	0.01	2.04	17	17	17
Low	0.00	0.03	4	4	4
Low	0.00	0.73	22	24	25
Low	0.87	0.60	196	200	205
Low	0.55	2.01	149	155	156
Low	0.54	0.12	3,979	3,979	4,225
Low	0.53	0.20	486	504	527
Low	0.47	0.43	248	263	294
Low	0.43	0.07	92	94	97
Low	0.39	0.10	506	532	538
Low	0.37	1.00	111	128	128
Low	0.36	0.84	414	437	468
Low	0.32	0.14	2,126	2,217	2,305
Low	0.30	0.55	88	90	90
Low	0.28	0.25	158	170	173
Low	0.28	7.02	14	15	17
Low	0.27	0.32	103	111	114

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.22	0.36	161	171	183
Low	0.22	0.51	467	474	482
Low	0.22	0.15	78	79	82
Low	0.21	0.35	455	463	464
Low	0.21	1.25	19	19	19
Low	0.16	0.03	265	269	282
Low	0.14	1.31	44	46	63
Low	0.14	0.63	85	85	88
Low	0.14	0.64	259	267	267
Low	0.13	1.54	40	41	41
Low	0.11	0.68	253	259	268
Low	0.10	0.89	337	343	352
Low	0.09	0.40	276	286	286
Low	0.07	0.39	572	595	614
Low	0.06	2.10	24	26	28
Low	0.06	0.94	170	171	171
Low	0.05	0.39	45	46	49
Low	0.05	0.12	53	74	74
Low	0.04	1.12	31	31	34
Low	0.02	0.20	18	19	19
Low	0.02	0.21	42	42	42
Low	0.01	0.70	9	10	11
Low	0.01	0.20	42	51	55
Low	0.01	0.64	5	6	6
Low	0.01	0.01	4	9	10
Low	0.00	0.15	1	2	2
Medium	1.07	0.05	49	52	54

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.76	2.33	276	288	301
Low	0.47	0.10	1,307	1,352	1,352
Low	0.46	1.00	240	251	262
Low	0.35	0.24	1,499	1,523	1,543
Low	0.33	0.22	337	355	379
Low	0.30	1.35	37	39	40
Low	0.27	0.57	228	231	235
Low	0.23	0.39	80	82	97
Low	0.23	1.31	150	160	160
Low	0.17	0.68	474	502	547
Low	0.16	0.01	516	535	543
Low	0.16	3.14	186	200	211
Low	0.15	0.38	99	100	103
Low	0.15	0.15	39	42	43
Low	0.14	0.48	339	364	382
Low	0.14	0.13	68	74	78
Low	0.13	0.18	44	44	44
Low	0.12	0.16	181	217	221
Low	0.11	0.68	411	416	419
Low	0.10	0.66	36	38	38
Low	0.09	0.79	167	176	187
Low	0.09	0.58	27	28	28
Low	0.07	0.49	71	72	72
Low	0.06	0.19	32	34	38
Low	0.06	0.59	60	61	61
Low	0.05	0.23	49	51	59
Low	0.04	0.21	22	22	22

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.03	5.53	14	16	18
Low	0.03	0.47	12	11	11
Low	0.03	0.23	46	47	47
Low	0.02	0.25	26	26	26
Low	0.01	5.01	7	7	7
Low	0.01	0.15	29	29	29
Low	0.00	0.02	2	2	2
Low	0.57	0.37	364	405	442
Low	0.55	0.11	1,738	1,829	1,980
Low	0.55	0.30	284	299	305
Low	0.48	0.50	4,031	4,079	4,164
Low	0.47	0.53	185	209	228
Low	0.45	0.82	957	993	1,021
Low	0.44	0.35	470	483	497
Low	0.40	0.11	1,218	1,297	1,353
Low	0.38	0.09	98	99	100
Low	0.31	0.59	84	87	92
Low	0.30	0.28	302	314	320
Low	0.24	0.36	118	118	121
Low	0.23	0.48	531	557	593
Low	0.23	0.28	121	122	136
Low	0.21	0.47	176	182	198
Low	0.17	1.02	20	20	20
Low	0.16	0.36	308	318	324
Low	0.16	0.14	89	89	89
Low	0.16	0.17	77	77	77
Low	0.15	0.58	25	26	28

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.15	0.42	159	163	169
Low	0.14	1.65	67	68	69
Low	0.14	0.86	197	229	235
Low	0.14	0.87	21	22	23
Low	0.13	0.07	60	60	61
Low	0.13	0.95	64	65	65
Low	0.13	0.36	71	71	71
Low	0.12	0.33	59	59	59
Low	0.12	1.19	596	610	628
Low	0.10	0.33	177	195	201
Low	0.06	0.23	37	41	46
Low	0.06	0.14	28	28	28
Low	0.06	0.27	69	71	83
Low	0.04	0.29	17	17	18
Low	0.04	0.32	154	155	159
Low	0.04	0.58	21	21	21
Low	0.04	1.26	10	10	12
Low	0.02	0.23	23	26	26
Low	0.02	0.40	15	15	16
Low	0.02	0.35	38	45	47
Low	0.02	0.09	46	47	48
Low	0.01	0.58	7	9	9
Low	0.01	0.54	17	19	21
Low	0.01	0.34	19	19	21
Low	0.01	0.01	10	17	27
Low	0.01	0.00	5	5	5
Low	0.01	0.38	15	15	15

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.01	0.68	29	30	31
Low	0.01	0.64	7	7	8
Low	0.01	5.53	11	12	16
Low	0.58	0.23	1,136	1,651	1,699
Low	0.42	1.74	354	358	361
Low	0.42	0.13	491	508	523
Low	0.41	0.25	640	680	720
Low	0.40	0.11	173	176	176
Low	0.33	0.82	198	222	243
Low	0.28	2.29	93	93	95
Low	0.24	0.35	1,177	1,197	1,233
Low	0.23	0.62	223	234	237
Low	0.21	0.29	580	591	607
Low	0.21	0.06	560	588	600
Low	0.20	0.83	1,322	1,339	1,376
Low	0.16	0.57	63	64	66
Low	0.16	0.58	44	46	48
Low	0.13	0.32	452	471	480
Low	0.12	0.95	61	61	61
Low	0.11	0.91	282	293	294
Low	0.08	0.44	43	44	44
Low	0.07	0.24	106	108	117
Low	0.07	0.55	176	178	181
Low	0.07	0.03	13	13	13
Low	0.07	0.38	94	94	101
Low	0.06	0.33	104	104	104
Low	0.06	0.55	195	211	213

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.06	0.22	32	32	32
Low	0.05	0.43	28	32	34
Low	0.05	0.65	24	24	26
Low	0.03	0.91	56	59	59
Low	0.03	1.40	27	28	28
Low	0.03	0.59	21	24	31
Low	0.03	0.21	95	97	97
Low	0.03	1.14	13	13	13
Low	0.03	0.52	23	24	27
Low	0.03	0.38	23	25	25
Low	0.02	0.16	19	20	20
Low	0.02	0.15	75	76	76
Low	0.02	1.31	24	25	31
Low	0.01	0.23	16	19	20
Low	0.01	0.19	9	10	10
Low	0.00	0.73	27	30	31
Low	0.00	0.85	7	7	8
Medium	1.15	0.42	71	75	79
Medium	1.08	0.42	150	159	164
Low	0.75	0.20	1,021	1,067	1,085
Low	0.62	0.20	656	744	825
Low	0.53	0.99	52	57	61
Low	0.53	0.44	122	123	124
Low	0.51	0.27	681	689	705
Low	0.46	0.62	143	150	157
Low	0.45	0.93	343	349	365
Low	0.42	6.01	22	23	25

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.40	0.17	50	54	54
Low	0.39	0.46	157	175	201
Low	0.36	0.93	206	216	225
Low	0.33	0.10	722	730	749
Low	0.30	0.31	3,352	3,531	3,718
Low	0.27	0.43	287	293	295
Low	0.26	0.40	144	145	145
Low	0.25	0.06	132	137	139
Low	0.24	0.85	478	502	518
Low	0.24	0.52	12	12	12
Low	0.23	0.25	238	240	250
Low	0.22	0.84	641	651	664
Low	0.22	0.57	118	118	118
Low	0.21	0.58	296	308	310
Low	0.21	0.20	47	47	50
Low	0.21	0.11	886	929	946
Low	0.21	0.04	60	60	60
Low	0.18	0.13	72	74	77
Low	0.17	0.64	566	577	596
Low	0.15	0.53	216	219	223
Low	0.14	0.95	27	27	27
Low	0.12	0.16	126	136	142
Low	0.12	0.18	419	426	430
Low	0.11	0.21	320	320	324
Low	0.11	1.31	93	97	108
Low	0.11	0.00	39	42	51
Low	0.10	0.22	38	42	49

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.09	0.16	41	41	41
Low	0.07	0.39	485	509	537
Low	0.06	0.20	20	20	21
Low	0.06	0.25	30	30	31
Low	0.05	0.74	63	64	64
Low	0.04	0.10	76	76	76
Low	0.04	0.83	108	113	114
Low	0.03	0.36	236	237	243
Low	0.03	0.15	119	120	122
Low	0.01	0.13	9	12	12
Low	0.01	0.11	11	12	12
Low	0.01	1.01	15	17	18
Low	0.01	0.82	13	14	14
Low	0.00	0.03	2	2	4
Low	0.00	0.01	1	1	1
Low	0.00	0.11	1	4	8
Low	0.84	0.04	263	269	269
Low	0.79	0.08	102	109	125
Low	0.75	0.45	302	305	312
Low	0.59	0.36	811	830	883
Low	0.57	2.33	76	80	87
Low	0.50	1.00	143	155	174
Low	0.48	0.02	358	363	368
Low	0.44	0.28	1,591	1,654	1,683
Low	0.43	0.47	934	964	988
Low	0.43	0.87	126	129	132
Low	0.43	0.36	145	153	156

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.39	0.11	6,161	6,356	6,551
Low	0.32	0.37	155	156	158
Low	0.29	9.26	61	65	72
Low	0.27	0.47	361	370	414
Low	0.27	0.40	57	59	59
Low	0.25	0.59	226	230	236
Low	0.24	0.06	135	136	138
Low	0.23	0.99	105	115	115
Low	0.23	0.42	67	76	87
Low	0.19	10.00	65	68	81
Low	0.19	0.08	518	527	539
Low	0.19	0.43	79	79	79
Low	0.19	0.15	868	907	936
Low	0.18	10.00	63	65	83
Low	0.17	0.21	478	486	504
Low	0.16	0.14	60	62	64
Low	0.16	0.93	137	140	141
Low	0.14	0.28	139	139	141
Low	0.12	1.31	296	306	329
Low	0.12	0.64	333	335	337
Low	0.11	0.38	58	62	62
Low	0.11	0.39	1,018	1,052	1,079
Low	0.11	1.53	61	61	61
Low	0.10	0.02	30	30	31
Low	0.09	0.61	164	174	183
Low	0.08	0.58	26	28	29
Low	0.06	0.95	44	47	47

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.06	1.74	42	43	43
Low	0.06	0.82	35	45	53
Low	0.05	0.27	62	62	67
Low	0.05	0.22	27	31	37
Low	0.05	0.23	52	54	54
Low	0.05	0.72	17	21	21
Low	0.02	1.46	16	16	16
Low	0.02	0.24	20	23	23
Low	0.02	0.65	15	15	15
Low	0.02	0.15	22	24	30
Low	0.01	1.86	13	13	13
Low	0.01	1.46	11	11	11
Low	0.01	0.33	13	14	14
Low	0.00	0.00	4	4	4
Low	0.00	0.00	2	2	2
Low	0.00	0.70	4	5	5
Low	0.00	0.14	3	3	3
Low	0.00	0.08	8	8	9
Low	0.00	1.26	3	3	3
Low	0.00	6.23	3	4	4
Low	0.88	0.14	146	146	146
Low	0.38	0.15	305	307	318
Low	0.38	0.23	47	48	55
Low	0.28	0.57	177	185	191
Low	0.28	0.83	74	74	74
Low	0.27	0.46	32	34	34
Low	0.22	1.32	155	164	173

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.20	0.75	236	244	244
Low	0.18	0.41	30	30	30
Low	0.17	0.11	74	94	109
Low	0.17	0.53	128	128	128
Low	0.17	0.47	1,241	1,267	1,300
Low	0.17	0.77	69	73	76
Low	0.16	0.00	51	61	67
Low	0.16	0.71	43	45	46
Low	0.15	0.16	56	58	58
Low	0.14	0.32	608	639	679
Low	0.13	0.98	20	20	21
Low	0.13	0.38	51	58	59
Low	0.12	7.11	26	30	32
Low	0.12	0.34	186	194	197
Low	0.11	0.10	28	28	28
Low	0.11	0.58	86	88	93
Low	0.10	0.11	52	52	54
Low	0.10	0.53	191	197	199
Low	0.10	0.50	118	132	133
Low	0.09	0.57	31	31	32
Low	0.09	0.17	39	41	42
Low	0.09	0.14	128	143	149
Low	0.08	4.89	45	48	50
Low	0.08	0.21	86	88	88
Low	0.08	0.40	138	144	144
Low	0.07	0.11	139	142	143
Low	0.07	0.18	273	276	278

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.05	0.98	13	13	13
Low	0.05	1.09	27	32	36
Low	0.05	0.48	33	35	36
Low	0.05	0.50	33	34	37
Low	0.04	0.07	33	42	59
Low	0.04	0.57	17	20	20
Low	0.04	0.84	23	26	26
Low	0.03	0.26	32	32	32
Low	0.03	0.05	20	21	23
Low	0.03	0.61	58	64	68
Low	0.03	0.68	46	48	48
Low	0.03	0.16	66	66	67
Low	0.02	2.09	37	38	39
Low	0.02	0.14	11	11	11
Low	0.02	0.04	10	11	11
Low	0.02	0.91	43	44	45
Low	0.01	4.45	31	31	32
Low	0.01	1.26	6	6	6
Low	0.01	0.33	31	31	31
Low	0.01	0.72	11	14	14
Low	0.01	0.65	27	29	29
Low	0.01	0.47	18	20	20
Low	0.01	0.14	9	9	9
Low	0.01	0.02	7	7	7
Low	0.01	0.68	19	20	20
Low	0.01	0.17	11	11	11
Low	0.00	0.40	8	9	11

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.00	0.26	9	10	10
Low	0.00	0.17	8	8	9
Low	0.00	0.32	5	5	5
Low	0.53	0.14	887	924	961
Low	0.50	0.48	3,564	3,711	3,842
Low	0.48	0.84	52	52	57
Low	0.41	0.48	35	35	39
Low	0.31	0.30	2,149	2,246	2,388
Low	0.29	0.35	56	57	62
Low	0.27	0.51	255	258	258
Low	0.26	0.24	2,163	2,179	2,204
Low	0.24	0.18	133	134	138
Low	0.21	0.51	186	190	194
Low	0.21	0.57	131	133	136
Low	0.18	0.04	116	117	117
Low	0.18	0.11	496	506	508
Low	0.17	0.18	150	155	156
Low	0.16	0.57	141	145	149
Low	0.15	0.12	121	121	123
Low	0.12	0.44	106	109	119
Low	0.12	0.15	102	106	110
Low	0.11	2.26	29	30	31
Low	0.11	0.82	95	105	114
Low	0.11	0.16	39	39	39
Low	0.11	0.14	31	31	31
Low	0.10	0.23	103	111	118
Low	0.09	0.01	26	27	27

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.09	0.64	260	261	265
Low	0.08	0.38	25	27	29
Low	0.07	0.36	23	23	24
Low	0.07	2.80	17	18	18
Low	0.06	0.93	38	40	48
Low	0.06	0.26	48	49	49
Low	0.06	0.23	24	25	27
Low	0.05	0.56	18	18	26
Low	0.05	0.60	23	23	24
Low	0.04	0.64	114	114	119
Low	0.04	0.42	39	42	42
Low	0.04	0.26	23	23	23
Low	0.04	0.34	36	38	43
Low	0.03	0.33	34	36	37
Low	0.02	0.14	20	21	24
Low	0.02	1.06	9	9	9
Low	0.02	0.38	15	16	16
Low	0.02	0.55	15	16	17
Low	0.02	0.85	29	30	31
Low	0.01	0.12	29	29	31
Low	0.01	0.32	22	22	22
Low	0.01	0.75	5	5	5
Low	0.01	0.79	21	22	24
Low	0.01	0.09	19	20	20
Low	0.01	0.26	4	4	4
Low	0.01	0.33	20	20	23
Low	0.01	5.53	13	13	13

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.01	0.42	10	11	11
Low	0.00	0.18	3	3	3
Low	0.00	0.00	6	6	6
Low	0.00	4.45	11	11	15
Low	0.00	0.44	8	9	12
Low	0.00	0.21	7	8	8
Low	0.00	0.21	18	22	29
Low	0.00	0.73	8	8	8
Low	0.00	0.30	12	12	12
Low	0.00	0.10	4	4	4
Low	0.00	1.90	7	9	10
Low	0.00	0.74	5	7	10
Low	0.44	0.12	178	195	207
Low	0.34	1.35	363	377	384
Low	0.33	1.84	62	63	63
Low	0.23	0.58	240	254	257
Low	0.21	0.01	16	16	16
Low	0.20	0.13	1,289	1,319	1,333
Low	0.19	1.74	53	54	54
Low	0.18	0.12	773	816	822
Low	0.18	0.10	1,012	1,025	1,038
Low	0.18	0.32	242	256	263
Low	0.18	0.02	21	21	21
Low	0.17	0.48	163	166	179
Low	0.17	0.11	444	452	456
Low	0.15	1.00	14	14	15
Low	0.15	3.28	30	30	30

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.13	0.28	76	76	77
Low	0.13	1.18	67	67	67
Low	0.12	0.20	391	393	396
Low	0.11	0.36	347	363	379
Low	0.11	0.02	47	47	47
Low	0.10	0.31	93	95	98
Low	0.09	0.08	267	273	275
Low	0.09	0.03	34	35	35
Low	0.09	0.58	96	99	100
Low	0.08	0.24	160	162	163
Low	0.08	0.84	582	602	629
Low	0.07	1.20	893	939	969
Low	0.07	0.41	80	146	158
Low	0.04	0.59	48	49	50
Low	0.04	0.30	57	60	60
Low	0.04	0.23	31	33	35
Low	0.04	4.89	24	24	24
Low	0.04	0.60	21	22	22
Low	0.04	0.05	10	10	10
Low	0.03	0.61	93	98	105
Low	0.03	0.02	22	22	22
Low	0.03	0.26	34	34	34
Low	0.03	0.15	31	34	34
Low	0.03	0.11	30	30	32
Low	0.03	1.19	79	79	80
Low	0.03	0.05	15	15	15
Low	0.03	0.19	54	55	57

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.02	0.57	15	16	16
Low	0.02	0.15	77	80	80
Low	0.02	0.43	28	28	28
Low	0.02	0.25	33	33	33
Low	0.02	4.45	20	21	22
Low	0.01	0.02	16	16	16
Low	0.01	0.48	23	23	23
Low	0.01	0.05	7	9	9
Low	0.01	0.62	22	22	22
Low	0.01	0.16	21	22	22
Low	0.00	0.06	8	8	8
Low	0.00	0.16	5	5	5
Low	0.00	1.25	3	3	3
Low	0.00	0.54	19	19	19
Low	0.00	1.12	2	2	2
Low	0.66	0.36	240	280	298
Low	0.47	0.17	3,972	4,156	4,421
Low	0.37	2.33	98	104	108
Low	0.33	0.37	54	58	58
Low	0.24	0.12	401	412	421
Low	0.21	0.23	1,385	1,413	1,422
Low	0.20	0.57	205	208	210
Low	0.20	1.35	98	98	99
Low	0.19	0.26	1,603	1,636	1,705
Low	0.18	-	11	11	11
Low	0.16	0.98	103	103	105
Low	0.15	0.10	567	584	607

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.14	0.34	72	77	81
Low	0.13	2.09	35	36	41
Low	0.12	1.20	2,058	2,113	2,182
Low	0.11	1.00	31	36	37
Low	0.11	0.37	51	51	52
Low	0.10	0.00	6	6	6
Low	0.10	0.59	45	49	50
Low	0.09	0.33	287	295	302
Low	0.09	0.74	137	138	140
Low	0.09	0.06	101	101	105
Low	0.08	0.50	27	32	32
Low	0.08	0.47	397	417	435
Low	0.08	0.33	90	97	98
Low	0.08	0.21	34	36	36
Low	0.07	0.56	46	47	51
Low	0.07	0.21	208	210	216
Low	0.06	0.28	48	49	50
Low	0.06	0.44	73	82	83
Low	0.06	0.21	17	18	18
Low	0.06	1.18	58	60	61
Low	0.06	0.24	43	45	48
Low	0.06	0.27	28	29	29
Low	0.05	0.40	89	92	92
Low	0.04	0.19	45	58	64
Low	0.04	0.20	178	180	180
Low	0.04	0.13	34	36	36
Low	0.04	0.14	13	13	13

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.03	0.93	17	17	17
Low	0.03	0.42	25	25	25
Low	0.03	0.32	167	171	172
Low	0.03	0.82	65	68	69
Low	0.03	0.14	13	13	14
Low	0.03	0.25	13	14	14
Low	0.03	1.54	28	29	29
Low	0.03	0.03	13	13	13
Low	0.03	0.13	22	23	23
Low	0.03	0.61	88	88	89
Low	0.02	0.09	29	29	29
Low	0.02	0.15	27	28	28
Low	0.02	0.07	12	12	12
Low	0.02	6.01	7	8	8
Low	0.02	0.09	21	21	21
Low	0.02	0.40	11	11	11
Low	0.01	0.44	26	26	27
Low	0.01	0.23	15	17	18
Low	0.01	0.61	38	40	40
Low	0.01	0.22	14	16	19
Low	0.01	0.58	5	5	5
Low	0.01	0.25	4	4	4
Low	0.01	0.22	26	26	26
Low	0.01	0.59	15	15	16
Low	0.01	0.03	7	7	7
Low	0.00	0.39	41	42	43
Low	0.00	0.02	9	9	9

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.00	0.20	12	12	12
Low	0.00	0.00	4	8	9
Low	0.00	0.35	8	8	8
Low	0.00	0.14	14	14	15
Low	0.00	0.11	7	7	7
Low	0.00	0.10	8	8	14
Low	0.00	2.19	4	5	5
Medium	1.04	2.33	236	254	261
Low	0.47	0.43	139	146	150
Low	0.36	0.44	123	126	130
Low	0.32	0.18	385	396	413
Low	0.29	0.21	352	365	372
Low	0.26	0.20	55	58	58
Low	0.25	0.03	36	36	36
Low	0.24	0.15	707	720	734
Low	0.23	2.26	25	25	27
Low	0.20	0.91	193	197	202
Low	0.19	0.14	174	177	181
Low	0.18	1.20	2,393	2,537	2,636
Low	0.18	0.24	452	500	509
Low	0.17	0.00	36	36	36
Low	0.16	0.35	235	239	239
Low	0.15	0.06	104	104	104
Low	0.15	0.21	1,124	1,163	1,240
Low	0.15	0.24	491	500	509
Low	0.14	0.13	60	60	61
Low	0.13	0.65	90	90	93

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.12	0.35	160	161	167
Low	0.12	0.28	115	119	122
Low	0.11	0.61	336	350	356
Low	0.11	0.77	90	91	92
Low	0.11	0.40	281	296	318
Low	0.11	0.55	374	405	453
Low	0.11	0.00	29	32	35
Low	0.11	0.00	29	29	31
Low	0.10	0.39	154	157	157
Low	0.10	0.82	285	293	296
Low	0.09	0.64	174	175	181
Low	0.09	0.32	198	204	211
Low	0.09	0.04	248	254	254
Low	0.09	0.02	35	35	37
Low	0.08	2.20	25	30	33
Low	0.08	0.14	93	93	98
Low	0.08	4.89	160	163	168
Low	0.08	0.20	34	34	34
Low	0.08	2.10	11	11	11
Low	0.08	0.09	28	28	28
Low	0.08	0.79	37	41	43
Low	0.07	0.31	748	765	786
Low	0.07	0.33	160	164	169
Low	0.07	0.18	33	34	34
Low	0.05	0.16	36	36	36
Low	0.05	0.35	44	45	48
Low	0.05	0.65	26	29	30

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.05	0.47	39	40	43
Low	0.05	1.46	15	15	15
Low	0.05	0.49	35	36	36
Low	0.05	0.02	17	17	17
Low	0.05	1.85	15	17	17
Low	0.05	0.33	42	42	45
Low	0.05	10.00	16	17	19
Low	0.04	0.10	24	25	25
Low	0.04	0.23	33	34	35
Low	0.03	0.53	18	19	20
Low	0.03	0.36	12	12	12
Low	0.03	0.35	14	14	15
Low	0.03	0.05	21	21	21
Low	0.03	0.44	28	28	28
Low	0.03	1.14	16	16	16
Low	0.03	0.05	16	17	17
Low	0.03	0.16	21	21	21
Low	0.03	1.01	23	24	24
Low	0.03	0.21	72	73	73
Low	0.02	0.11	26	26	26
Low	0.02	0.31	148	148	166
Low	0.02	0.13	37	37	37
Low	0.02	0.88	8	8	8
Low	0.02	0.00	5	5	5
Low	0.02	0.40	17	17	17
Low	0.02	0.29	29	30	31
Low	0.02	0.75	8	8	8

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.01	1.27	20	21	25
Low	0.01	0.16	25	25	26
Low	0.01	0.16	17	19	25
Low	0.01	1.85	14	15	15
Low	0.01	0.29	16	16	18
Low	0.01	0.13	14	15	15
Low	0.01	0.16	20	20	20
Low	0.01	0.21	12	12	12
Low	0.01	1.26	4	5	5
Low	0.01	0.32	8	9	9
Low	0.01	0.17	9	9	9
Low	0.01	1.78	13	13	15
Low	0.01	0.43	11	11	12
Low	0.00	4.45	17	18	19
Low	0.00	0.00	4	4	4
Low	0.00	1.90	12	14	17
Low	0.00	2.11	12	16	23
Low	0.00	0.59	10	10	13
Low	0.00	0.02	4	4	4
Low	0.00	0.25	7	7	7
Low	0.00	0.16	11	11	11
Low	0.00	0.25	6	8	10
Low	0.00	0.11	8	11	11
Low	0.00	0.15	5	5	5
Low	0.00	0.11	2	2	2
Low	0.00	2.04	5	5	5
Low	0.00	3.28	1	1	1

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.00	0.65	4	4	4
Low	0.00	0.16	5	5	5
Low	0.00	0.02	1	2	2
Low	0.58	-	14	14	14
Low	0.48	0.00	81	82	83
Low	0.33	0.53	821	839	870
Low	0.33	0.39	238	256	275
Low	0.28	0.47	381	415	437
Low	0.26	0.10	247	249	254
Low	0.26	0.01	27	27	27
Low	0.23	0.18	226	230	230
Low	0.23	0.21	379	385	394
Low	0.23	0.05	1,326	1,374	1,477
Low	0.22	0.11	130	143	156
Low	0.22	0.07	73	80	80
Low	0.21	0.17	46	46	48
Low	0.20	0.62	122	133	137
Low	0.20	0.38	50	57	61
Low	0.20	0.04	35	35	35
Low	0.19	0.33	428	430	433
Low	0.19	0.16	37	37	38
Low	0.18	0.05	46	50	50
Low	0.17	0.04	77	79	80
Low	0.17	0.15	729	748	757
Low	0.17	0.06	110	115	120
Low	0.16	0.19	33	33	33
Low	0.16	0.01	372	384	391

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.15	0.10	154	156	158
Low	0.15	0.19	891	907	934
Low	0.14	0.57	49	54	59
Low	0.12	0.77	71	71	73
Low	0.12	0.11	80	81	84
Low	0.11	0.11	61	61	64
Low	0.11	0.34	180	183	185
Low	0.11	0.13	56	56	58
Low	0.11	0.05	53	58	62
Low	0.11	0.58	210	215	219
Low	0.10	0.08	49	49	53
Low	0.10	0.95	45	46	49
Low	0.10	0.42	59	61	62
Low	0.10	0.30	710	724	766
Low	0.10	0.24	208	210	211
Low	0.10	0.11	135	143	147
Low	0.10	1.26	14	14	14
Low	0.09	0.19	543	557	560
Low	0.09	10.00	150	159	162
Low	0.09	1.32	79	79	83
Low	0.09	0.44	165	165	167
Low	0.09	0.19	464	471	486
Low	0.09	0.01	70	74	76
Low	0.09	0.18	219	226	233
Low	0.08	0.44	35	35	35
Low	0.07	0.35	69	71	71
Low	0.06	0.42	70	71	71

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.06	0.20	81	84	85
Low	0.06	0.55	212	231	260
Low	0.06	0.19	36	37	38
Low	0.06	0.09	45	46	46
Low	0.06	2.26	31	32	33
Low	0.05	0.13	40	40	41
Low	0.05	0.12	63	63	63
Low	0.05	0.07	28	28	28
Low	0.05	0.14	164	169	171
Low	0.05	0.18	24	24	24
Low	0.04	0.17	31	32	32
Low	0.04	0.36	65	65	65
Low	0.04	0.21	18	18	18
Low	0.04	0.21	23	25	26
Low	0.04	1.07	24	24	24
Low	0.04	0.33	20	20	22
Low	0.03	0.26	35	37	41
Low	0.03	1.42	28	28	28
Low	0.03	0.30	75	75	85
Low	0.03	0.39	24	26	29
Low	0.03	0.44	18	18	18
Low	0.02	0.40	15	16	16
Low	0.02	0.15	32	33	34
Low	0.02	0.43	27	29	33
Low	0.02	0.38	17	17	17
Low	0.02	0.62	11	11	12
Low	0.02	0.20	51	52	52

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.02	1.02	13	13	13
Low	0.02	0.21	15	21	29
Low	0.02	0.26	51	51	51
Low	0.02	0.03	22	22	22
Low	0.01	0.82	34	34	34
Low	0.01	4.89	25	25	26
Low	0.01	0.13	20	21	22
Low	0.01	0.84	27	32	32
Low	0.01	0.46	21	25	27
Low	0.01	0.47	26	27	28
Low	0.01	0.39	28	29	30
Low	0.01	0.75	6	6	7
Low	0.01	0.00	16	16	16
Low	0.01	0.38	12	13	13
Low	0.01	0.54	36	37	37
Low	0.01	0.17	11	12	12
Low	0.01	0.91	12	13	14
Low	0.01	0.24	14	16	17
Low	0.01	0.91	19	19	21
Low	0.01	0.14	10	10	12
Low	0.01	0.00	3	4	5
Low	0.01	0.20	16	16	16
Low	0.01	1.86	11	13	14
Low	0.01	0.35	11	11	11
Low	0.01	0.17	21	21	21
Low	0.01	1.14	5	5	5
Low	0.01	0.61	6	6	7

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.01	0.15	10	11	11
Low	0.01	0.35	10	15	15
Low	0.01	0.21	15	16	16
Low	0.01	0.38	8	8	9
Low	0.01	0.27	12	12	12
Low	0.01	0.01	8	9	10
Low	0.00	0.14	9	9	9
Low	0.00	0.17	12	12	12
Low	0.00	1.12	5	5	5
Low	0.00	1.35	7	7	9
Low	0.00	0.04	6	8	8
Low	0.00	0.18	20	22	22
Low	0.00	0.01	2	2	2
Low	0.00	0.04	3	3	4
Low	0.00	0.02	4	4	4
Low	0.00	0.21	8	8	9
Low	0.00	0.09	3	3	3
Low	0.00	0.38	6	8	9
Low	0.00	0.11	4	4	5
Low	0.00	0.14	6	6	6
Low	0.00	1.00	5	5	6
Low	0.00	0.03	3	3	3
Low	0.00	0.19	14	14	14
Low	0.00	6.23	4	5	5
Low	0.00	0.06	3	3	4
Low	0.00	0.58	2	2	3
Low	0.00	0.66	4	4	4

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.00	0.00	2	2	2
Low	0.00	0.00	1	1	1
Low	0.00	0.03	1	1	1
Low	0.00	1.90	4	5	6
Low	0.00	0.11	2	2	2
Low	0.00	6.23	1	1	1
Low	0.49	-	116	116	116
Low	0.26	0.11	55	58	59
Low	0.19	0.02	117	121	126
Low	0.17	0.19	123	124	128
Low	0.17	0.03	357	366	366
Low	0.17	0.27	68	71	81
Low	0.16	0.28	219	245	266
Low	0.16	0.21	483	500	514
Low	0.15	0.46	215	223	223
Low	0.14	0.53	144	147	153
Low	0.14	0.11	43	43	44
Low	0.14	0.15	1,077	1,090	1,107
Low	0.13	2.33	40	40	44
Low	0.13	0.21	74	80	81
Low	0.13	0.42	86	87	87
Low	0.13	0.62	60	60	62
Low	0.12	0.73	118	120	123
Low	0.12	0.01	46	48	52
Low	0.12	0.12	99	99	99
Low	0.12	0.19	81	85	89
Low	0.12	0.85	48	51	51

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.11	0.18	146	146	148
Low	0.11	0.26	33	33	34
Low	0.11	0.24	321	327	328
Low	0.11	0.53	99	106	121
Low	0.11	0.18	184	188	196
Low	0.10	0.20	23	24	24
Low	0.10	0.28	55	57	57
Low	0.10	0.72	38	38	41
Low	0.10	0.03	43	43	43
Low	0.10	6.01	9	9	9
Low	0.09	0.59	100	100	107
Low	0.09	0.93	19	19	19
Low	0.09	0.23	227	233	234
Low	0.08	0.58	139	142	145
Low	0.08	0.10	46	46	46
Low	0.08	0.26	374	380	400
Low	0.07	0.43	43	43	43
Low	0.07	0.59	45	47	49
Low	0.07	0.58	111	112	119
Low	0.06	0.06	51	51	53
Low	0.06	0.14	73	80	87
Low	0.06	0.57	16	16	17
Low	0.06	0.05	69	71	73
Low	0.05	0.74	118	121	122
Low	0.05	0.19	17	19	21
Low	0.05	1.20	535	544	559
Low	0.05	0.33	36	36	38

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.05	0.26	51	51	51
Low	0.05	0.18	16	16	16
Low	0.05	0.50	23	23	23
Low	0.04	0.04	38	50	56
Low	0.04	0.12	36	36	38
Low	0.04	0.20	34	36	36
Low	0.04	0.32	168	170	170
Low	0.04	0.42	15	16	16
Low	0.04	0.33	29	33	37
Low	0.04	0.24	17	18	18
Low	0.04	0.09	40	40	40
Low	0.04	0.14	31	31	31
Low	0.04	0.04	36	38	39
Low	0.04	0.40	146	160	166
Low	0.04	0.20	46	46	46
Low	0.04	0.29	17	17	17
Low	0.04	0.47	53	55	55
Low	0.03	0.15	38	38	43
Low	0.03	1.65	47	49	50
Low	0.03	0.34	27	27	28
Low	0.03	0.20	31	32	32
Low	0.03	0.30	86	86	87
Low	0.03	0.43	32	32	37
Low	0.03	0.18	98	98	98
Low	0.03	0.03	11	12	12
Low	0.03	0.43	29	30	30
Low	0.03	0.03	8	9	13

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.03	0.02	10	10	11
Low	0.03	0.93	30	32	33
Low	0.03	0.61	98	99	100
Low	0.03	0.27	16	16	16
Low	0.03	2.10	13	14	14
Low	0.03	0.04	29	31	31
Low	0.03	0.20	23	23	23
Low	0.02	0.18	56	57	58
Low	0.02	0.67	18	18	19
Low	0.02	0.04	21	26	28
Low	0.02	0.44	22	24	24
Low	0.02	0.09	26	26	27
Low	0.02	0.33	43	43	44
Low	0.02	0.27	25	25	27
Low	0.02	0.09	23	23	23
Low	0.02	0.15	19	20	20
Low	0.02	0.44	30	31	32
Low	0.02	0.15	59	60	65
Low	0.02	0.16	16	16	16
Low	0.02	0.22	20	20	21
Low	0.02	0.23	32	32	33
Low	0.02	0.33	35	36	36
Low	0.02	0.33	22	23	23
Low	0.01	0.25	15	15	15
Low	0.01	0.08	12	12	12
Low	0.01	0.48	30	31	31
Low	0.01	0.18	45	48	51

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.01	0.17	33	33	34
Low	0.01	0.16	28	28	28
Low	0.01	0.28	37	39	40
Low	0.01	0.33	15	15	16
Low	0.01	0.20	18	18	20
Low	0.01	0.84	19	21	21
Low	0.01	0.11	27	27	27
Low	0.01	0.00	6	6	6
Low	0.01	0.33	12	12	12
Low	0.01	0.67	15	16	17
Low	0.01	0.47	30	30	30
Low	0.01	6.01	8	8	8
Low	0.01	0.43	11	12	13
Low	0.01	0.23	13	14	15
Low	0.01	0.28	16	16	16
Low	0.01	0.09	18	18	18
Low	0.01	0.88	9	10	10
Low	0.01	0.44	7	7	7
Low	0.01	0.46	10	14	16
Low	0.01	0.04	17	17	18
Low	0.01	0.50	9	9	9
Low	0.01	0.53	8	9	10
Low	0.01	1.40	13	14	14
Low	0.01	0.43	16	16	16
Low	0.01	0.51	13	13	13
Low	0.01	0.17	9	9	9
Low	0.01	0.43	8	8	11

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.01	1.09	7	7	7
Low	0.00	0.06	5	5	5
Low	0.00	0.88	4	4	4
Low	0.00	2.09	5	5	5
Low	0.00	0.90	7	7	8
Low	0.00	0.38	6	6	6
Low	0.00	0.64	14	14	16
Low	0.00	0.22	9	9	9
Low	0.00	2.20	5	6	6
Low	0.00	0.43	8	9	9
Low	0.00	0.01	3	3	3
Low	0.00	0.04	3	3	3
Low	0.00	0.01	5	6	6
Low	0.00	0.47	13	13	13
Low	0.00	0.62	8	8	8
Low	0.00	0.56	4	5	5
Low	0.00	0.09	5	5	8
Low	0.00	0.03	1	1	1
Low	0.00	0.66	4	5	6
Low	0.00	0.03	4	4	4
Low	0.00	0.48	14	14	14
Low	0.00	2.04	4	4	4
Low	0.00	0.82	9	9	9
Low	0.00	0.26	3	3	4
Low	0.00	1.42	3	3	3
Low	0.00	0.19	7	7	7
Low	0.00	0.08	3	13	13

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.00	0.26	1	2	2
Low	0.00	0.47	2	3	3
Low	0.00	0.07	1	1	1
Low	0.00	0.16	-	-	1
Low	0.28	0.44	293	301	306
Low	0.26	0.06	78	79	82
Low	0.25	0.41	564	615	633
Low	0.20	0.20	53	54	65
Low	0.18	0.23	37	37	37
Low	0.16	0.28	225	225	233
Low	0.16	0.07	86	93	101
Low	0.16	0.33	53	54	55
Low	0.16	0.04	64	64	67
Low	0.15	0.00	40	40	40
Low	0.14	0.19	96	96	96
Low	0.14	0.02	179	185	185
Low	0.12	0.15	263	266	266
Low	0.11	0.28	68	71	73
Low	0.11	0.40	61	61	62
Low	0.11	0.61	43	44	45
Low	0.11	0.22	95	97	99
Low	0.11	0.10	150	155	155
Low	0.10	0.07	56	56	56
Low	0.10	0.11	285	293	311
Low	0.10	0.11	131	133	142
Low	0.10	0.02	25	25	26
Low	0.09	0.01	18	19	19

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.09	0.83	149	150	150
Low	0.09	1.18	63	64	66
Low	0.08	0.15	49	49	49
Low	0.08	1.35	4	4	4
Low	0.08	0.09	21	21	21
Low	0.07	0.01	29	30	32
Low	0.07	0.17	97	100	100
Low	0.07	0.00	14	14	15
Low	0.07	0.54	117	122	127
Low	0.07	0.76	9	11	14
Low	0.07	0.22	51	53	54
Low	0.06	0.04	43	43	43
Low	0.06	0.00	16	17	17
Low	0.06	0.11	34	35	37
Low	0.06	0.26	90	91	92
Low	0.06	0.12	80	81	82
Low	0.06	0.02	30	31	31
Low	0.05	0.42	33	33	33
Low	0.05	0.06	142	144	146
Low	0.05	0.06	100	102	102
Low	0.05	0.28	50	51	53
Low	0.05	0.28	34	37	38
Low	0.04	2.33	35	36	37
Low	0.04	0.27	99	101	105
Low	0.04	0.19	67	67	67
Low	0.03	0.07	30	30	30
Low	0.03	0.09	16	18	20

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.03	0.03	17	17	17
Low	0.03	0.23	35	36	36
Low	0.03	0.15	27	27	27
Low	0.03	0.21	20	20	20
Low	0.03	0.20	115	116	118
Low	0.03	0.36	65	65	66
Low	0.03	0.04	23	23	23
Low	0.03	0.57	32	33	36
Low	0.03	0.11	11	13	14
Low	0.03	0.35	35	37	38
Low	0.03	0.11	27	28	32
Low	0.03	0.85	28	28	28
Low	0.03	0.19	76	76	76
Low	0.03	0.53	31	33	35
Low	0.03	0.57	30	30	32
Low	0.03	0.91	14	15	15
Low	0.03	0.15	22	24	24
Low	0.03	0.21	11	11	11
Low	0.03	1.84	16	16	16
Low	0.03	0.09	38	39	39
Low	0.02	0.03	7	7	7
Low	0.02	0.19	62	63	63
Low	0.02	0.10	17	17	17
Low	0.02	0.26	15	15	15
Low	0.02	0.29	23	23	24
Low	0.02	0.00	22	22	22
Low	0.02	0.18	19	19	19

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.02	0.00	9	10	10
Low	0.02	0.19	41	41	41
Low	0.02	0.35	27	28	33
Low	0.01	0.46	14	14	14
Low	0.01	0.14	13	13	13
Low	0.01	1.84	14	18	22
Low	0.01	0.33	39	40	40
Low	0.01	0.15	22	25	25
Low	0.01	0.01	6	6	6
Low	0.01	0.24	18	18	18
Low	0.01	0.18	10	11	11
Low	0.01	0.16	34	36	38
Low	0.01	0.21	15	15	15
Low	0.01	0.30	16	16	18
Low	0.01	0.79	13	13	13
Low	0.01	0.21	7	7	7
Low	0.01	0.40	13	13	13
Low	0.01	0.04	10	10	11
Low	0.01	0.62	13	21	23
Low	0.01	0.09	20	20	20
Low	0.01	0.19	13	13	13
Low	0.01	0.21	19	20	21
Low	0.01	0.22	10	10	10
Low	0.01	1.84	8	8	8
Low	0.01	0.09	12	12	13
Low	0.01	0.12	18	18	19
Low	0.01	0.26	9	9	10

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.01	0.11	8	8	8
Low	0.01	0.23	7	7	7
Low	0.01	0.02	20	20	20
Low	0.01	0.27	15	15	15
Low	0.01	0.40	20	21	22
Low	0.01	0.23	11	14	14
Low	0.01	0.16	16	17	23
Low	0.01	0.24	6	6	6
Low	0.01	0.10	11	11	11
Low	0.01	0.06	7	7	8
Low	0.01	0.61	22	24	24
Low	0.01	0.62	5	5	5
Low	0.01	0.09	7	7	7
Low	0.00	0.24	10	10	10
Low	0.00	0.17	5	5	5
Low	0.00	0.36	4	4	4
Low	0.00	0.15	6	6	6
Low	0.00	0.51	5	5	5
Low	0.00	0.17	12	12	13
Low	0.00	0.11	7	7	8
Low	0.00	2.10	5	5	5
Low	0.00	0.64	13	14	14
Low	0.00	0.01	4	4	4
Low	0.00	0.17	5	5	5
Low	0.00	0.08	9	9	9
Low	0.00	0.55	28	39	50
Low	0.00	0.24	13	13	13

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.00	0.91	32	33	33
Low	0.00	0.16	12	12	13
Low	0.00	0.03	12	12	12
Low	0.00	4.45	9	9	9
Low	0.00	0.19	13	13	13
Low	0.00	0.18	5	5	5
Low	0.00	0.16	4	5	5
Low	0.00	0.72	4	4	4
Low	0.00	0.07	3	3	3
Low	0.00	0.09	4	4	4
Low	0.00	0.21	2	2	2
Low	0.00	0.45	7	7	7
Low	0.00	0.01	2	2	2
Low	0.00	0.70	4	4	4
Low	0.00	2.11	5	8	8
Low	0.00	0.48	3	3	3
Low	0.00	0.03	2	2	2
Low	0.00	0.42	5	5	5
Low	0.00	0.11	6	6	6
Low	0.00	0.42	3	3	3
Low	0.00	0.00	2	2	2
Low	0.00	0.26	4	5	5
Low	0.00	0.04	7	7	7
Low	0.00	0.02	1	1	1
Low	0.00	0.10	3	3	3
Low	0.00	0.95	-	-	-
Low	0.18	0.05	12	12	14

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.15	0.00	65	65	65
Low	0.14	0.00	48	48	50
Low	0.14	0.02	44	44	44
Low	0.14	0.62	38	38	38
Low	0.13	0.23	285	289	297
Low	0.13	0.25	213	222	226
Low	0.11	0.51	189	189	193
Low	0.11	0.00	80	80	82
Low	0.11	0.67	39	39	40
Low	0.11	0.10	57	57	63
Low	0.10	0.08	228	233	236
Low	0.10	0.16	232	244	252
Low	0.09	0.38	38	40	41
Low	0.09	0.83	156	160	168
Low	0.09	0.11	45	47	53
Low	0.09	0.07	78	78	78
Low	0.08	0.12	90	92	92
Low	0.08	0.10	49	49	49
Low	0.08	0.18	175	178	182
Low	0.07	0.09	76	79	82
Low	0.07	0.13	42	44	44
Low	0.07	0.43	49	52	52
Low	0.07	0.42	214	222	224
Low	0.07	0.10	56	58	63
Low	0.06	0.53	48	52	54
Low	0.06	0.42	39	41	41
Low	0.05	0.54	31	32	32

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.05	0.23	80	81	85
Low	0.05	0.05	37	40	42
Low	0.05	0.01	7	7	7
Low	0.05	0.06	47	49	51
Low	0.05	0.00	14	14	14
Low	0.05	0.17	249	252	275
Low	0.05	3.28	10	10	11
Low	0.05	0.04	22	23	23
Low	0.04	0.12	67	68	70
Low	0.04	0.27	34	36	36
Low	0.04	0.26	125	134	140
Low	0.04	0.06	30	30	30
Low	0.04	0.16	44	44	44
Low	0.04	0.26	131	132	134
Low	0.04	2.33	22	24	26
Low	0.04	0.40	88	93	99
Low	0.04	0.47	78	82	89
Low	0.04	0.93	13	13	13
Low	0.04	0.35	25	27	27
Low	0.03	0.48	29	29	29
Low	0.03	0.15	47	47	47
Low	0.03	0.16	24	24	25
Low	0.03	1.30	40	40	40
Low	0.03	0.21	20	20	20
Low	0.03	0.14	42	43	44
Low	0.03	0.55	162	171	189
Low	0.03	0.31	69	69	82

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.03	0.33	54	57	58
Low	0.03	0.01	9	9	9
Low	0.03	0.10	44	47	48
Low	0.03	0.75	21	21	21
Low	0.03	0.15	37	37	38
Low	0.03	0.24	24	24	24
Low	0.02	0.33	45	46	46
Low	0.02	0.43	20	21	21
Low	0.02	0.00	12	12	12
Low	0.02	0.04	11	11	11
Low	0.02	0.22	16	16	16
Low	0.02	0.12	22	22	22
Low	0.02	0.10	4	4	4
Low	0.02	2.11	22	25	25
Low	0.02	0.16	16	16	18
Low	0.02	0.11	12	12	13
Low	0.02	0.06	21	22	23
Low	0.02	0.19	27	28	29
Low	0.02	0.13	29	29	31
Low	0.02	0.06	12	12	12
Low	0.02	0.06	30	30	30
Low	0.02	0.62	33	37	41
Low	0.01	0.21	9	9	9
Low	0.01	0.62	10	10	10
Low	0.01	0.88	8	8	8
Low	0.01	0.05	13	14	14
Low	0.01	0.35	6	6	7

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.01	0.53	19	19	19
Low	0.01	0.21	20	20	20
Low	0.01	0.09	16	16	16
Low	0.01	1.11	22	22	22
Low	0.01	0.43	15	15	16
Low	0.01	0.14	10	10	10
Low	0.01	0.17	17	17	17
Low	0.01	0.01	7	7	8
Low	0.01	0.03	10	10	10
Low	0.01	0.02	11	11	11
Low	0.01	3.28	13	13	13
Low	0.01	0.13	13	14	15
Low	0.01	0.05	13	14	14
Low	0.01	0.01	10	11	12
Low	0.01	0.47	29	32	32
Low	0.01	0.03	10	10	10
Low	0.01	0.09	12	12	12
Low	0.01	0.98	8	8	8
Low	0.01	0.00	6	7	10
Low	0.01	2.10	5	5	5
Low	0.01	0.24	9	11	11
Low	0.01	0.12	19	19	19
Low	0.01	0.02	11	12	13
Low	0.01	0.88	11	11	11
Low	0.01	0.42	13	13	13
Low	0.01	0.00	6	7	8
Low	0.01	0.12	10	10	10

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.01	0.16	19	19	21
Low	0.01	0.84	8	8	8
Low	0.01	0.42	10	10	13
Low	0.01	0.10	5	5	9
Low	0.01	0.02	9	9	9
Low	0.00	0.21	20	20	21
Low	0.00	0.16	18	18	19
Low	0.00	0.48	7	7	7
Low	0.00	0.24	6	6	6
Low	0.00	0.00	4	4	4
Low	0.00	0.43	12	13	15
Low	0.00	0.66	8	8	8
Low	0.00	2.77	8	9	9
Low	0.00	0.48	13	14	14
Low	0.00	0.12	6	6	6
Low	0.00	0.16	7	7	7
Low	0.00	0.06	6	6	6
Low	0.00	0.99	5	6	7
Low	0.00	0.39	42	43	45
Low	0.00	0.03	6	6	6
Low	0.00	0.11	5	5	5
Low	0.00	0.00	5	5	5
Low	0.00	0.82	13	14	15
Low	0.00	0.07	5	5	5
Low	0.00	1.40	10	11	11
Low	0.00	0.24	6	6	6
Low	0.00	0.11	11	12	12

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.00	0.91	19	20	20
Low	0.00	0.00	3	3	3
Low	0.00	0.44	14	14	20
Low	0.00	0.28	7	7	7
Low	0.00	0.02	7	7	7
Low	0.00	0.59	8	8	8
Low	0.00	0.10	3	3	3
Low	0.00	1.28	16	17	17
Low	0.00	0.19	9	9	10
Low	0.00	2.09	7	9	9
Low	0.00	0.47	10	10	10
Low	0.00	0.24	7	7	7
Low	0.00	0.11	6	6	6
Low	0.00	0.00	5	5	5
Low	0.00	0.05	4	4	4
Low	0.00	0.61	6	7	7
Low	0.00	3.28	2	2	2
Low	0.00	1.78	10	14	15
Low	0.00	0.09	4	4	4
Low	0.00	0.00	1	1	1
Low	0.00	0.19	11	11	11
Low	0.00	4.38	3	3	3
Low	0.00	0.00	12	13	13
Low	0.00	0.18	4	5	5
Low	0.00	0.03	3	3	3
Low	0.00	0.01	2	2	2
Low	0.00	0.14	6	6	6

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.00	0.88	3	3	4
Low	0.00	0.18	3	3	3
Low	0.00	4.38	3	3	3
Low	0.00	0.12	4	4	4
Low	0.00	0.11	7	7	7
Low	0.00	0.01	4	4	4
Low	0.00	0.00	2	2	2
Low	0.00	0.02	3	3	3
Low	0.00	0.16	8	9	10
Low	0.00	0.01	2	2	2
Low	0.00	0.35	3	3	3
Low	0.00	0.33	3	3	3
Low	0.00	0.04	3	4	6
Low	0.00	0.47	7	7	7
Low	0.00	1.12	2	3	3
Low	0.00	0.44	6	6	6
Low	0.00	0.02	1	1	1
Low	0.00	0.17	3	3	5
Low	0.00	0.18	8	8	8
Low	0.00	0.02	2	2	2
Low	0.00	1.25	1	1	1
Low	0.00	0.09	2	2	2
Low	0.00	0.11	2	2	2
Low	0.00	0.01	1	1	1
Low	0.00	1.26	2	2	2
Low	0.00	0.16	3	3	3
Low	0.00	6.23	1	1	1

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.00	0.85	3	3	3
Low	0.00	0.17	1	1	1
Low	0.00	1.09	1	2	3
Low	0.00	0.88	1	1	1
Low	0.00	0.16	1	1	3
Low	0.30	-	73	73	73
Low	0.23	-	399	400	400
Low	0.16	0.07	68	71	72
Low	0.15	0.15	101	101	106
Low	0.14	0.01	11	11	13
Low	0.12	0.24	324	334	339
Low	0.11	0.01	54	54	54
Low	0.09	0.03	72	72	75
Low	0.09	0.13	76	76	78
Low	0.09	0.06	16	16	16
Low	0.09	0.51	88	89	91
Low	0.09	0.12	71	73	74
Low	0.09	0.01	22	22	22
Low	0.08	0.15	86	87	87
Low	0.08	0.07	21	21	22
Low	0.07	0.16	41	41	43
Low	0.06	0.28	40	42	42
Low	0.06	0.28	27	27	27
Low	0.06	1.78	54	62	63
Low	0.05	0.18	13	13	13
Low	0.05	0.06	53	62	67
Low	0.05	0.20	105	106	111

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.05	0.14	21	21	25
Low	0.05	0.12	53	54	56
Low	0.05	0.35	147	150	159
Low	0.05	0.11	30	33	34
Low	0.04	0.03	37	37	37
Low	0.04	0.11	34	34	34
Low	0.04	0.06	54	55	57
Low	0.04	0.07	10	10	12
Low	0.04	0.00	13	13	13
Low	0.03	0.06	12	12	12
Low	0.03	0.03	27	27	27
Low	0.03	0.23	54	55	58
Low	0.03	0.09	27	27	27
Low	0.03	0.42	39	39	39
Low	0.03	0.01	11	12	12
Low	0.03	0.35	41	41	41
Low	0.03	0.02	21	21	21
Low	0.03	0.16	19	20	20
Low	0.03	0.17	62	62	62
Low	0.03	0.12	32	34	34
Low	0.02	0.01	22	23	23
Low	0.02	0.08	16	16	19
Low	0.02	0.02	20	21	21
Low	0.02	0.03	18	18	19
Low	0.02	0.10	28	28	28
Low	0.02	0.05	19	19	21
Low	0.02	0.04	17	17	18

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.02	0.04	9	9	9
Low	0.02	0.00	13	13	13
Low	0.02	0.24	26	26	29
Low	0.02	0.17	21	21	21
Low	0.02	0.15	13	13	13
Low	0.02	0.07	17	17	17
Low	0.02	0.19	50	51	51
Low	0.02	0.48	16	24	24
Low	0.02	0.04	11	11	11
Low	0.02	0.02	22	23	23
Low	0.02	0.50	79	82	87
Low	0.02	0.19	33	36	38
Low	0.02	0.08	16	16	16
Low	0.02	0.01	11	11	11
Low	0.01	0.93	10	10	10
Low	0.01	0.03	7	7	7
Low	0.01	0.57	13	13	13
Low	0.01	0.04	13	13	13
Low	0.01	1.40	17	17	17
Low	0.01	0.20	8	8	8
Low	0.01	0.01	11	11	11
Low	0.01	0.55	44	46	52
Low	0.01	0.14	11	11	11
Low	0.01	0.14	24	24	25
Low	0.01	0.47	40	44	44
Low	0.01	0.14	19	21	21
Low	0.01	0.11	10	10	10

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.01	0.02	15	16	16
Low	0.01	0.21	16	16	16
Low	0.01	0.53	16	16	16
Low	0.01	0.10	19	20	22
Low	0.01	0.20	13	13	13
Low	0.01	0.26	29	29	29
Low	0.01	0.09	24	24	24
Low	0.01	0.13	12	13	13
Low	0.01	0.04	7	7	7
Low	0.01	0.23	8	8	9
Low	0.01	0.57	9	9	9
Low	0.01	0.12	12	13	13
Low	0.01	0.02	13	15	16
Low	0.01	0.09	5	5	5
Low	0.01	0.30	6	6	6
Low	0.01	0.32	9	9	9
Low	0.01	0.10	11	13	15
Low	0.01	0.09	12	12	13
Low	0.01	0.11	14	14	14
Low	0.01	0.09	13	13	13
Low	0.01	0.55	42	43	48
Low	0.01	0.20	23	25	25
Low	0.01	0.31	10	10	11
Low	0.01	0.05	8	8	8
Low	0.01	0.04	15	15	15
Low	0.01	0.33	13	14	14
Low	0.01	0.23	20	20	20

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.01	0.35	12	12	12
Low	0.01	0.23	19	19	19
Low	0.01	0.91	13	13	13
Low	0.01	1.11	3	3	3
Low	0.01	0.03	7	7	8
Low	0.01	4.89	22	22	22
Low	0.01	0.07	10	11	11
Low	0.01	0.18	5	5	5
Low	0.01	0.16	5	5	5
Low	0.01	0.05	6	6	6
Low	0.01	0.44	19	19	19
Low	0.01	0.06	8	9	12
Low	0.01	0.05	3	3	3
Low	0.00	0.10	5	5	5
Low	0.00	0.33	12	13	13
Low	0.00	2.10	4	4	4
Low	0.00	0.02	5	5	5
Low	0.00	0.02	9	10	10
Low	0.00	0.07	4	4	4
Low	0.00	0.23	16	16	16
Low	0.00	0.01	3	3	3
Low	0.00	0.14	14	15	15
Low	0.00	0.00	6	6	6
Low	0.00	0.06	5	5	5
Low	0.00	0.01	5	5	6
Low	0.00	0.05	5	5	5
Low	0.00	0.34	9	9	10

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.00	0.15	6	6	8
Low	0.00	0.27	8	10	12
Low	0.00	0.01	5	5	5
Low	0.00	0.59	7	7	7
Low	0.00	0.00	5	5	5
Low	0.00	0.10	4	4	4
Low	0.00	0.03	8	8	8
Low	0.00	0.53	7	7	7
Low	0.00	0.26	4	6	6
Low	0.00	0.01	5	5	5
Low	0.00	0.00	5	5	5
Low	0.00	0.22	7	7	7
Low	0.00	2.11	8	10	12
Low	0.00	0.14	10	10	11
Low	0.00	0.15	16	16	16
Low	0.00	0.73	7	7	7
Low	0.00	0.21	8	8	8
Low	0.00	1.78	10	15	16
Low	0.00	0.08	4	6	6
Low	0.00	0.82	12	13	13
Low	0.00	0.72	5	5	6
Low	0.00	0.01	2	2	2
Low	0.00	0.01	2	2	3
Low	0.00	0.31	17	17	24
Low	0.00	1.78	13	14	16
Low	0.00	0.33	7	7	8
Low	0.00	0.02	6	6	6

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.00	0.03	4	4	4
Low	0.00	0.09	8	8	8
Low	0.00	0.09	6	6	7
Low	0.00	0.93	5	5	6
Low	0.00	0.16	6	6	6
Low	0.00	0.18	12	12	14
Low	0.00	0.01	4	5	5
Low	0.00	0.00	4	4	4
Low	0.00	0.16	3	3	3
Low	0.00	0.66	9	9	9
Low	0.00	0.03	1	1	1
Low	0.00	0.10	3	3	3
Low	0.00	6.01	2	3	3
Low	0.00	0.03	5	5	5
Low	0.00	0.11	4	4	5
Low	0.00	0.16	6	6	6
Low	0.00	0.17	3	3	3
Low	0.00	0.61	3	3	3
Low	0.00	0.01	2	2	2
Low	0.00	0.14	3	3	3
Low	0.00	0.09	3	3	3
Low	0.00	0.43	4	4	5
Low	0.00	0.45	7	7	8
Low	0.00	0.20	2	2	3
Low	0.00	0.01	2	2	2
Low	0.00	0.00	1	1	1
Low	0.00	0.73	4	4	4

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.00	0.00	2	2	2
Low	0.00	0.07	3	5	6
Low	0.00	0.00	1	1	1
Low	0.00	0.64	5	5	5
Low	0.00	0.01	3	3	3
Low	0.00	0.02	1	1	1
Low	0.00	0.00	1	1	1
Low	0.00	0.00	1	1	1
Low	0.00	0.00	1	1	1
Low	0.00	0.11	6	6	6
Low	0.00	0.01	2	2	2
Low	0.00	0.05	2	2	2
Low	0.00	0.09	3	3	3
Low	0.00	0.24	6	6	7
Low	0.00	1.07	1	1	1
Low	0.00	0.22	2	2	2
Low	0.00	0.75	6	6	6
Low	0.00	0.02	1	1	1
Low	0.00	0.50	3	3	3
Low	0.00	0.36	1	1	2
Low	0.00	0.11	1	1	1
Low	0.00	2.20	1	1	1
Low	0.00	4.38	1	1	1
Low	0.00	0.09	2	2	2
Low	0.00	0.00	1	1	1
Low	0.00	0.42	3	3	3
Low	0.00	0.47	2	2	2

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.00	0.11	1	1	1
Low	0.00	0.00	4	4	4
Low	0.00	0.11	1	1	1
Low	0.00	0.26	2	2	2
Low	0.00	1.90	2	2	3
Low	0.00	0.01	1	1	1
Low	0.00	1.11	1	1	2
Low	0.00	0.00	1	3	3
Low	0.00	0.05	-	1	1
Low	0.00	0.00	-	1	1
Low	0.15	-	21	21	21
Low	0.14	0.05	75	75	79
Low	0.09	0.58	46	47	47
Low	0.08	7.02	45	46	50
Low	0.07	0.00	99	102	106
Low	0.07	0.12	87	87	90
Low	0.07	0.15	63	65	72
Low	0.06	0.03	15	15	15
Low	0.05	0.46	43	43	44
Low	0.05	0.00	20	21	21
Low	0.05	-	12	12	13
Low	0.04	0.11	43	43	43
Low	0.04	0.01	85	86	89
Low	0.04	0.04	49	49	49
Low	0.03	0.25	46	46	51
Low	0.03	0.02	11	11	11
Low	0.03	0.01	16	16	16

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.03	0.13	30	32	32
Low	0.03	0.04	39	39	39
Low	0.03	0.19	70	72	75
Low	0.02	0.03	18	18	20
Low	0.02	0.11	46	46	48
Low	0.02	0.02	28	28	34
Low	0.02	0.06	20	21	21
Low	0.02	0.00	14	14	14
Low	0.02	0.06	18	18	18
Low	0.02	0.17	39	39	39
Low	0.02	0.14	14	14	14
Low	0.02	0.22	28	29	29
Low	0.02	1.02	24	24	25
Low	0.02	0.12	28	31	32
Low	0.02	0.01	6	6	6
Low	0.02	2.77	27	31	32
Low	0.02	0.62	11	11	11
Low	0.02	1.65	33	35	35
Low	0.02	0.14	10	10	10
Low	0.02	0.40	15	15	15
Low	0.01	0.04	14	14	18
Low	0.01	0.88	32	32	33
Low	0.01	0.62	15	15	15
Low	0.01	0.02	12	12	12
Low	0.01	0.18	9	9	9
Low	0.01	0.07	25	25	28
Low	0.01	0.01	8	10	10

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.01	0.22	17	17	17
Low	0.01	1.14	8	8	8
Low	0.01	0.28	26	26	26
Low	0.01	0.00	5	5	6
Low	0.01	0.14	30	31	31
Low	0.01	0.00	12	12	12
Low	0.01	0.26	17	17	17
Low	0.01	0.11	17	17	18
Low	0.01	0.04	11	11	11
Low	0.01	0.10	7	7	7
Low	0.01	0.19	16	16	18
Low	0.01	0.24	7	7	7
Low	0.01	0.10	31	34	38
Low	0.01	0.14	8	8	8
Low	0.01	0.03	14	14	14
Low	0.01	0.23	16	16	16
Low	0.01	0.12	13	14	14
Low	0.01	0.21	2	2	2
Low	0.01	0.04	9	9	9
Low	0.01	0.58	26	27	28
Low	0.01	0.09	14	14	14
Low	0.01	0.03	5	5	6
Low	0.01	0.14	16	16	16
Low	0.01	0.01	9	9	9
Low	0.01	0.53	15	15	15
Low	0.01	0.10	10	10	10
Low	0.01	0.15	17	17	17

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.01	0.11	17	18	18
Low	0.01	0.31	30	30	35
Low	0.01	0.00	4	4	4
Low	0.01	0.05	10	10	10
Low	0.01	0.16	6	6	6
Low	0.01	0.11	10	10	10
Low	0.01	7.02	13	13	16
Low	0.01	0.47	9	14	17
Low	0.01	0.13	7	7	7
Low	0.01	0.04	8	8	8
Low	0.00	0.10	8	8	8
Low	0.00	0.05	14	15	16
Low	0.00	0.00	8	8	8
Low	0.00	0.20	13	13	13
Low	0.00	0.04	11	11	11
Low	0.00	0.36	6	6	6
Low	0.00	0.03	11	11	12
Low	0.00	0.00	6	6	6
Low	0.00	0.03	6	6	6
Low	0.00	0.09	8	8	8
Low	0.00	0.00	6	6	6
Low	0.00	0.07	8	8	8
Low	0.00	0.54	8	8	9
Low	0.00	0.21	9	10	10
Low	0.00	0.18	5	5	5
Low	0.00	0.01	11	11	11
Low	0.00	0.00	3	3	3

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.00	0.40	6	7	7
Low	0.00	0.09	12	12	12
Low	0.00	0.02	7	7	8
Low	0.00	0.01	11	11	13
Low	0.00	0.47	12	12	12
Low	0.00	0.01	3	3	3
Low	0.00	0.84	9	9	10
Low	0.00	0.01	5	5	5
Low	0.00	0.14	6	6	6
Low	0.00	0.13	14	14	14
Low	0.00	0.03	3	3	3
Low	0.00	0.15	6	6	6
Low	0.00	0.01	3	3	3
Low	0.00	0.05	8	8	8
Low	0.00	0.16	6	6	6
Low	0.00	0.09	13	13	13
Low	0.00	0.24	7	7	9
Low	0.00	0.33	14	16	17
Low	0.00	0.00	9	9	9
Low	0.00	0.38	4	4	4
Low	0.00	0.28	6	6	6
Low	0.00	0.02	9	9	10
Low	0.00	1.18	9	9	9
Low	0.00	0.12	5	5	5
Low	0.00	0.03	4	4	4
Low	0.00	0.21	7	7	8
Low	0.00	0.05	5	5	5

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.00	0.11	6	7	7
Low	0.00	0.00	2	2	2
Low	0.00	0.42	14	14	14
Low	0.00	0.09	5	5	5
Low	0.00	0.24	14	14	14
Low	0.00	0.25	6	6	6
Low	0.00	0.10	3	3	3
Low	0.00	0.16	5	5	5
Low	0.00	0.45	7	7	7
Low	0.00	0.55	21	21	25
Low	0.00	0.17	5	5	5
Low	0.00	0.14	5	5	6
Low	0.00	0.04	5	5	5
Low	0.00	0.01	4	4	4
Low	0.00	0.18	15	16	16
Low	0.00	0.38	3	3	3
Low	0.00	1.85	3	3	4
Low	0.00	0.07	8	8	10
Low	0.00	0.38	4	4	4
Low	0.00	0.02	4	4	4
Low	0.00	0.01	6	6	6
Low	0.00	0.04	7	7	7
Low	0.00	0.43	5	5	5
Low	0.00	0.01	4	4	4
Low	0.00	0.20	5	6	6
Low	0.00	0.84	5	6	7
Low	0.00	0.03	3	3	3

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.00	0.79	5	5	5
Low	0.00	0.05	4	4	4
Low	0.00	0.83	5	5	5
Low	0.00	0.14	3	3	3
Low	0.00	0.00	3	3	3
Low	0.00	0.19	7	7	7
Low	0.00	0.05	2	2	2
Low	0.00	0.01	3	3	3
Low	0.00	0.83	14	15	15
Low	0.00	0.79	5	5	5
Low	0.00	0.72	3	3	3
Low	0.00	0.21	9	9	10
Low	0.00	0.10	4	4	5
Low	0.00	0.23	4	4	5
Low	0.00	0.08	4	4	4
Low	0.00	0.15	3	3	3
Low	0.00	2.29	5	5	5
Low	0.00	1.28	13	13	14
Low	0.00	4.38	5	5	5
Low	0.00	0.03	3	3	3
Low	0.00	0.02	2	2	2
Low	0.00	0.53	11	12	13
Low	0.00	0.04	5	5	5
Low	0.00	0.04	3	3	3
Low	0.00	0.12	3	6	6
Low	0.00	0.03	4	4	4
Low	0.00	0.10	5	6	6

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.00	2.04	4	4	4
Low	0.00	0.62	4	5	5
Low	0.00	0.23	6	6	6
Low	0.00	0.02	3	3	3
Low	0.00	0.02	3	3	3
Low	0.00	0.20	4	4	4
Low	0.00	0.01	3	3	3
Low	0.00	0.01	1	1	1
Low	0.00	2.04	2	2	3
Low	0.00	0.26	4	4	4
Low	0.00	0.11	2	2	2
Low	0.00	0.61	5	5	5
Low	0.00	0.18	1	1	1
Low	0.00	0.05	2	2	2
Low	0.00	0.88	2	3	3
Low	0.00	0.23	2	2	2
Low	0.00	0.14	3	3	3
Low	0.00	3.28	2	2	2
Low	0.00	0.08	3	3	4
Low	0.00	0.38	2	2	2
Low	0.00	0.00	1	1	1
Low	0.00	0.83	2	2	2
Low	0.00	0.01	4	4	4
Low	0.00	0.02	2	2	2
Low	0.00	0.04	2	3	3
Low	0.00	0.41	2	3	3
Low	0.00	0.48	2	2	3

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.00	-	1	1	1
Low	0.00	0.01	1	1	1
Low	0.00	0.47	2	5	10
Low	0.00	0.18	1	1	1
Low	0.00	0.05	1	1	1
Low	0.00	0.02	2	3	3
Low	0.00	0.01	1	1	1
Low	0.00	0.32	3	3	3
Low	0.00	0.00	1	2	3
Low	0.00	0.01	1	1	1
Low	0.00	1.18	1	1	1
Low	0.00	0.47	2	2	2
Low	0.00	0.11	1	1	1
Low	0.00	0.16	3	3	4
Low	0.00	0.26	2	2	2
Low	0.00	0.64	1	1	1
Low	0.00	0.09	4	5	5
Low	0.00	0.07	2	2	2
Low	0.00	0.00	1	1	1
Low	0.00	1.09	1	1	1
Low	0.00	0.26	3	3	3
Low	0.00	0.17	1	1	1
Low	0.00	0.16	2	2	2
Low	0.06	0.03	49	49	49
Low	0.05	0.08	18	18	18
Low	0.04	0.02	2	2	2
Low	0.04	0.03	19	19	19

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.03	0.03	28	28	29
Low	0.03	0.00	23	24	25
Low	0.03	0.14	28	28	28
Low	0.03	0.00	31	31	31
Low	0.02	0.14	44	47	47
Low	0.02	0.22	17	17	18
Low	0.02	0.06	23	24	24
Low	0.02	0.14	21	21	21
Low	0.02	0.14	23	23	23
Low	0.01	0.10	16	16	16
Low	0.01	0.05	18	19	19
Low	0.01	0.01	11	11	12
Low	0.01	0.04	19	19	19
Low	0.01	0.04	17	17	17
Low	0.01	0.09	13	13	14
Low	0.01	0.00	6	6	6
Low	0.01	0.01	15	15	15
Low	0.01	0.13	12	12	13
Low	0.01	0.11	10	10	10
Low	0.01	0.02	12	12	13
Low	0.01	0.02	6	6	6
Low	0.01	0.08	12	12	12
Low	0.01	0.10	10	10	10
Low	0.01	0.01	10	11	11
Low	0.01	0.05	12	15	17
Low	0.01	0.18	5	5	5
Low	0.01	0.26	10	10	10

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.01	0.04	4	4	4
Low	0.01	0.16	19	19	19
Low	0.01	0.33	11	12	13
Low	0.01	0.02	10	10	12
Low	0.00	0.16	13	13	16
Low	0.00	0.12	6	6	6
Low	0.00	0.00	6	6	6
Low	0.00	0.07	12	12	12
Low	0.00	0.04	12	13	14
Low	0.00	0.28	6	6	6
Low	0.00	0.00	3	3	3
Low	0.00	0.08	7	8	8
Low	0.00	0.00	10	10	10
Low	0.00	0.02	11	13	13
Low	0.00	0.03	10	10	10
Low	0.00	0.04	5	5	5
Low	0.00	0.02	2	2	2
Low	0.00	0.10	10	10	12
Low	0.00	0.12	7	7	7
Low	0.00	0.34	8	8	8
Low	0.00	0.09	8	8	8
Low	0.00	0.42	5	5	5
Low	0.00	0.16	16	16	16
Low	0.00	0.01	4	4	4
Low	0.00	0.14	5	5	6
Low	0.00	0.15	6	7	7
Low	0.00	0.33	9	9	9

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.00	0.01	5	5	5
Low	0.00	1.78	11	11	13
Low	0.00	0.20	3	4	5
Low	0.00	0.32	4	4	5
Low	0.00	0.09	2	2	2
Low	0.00	0.02	3	3	3
Low	0.00	0.16	8	8	9
Low	0.00	0.00	4	4	4
Low	0.00	0.20	4	4	4
Low	0.00	0.00	5	5	6
Low	0.00	0.02	6	6	7
Low	0.00	0.15	6	6	6
Low	0.00	0.01	4	4	4
Low	0.00	0.10	5	5	5
Low	0.00	0.05	8	9	10
Low	0.00	0.28	10	10	10
Low	0.00	0.15	5	5	6
Low	0.00	0.33	6	6	6
Low	0.00	0.06	8	10	10
Low	0.00	0.18	3	3	3
Low	0.00	0.01	6	6	6
Low	0.00	0.00	4	4	4
Low	0.00	0.03	4	4	6
Low	0.00	0.62	1	1	1
Low	0.00	0.04	6	6	6
Low	0.00	0.32	3	4	4
Low	0.00	0.02	4	4	4

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.00	0.01	2	2	2
Low	0.00	0.01	3	3	4
Low	0.00	0.20	3	3	3
Low	0.00	0.00	3	3	3
Low	0.00	0.38	5	5	5
Low	0.00	0.44	7	7	7
Low	0.00	0.21	5	6	6
Low	0.00	0.05	5	5	7
Low	0.00	0.03	2	2	2
Low	0.00	0.03	5	6	6
Low	0.00	0.03	6	6	6
Low	0.00	0.01	5	5	5
Low	0.00	0.66	5	5	6
Low	0.00	0.04	4	4	4
Low	0.00	0.17	9	9	9
Low	0.00	0.04	5	5	5
Low	0.00	0.44	4	4	4
Low	0.00	0.21	7	7	8
Low	0.00	0.88	3	3	3
Low	0.00	0.03	5	5	5
Low	0.00	0.28	4	4	4
Low	0.00	0.13	7	7	8
Low	0.00	0.51	4	4	4
Low	0.00	0.00	2	2	2
Low	0.00	0.02	3	3	3
Low	0.00	0.16	3	3	3
Low	0.00	0.10	3	3	3

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.00	0.03	3	3	3
Low	0.00	0.07	7	7	8
Low	0.00	0.05	2	2	2
Low	0.00	0.14	3	3	3
Low	0.00	0.10	7	7	7
Low	0.00	0.21	5	5	6
Low	0.00	0.83	5	5	5
Low	0.00	0.03	4	4	4
Low	0.00	0.43	3	3	3
Low	0.00	0.07	2	2	2
Low	0.00	0.88	2	2	2
Low	0.00	0.00	2	2	2
Low	0.00	0.09	5	6	7
Low	0.00	2.09	2	2	2
Low	0.00	0.15	4	4	4
Low	0.00	0.45	5	5	5
Low	0.00	0.04	4	4	4
Low	0.00	0.02	4	5	5
Low	0.00	0.47	3	3	3
Low	0.00	0.05	3	3	3
Low	0.00	0.04	4	4	4
Low	0.00	0.14	8	8	8
Low	0.00	0.17	3	3	3
Low	0.00	0.00	2	2	2
Low	0.00	0.33	7	7	7
Low	0.00	0.11	4	4	4
Low	0.00	0.05	1	1	1

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.00	0.12	3	3	3
Low	0.00	0.02	4	4	4
Low	0.00	0.10	4	4	4
Low	0.00	0.10	3	3	3
Low	0.00	0.88	2	2	2
Low	0.00	0.21	3	3	3
Low	0.00	0.17	3	3	3
Low	0.00	0.03	2	2	2
Low	0.00	0.00	1	1	1
Low	0.00	0.02	2	2	3
Low	0.00	0.04	2	2	2
Low	0.00	0.51	3	3	4
Low	0.00	0.20	3	4	4
Low	0.00	0.11	4	4	4
Low	0.00	0.01	3	3	5
Low	0.00	0.04	3	4	5
Low	0.00	0.61	1	2	2
Low	0.00	0.11	3	3	3
Low	0.00	0.00	1	1	1
Low	0.00	0.06	2	3	3
Low	0.00	0.00	1	1	1
Low	0.00	0.18	2	2	2
Low	0.00	0.00	1	1	1
Low	0.00	0.18	3	3	4
Low	0.00	0.02	3	3	3
Low	0.00	0.16	7	7	8
Low	0.00	0.09	3	3	3

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.00	0.02	1	1	1
Low	0.00	0.02	3	3	3
Low	0.00	0.23	2	2	2
Low	0.00	0.09	2	2	2
Low	0.00	0.13	2	2	2
Low	0.00	0.01	2	2	2
Low	0.00	0.01	2	3	3
Low	0.00	0.04	1	1	1
Low	0.00	0.04	2	2	2
Low	0.00	0.03	2	2	2
Low	0.00	0.05	2	2	2
Low	0.00	0.09	2	2	2
Low	0.00	0.00	1	1	1
Low	0.00	0.10	2	3	3
Low	0.00	0.00	1	1	1
Low	0.00	0.05	1	1	1
Low	0.00	0.01	1	1	1
Low	0.00	0.04	3	3	3
Low	0.00	0.01	1	1	1
Low	0.00	0.61	5	5	5
Low	0.00	0.10	3	3	3
Low	0.00	0.06	1	1	2
Low	0.00	0.14	2	2	2
Low	0.00	0.00	1	1	1
Low	0.00	0.01	1	1	1
Low	0.00	1.18	2	2	2
Low	0.00	0.01	2	2	2

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.00	0.00	1	1	1
Low	0.00	2.19	-	1	1
Low	0.00	1.46	2	2	2
Low	0.00	0.01	1	1	1
Low	0.00	2.09	2	2	2
Low	0.00	0.14	1	1	1
Low	0.00	0.20	2	2	3
Low	0.00	0.01	1	1	1
Low	0.00	0.11	1	1	1
Low	0.00	0.06	2	3	3
Low	0.00	0.11	1	1	1
Low	0.00	0.05	1	1	1
Low	0.00	0.28	1	1	1
Low	0.00	0.19	2	2	2
Low	0.00	0.04	1	1	1
Low	0.00	0.25	1	1	2
Low	0.00	0.16	3	3	3
Low	0.00	0.11	1	1	1
Low	0.00	0.21	1	2	2
Low	0.00	0.06	1	1	2
Low	0.00	0.48	1	1	1
Low	0.00	0.26	1	1	1
Low	0.00	0.01	1	1	1
Low	0.00	0.14	1	1	1
Low	0.00	0.21	1	1	1
Low	0.00	0.42	1	1	1
Low	0.00	0.72	1	1	1

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.00	0.16	1	1	1
Low	0.00	0.17	2	2	2
Low	0.00	0.73	1	1	1
Low	0.00	1.27	1	1	1
Low	0.00	0.53	1	1	1
Low	0.00	0.16	1	1	1
Low	0.00	0.01	1	1	1
Low	0.00	0.71	1	1	2
Low	0.00	0.15	-	1	1
Low	0.00	0.03	-	-	1
Low	0.00	0.03	-	1	1
Low	0.00	0.02	-	-	-
Low	0.00	0.00	-	1	1
Low	0.04	0.13	50	50	54
Low	0.01	0.00	11	11	11
Low	0.01	0.01	16	16	16
Low	0.01	0.01	18	18	19
Low	0.01	0.11	12	12	12
Low	0.01	0.01	12	13	13
Low	0.01	0.04	8	8	8
Low	0.00	0.00	13	13	13
Low	0.00	0.37	3	3	3
Low	0.00	0.00	5	5	5
Low	0.00	0.08	6	6	6
Low	0.00	0.00	5	5	5
Low	0.00	0.00	5	5	5
Low	0.00	0.06	4	4	4

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.00	0.00	6	6	6
Low	0.00	0.06	3	3	3
Low	0.00	0.12	8	9	10
Low	0.00	0.21	5	5	5
Low	0.00	0.01	4	4	4
Low	0.00	0.12	9	9	9
Low	0.00	0.04	7	7	7
Low	0.00	0.06	5	5	5
Low	0.00	0.00	2	2	2
Low	0.00	0.01	4	4	4
Low	0.00	0.01	3	3	3
Low	0.00	0.15	4	4	4
Low	0.00	0.00	2	2	2
Low	0.00	0.10	4	4	4
Low	0.00	0.05	3	3	3
Low	0.00	0.15	5	5	5
Low	0.00	0.01	2	2	2
Low	0.00	0.24	4	4	4
Low	0.00	0.43	7	7	7
Low	0.00	0.00	2	2	2
Low	0.00	0.05	3	3	3
Low	0.00	0.26	5	5	5
Low	0.00	0.10	7	7	7
Low	0.00	0.01	6	6	6
Low	0.00	0.00	4	4	4
Low	0.00	0.62	1	1	1
Low	0.00	0.05	4	4	6

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.00	0.03	2	2	2
Low	0.00	-	2	2	2
Low	0.00	0.01	3	3	4
Low	0.00	0.11	3	3	3
Low	0.00	0.03	5	5	5
Low	0.00	0.01	3	3	3
Low	0.00	0.11	5	5	5
Low	0.00	0.01	5	5	6
Low	0.00	0.00	2	2	2
Low	0.00	0.01	1	1	1
Low	0.00	0.00	2	2	2
Low	0.00	0.08	4	4	4
Low	0.00	0.00	1	1	1
Low	0.00	3.28	4	4	4
Low	0.00	0.00	2	2	2
Low	0.00	0.02	2	2	2
Low	0.00	0.07	4	4	4
Low	0.00	0.09	2	2	2
Low	0.00	0.02	2	2	2
Low	0.00	0.38	3	4	4
Low	0.00	0.03	1	1	1
Low	0.00	0.08	2	2	2
Low	0.00	0.17	6	6	6
Low	0.00	0.04	2	2	2
Low	0.00	0.05	2	2	2
Low	0.00	0.72	2	2	2
Low	0.00	0.46	2	2	2

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.00	0.04	2	2	2
Low	0.00	0.06	2	2	2
Low	0.00	0.11	3	3	3
Low	0.00	0.01	1	1	1
Low	0.00	0.00	1	1	1
Low	0.00	0.53	5	5	6
Low	0.00	0.09	5	5	5
Low	0.00	0.00	1	1	1
Low	0.00	0.15	1	1	1
Low	0.00	0.04	2	2	2
Low	0.00	0.00	1	1	1
Low	0.00	0.02	3	3	3
Low	0.00	0.11	2	2	2
Low	0.00	0.03	1	1	1
Low	0.00	1.14	1	1	1
Low	0.00	0.09	4	4	5
Low	0.00	0.05	2	2	2
Low	0.00	0.18	2	2	2
Low	0.00	0.00	1	1	1
Low	0.00	0.07	3	3	3
Low	0.00	0.14	3	3	3
Low	0.00	0.03	1	1	1
Low	0.00	0.05	1	1	1
Low	0.00	0.56	3	3	3
Low	0.00	0.29	1	1	1
Low	0.00	0.00	1	1	1
Low	0.00	0.07	1	1	1

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.00	0.17	4	4	4
Low	0.00	0.02	1	1	1
Low	0.00	0.03	1	1	1
Low	0.00	0.05	2	2	2
Low	0.00	0.07	3	3	4
Low	0.00	0.00	1	1	1
Low	0.00	0.00	1	1	1
Low	0.00	0.01	1	1	1
Low	0.00	0.01	2	2	2
Low	0.00	0.00	1	1	1
Low	0.00	0.21	1	1	3
Low	0.00	0.10	1	1	1
Low	0.00	0.02	1	1	1
Low	0.00	0.74	1	1	1
Low	0.00	0.00	1	1	1
Low	0.00	0.00	1	1	1
Low	0.00	0.04	1	1	1
Low	0.00	0.26	2	2	2
Low	0.00	0.35	3	3	3
Low	0.00	0.03	1	1	1
Low	0.00	1.12	1	1	1
Low	0.00	0.07	2	2	2
Low	0.00	0.03	2	2	2
Low	0.00	0.91	2	2	2
Low	0.00	0.14	2	2	2
Low	0.00	1.12	1	1	1
Low	0.00	0.35	2	2	2

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.00	0.00	1	1	1
Low	0.00	0.10	1	1	1
Low	0.00	0.06	1	2	3
Low	0.00	0.21	3	3	3
Low	0.00	0.42	2	2	2
Low	0.00	0.20	1	1	1
Low	0.00	0.03	1	1	1
Low	0.00	0.11	1	1	1
Low	0.00	0.02	2	2	2
Low	0.00	0.05	1	1	1
Low	0.00	1.14	1	1	1
Low	0.00	0.71	2	2	2
Low	0.00	0.11	2	2	2
Low	0.00	0.03	1	1	1
Low	0.00	0.20	2	2	2
Low	0.00	0.20	1	1	2
Low	0.00	0.08	1	1	1
Low	0.00	0.11	1	1	1
Low	0.00	0.03	1	1	1
Low	0.00	0.48	1	1	1
Low	0.00	0.05	1	1	1
Low	0.00	0.01	1	1	1
Low	0.00	0.00	1	1	1
Low	0.00	0.11	1	1	1
Low	0.00	0.00	1	1	1
Low	0.00	0.01	1	1	1
Low	0.00	0.46	1	1	1

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.00	0.01	1	1	1
Low	0.00	0.02	1	1	1
Low	0.00	0.03	3	3	3
Low	0.00	0.16	2	2	2
Low	0.00	0.02	1	1	1
Low	0.00	0.11	1	1	1
Low	0.00	0.00	1	1	1
Low	0.00	0.09	1	1	1
Low	0.00	0.15	1	1	1
Low	0.00	0.48	1	1	1
Low	0.00	0.01	1	1	2
Low	0.00	0.48	1	1	1
Low	0.00	0.09	1	1	1
Low	0.00	0.01	1	1	1
Low	0.00	0.66	1	2	2
Low	0.00	0.21	1	1	1
Low	0.00	0.15	1	1	1
Low	0.00	0.01	1	1	1
Low	0.00	0.14	2	2	2
Low	0.00	0.17	2	2	2
Low	0.00	0.01	1	1	1
Low	0.00	0.04	2	2	2
Low	0.00	0.18	1	1	1
Low	0.00	0.14	1	1	1
Low	0.00	1.14	1	1	1
Low	0.00	0.06	1	2	2
Low	0.00	0.26	1	1	1

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.00	1.85	1	1	1
Low	0.00	0.84	1	1	1
Low	0.00	0.02	1	1	1
Low	0.00	0.01	1	1	1
Low	0.00	0.02	1	1	1
Low	0.00	0.03	1	1	1
Low	0.00	0.16	1	1	1
Low	0.00	0.01	1	1	1
Low	0.00	0.09	1	1	1
Low	0.00	0.04	1	1	1
Low	0.00	0.71	-	-	1
Low	0.00	0.01	1	1	1
Low	0.00	0.71	1	1	2
Low	0.00	0.33	1	1	1
Low	0.00	0.21	1	1	1
Low	0.00	0.15	1	1	1
Low	0.00	0.12	1	1	1
Low	0.00	0.35	1	1	1
Low	0.00	0.33	-	1	1
Low	0.00	0.18	-	1	1
Low	0.00	0.16	-	1	1
Low	0.00	0.09	-	-	-
Low	0.00	0.08	-	-	1
Low	0.00	0.07	-	-	-
Low	0.00	0.02	-	1	1
Low	0.00	0.01	-	1	1
Low	0.00	0.01	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.00	0.00	-	1	1
Low	0.00	0.00	-	-	-
Low	0.26	0.15	-	-	-
Low	0.00	0.02	-	-	-
Low	0.00	0.00	-	-	-
Low	0.00	0.04	2	2	2
Low	0.00	0.01	-	-	-
Low	0.00	0.01	-	-	-
Low	0.00	0.22	-	-	-
Low	0.00	0.01	2	2	2
Low	0.00	0.00	1	1	1
Low	0.00	0.02	-	-	-
Low	0.00	0.09	1	1	1
Low	0.00	0.12	-	-	-
Low	0.00	0.88	1	1	1
Low	0.00	0.01	1	1	1
Low	0.00	0.03	1	1	1
Low	0.00	0.22	1	1	1
Low	0.00	0.07	1	1	1
Low	0.00	0.05	1	1	1
Low	0.00	0.04	1	1	1
Low	0.00	1.85	1	1	1
Low	0.00	0.04	1	1	1
Low	0.00	0.07	1	1	1
Low	0.00	6.23	-	-	-
Low	0.00	3.28	-	-	-
Low	0.00	2.19	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.00	2.19	-	-	-
Low	0.00	1.90	-	-	-
Low	0.00	1.12	-	-	-
Low	0.00	1.09	-	-	-
Low	0.00	1.09	-	-	-
Low	0.00	1.07	-	-	-
Low	0.00	1.07	-	-	-
Low	0.00	1.07	-	-	-
Low	0.00	0.75	-	-	-
Low	0.00	0.72	-	-	-
Low	0.00	0.71	-	-	-
Low	0.00	0.64	-	-	-
Low	0.00	0.64	-	-	-
Low	0.00	0.64	-	-	-
Low	0.00	0.54	-	-	-
Low	0.00	0.53	-	-	-
Low	0.00	0.51	-	-	-
Low	0.00	0.49	-	-	-
Low	0.00	0.48	-	-	-
Low	0.00	0.48	-	-	-
Low	0.00	0.42	-	-	-
Low	0.00	0.40	-	-	-
Low	0.00	0.36	-	-	-
Low	0.00	0.35	-	-	-
Low	0.00	0.35	-	-	-
Low	0.00	0.35	-	-	-
Low	0.00	0.35	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.00	0.35	-	-	-
Low	0.00	0.35	-	-	-
Low	0.00	0.34	-	-	-
Low	0.00	0.33	-	-	-
Low	0.00	0.33	-	-	-
Low	0.00	0.33	-	-	-
Low	0.00	0.26	-	-	-
Low	0.00	0.26	-	-	-
Low	0.00	0.25	-	-	-
Low	0.00	0.23	-	-	-
Low	0.00	0.22	-	-	-
Low	0.00	0.22	-	-	-
Low	0.00	0.21	-	-	-
Low	0.00	0.21	-	-	-
Low	0.00	0.21	-	-	-
Low	0.00	0.20	-	-	-
Low	0.00	0.20	-	-	-
Low	0.00	0.20	-	-	-
Low	0.00	0.20	-	-	-
Low	0.00	0.20	-	-	-
Low	0.00	0.18	-	-	-
Low	0.00	0.18	-	-	-
Low	0.00	0.18	-	-	-
Low	0.00	0.17	-	-	-
Low	0.00	0.17	-	-	-
Low	0.00	0.17	-	-	-
Low	0.00	0.17	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.00	0.17	-	-	-
Low	0.00	0.16	-	-	-
Low	0.00	0.16	-	-	-
Low	0.00	0.16	-	-	-
Low	0.00	0.16	-	-	-
Low	0.00	0.16	-	-	-
Low	0.00	0.16	-	-	-
Low	0.00	0.15	-	-	-
Low	0.00	0.15	-	-	-
Low	0.00	0.14	-	-	-
Low	0.00	0.14	-	-	-
Low	0.00	0.14	-	-	-
Low	0.00	0.14	-	-	-
Low	0.00	0.14	-	-	-
Low	0.00	0.14	-	-	-
Low	0.00	0.14	-	-	-
Low	0.00	0.14	-	-	-
Low	0.00	0.12	-	-	-
Low	0.00	0.12	-	-	-
Low	0.00	0.12	-	-	-
Low	0.00	0.12	-	-	-
Low	0.00	0.11	-	-	-
Low	0.00	0.11	-	-	-
Low	0.00	0.11	-	-	-
Low	0.00	0.11	-	-	-
Low	0.00	0.11	-	-	-
Low	0.00	0.11	-	-	-
Low	0.00	0.11	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.00	0.11	-	-	-
Low	0.00	0.11	-	-	-
Low	0.00	0.11	-	-	-
Low	0.00	0.11	-	-	-
Low	0.00	0.11	-	-	-
Low	0.00	0.11	-	-	-
Low	0.00	0.10	-	-	-
Low	0.00	0.10	-	-	-
Low	0.00	0.09	-	-	-
Low	0.00	0.09	-	-	-
Low	0.00	0.09	-	-	-
Low	0.00	0.09	-	-	-
Low	0.00	0.09	-	-	-
Low	0.00	0.09	-	-	-
Low	0.00	0.09	-	-	-
Low	0.00	0.08	-	-	-
Low	0.00	0.08	-	-	-
Low	0.00	0.08	-	-	-
Low	0.00	0.08	-	-	-
Low	0.00	0.07	-	-	-
Low	0.00	0.07	-	-	-
Low	0.00	0.06	-	-	-
Low	0.00	0.06	-	-	-
Low	0.00	0.06	-	-	-
Low	0.00	0.06	-	-	-
Low	0.00	0.05	-	-	-
Low	0.00	0.05	-	-	-
Low	0.00	0.05	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.00	0.05	-	-	-
Low	0.00	0.05	-	-	-
Low	0.00	0.05	-	-	-
Low	0.00	0.05	-	-	-
Low	0.00	0.05	-	-	-
Low	0.00	0.05	-	-	-
Low	0.00	0.05	-	-	-
Low	0.00	0.05	-	-	-
Low	0.00	0.05	-	-	-
Low	0.00	0.05	-	-	-
Low	0.00	0.05	-	-	-
Low	0.00	0.04	-	-	-
Low	0.00	0.04	-	-	-
Low	0.00	0.04	-	-	-
Low	0.00	0.04	-	-	-
Low	0.00	0.04	-	-	-
Low	0.00	0.04	-	-	-
Low	0.00	0.04	-	-	-
Low	0.00	0.04	-	-	-
Low	0.00	0.04	-	-	-
Low	0.00	0.04	-	-	-
Low	0.00	0.04	-	-	-
Low	0.00	0.04	-	-	-
Low	0.00	0.04	-	-	-
Low	0.00	0.03	-	-	-
Low	0.00	0.03	-	-	-

Low	0.00	0.03	-	-	-
Low	0.00	0.03	-	-	-
Low	0.00	0.03	-	-	-
Low	0.00	0.03	-	-	-
Low	0.00	0.03	-	-	-
Low	0.00	0.03	-	-	-
Low	0.00	0.03	-	-	-
Low	0.00	0.03	-	-	-
Low	0.00	0.03	-	-	-
Low	0.00	0.03	-	-	-
Low	0.00	0.03	-	-	-
Low	0.00	0.03	-	-	-
Low	0.00	0.02	-	-	-
Low	0.00	0.02	-	-	-
Low	0.00	0.02	-	-	-
Low	0.00	0.02	-	-	-
Low	0.00	0.02	-	-	-
Low	0.00	0.02	-	-	-
Low	0.00	0.02	-	-	-
Low	0.00	0.02	-	-	-
Low	0.00	0.02	-	-	-
Low	0.00	0.02	-	-	-
Low	0.00	0.02	-	-	-
Low	0.00	0.02	-	-	-
Low	0.00	0.02	-	-	-
Low	0.00	0.02	-	-	-

Low	0.00	0.02	-	-	-
Low	0.00	0.02	-	-	-
Low	0.00	0.02	-	-	-
Low	0.00	0.02	-	-	-
Low	0.00	0.02	-	-	-
Low	0.00	0.02	-	-	-
Low	0.00	0.01	-	-	-
Low	0.00	0.01	-	-	-
Low	0.00	0.01	-	-	-
Low	0.00	0.01	-	-	-
Low	0.00	0.01	-	-	-
Low	0.00	0.01	-	-	-
Low	0.00	0.01	-	-	-
Low	0.00	0.01	-	-	-
Low	0.00	0.01	-	-	-
Low	0.00	0.01	-	-	-
Low	0.00	0.01	-	-	-
Low	0.00	0.01	-	-	-
Low	0.00	0.01	-	-	-
Low	0.00	0.01	-	-	-
Low	0.00	0.01	-	-	-
Low	0.00	0.01	-	-	-
Low	0.00	0.01	-	-	-
Low	0.00	0.01	-	-	-
Low	0.00	0.01	-	-	-
Low	0.00	0.01	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.00	0.01	-	-	-
Low	0.00	0.01	-	-	-
Low	0.00	0.01	-	-	-
Low	0.00	0.01	-	-	-
Low	0.00	0.01	-	-	-
Low	0.00	0.01	-	-	-
Low	0.00	0.01	-	1	1
Low	0.00	0.01	-	-	-
Low	0.00	0.01	-	-	-
Low	0.00	0.01	-	-	-
Low	0.00	0.01	-	-	-
Low	0.00	0.01	-	-	-
Low	0.00	0.01	-	-	-
Low	0.00	0.01	-	-	-
Low	0.00	0.01	-	-	-
Low	0.00	0.01	-	-	-
Low	0.00	0.01	-	-	-
Low	0.00	0.00	-	-	-
Low	0.00	0.00	-	-	-
Low	0.00	0.00	-	-	-
Low	0.00	0.00	-	-	-
Low	0.00	0.00	-	-	-
Low	0.00	0.00	-	-	-
Low	0.00	0.00	-	-	-
Low	0.00	0.00	-	-	-
Low	0.00	0.00	-	-	-


























(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Low	0.00	0.00	-	-	-
Low	0.00	0.00	-	-	-
Low	0.00	0.00	-	-	-
Low	0.00	0.00	-	-	-
Low	0.00	0.00	-	-	-
Low	0.00	0.00	-	-	-
Low	0.00	0.00	-	-	-
Low	0.00	0.00	-	-	-
Low	0.00	0.00	-	-	-
Low	0.00	0.00	-	-	-
Low	0.00	0.00	-	-	-
Low	0.00	0.00	-	-	-
Low	0.00	0.00	-	-	-
Low	0.00	0.00	-	-	-
Low	0.00	0.00	-	-	-
Low	0.00	0.00	-	-	-
Low	0.00	0.00	-	-	-
Low	0.00	0.00	-	-	-
Low	0.00	0.00	-	-	-
Low	0.00	0.00	-	-	-
Low	0.00	0.00	-	-	-
Low	0.00	0.00	-	-	-
Low	0.00	0.00	-	-	-
Low	0.00	0.00	-	-	-

Low	0.00	0.00	-	-	-
Low	0.00	0.00	-	-	-
Low	0.00	0.00	-	-	-
Low	0.00	0.00	-	-	-
Low	0.00	0.00	-	-	-
Low	0.00	0.00	-	-	-
Low	0.00	0.00	-	-	-
Low	0.00	0.00	-	-	-
Low	0.00	0.00	-	-	-
Low	0.00	0.00	-	-	-
Low	0.00	0.00	-	-	-
Low	0.00	0.00	-	-	-
Low	0.00	0.00	-	-	-
Low	0.00	0.00	-	-	-
Low	0.00	0.00	-	-	-
Low	0.00	0.00	-	-	-
Low	0.00	0.00	-	-	-
Low	0.00	0.00	-	-	-
Low	0.00	0.00	-	-	-
Low	0.00	0.00	-	-	-
Low	0.00	0.00	-	-	-
Low	0.00	0.00	-	-	-
Low	0.00	0.00	-	-	-
Low	0.00	0.00	-	-	-
Low	0.00	0.00	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)




























Low	0.00	-	-	-	-
Low	0.00	-	-	-	-
Low	0.00	-	-	-	-
Low	0.00	-	-	-	-
Low	0.00	-	-	-	-
Low	0.00	-	-	-	-
Low	0.00	-	-	-	-
Low	0.00	-	-	-	-
Low	0.00	-	-	-	-
Low	0.00	-	-	-	-
Low	0.00	-	-	-	-
Low	0.00	-	-	-	-

Yesterday	Cases Today Per 10k Population (USAfacts)	4 Day Trend (USAfacts)	Percentage Change	Projected Cases in 4 Days
1,346	1,222		994.3%	41,635
822	614		1.0%	831
918	457		39.9%	1,542
940	429		26.7%	1,295
598	405		0.7%	603
12,025	369		2.7%	12,484
2,329	357		6.1%	2,516
1,293	341		11.1%	1,461
29,884	309		3.2%	31,202
1,729	298		0.3%	1,734
38,916	272		4.5%	41,351
36,780	271		2.6%	38,094
13,364	266		7.3%	14,693
12,195	256		3.3%	12,751
547	251		9.4%	625
277	248		3.0%	290
815	240		20.7%	1,060
163	239		2.5%	169
13,225	237		5.1%	14,135
34,855	235		3.5%	36,536
53,640	235		3.9%	56,512
8,967	235		3.7%	9,451
15,769	233		5.7%	16,930
543	229		19.1%	683
497	220		0.0%	497

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

186	216		1.6%	190
218	213		1.9%	222
1,256	204		22.5%	1,625
399	186		22.0%	508
14,521	182		6.1%	15,718
46,839	181		4.4%	49,683
772	179		0.5%	778
16,185	173		3.7%	16,960
13,777	171		6.9%	15,133
286	169		7.5%	315
1,536	168		2.1%	1,581
107	168		8.1%	117
6,538	167		1.3%	6,662
145	160		0.7%	146
1,144	158		11.4%	1,333
12,597	152		7.5%	13,821
603	151		29.1%	841
161	148		133.3%	558
212	148		64.3%	410
6,388	147		3.1%	6,670
476	145		5.8%	517
319	144		2.9%	332
22,741	140		3.7%	23,916
399	140		7.3%	442
291	135		3.2%	304
388	130		2.1%	399
358	127		13.3%	429

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

951	126		13.5%	1,142
11,801	125		4.5%	12,610
457	125		44.2%	794
400	123		51.5%	704
4,504	122		14.4%	5,369
9,542	121		10.0%	10,922
250	119		1.6%	254
6,871	114		7.8%	7,595
134	114		109.4%	329
5,517	112		4.4%	5,814
3,703	112		6.9%	4,034
65	112		0.0%	65
143	112		23.3%	190
2,142	111		5.1%	2,297
7,028	110		11.7%	8,176
327	110		3.2%	343
582	110		2.1%	598
1,112	108		49.9%	2,016
2,461	107		11.1%	2,815
5,507	106		8.3%	6,157
3,086	105		4.5%	3,276
233	102		14.2%	282
1,013	102		4.4%	1,075
90	102		1.1%	91
475	102		2.4%	492
6,290	101		4.3%	6,641
551	100		1.3%	559

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

1,306	99		14.6%	1,572
17,298	99		3.4%	18,070
201	98		53.4%	362
132	96		2.3%	136
165	96		0.6%	167
149	96		29.6%	215
15,370	95		8.2%	17,130
8,024	94		6.5%	8,802
161	91		21.1%	211
957	90		6.0%	1,036
376	90		1.9%	386
6,280	89		6.5%	6,850
300	89		3.4%	313
478	88		12.2%	562
230	88		6.5%	248
197	88		8.2%	220
199	87		8.2%	220
372	87		10.7%	427
69	87		1.5%	71
25	87		13.6%	31
4,066	86		7.7%	4,508
1,698	84		27.6%	2,482
13,179	83		7.2%	14,531
42,324	82		15.9%	51,345
7,333	81		21.3%	9,547
137	81		136.2%	511
162	80		5.9%	176

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

2,924	79		4.6%	3,113
3,973	78		12.9%	4,636
69	78		0.0%	69
57	77		3.6%	59
180	77		1.7%	185
6,288	76		13.3%	7,522
76	76		33.3%	108
1,341	75		4.8%	1,435
202	75		1.0%	205
169	75		1.8%	172
342	75		33.6%	520
79	75		19.7%	104
25	75		4.2%	27
248	74		24.0%	349
23	74		0.0%	23
2,214	73		8.0%	2,475
526	73		17.1%	656
4,113	73		11.3%	4,765
214	73		14.4%	260
295	73		3.5%	308
61	73		35.6%	93
127	72		1.6%	129
405	72		7.1%	444
198	72		4.2%	211
98	71		10.1%	110
4,019	71		12.3%	4,710
2,240	71		4.5%	2,380




























(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

5,016	71		16.0%	6,094
71	71		9.2%	81
60	71		1900.0%	1,583
777	70		9.1%	881
58	70		7.4%	63
2,886	69		7.0%	3,150
969	69		5.2%	1,034
1,172	69		4.0%	1,240
6,112	68		9.1%	6,969
3,043	68		13.1%	3,559
669	68		2.8%	695
229	68		9.0%	254
72	68		9.1%	82
148	67		5.0%	157
129	67		5.7%	139
5,756	66		4.4%	6,080
1,610	66		4.5%	1,716
6,176	65		11.7%	7,179
131	65		4.8%	140
100	65		117.4%	305
117	64		18.2%	151
766	64		53.5%	1,392
266	64		23.1%	367
203	64		23.8%	279
62	63		63.2%	122
151	62		7.1%	166
80	61		6.7%	88

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

285	61		8.8%	322
59	61		20.4%	80
498	61		39.9%	709
77	61		20.3%	98
1,872	60		5.4%	2,007
7,518	60		3.5%	7,878
537	60		68.9%	1,174
49	60		2.1%	50
135	60		15.4%	165
29	60		0.0%	29
736	59		18.5%	947
4,161	59		18.6%	5,247
881	58		21.9%	1,141
168	58		13.5%	199
33	58		0.0%	33
18	58		20.0%	23
1,036	57		7.6%	1,155
133	57		24.3%	182
76	57		0.0%	76
179	56		14.7%	210
899	56		19.2%	1,136
24	56		60.0%	48
677	55		3.4%	713
109	55		23.9%	147
4,552	55		5.7%	4,910
11	55		22.2%	15
29	54		7.4%	33

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

661	53		9.6%	734
104	53		36.8%	163
105	53		98.1%	284
273	53		6.6%	298
1,358	52		28.5%	1,912
232	52		7.9%	257
3,286	52		14.5%	3,956
378	52		19.6%	497
193	52		48.5%	331
735	52		8.7%	818
644	52		8.6%	721
1,296	52		14.9%	1,586
147	52		8.9%	166
1,325	51		8.6%	1,503
380	50		8.9%	431
770	50		9.1%	870
42	50		0.0%	42
826	50		22.0%	1,063
222	50		10.4%	255
5,150	49		19.8%	6,546
175	49		11.5%	207
79	49		6.8%	87
45	48		7.1%	49
159	48		7.4%	174
19	48		18.8%	24
3,345	47		11.5%	3,869
148	47		11.3%	172

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

999	47		9.4%	1,127
2,086	47		11.3%	2,428
157	47		89.2%	385
82	47		34.4%	124
103	47		4.0%	108
1,384	47		10.6%	1,584
1,106	47		14.4%	1,312
24	47		4.3%	25
45	47		25.0%	63
45	47		2.3%	47
91	47		15.2%	104
473	46		16.5%	583
144	46		12.5%	167
12,775	46		5.9%	13,846
821	46		8.2%	908
109	46		9.0%	123
78	46		25.8%	108
764	46		14.5%	929
117	46		10.4%	134
244	46		5.2%	263
206	46		5.1%	218
706	45		21.9%	929
89	45		8.5%	100
130	45		0.0%	130
946	44		10.0%	1,088
151	44		7.1%	168
291	44		2.8%	302

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

59	44		0.0%	59
584	44		5.6%	637
76	44		11.8%	89
61	44		32.6%	91
2,026	43		23.2%	2,678
697	43		12.1%	818
707	43		7.6%	790
93	43		14.8%	110
270	43		16.9%	340
132	43		7.3%	142
192	43		3.2%	201
97	43		0.0%	97
81	42		0.0%	81
149	42		29.6%	221
2,706	42		9.5%	3,049
2,904	42		11.2%	3,336
132	42		127.6%	391
2,036	42		10.3%	2,333
110	42		12.2%	130
1,258	41		8.0%	1,401
1,075	41		11.5%	1,251
145	41		2.1%	150
298	41		21.6%	372
459	41		5.0%	492
188	41		1.6%	192
937	41		13.2%	1,093
200	41		15.6%	244

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

205	41		7.3%	225
2,868	41		15.1%	3,517
1,242	41		15.3%	1,514
116	41		20.8%	152
197	41		5.3%	211
26	41		0.0%	26
3,710	40		11.8%	4,313
3,301	40		16.6%	4,086
56	40		5.7%	61
1,634	40		3.4%	1,710
50	40		11.1%	59
66	40		11.9%	74
68	40		7.9%	77
25	40		4.2%	27
72	39		2.9%	75
3,611	39		17.2%	4,466
1,004	39		9.4%	1,134
637	39		12.9%	750
155	39		4.7%	166
60	39		3.4%	62
167	39		83.5%	372
61	39		13.0%	72
35	39		0.0%	35
3	39		0.0%	3
267	38		3.5%	280
93	38		1.1%	95
4,340	38		20.2%	5,482

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

720	38		8.6%	802
363	38		30.1%	532
2,319	38		12.1%	2,701
269	38		4.7%	285
267	38		3.9%	282
55	38		10.0%	63
49	38		14.0%	59
10	38		0.0%	10
86	38		1.2%	87
32	38		28.0%	47
344	37		6.5%	373
191	37		35.5%	289
93	37		12.0%	107
527	37		8.4%	587
165	37		19.6%	213
589	37		120.6%	1,797
138	37		5.3%	148
245	37		3.4%	258
74	37		27.6%	107
31	37		6.9%	33
20	37		11.1%	23
3	37		0.0%	3
1,936	36		9.7%	2,215
68	36		21.4%	86
1,935	36		26.8%	2,662
342	36		7.9%	378
451	36		2.0%	464

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

58	36		0.0%	58
40	36		25.0%	55
130	36		7.4%	144
36	36		2.9%	37
3	36		0.0%	3
559	35		7.9%	627
1,780	35		12.3%	2,088
209	35		22.9%	278
66	35		6.5%	72
653	35		4.8%	693
86	35		3.6%	89
90	35		0.0%	90
106	35		6.0%	114
52	35		10.6%	61
15	35		7.1%	16
24	35		14.3%	29
8	35		100.0%	17
527	34		5.2%	565
1,903	34		9.7%	2,158
3,244	34		10.3%	3,704
1,959	34		13.6%	2,326
439	34		4.5%	466
146	34		5.8%	158
39	34		0.0%	39
107	34		4.9%	114
35	34		0.0%	35
91	34		11.0%	106

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

77	34		24.2%	108
79	34		3.9%	83
138	34		7.0%	152
82	34		74.5%	154
67	33		1.5%	68
145	33		34.3%	218
605	33		17.9%	753
94	33		2.2%	97
3,325	33		9.1%	3,740
265	33		10.4%	305
220	33		5.8%	236
87	33		11.5%	104
498	33		8.0%	553
358	33		5.9%	391
50	33		4.2%	53
386	33		7.8%	430
55	33		31.0%	82
67	33		42.6%	114
40	33		21.2%	55
12	33		20.0%	14
198	32		26.9%	289
731	32		9.3%	824
1,376	32		10.0%	1,558
141	32		8.5%	159
268	32		7.2%	296
60	32		9.1%	67
534	32		36.6%	838

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

151	32		15.3%	180
57	32		5.6%	62
177	32		8.6%	198
32	32		14.3%	40
115	32		10.6%	130
54	31		0.0%	54
122	31		13.0%	146
2,509	31		3.1%	2,624
325	31		3.8%	342
232	31		12.1%	271
127	31		8.5%	143
152	31		7.0%	163
461	31		5.5%	502
16	31		0.0%	16
62	31		67.6%	149
22	31		22.2%	29
31	31		72.2%	53
28	31		27.3%	40
1,476	30		49.8%	2,592
186	30		25.7%	261
2,815	30		12.3%	3,253
436	30		15.6%	529
166	30		19.4%	218
969	30		11.8%	1,123
79	30		21.5%	97
82	30		9.3%	93
75	30		4.2%	79

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

96	30		71.4%	206
58	30		18.4%	74
1,113	30		3.5%	1,165
112	30		5.7%	120
69	30		13.1%	81
198	30		4.8%	214
230	30		5.5%	248
42	30		31.3%	62
111	30		101.8%	255
68	30		88.9%	136
51	30		142.9%	149
83	29		1.2%	84
188	29		6.8%	206
6,449	29		3.9%	6,777
1,198	29		13.3%	1,439
954	29		8.9%	1,069
1,502	29		9.2%	1,694
2,181	29		7.8%	2,430
416	29		6.9%	458
90	29		34.3%	141
494	29		13.3%	587
131	29		4.8%	141
95	29		33.8%	133
23	29		15.0%	28
67	29		3.1%	70
73	29		0.0%	73
21	29		0.0%	21

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

32	29		6.7%	34
65	29		1.6%	66
24	29		4.3%	25
6	29		0.0%	6
49	29		32.4%	69
30	29		7.1%	34
356	28		7.9%	395
369	28		11.1%	413
76	28		4.1%	81
862	28		24.6%	1,170
176	28		12.1%	204
354	28		7.6%	390
2,978	28		6.1%	3,216
162	28		10.2%	183
31	28		0.0%	31
395	28		7.3%	433
83	28		10.7%	97
51	28		0.0%	51
183	28		4.6%	195
331	28		13.0%	396
55	28		14.6%	67
30	28		3.4%	32
1,786	27		20.8%	2,307
99	27		0.0%	99
5,312	27		7.2%	5,866
388	27		1.8%	400
1,109	27		15.0%	1,336

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

45	27		7.1%	48
184	27		2.2%	190
63	27		10.5%	73
52	27		0.0%	52
793	27		11.2%	930
278	27		9.9%	317
155	27		1.3%	158
184	27		8.9%	205
50	27		6.4%	54
135	27		29.8%	184
229	26		163.2%	866
58	26		23.4%	78
423	26		1.2%	431
78	26		32.2%	123
518	26		20.5%	670
172	26		9.6%	200
138	26		40.8%	224
47	26		11.9%	56
66	26		8.2%	75
54	26		0.0%	54
435	26		7.4%	484
272	26		18.8%	350
57	26		5.6%	61
203	26		14.0%	249
20	26		11.1%	24
42	26		5.0%	44
100	26		49.3%	176

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

64	26		1.6%	65
159	26		16.9%	205
42	26		23.5%	55
8	26		14.3%	10
17	26		41.7%	27
2	26		0.0%	2
14	26		75.0%	33
25,662	25		10.7%	29,383
348	25		19.6%	437
172	25		20.3%	224
25	25		0.0%	25
129	25		8.4%	140
824	25		9.1%	929
130	25		17.1%	155
105	25		9.4%	119
112	25		27.3%	164
47	25		6.8%	53
48	25		20.0%	63
13	25		8.3%	15
68	25		30.8%	95
179	25		20.9%	231
28	25		40.0%	46
11	25		10.0%	13
19	25		58.3%	35
9	25		0.0%	9
73	24		7.4%	82
139	24		29.9%	192

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

163	24		13.2%	191
658	24		3.8%	687
762	24		4.7%	810
1,405	24		5.0%	1,497
55	24		12.2%	66
336	24		10.5%	384
400	24		2.3%	413
92	24		8.2%	103
97	24		9.0%	107
305	24		14.7%	365
251	24		10.1%	292
165	24		10.0%	190
69	24		11.3%	77
48	24		2.1%	50
738	24		18.8%	922
72	24		38.5%	117
26	24		13.0%	31
146	24		49.0%	211
27	24		12.5%	32
29	24		7.4%	31
101	24		21.7%	131
35	24		34.6%	46
17	24		30.8%	22
10	24		100.0%	31
351	23		23.6%	459
2,707	23		11.0%	3,107
196	23		8.3%	221




























(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

1,768	23		9.5%	2,022
964	23		7.2%	1,064
218	23		0.9%	221
105	23		6.1%	116
474	23		12.9%	558
623	23		10.5%	723
520	23		5.7%	564
634	23		8.6%	707
931	23		24.8%	1,256
361	23		0.0%	361
55	23		1.9%	57
114	23		12.9%	135
251	23		15.1%	294
295	23		3.1%	308
191	23		11.0%	221
87	23		3.6%	92
86	23		3.6%	89
19	23		0.0%	19
341	23		6.9%	373
163	23		7.2%	179
107	23		12.6%	126
33	23		6.5%	35
28	23		0.0%	28
38	23		11.8%	45
13	23		85.7%	35
19	23		18.8%	24
29	23		26.1%	38

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

2,905	22		19.0%	3,616
162	22		4.5%	172
154	22		4.1%	164
455	22		17.0%	567
56	22		1.8%	58
281	22		6.0%	302
144	22		11.6%	169
435	22		22.5%	566
71	22		39.2%	106
186	22		3.3%	195
113	22		7.6%	128
145	22		4.3%	153
89	22		4.7%	96
196	22		5.4%	211
134	22		3.1%	139
44	22		4.8%	47
52	22		13.0%	63
56	22		5.7%	60
75	22		13.6%	90
55	22		5.8%	60
18	22		5.9%	20
43	22		0.0%	43
40	22		8.1%	44
17	22		6.3%	18
75	22		7.1%	80
13	22		44.4%	19
2	22		0.0%	2

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

52	21		2.0%	54
489	21		11.4%	568
952	21		14.4%	1,136
1,566	21		8.7%	1,761
3,130	21		5.6%	3,365
335	21		2.1%	346
1,974	21		10.5%	2,278
217	21		15.4%	251
977	21		15.2%	1,204
323	21		5.9%	349
190	21		12.4%	218
51	21		30.8%	73
140	21		11.1%	161
99	21		1.0%	100
537	21		13.1%	625
40	21		5.3%	43
163	21		3.2%	170
75	21		78.6%	197
151	21		15.3%	187
50	21		25.0%	65
175	21		11.5%	207
53	21		3.9%	56
91	21		1.1%	92
140	21		37.3%	207
40	21		0.0%	40
507	21		7.9%	566
109	21		9.0%	121

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

85	21		1.2%	86
417	21		2.7%	434
28	21		0.0%	28
26	21		8.3%	30
311	21		8.4%	346
17	21		30.8%	24
15	21		7.1%	17
21	21		0.0%	21
45	21		0.0%	45
26	21		0.0%	26
22	21		83.3%	54
115	20		25.0%	160
270	20		26.8%	376
579	20		31.0%	819
322	20		12.2%	377
661	20		14.0%	795
169	20		0.6%	170
58	20		3.6%	61
76	20		15.2%	89
55	20		19.6%	72
113	20		22.8%	151
39	20		2.6%	40
99	20		8.8%	111
159	20		19.5%	207
76	20		18.8%	99
105	20		20.7%	133
358	20		7.5%	396

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

69	20		3.0%	72
34	20		9.7%	38
24	20		0.0%	24
32	20		14.3%	39
64	20		3.2%	67
17	20		6.3%	18
15	20		15.4%	18
28	20		0.0%	28
11	20		22.2%	14
31	20		72.2%	67
17	20		0.0%	17
4	20		0.0%	4
41	20		86.4%	77
208	19		6.1%	226
158	19		6.0%	171
4,274	19		7.4%	4,782
549	19		13.0%	647
300	19		21.0%	401
100	19		8.7%	112
593	19		17.2%	708
133	19		19.8%	168
479	19		15.7%	593
2,338	19		10.0%	2,683
90	19		2.3%	93
183	19		15.8%	220
18	19		28.6%	26
117	19		13.6%	139

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

197	19		22.4%	257
490	19		4.9%	522
82	19		5.1%	89
466	19		2.4%	481
19	19		0.0%	19
293	19		10.6%	336
63	19		43.2%	114
90	19		5.9%	97
267	19		3.1%	279
41	19		2.5%	42
273	19		7.9%	304
361	19		7.1%	396
308	19		11.6%	346
629	19		10.0%	717
28	19		16.7%	36
171	19		0.6%	172
50	19		11.1%	58
77	19		45.3%	127
35	19		12.9%	42
19	19		5.6%	20
43	19		2.4%	44
12	19		33.3%	18
60	19		42.9%	97
6	19		20.0%	8
12	19		200.0%	53
14	19		1300.0%	213
55	18		12.2%	65

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

304	18		10.1%	351
1,403	18		7.3%	1,521
271	18		12.9%	320
1,602	18		6.9%	1,732
409	18		21.4%	527
42	18		13.5%	49
237	18		3.9%	250
97	18		21.3%	134
162	18		8.0%	179
579	18		22.2%	764
549	18		6.4%	598
211	18		13.4%	256
103	18		4.0%	110
45	18		15.4%	54
403	18		18.9%	507
81	18		19.1%	103
45	18		2.3%	46
226	18		24.9%	307
427	18		3.9%	447
38	18		5.6%	41
188	18		12.6%	225
28	18		3.7%	29
74	18		4.2%	77
42	18		31.3%	60
61	18		1.7%	62
59	18		20.4%	80
23	18		4.5%	24

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

18	18		28.6%	27
11	18		-8.3%	10
48	18		4.3%	50
26	18		0.0%	26
7	18		0.0%	7
29	18		0.0%	29
2	18		0.0%	2
456	17		25.3%	632
2,151	17		23.8%	2,848
327	17		15.1%	387
4,180	17		3.7%	4,417
238	17		28.6%	340
1,073	17		12.1%	1,239
506	17		7.7%	561
1,380	17		13.3%	1,648
102	17		4.1%	107
92	17		9.5%	106
327	17		8.3%	364
124	17		5.1%	132
601	17		13.2%	723
136	17		12.4%	165
200	17		13.6%	244
20	17		0.0%	20
331	17		7.5%	364
91	17		2.2%	93
77	17		0.0%	77
28	17		12.0%	34

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

170	17		6.9%	188
69	17		3.0%	72
238	17		20.8%	311
24	17		14.3%	29
61	17		1.7%	63
65	17		1.6%	66
72	17		1.4%	73
60	17		1.7%	61
640	17		7.4%	707
201	17		13.6%	242
49	17		32.4%	73
28	17		0.0%	28
83	17		20.3%	113
18	17		5.9%	20
163	17		5.8%	176
22	17		4.8%	23
12	17		20.0%	16
26	17		13.0%	31
16	17		6.7%	18
56	17		47.4%	89
48	17		4.3%	51
9	17		28.6%	13
28	17		64.7%	50
23	17		21.1%	30
61	17		510.0%	586
5	17		0.0%	5
16	17		6.7%	17

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

31	17		6.9%	34
9	17		28.6%	13
16	17		45.5%	29
1,724	16		51.8%	3,095
363	16		2.5%	376
544	16		10.8%	621
743	16		16.1%	917
177	16		2.3%	182
262	16		32.3%	384
97	16		4.3%	102
1,233	16		4.8%	1,328
242	16		8.5%	270
619	16		6.7%	677
619	16		10.5%	705
1,393	16		5.4%	1,502
68	16		7.9%	75
50	16		13.6%	59
490	16		8.4%	546
61	16		0.0%	61
298	16		5.7%	320
45	16		4.7%	47
120	16		13.2%	144
183	16		4.0%	193
13	16		0.0%	13
101	16		7.4%	114
105	16		1.0%	106
229	16		17.4%	277

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

33	16		3.1%	34
34	16		21.4%	45
27	16		12.5%	32
63	16		12.5%	72
29	16		7.4%	31
34	16		61.9%	69
99	16		4.2%	104
13	16		0.0%	13
31	16		34.8%	46
27	16		17.4%	33
20	16		5.3%	21
76	16		1.3%	77
31	16		29.2%	47
20	16		25.0%	28
15	16		66.7%	25
33	16		22.2%	43
8	16		14.3%	10
82	15		15.5%	100
165	15		10.0%	190
1,118	15		9.5%	1,257
878	15		33.8%	1,320
61	15		17.3%	78
125	15		2.5%	129
705	15		3.5%	745
157	15		9.8%	181
373	15		8.7%	421
26	15		18.2%	33

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

60	15		20.0%	73
201	15		28.0%	296
232	15		12.6%	273
757	15		4.8%	811
3,899	15		16.3%	4,778
311	15		8.4%	340
145	15		0.7%	146
139	15		5.3%	150
526	15		10.0%	602
12	15		0.0%	12
252	15		5.9%	275
679	15		5.9%	732
118	15		0.0%	118
313	15		5.7%	337
51	15		8.5%	58
969	15		9.4%	1,091
60	15		0.0%	60
80	15		11.1%	92
603	15		6.5%	661
226	15		4.6%	240
28	15		3.7%	29
146	15		15.9%	179
432	15		3.1%	451
327	15		2.2%	337
108	15		16.1%	138
59	15		51.3%	104
59	15		55.3%	104

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

43	15		4.9%	45
542	15		11.8%	641
22	15		10.0%	25
32	15		6.7%	35
67	15		6.3%	71
77	15		1.3%	78
118	15		9.3%	132
247	15		4.7%	263
122	15		2.5%	127
12	15		33.3%	18
12	15		9.1%	14
18	15		20.0%	24
15	15		15.4%	18
4	15		100.0%	13
1	15		0.0%	1
8	15		700.0%	181
270	14		2.7%	280
136	14		33.3%	203
316	14		4.6%	337
920	14		13.4%	1,096
90	14		18.4%	115
186	14		30.1%	269
385	14		7.5%	418
1,714	14		7.7%	1,895
994	14		6.4%	1,089
133	14		5.6%	144
159	14		9.7%	180

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

6,708	14		8.9%	7,535
158	14		1.9%	163
75	14		23.0%	101
420	14		16.3%	533
59	14		3.5%	62
241	14		6.6%	263
140	14		3.7%	147
121	14		15.2%	144
88	14		31.3%	133
81	14		24.6%	116
550	14		6.2%	596
81	14		2.5%	83
951	14		9.6%	1,082
88	14		39.7%	147
509	14		6.5%	559
64	14		6.7%	71
145	14		5.8%	155
143	14		2.9%	148
330	14		11.5%	392
365	14		9.6%	400
65	14		12.1%	74
1,133	14		11.3%	1,294
61	14		0.0%	61
31	14		3.3%	33
187	14		14.0%	226
29	14		11.5%	34
51	14		15.9%	60

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

45	14		7.1%	48
63	14		80.0%	138
68	14		9.7%	79
38	14		40.7%	64
54	14		3.8%	57
24	14		41.2%	36
16	14		0.0%	16
25	14		25.0%	33
15	14		0.0%	15
32	14		45.5%	56
13	14		0.0%	13
11	14		0.0%	11
14	14		7.7%	16
4	14		0.0%	4
2	14		0.0%	2
5	14		25.0%	7
3	14		0.0%	3
9	14		12.5%	11
3	14		0.0%	3
4	14		33.3%	6
146	13		0.0%	146
319	13		4.6%	343
57	13		21.3%	76
195	13		10.2%	223
80	13		8.1%	86
35	13		9.4%	39
174	13		12.3%	207

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

249	13		5.5%	266
31	13		3.3%	32
118	13		59.5%	228
129	13		0.8%	130
1,326	13		6.8%	1,452
83	13		20.3%	104
67	13		31.4%	101
46	13		7.0%	51
63	13		12.5%	71
701	13		15.3%	858
21	13		5.0%	23
59	13		15.7%	73
33	13		26.9%	46
200	13		7.5%	221
29	13		3.6%	30
103	13		19.8%	128
57	13		9.6%	64
202	13		5.8%	218
137	13		16.1%	167
34	13		9.7%	38
45	13		15.4%	54
153	13		19.5%	196
52	13		15.6%	63
90	13		4.7%	95
170	13		23.2%	210
143	13		2.9%	149
279	13		2.2%	288

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

13	13		0.0%	13
41	13		51.9%	71
36	13		9.1%	41
39	13		18.2%	49
92	13		178.8%	343
20	13		17.6%	25
26	13		13.0%	31
32	13		0.0%	32
27	13		35.0%	39
92	13		58.6%	154
53	13		15.2%	62
67	13		1.5%	69
42	13		13.5%	49
11	13		0.0%	11
12	13		20.0%	15
47	13		9.3%	52
33	13		6.5%	36
7	13		16.7%	8
33	13		6.5%	35
14	13		27.3%	20
32	13		18.5%	39
20	13		11.1%	23
9	13		0.0%	9
7	13		0.0%	7
21	13		10.5%	24
11	13		0.0%	11
11	13		37.5%	18

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

10	13		11.1%	12
11	13		37.5%	16
5	13		0.0%	5
986	12		11.2%	1,142
3,927	12		10.2%	4,496
60	12		15.4%	73
44	12		25.7%	59
2,503	12		16.5%	3,083
62	12		10.7%	73
258	12		1.2%	262
2,231	12		3.1%	2,324
140	12		5.3%	151
195	12		4.8%	209
136	12		3.8%	144
118	12		1.7%	120
514	12		3.6%	538
156	12		4.0%	165
155	12		9.9%	175
124	12		2.5%	128
122	12		15.1%	151
110	12		7.8%	124
31	12		6.9%	34
125	12		31.6%	180
40	12		2.6%	41
31	12		0.0%	31
120	12		16.5%	150
28	12		7.7%	31

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

271	12		4.2%	285
30	12		20.0%	39
24	12		4.3%	26
21	12		23.5%	26
56	12		47.4%	94
49	12		2.1%	50
27	12		12.5%	33
35	12		94.4%	85
24	12		4.3%	26
122	12		7.0%	134
43	12		10.3%	49
23	12		0.0%	23
45	12		25.0%	62
37	12		8.8%	42
25	12		25.0%	35
9	12		0.0%	9
16	12		6.7%	18
18	12		20.0%	23
31	12		6.9%	34
32	12		10.3%	37
22	12		0.0%	22
5	12		0.0%	5
24	12		14.3%	30
21	12		10.5%	24
4	12		0.0%	4
25	12		25.0%	34
14	12		7.7%	15

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

14	12		40.0%	20
3	12		0.0%	3
6	12		0.0%	6
15	12		36.4%	25
15	12		87.5%	35
8	12		14.3%	10
32	12		77.8%	74
8	12		0.0%	8
13	12		8.3%	14
4	12		0.0%	4
10	12		42.9%	17
11	12		120.0%	35
208	11		16.9%	263
395	11		8.8%	441
63	11		1.6%	64
263	11		9.6%	297
16	11		0.0%	16
1,345	11		4.3%	1,426
56	11		5.7%	59
838	11		8.4%	931
1,045	11		3.3%	1,093
279	11		15.3%	333
21	11		0.0%	21
179	11		9.8%	209
457	11		2.9%	477
15	11		7.1%	17
30	11		0.0%	30

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

79	11		3.9%	83
67	11		0.0%	67
401	11		2.6%	414
398	11		14.7%	477
47	11		0.0%	47
99	11		6.5%	109
286	11		7.1%	309
35	11		2.9%	36
101	11		5.2%	108
164	11		2.5%	170
634	11		8.9%	721
1,005	11		12.5%	1,175
172	11		115.0%	493
50	11		4.2%	53
61	11		7.0%	67
35	11		12.9%	42
24	11		0.0%	24
22	11		4.8%	23
10	11		0.0%	10
107	11		15.1%	132
22	11		0.0%	22
34	11		0.0%	34
34	11		9.7%	39
34	11		13.3%	40
80	11		1.3%	82
15	11		0.0%	15
59	11		9.3%	66

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

16	11		6.7%	18
80	11		3.9%	84
28	11		0.0%	28
36	11		9.1%	39
22	11		10.0%	25
16	11		0.0%	16
25	11		8.7%	27
9	11		28.6%	13
22	11		0.0%	22
22	11		4.8%	23
8	11		0.0%	8
5	11		0.0%	5
3	11		0.0%	3
19	11		0.0%	19
2	11		0.0%	2
330	10		37.5%	499
4,585	10		15.4%	5,607
113	10		15.3%	136
60	10		11.1%	68
432	10		7.7%	476
1,434	10		3.5%	1,502
215	10		4.9%	228
101	10		3.1%	105
1,749	10		9.1%	1,975
11	10		0.0%	11
108	10		4.9%	114
628	10		10.8%	721

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

87	10		20.8%	111
43	10		22.9%	58
2,182	10		6.0%	2,391
37	10		19.4%	48
52	10		2.0%	54
6	10		0.0%	6
50	10		11.1%	58
308	10		7.3%	339
150	10		9.5%	165
105	10		4.0%	112
32	10		18.5%	41
456	10		14.9%	548
98	10		8.9%	111
36	10		5.9%	39
51	10		10.9%	60
218	10		4.8%	234
50	10		4.2%	53
86	10		17.8%	107
18	10		5.9%	19
62	10		6.9%	68
50	10		16.3%	62
29	10		3.6%	30
95	10		6.7%	102
65	10		44.4%	111
180	10		1.1%	183
36	10		5.9%	39
13	10		0.0%	13




























(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

17	10		0.0%	17
25	10		0.0%	25
172	10		3.0%	180
71	10		9.2%	80
14	10		7.7%	16
14	10		7.7%	16
29	10		3.6%	30
13	10		0.0%	13
23	10		4.5%	24
92	10		4.5%	97
29	10		0.0%	29
29	10		7.4%	31
13	10		8.3%	14
11	10		57.1%	18
25	10		19.0%	29
11	10		0.0%	11
28	10		7.7%	31
21	10		40.0%	32
40	10		5.3%	43
20	10		42.9%	34
5	10		0.0%	5
4	10		0.0%	4
26	10		0.0%	26
16	10		6.7%	18
7	10		0.0%	7
44	10		7.3%	48
12	10		33.3%	16

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

12	10		0.0%	12
10	10		150.0%	35
8	10		0.0%	8
15	10		7.1%	17
7	10		0.0%	7
15	10		87.5%	41
7	10		75.0%	13
275	9		16.5%	335
158	9		13.7%	186
130	9		5.7%	142
413	9		7.3%	461
377	9		7.1%	415
59	9		7.3%	65
37	9		2.8%	38
739	9		4.5%	788
29	9		16.0%	35
208	9		7.8%	229
181	9		4.0%	193
2,743	9		14.6%	3,293
513	9		13.5%	613
36	9		0.0%	36
240	9		2.1%	247
105	9		1.0%	106
1,281	9		14.0%	1,543
516	9		5.1%	552
61	9		1.7%	63
95	9		5.6%	102

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

167	9		4.4%	179
123	9		7.0%	136
360	9		7.1%	396
95	9		5.6%	101
328	9		16.7%	410
493	9		31.8%	720
39	9		34.5%	57
34	9		17.2%	41
157	9		1.9%	161
300	9		5.3%	321
187	9		7.5%	206
221	9		11.6%	254
287	9		15.7%	331
37	9		5.7%	41
33	9		32.0%	50
105	9		12.9%	122
175	9		9.4%	196
35	9		2.9%	36
11	9		0.0%	11
28	9		0.0%	28
48	9		29.7%	66
799	9		6.8%	876
171	9		6.9%	188
34	9		3.0%	35
36	9		0.0%	36
48	9		9.1%	55
30	9		15.4%	37

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

44	9		12.8%	53
16	9		6.7%	17
37	9		5.7%	39
17	9		0.0%	17
18	9		20.0%	23
48	9		14.3%	57
19	9		18.8%	25
26	9		8.3%	29
35	9		6.1%	38
21	9		16.7%	26
12	9		0.0%	12
15	9		7.1%	17
24	9		14.3%	27
28	9		0.0%	28
16	9		0.0%	16
17	9		6.3%	19
21	9		0.0%	21
24	9		4.3%	25
76	9		5.6%	80
26	9		0.0%	26
166	9		12.2%	202
37	9		0.0%	37
8	9		0.0%	8
5	9		0.0%	5
17	9		0.0%	17
32	9		10.3%	37
9	9		12.5%	10

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

25	9		25.0%	36
29	9		16.0%	34
27	9		58.8%	54
15	9		7.1%	17
20	9		25.0%	27
15	9		7.1%	17
20	9		0.0%	20
12	9		0.0%	12
5	9		25.0%	7
9	9		12.5%	11
9	9		0.0%	9
18	9		38.5%	27
12	9		9.1%	14
20	9		17.6%	25
4	9		0.0%	4
23	9		91.7%	52
23	9		91.7%	64
13	9		30.0%	20
4	9		0.0%	4
7	9		0.0%	7
11	9		0.0%	11
14	9		133.3%	41
12	9		50.0%	20
5	9		0.0%	5
2	9		0.0%	2
6	9		20.0%	7
1	9		0.0%	1

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

5	9		25.0%	6
5	9		0.0%	5
5	9		400.0%	30
14	8		0.0%	14
83	8		2.5%	86
874	8		6.5%	962
276	8		16.0%	346
439	8		15.2%	542
257	8		4.0%	272
27	8		0.0%	27
234	8		3.5%	244
394	8		4.0%	419
1,585	8		19.5%	2,007
177	8		36.2%	263
81	8		11.0%	93
48	8		4.3%	52
142	8		16.4%	174
64	8		28.0%	90
35	8		0.0%	35
436	8		1.9%	447
39	8		5.4%	42
50	8		8.7%	56
80	8		3.9%	85
766	8		5.1%	819
156	8		41.8%	226
33	8		0.0%	33
399	8		7.3%	438

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

160	8		3.9%	168
945	8		6.1%	1,029
61	8		24.5%	84
75	8		5.6%	81
98	8		22.5%	122
65	8		6.6%	72
186	8		3.3%	195
58	8		3.6%	62
64	8		20.8%	84
221	8		5.2%	238
55	8		12.2%	65
49	8		8.9%	56
66	8		11.9%	75
784	8		10.4%	906
211	8		1.4%	216
151	8		11.9%	176
16	8		14.3%	18
570	8		5.0%	606
164	8		9.3%	186
83	8		5.1%	90
167	8		1.2%	170
498	8		7.3%	548
76	8		8.6%	86
234	8		6.8%	259
35	8		0.0%	35
71	8		2.9%	74
71	8		1.4%	72

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

85	8		4.9%	91
281	8		32.5%	415
38	8		5.6%	41
46	8		2.2%	47
33	8		6.5%	36
42	8		5.0%	45
69	8		9.5%	75
28	8		0.0%	28
171	8		4.3%	182
25	8		4.2%	26
32	8		3.2%	33
65	8		0.0%	65
18	8		0.0%	18
26	8		13.0%	31
24	8		0.0%	24
22	8		10.0%	26
43	8		22.9%	58
29	8		3.6%	30
85	8		13.3%	105
29	8		20.8%	39
19	8		5.6%	20
16	8		6.7%	18
35	8		9.4%	39
33	8		22.2%	45
18	8		5.9%	19
12	8		9.1%	14
52	8		2.0%	53

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

13	8		0.0%	13
32	8		113.3%	97
51	8		0.0%	51
23	8		4.5%	24
35	8		2.9%	36
26	8		4.0%	28
23	8		15.0%	28
32	8		18.5%	41
27	8		28.6%	39
30	8		15.4%	36
31	8		10.7%	36
7	8		16.7%	9
16	8		0.0%	16
13	8		8.3%	15
37	8		2.8%	38
13	8		18.2%	16
14	8		16.7%	18
19	8		35.7%	28
22	8		15.8%	27
12	8		20.0%	16
6	8		100.0%	15
16	8		0.0%	16
14	8		27.3%	20
11	8		0.0%	11
21	8		0.0%	21
5	8		0.0%	5
7	8		16.7%	9




























(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

11	8		10.0%	13
16	8		60.0%	30
16	8		6.7%	18
9	8		12.5%	11
12	8		0.0%	12
11	8		37.5%	17
9	8		0.0%	9
12	8		0.0%	12
5	8		0.0%	5
9	8		28.6%	14
8	8		33.3%	12
22	8		10.0%	25
2	8		0.0%	2
4	8		33.3%	7
4	8		0.0%	4
9	8		12.5%	11
3	8		0.0%	3
9	8		50.0%	16
5	8		25.0%	7
6	8		0.0%	6
6	8		20.0%	8
3	8		0.0%	3
14	8		0.0%	14
5	8		25.0%	7
5	8		66.7%	10
3	8		50.0%	6
4	8		0.0%	4

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

2	8		0.0%	2
1	8		0.0%	1
1	8		0.0%	1
6	8		50.0%	11
2	8		0.0%	2
2	8		100.0%	4
116	7		0.0%	116
59	7		7.3%	65
127	7		8.5%	144
129	7		4.9%	139
369	7		3.4%	385
85	7		25.0%	118
267	7		21.9%	360
523	7		8.3%	584
226	7		5.1%	241
159	7		10.4%	181
44	7		2.3%	46
1,117	7		3.7%	1,176
44	7		10.0%	52
81	7		9.5%	92
87	7		1.2%	88
62	7		3.3%	66
125	7		5.9%	135
54	7		17.4%	68
99	7		0.0%	99
90	7		11.1%	105
51	7		6.3%	56

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

148	7		1.4%	151
35	7		6.1%	38
328	7		2.2%	338
124	7		25.3%	175
201	7		9.2%	227
25	7		8.7%	28
58	7		5.5%	62
46	7		21.1%	58
43	7		0.0%	43
9	7		0.0%	9
107	7		7.0%	120
19	7		0.0%	19
234	7		3.1%	244
145	7		4.3%	155
46	7		0.0%	46
411	7		9.9%	470
45	7		4.7%	47
50	7		11.1%	58
119	7		7.2%	134
54	7		5.9%	59
87	7		19.2%	114
17	7		6.3%	19
73	7		5.8%	80
125	7		5.9%	134
22	7		29.4%	32
566	7		5.8%	614
41	7		13.9%	48

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

51	7		0.0%	51
19	7		18.8%	22
25	7		8.7%	27
61	7		60.5%	117
39	7		8.3%	44
36	7		5.9%	39
172	7		2.4%	177
17	7		13.3%	20
41	7		41.4%	65
18	7		5.9%	19
40	7		0.0%	40
31	7		0.0%	31
39	7		8.3%	44
168	7		15.1%	206
47	7		2.2%	48
17	7		0.0%	17
56	7		5.7%	60
49	7		28.9%	68
53	7		12.8%	61
34	7		25.9%	43
32	7		3.2%	33
87	7		1.2%	89
37	7		15.6%	47
100	7		2.0%	102
12	7		9.1%	14
31	7		6.9%	33
13	7		62.5%	29

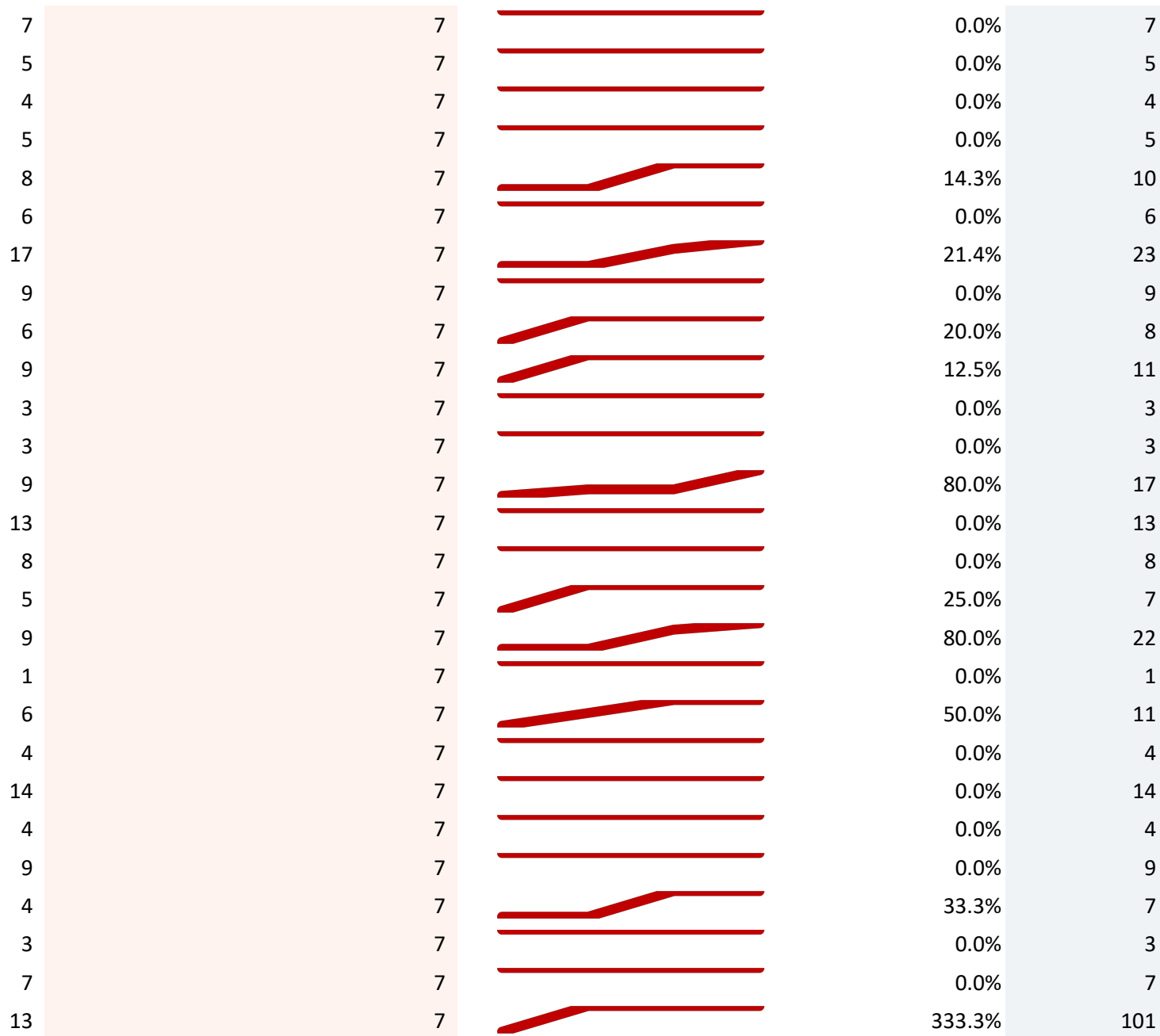
(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

12	7		20.0%	15
34	7		13.3%	40
101	7		3.1%	105
16	7		0.0%	16
14	7		7.7%	16
31	7		6.9%	34
23	7		0.0%	23
59	7		5.4%	63
19	7		5.6%	21
29	7		38.1%	46
24	7		9.1%	27
27	7		3.8%	29
45	7		4.7%	48
28	7		12.0%	33
24	7		4.3%	25
20	7		5.3%	21
32	7		6.7%	35
66	7		11.9%	78
16	7		0.0%	16
24	7		20.0%	29
33	7		3.1%	35
36	7		2.9%	37
23	7		4.5%	24
15	7		0.0%	15
13	7		8.3%	14
31	7		3.3%	32
52	7		15.6%	64

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

34	7		3.0%	36
28	7		0.0%	28
40	7		8.1%	45
16	7		6.7%	18
22	7		22.2%	29
21	7		10.5%	24
27	7		0.0%	27
6	7		0.0%	6
12	7		0.0%	12
20	7		33.3%	28
32	7		6.7%	34
8	7		0.0%	8
13	7		18.2%	17
15	7		15.4%	19
17	7		6.3%	18
18	7		0.0%	18
11	7		22.2%	14
7	7		0.0%	7
16	7		60.0%	32
18	7		5.9%	20
10	7		11.1%	11
10	7		25.0%	14
14	7		7.7%	16
17	7		6.3%	18
13	7		0.0%	13
9	7		0.0%	9
11	7		37.5%	19

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)



(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

2	7		100.0%	5
4	7		100.0%	9
1	7		0.0%	1
1	7		100.0%	1
313	6		6.8%	341
84	6		7.7%	93
633	6		12.2%	750
67	6		26.4%	97
38	6		2.7%	39
234	6		4.0%	249
106	6		23.3%	142
55	6		3.8%	58
67	6		4.7%	72
40	6		0.0%	40
102	6		6.3%	108
187	6		4.5%	198
266	6		1.1%	270
74	6		8.8%	83
62	6		1.6%	64
46	6		7.0%	50
99	6		4.2%	106
159	6		6.0%	170
56	6		0.0%	56
316	6		10.9%	369
146	6		11.5%	171
26	6		4.0%	28
20	6		11.1%	23

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

150	6		0.7%	151
66	6		4.8%	71
49	6		0.0%	49
4	6		0.0%	4
21	6		0.0%	21
32	6		10.3%	37
101	6		4.1%	106
16	6		14.3%	19
135	6		15.4%	162
16	6		77.8%	36
57	6		11.8%	65
43	6		0.0%	43
20	6		25.0%	25
38	6		11.8%	45
97	6		7.8%	105
83	6		3.8%	87
31	6		3.3%	32
35	6		6.1%	37
146	6		2.8%	152
102	6		2.0%	105
53	6		6.0%	58
39	6		14.7%	47
37	6		5.7%	40
108	6		9.1%	122
68	6		1.5%	69
30	6		0.0%	30
21	6		31.3%	31

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

17	6		0.0%	17
36	6		2.9%	37
27	6		0.0%	27
21	6		5.0%	22
119	6		3.5%	125
66	6		1.5%	68
23	6		0.0%	23
36	6		12.5%	44
14	6		27.3%	20
38	6		8.6%	43
34	6		25.9%	47
28	6		0.0%	28
77	6		1.3%	78
35	6		12.9%	42
32	6		6.7%	36
15	6		7.1%	17
24	6		9.1%	27
11	6		0.0%	11
17	6		6.3%	18
39	6		2.6%	40
7	6		0.0%	7
63	6		1.6%	64
18	6		5.9%	19
15	6		0.0%	15
25	6		8.7%	28
22	6		0.0%	22
20	6		5.3%	21

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

10	6		11.1%	12
43	6		4.9%	45
34	6		25.9%	49
14	6		0.0%	14
13	6		0.0%	13
24	6		71.4%	52
40	6		2.6%	41
27	6		22.7%	35
6	6		0.0%	6
18	6		0.0%	18
11	6		10.0%	13
40	6		17.6%	50
16	6		6.7%	17
18	6		12.5%	22
13	6		0.0%	13
7	6		0.0%	7
13	6		0.0%	13
11	6		10.0%	13
26	6		100.0%	66
20	6		0.0%	20
13	6		0.0%	13
21	6		10.5%	25
10	6		0.0%	10
8	6		0.0%	8
13	6		8.3%	15
19	6		5.6%	21
10	6		11.1%	12

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)



(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

33	6		3.1%	34
13	6		8.3%	15
12	6		0.0%	12
9	6		0.0%	9
15	6		15.4%	17
5	6		0.0%	5
5	6		25.0%	7
4	6		0.0%	4
3	6		0.0%	3
4	6		0.0%	4
2	6		0.0%	2
7	6		0.0%	7
2	6		0.0%	2
4	6		0.0%	4
9	6		80.0%	19
3	6		0.0%	3
2	6		0.0%	2
5	6		0.0%	5
6	6		0.0%	6
4	6		33.3%	5
2	6		0.0%	2
6	6		50.0%	10
7	6		0.0%	7
1	6		0.0%	1
3	6		0.0%	3
1	6		100.0%	1
15	5		25.0%	21

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

65	5		0.0%	65
54	5		12.5%	62
44	5		0.0%	44
38	5		0.0%	38
308	5		8.1%	340
235	5		10.3%	266
194	5		2.6%	202
82	5		2.5%	86
41	5		5.1%	44
67	5		17.5%	84
243	5		6.6%	263
252	5		8.6%	286
41	5		7.9%	46
172	5		10.3%	198
53	5		17.8%	69
81	5		3.8%	84
94	5		4.4%	99
51	5		4.1%	53
184	5		5.1%	198
82	5		7.9%	92
44	5		4.8%	47
53	5		8.2%	59
225	5		5.1%	241
63	5		12.5%	76
56	5		16.7%	69
41	5		5.1%	44
34	5		9.7%	38

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

85	5		6.3%	94
42	5		13.5%	51
9	5		28.6%	11
52	5		10.6%	60
14	5		0.0%	14
278	5		11.6%	331
11	5		10.0%	13
24	5		9.1%	27
70	5		4.5%	75
36	5		5.9%	39
142	5		13.6%	171
31	5		3.3%	32
45	5		2.3%	46
137	5		4.6%	145
26	5		18.2%	34
101	5		14.8%	124
98	5		25.6%	132
13	5		0.0%	13
28	5		12.0%	32
29	5		0.0%	29
47	5		0.0%	47
26	5		8.3%	29
40	5		0.0%	40
20	5		0.0%	20
44	5		4.8%	47
202	5		24.7%	274
82	5		18.8%	110

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

58	5		7.4%	64
9	5		0.0%	9
49	5		11.4%	57
21	5		0.0%	21
38	5		2.7%	40
24	5		0.0%	24
46	5		2.2%	47
21	5		5.0%	22
12	5		0.0%	12
11	5		0.0%	11
18	5		12.5%	20
22	5		0.0%	22
4	5		0.0%	4
26	5		18.2%	32
18	5		12.5%	22
13	5		8.3%	15
23	5		9.5%	26
29	5		7.4%	32
31	5		6.9%	35
14	5		16.7%	16
30	5		0.0%	30
44	5		33.3%	66
9	5		0.0%	9
10	5		0.0%	10
8	5		0.0%	8
14	5		7.7%	16
7	5		16.7%	9

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

19	5		0.0%	19
20	5		0.0%	20
17	5		6.3%	18
22	5		0.0%	22
19	5		26.7%	25
10	5		0.0%	10
17	5		0.0%	17
10	5		42.9%	15
10	5		0.0%	10
11	5		0.0%	11
13	5		0.0%	13
15	5		15.4%	19
14	5		7.7%	16
12	5		20.0%	16
33	5		13.8%	39
10	5		0.0%	10
12	5		0.0%	12
8	5		0.0%	8
11	5		83.3%	27
5	5		0.0%	5
17	5		88.9%	33
19	5		0.0%	19
15	5		36.4%	22
11	5		0.0%	11
13	5		0.0%	13
8	5		33.3%	12
10	5		0.0%	10

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

21	5		10.5%	25
8	5		0.0%	8
13	5		30.0%	20
9	5		80.0%	24
10	5		11.1%	11
22	5		10.0%	25
19	5		5.6%	21
7	5		0.0%	7
6	5		0.0%	6
4	5		0.0%	4
16	5		33.3%	24
8	5		0.0%	8
9	5		12.5%	11
15	5		15.4%	18
6	5		0.0%	6
7	5		0.0%	7
7	5		16.7%	8
7	5		40.0%	12
45	5		7.1%	50
8	5		33.3%	10
5	5		0.0%	5
5	5		0.0%	5
15	5		15.4%	19
5	5		0.0%	5
13	5		30.0%	17
7	5		16.7%	8
12	5		9.1%	14

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

20	5		5.3%	21
3	5		0.0%	3
20	5		42.9%	37
14	5		100.0%	26
7	5		0.0%	7
8	5		0.0%	8
3	5		0.0%	3
18	5		12.5%	21
10	5		11.1%	12
9	5		28.6%	13
10	5		0.0%	10
7	5		0.0%	7
6	5		0.0%	6
5	5		0.0%	5
4	5		0.0%	4
7	5		16.7%	9
2	5		0.0%	2
18	5		80.0%	38
4	5		0.0%	4
1	5		0.0%	1
11	5		0.0%	11
3	5		0.0%	3
14	5		16.7%	17
5	5		25.0%	7
3	5		0.0%	3
2	5		0.0%	2
6	5		0.0%	6




























(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

4	5		33.3%	7
3	5		0.0%	3
3	5		0.0%	3
4	5		0.0%	4
7	5		0.0%	7
4	5		0.0%	4
2	5		0.0%	2
3	5		0.0%	3
10	5		25.0%	14
2	5		0.0%	2
3	5		0.0%	3
3	5		0.0%	3
6	5		100.0%	18
7	5		0.0%	7
3	5		50.0%	5
6	5		0.0%	6
1	5		0.0%	1
5	5		66.7%	12
8	5		0.0%	8
2	5		0.0%	2
1	5		0.0%	1
2	5		0.0%	2
2	5		0.0%	2
1	5		0.0%	1
3	5		50.0%	4
3	5		0.0%	3
1	5		0.0%	1

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

3	5		0.0%	3
1	5		0.0%	1
5	5		400.0%	42
1	5		0.0%	1
3	5		200.0%	19
74	4		1.4%	75
400	4		0.3%	401
76	4		11.8%	87
106	4		5.0%	115
13	4		18.2%	17
340	4		4.9%	365
54	4		0.0%	54
76	4		5.6%	82
78	4		2.6%	82
16	4		0.0%	16
91	4		3.4%	96
75	4		5.6%	81
22	4		0.0%	22
90	4		4.7%	94
23	4		9.5%	26
47	4		14.6%	55
42	4		5.0%	45
27	4		0.0%	27
68	4		25.9%	91
13	4		0.0%	13
69	4		30.2%	101
111	4		5.7%	122

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

25	4		19.0%	34
56	4		5.7%	61
159	4		8.2%	181
34	4		13.3%	41
37	4		0.0%	37
35	4		2.9%	36
57	4		5.6%	62
12	4		20.0%	16
13	4		0.0%	13
12	4		0.0%	12
27	4		0.0%	27
58	4		7.4%	65
27	4		0.0%	27
39	4		0.0%	39
12	4		9.1%	14
41	4		0.0%	41
21	4		0.0%	21
20	4		5.3%	21
62	4		0.0%	62
36	4		12.5%	41
23	4		4.5%	24
19	4		18.8%	25
25	4		25.0%	31
19	4		5.6%	21
28	4		0.0%	28
21	4		10.5%	25
18	4		5.9%	20

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

9	4		0.0%	9
13	4		0.0%	13
29	4		11.5%	35
21	4		0.0%	21
13	4		0.0%	13
17	4		0.0%	17
51	4		2.0%	52
24	4		50.0%	42
11	4		0.0%	11
25	4		13.6%	29
89	4		12.7%	106
38	4		15.2%	47
16	4		0.0%	16
12	4		9.1%	13
10	4		0.0%	10
8	4		14.3%	9
13	4		0.0%	13
13	4		0.0%	13
18	4		5.9%	19
8	4		0.0%	8
11	4		0.0%	11
58	4		31.8%	84
11	4		0.0%	11
25	4		4.2%	27
48	4		20.0%	59
22	4		15.8%	26
11	4		10.0%	12

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

16	4		6.7%	18
19	4		18.8%	22
16	4		0.0%	16
24	4		26.3%	33
13	4		0.0%	13
29	4		0.0%	29
24	4		0.0%	24
14	4		16.7%	17
7	4		0.0%	7
9	4		12.5%	11
9	4		0.0%	9
13	4		8.3%	15
16	4		23.1%	22
5	4		0.0%	5
6	4		0.0%	6
9	4		0.0%	9
15	4		36.4%	24
13	4		8.3%	15
15	4		7.1%	16
13	4		0.0%	13
50	4		19.0%	65
26	4		13.0%	30
12	4		20.0%	15
9	4		12.5%	10
15	4		0.0%	15
14	4		7.7%	16
20	4		0.0%	20

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

12	4		0.0%	12
19	4		0.0%	19
13	4		0.0%	13
3	4		0.0%	3
9	4		28.6%	13
24	4		9.1%	26
11	4		10.0%	13
5	4		0.0%	5
5	4		0.0%	5
6	4		0.0%	6
19	4		0.0%	19
13	4		62.5%	27
3	4		0.0%	3
5	4		0.0%	5
14	4		16.7%	17
4	4		0.0%	4
5	4		0.0%	5
10	4		11.1%	12
4	4		0.0%	4
16	4		0.0%	16
3	4		0.0%	3
15	4		7.1%	17
6	4		0.0%	6
5	4		0.0%	5
6	4		20.0%	8
5	4		0.0%	5
10	4		11.1%	12

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

8	4		33.3%	13
13	4		62.5%	26
5	4		0.0%	5
7	4		0.0%	7
5	4		0.0%	5
4	4		0.0%	4
8	4		0.0%	8
7	4		0.0%	7
6	4		50.0%	11
5	4		0.0%	5
5	4		0.0%	5
7	4		0.0%	7
12	4		50.0%	22
11	4		10.0%	13
16	4		0.0%	16
7	4		0.0%	7
8	4		0.0%	8
16	4		60.0%	31
6	4		50.0%	11
15	4		25.0%	19
6	4		20.0%	8
2	4		0.0%	2
3	4		50.0%	6
24	4		41.2%	43
18	4		38.5%	28
8	4		14.3%	10
6	4		0.0%	6

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)








(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

2	4		0.0%	2
7	4		133.3%	22
1	4		0.0%	1
5	4		0.0%	5
3	4		0.0%	3
1	4		0.0%	1
1	4		0.0%	1
1	4		0.0%	1
1	4		0.0%	1
6	4		0.0%	6
2	4		0.0%	2
2	4		0.0%	2
3	4		0.0%	3
9	4		50.0%	15
1	4		0.0%	1
2	4		0.0%	2
6	4		0.0%	6
1	4		0.0%	1
3	4		0.0%	3
2	4		100.0%	6
1	4		0.0%	1
1	4		0.0%	1
1	4		0.0%	1
2	4		0.0%	2
1	4		0.0%	1
3	4		0.0%	3
2	4		0.0%	2

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

1	4		0.0%	1
4	4		0.0%	4
1	4		0.0%	1
2	4		0.0%	2
4	4		100.0%	10
1	4		0.0%	1
2	4		100.0%	6
3	4		200.0%	14
1	4		100.0%	1
2	4		200.0%	4
21	3		0.0%	21
79	3		5.3%	86
47	3		2.2%	48
50	3		11.1%	59
107	3		8.1%	120
91	3		4.6%	97
73	3		15.9%	92
15	3		0.0%	15
44	3		2.3%	46
21	3		5.0%	22
13	3		8.3%	15
44	3		2.3%	45
90	3		5.9%	98
51	3		4.1%	53
51	3		10.9%	61
11	3		0.0%	11
17	3		6.3%	18

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

32	3		6.7%	35
39	3		0.0%	39
76	3		8.6%	86
20	3		11.1%	24
48	3		4.3%	52
36	3		28.6%	53
22	3		10.0%	25
14	3		0.0%	14
19	3		5.6%	20
39	3		0.0%	39
14	3		0.0%	14
29	3		3.6%	30
26	3		8.3%	29
33	3		17.9%	41
6	3		0.0%	6
33	3		22.2%	43
11	3		0.0%	11
36	3		9.1%	40
11	3		10.0%	12
15	3		0.0%	15
20	3		42.9%	34
33	3		3.1%	35
15	3		0.0%	15
12	3		0.0%	12
9	3		0.0%	9
28	3		12.0%	34
11	3		37.5%	16

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

17	3		0.0%	17
8	3		0.0%	8
26	3		0.0%	26
6	3		20.0%	8
31	3		3.3%	32
12	3		0.0%	12
17	3		0.0%	17
19	3		11.8%	22
11	3		0.0%	11
7	3		0.0%	7
18	3		12.5%	22
7	3		0.0%	7
41	3		32.3%	60
8	3		0.0%	8
14	3		0.0%	14
16	3		0.0%	16
15	3		15.4%	18
2	3		0.0%	2
9	3		0.0%	9
28	3		7.7%	31
14	3		0.0%	14
6	3		20.0%	8
21	3		31.3%	27
9	3		0.0%	9
15	3		0.0%	15
10	3		0.0%	10
17	3		0.0%	17

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

18	3		5.9%	19
35	3		16.7%	45
4	3		0.0%	4
10	3		0.0%	10
6	3		0.0%	6
10	3		0.0%	10
16	3		23.1%	23
17	3		88.9%	44
7	3		0.0%	7
8	3		0.0%	8
8	3		0.0%	8
16	3		14.3%	20
8	3		0.0%	8
13	3		0.0%	13
12	3		9.1%	13
6	3		0.0%	6
12	3		9.1%	14
7	3		16.7%	8
6	3		0.0%	6
8	3		0.0%	8
6	3		0.0%	6
8	3		0.0%	8
10	3		25.0%	13
10	3		11.1%	12
5	3		0.0%	5
11	3		0.0%	11
3	3		0.0%	3

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)



(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

7	3		16.7%	9
2	3		0.0%	2
14	3		0.0%	14
5	3		0.0%	5
14	3		0.0%	14
6	3		0.0%	6
3	3		0.0%	3
5	3		0.0%	5
7	3		0.0%	7
26	3		23.8%	36
6	3		20.0%	7
7	3		40.0%	11
7	3		40.0%	9
4	3		0.0%	4
16	3		6.7%	18
3	3		0.0%	3
5	3		66.7%	10
10	3		25.0%	15
4	3		0.0%	4
4	3		0.0%	4
6	3		0.0%	6
7	3		0.0%	7
5	3		0.0%	5
5	3		25.0%	6
6	3		20.0%	8
7	3		40.0%	12
3	3		0.0%	3

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)



(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)



(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

1	3		0.0%	1
1	3		0.0%	1
10	3		400.0%	117
1	3		0.0%	1
1	3		0.0%	1
3	3		50.0%	5
1	3		0.0%	1
3	3		0.0%	3
3	3		200.0%	16
1	3		0.0%	1
1	3		0.0%	1
2	3		0.0%	2
1	3		0.0%	1
4	3		33.3%	7
2	3		0.0%	2
1	3		0.0%	1
5	3		25.0%	7
2	3		0.0%	2
1	3		0.0%	1
1	3		0.0%	1
3	3		0.0%	3
1	3		0.0%	1
2	3		0.0%	2
49	2		0.0%	49
19	2		5.6%	20
2	2		0.0%	2
19	2		0.0%	19

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

29	2		3.6%	31
25	2		8.7%	28
28	2		0.0%	28
31	2		0.0%	31
47	2		6.8%	52
18	2		5.9%	20
24	2		4.3%	25
21	2		0.0%	21
24	2		4.3%	25
18	2		12.5%	20
19	2		5.6%	20
12	2		9.1%	14
19	2		0.0%	19
17	2		0.0%	17
14	2		7.7%	16
6	2		0.0%	6
15	2		0.0%	15
13	2		8.3%	15
10	2		0.0%	10
13	2		8.3%	15
6	2		0.0%	6
12	2		0.0%	12
10	2		0.0%	10
12	2		20.0%	15
17	2		41.7%	29
5	2		0.0%	5
10	2		0.0%	10

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)



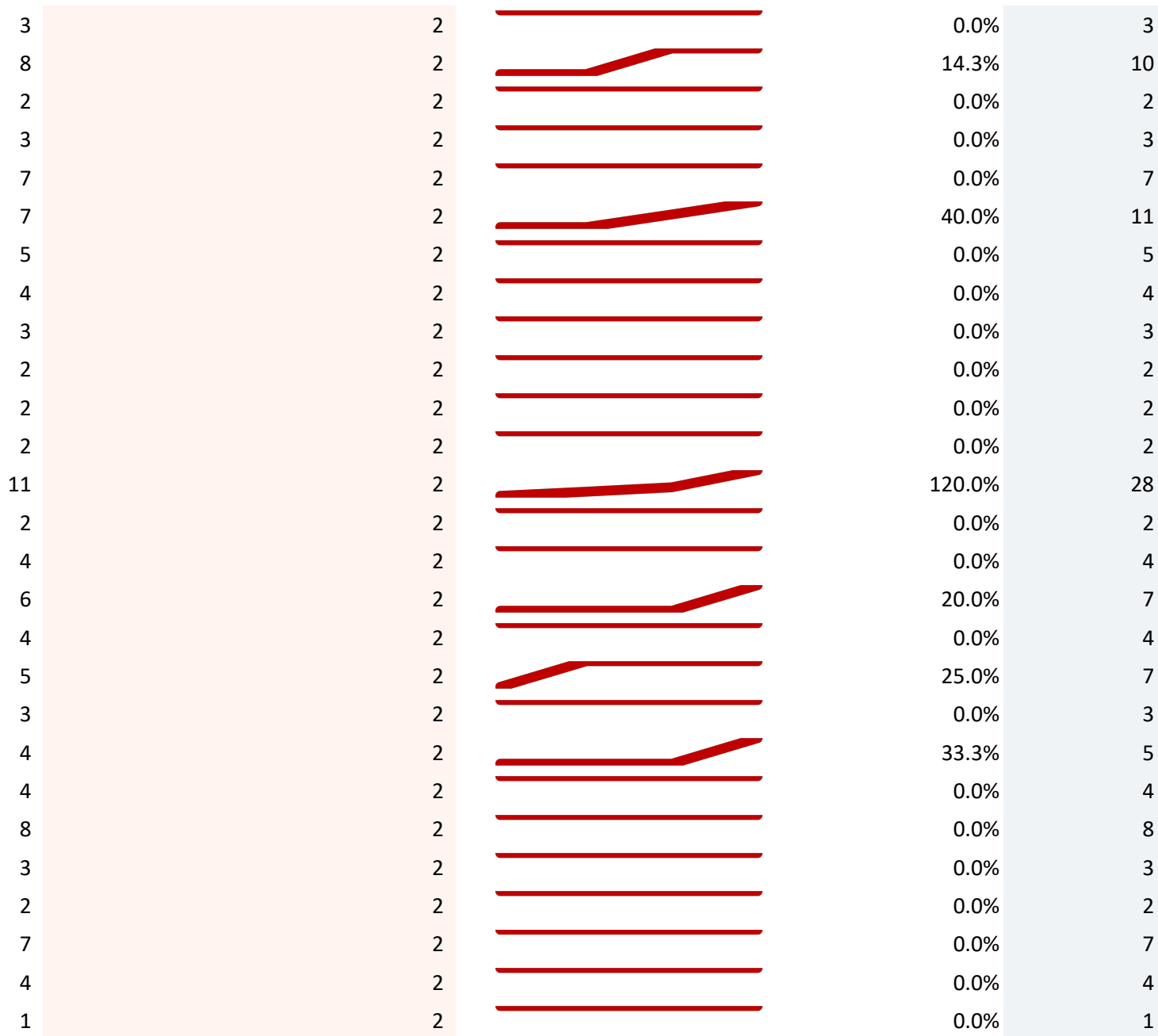
(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

5	2		0.0%	5
13	2		18.2%	17
5	2		66.7%	11
5	2		25.0%	7
2	2		0.0%	2
3	2		0.0%	3
9	2		12.5%	11
4	2		0.0%	4
4	2		0.0%	4
6	2		20.0%	8
7	2		16.7%	9
6	2		0.0%	6
4	2		0.0%	4
5	2		0.0%	5
10	2		25.0%	14
10	2		0.0%	10
6	2		20.0%	8
6	2		0.0%	6
10	2		25.0%	14
4	2		33.3%	5
6	2		0.0%	6
4	2		0.0%	4
6	2		50.0%	12
1	2		0.0%	1
6	2		0.0%	6
4	2		33.3%	6
4	2		0.0%	4

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

2	2		0.0%	2
4	2		33.3%	7
3	2		0.0%	3
3	2		0.0%	3
5	2		0.0%	5
7	2		0.0%	7
6	2		20.0%	8
7	2		40.0%	12
2	2		0.0%	2
6	2		20.0%	8
6	2		0.0%	6
5	2		0.0%	5
6	2		20.0%	8
4	2		0.0%	4
9	2		0.0%	9
6	2		20.0%	7
4	2		0.0%	4
8	2		14.3%	10
3	2		0.0%	3
5	2		0.0%	5
4	2		0.0%	4
9	2		28.6%	13
4	2		0.0%	4
2	2		0.0%	2
3	2		0.0%	3
3	2		0.0%	3
3	2		0.0%	3

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)



(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

3	2		0.0%	3
4	2		0.0%	4
4	2		0.0%	4
3	2		0.0%	3
2	2		0.0%	2
3	2		0.0%	3
3	2		0.0%	3
2	2		0.0%	2
1	2		0.0%	1
5	2		150.0%	16
2	2		0.0%	2
4	2		33.3%	7
4	2		33.3%	6
5	2		25.0%	6
6	2		100.0%	17
5	2		66.7%	11
2	2		100.0%	5
3	2		0.0%	3
1	2		0.0%	1
3	2		50.0%	5
1	2		0.0%	1
2	2		0.0%	2
1	2		0.0%	1
5	2		66.7%	10
3	2		0.0%	3
8	2		14.3%	10
3	2		0.0%	3

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

1	2	0.0%	1
3	2	0.0%	3
2	2	0.0%	2
2	2	0.0%	2
2	2	0.0%	2
2	2	0.0%	2
2	2	0.0%	2
3	2	50.0%	5
1	2	0.0%	1
2	2	0.0%	2
2	2	0.0%	2
2	2	0.0%	2
2	2	0.0%	2
2	2	0.0%	2
1	2	0.0%	1
3	2	50.0%	5
1	2	0.0%	1
1	2	0.0%	1
1	2	0.0%	1
3	2	0.0%	3
1	2	0.0%	1
5	2	0.0%	5
3	2	0.0%	3
2	2	100.0%	6
2	2	0.0%	2
1	2	0.0%	1
1	2	0.0%	1
2	2	0.0%	2
2	2	0.0%	2

1	2		0.0%	1
1	2		100.0%	1
3	2		50.0%	4
1	2		0.0%	1
2	2		0.0%	2
1	2		0.0%	1
3	2		50.0%	6
1	2		0.0%	1
1	2		0.0%	1
3	2		50.0%	5
1	2		0.0%	1
1	2		0.0%	1
1	2		0.0%	1
2	2		0.0%	2
1	2		0.0%	1
2	2		100.0%	6
4	2		33.3%	5
1	2		0.0%	1
2	2		100.0%	5
2	2		100.0%	6
1	2		0.0%	1
1	2		0.0%	1
1	2		0.0%	1
1	2		0.0%	1
1	2		0.0%	1
1	2		0.0%	1
1	2		0.0%	1
1	2		0.0%	1

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

1	2		0.0%	1
2	2		0.0%	2
1	2		0.0%	1
1	2		0.0%	1
1	2		0.0%	1
1	2		0.0%	1
1	2		0.0%	1
2	2		100.0%	6
1	2		100.0%	1
1	2		100.0%	1
1	2		100.0%	1
1	2		100.0%	1
1	2		100.0%	1
54	1		8.0%	62
11	1		0.0%	11
16	1		0.0%	16
19	1		5.6%	21
12	1		0.0%	12
14	1		16.7%	17
8	1		0.0%	8
13	1		0.0%	13
3	1		0.0%	3
5	1		0.0%	5
6	1		0.0%	6
5	1		0.0%	5
5	1		0.0%	5
4	1		0.0%	4

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

6	1		0.0%	6
3	1		0.0%	3
11	1		37.5%	17
5	1		0.0%	5
4	1		0.0%	4
9	1		0.0%	9
7	1		0.0%	7
5	1		0.0%	5
2	1		0.0%	2
4	1		0.0%	4
3	1		0.0%	3
4	1		0.0%	4
2	1		0.0%	2
4	1		0.0%	4
3	1		0.0%	3
5	1		0.0%	5
2	1		0.0%	2
4	1		0.0%	4
7	1		0.0%	7
2	1		0.0%	2
3	1		0.0%	3
5	1		0.0%	5
7	1		0.0%	7
6	1		0.0%	6
4	1		0.0%	4
1	1		0.0%	1
6	1		50.0%	12

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

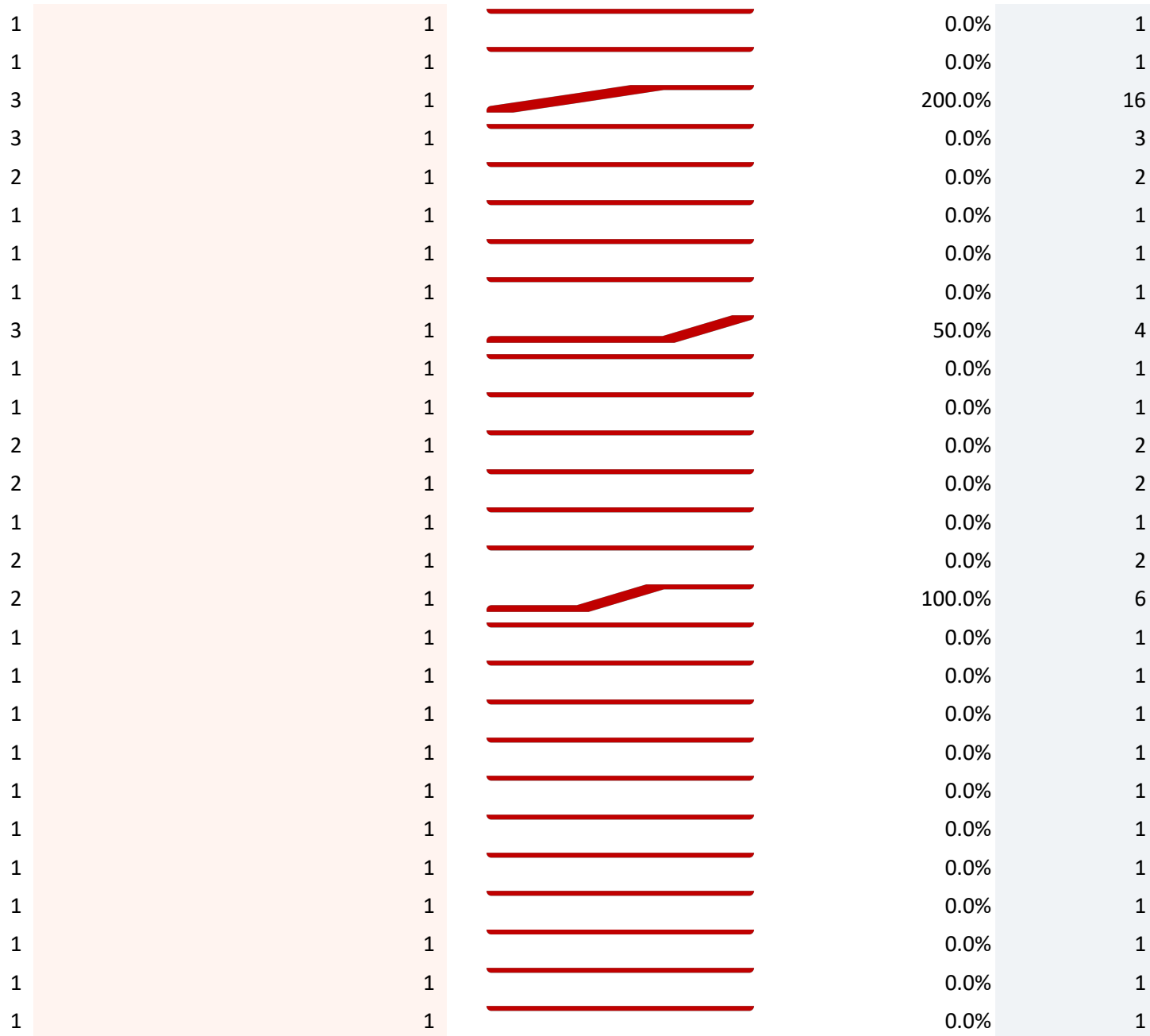
2	1		0.0%	2
2	1		0.0%	2
4	1		33.3%	7
3	1		0.0%	3
5	1		0.0%	5
3	1		0.0%	3
5	1		0.0%	5
6	1		20.0%	8
2	1		0.0%	2
1	1		0.0%	1
2	1		0.0%	2
4	1		0.0%	4
1	1		0.0%	1
4	1		0.0%	4
2	1		0.0%	2
2	1		0.0%	2
4	1		0.0%	4
2	1		0.0%	2
2	1		0.0%	2
4	1		33.3%	6
1	1		0.0%	1
2	1		0.0%	2
6	1		0.0%	6
2	1		0.0%	2
2	1		0.0%	2
2	1		0.0%	2
2	1		0.0%	2
2	1		0.0%	2

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

2	1		0.0%	2
2	1		0.0%	2
3	1		0.0%	3
1	1		0.0%	1
1	1		0.0%	1
6	1		20.0%	8
5	1		0.0%	5
1	1		0.0%	1
1	1		0.0%	1
2	1		0.0%	2
1	1		0.0%	1
4	1		33.3%	5
2	1		0.0%	2
1	1		0.0%	1
1	1		0.0%	1
5	1		25.0%	7
2	1		0.0%	2
2	1		0.0%	2
1	1		0.0%	1
3	1		0.0%	3
3	1		0.0%	3
1	1		0.0%	1
1	1		0.0%	1
3	1		0.0%	3
1	1		0.0%	1
1	1		0.0%	1
1	1		0.0%	1

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

4	1		0.0%	4
1	1		0.0%	1
1	1		0.0%	1
2	1		0.0%	2
5	1		66.7%	10
1	1		0.0%	1
1	1		0.0%	1
1	1		0.0%	1
2	1		0.0%	2
1	1		0.0%	1
3	1		200.0%	19
1	1		0.0%	1
1	1		0.0%	1
1	1		0.0%	1
1	1		0.0%	1
1	1		0.0%	1
1	1		0.0%	1
1	1		0.0%	1
2	1		0.0%	2
3	1		0.0%	3
1	1		0.0%	1
1	1		0.0%	1
2	1		0.0%	2
2	1		0.0%	2
2	1		0.0%	2
2	1		0.0%	2
2	1		0.0%	2
1	1		0.0%	1
3	1		50.0%	4

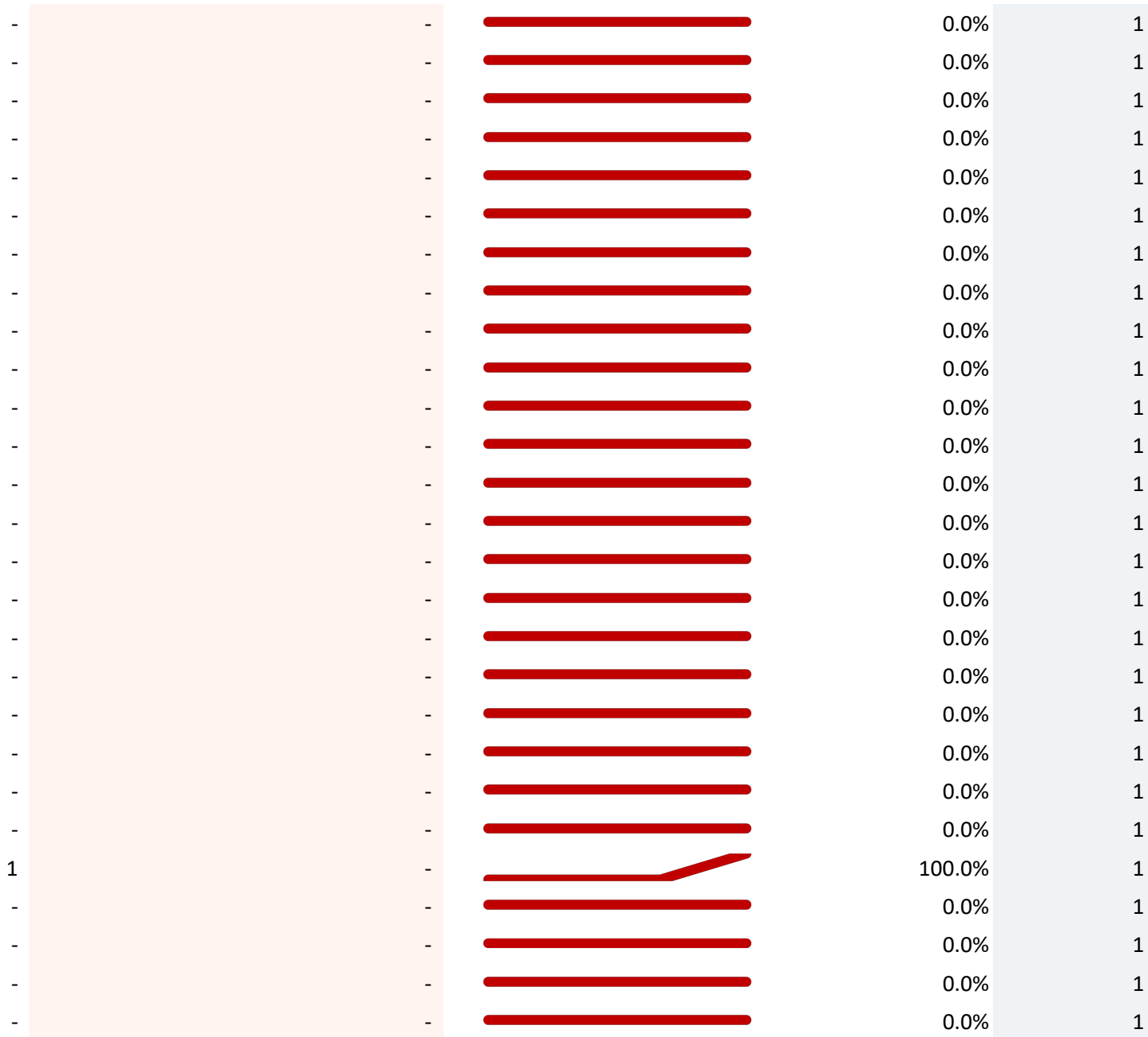































1	1	1	0.0%	1
1	1	1	0.0%	1
3	1	1	0.0%	3
2	1	1	0.0%	2
1	1	1	0.0%	1
1	1	1	0.0%	1
1	1	1	0.0%	1
1	1	1	0.0%	1
1	1	1	0.0%	1
1	1	1	0.0%	1
1	1	1	0.0%	1
2	1	1	100.0%	6
1	1	1	0.0%	1
1	1	1	0.0%	1
1	1	1	0.0%	1
1	1	1	0.0%	1
2	1	1	100.0%	5
1	1	1	0.0%	1
1	1	1	0.0%	1
1	1	1	0.0%	1
2	1	1	0.0%	2
2	1	1	0.0%	2
1	1	1	0.0%	1
2	1	1	0.0%	2
1	1	1	0.0%	1
1	1	1	0.0%	1
1	1	1	0.0%	1
2	1	1	100.0%	5
1	1	1	0.0%	1

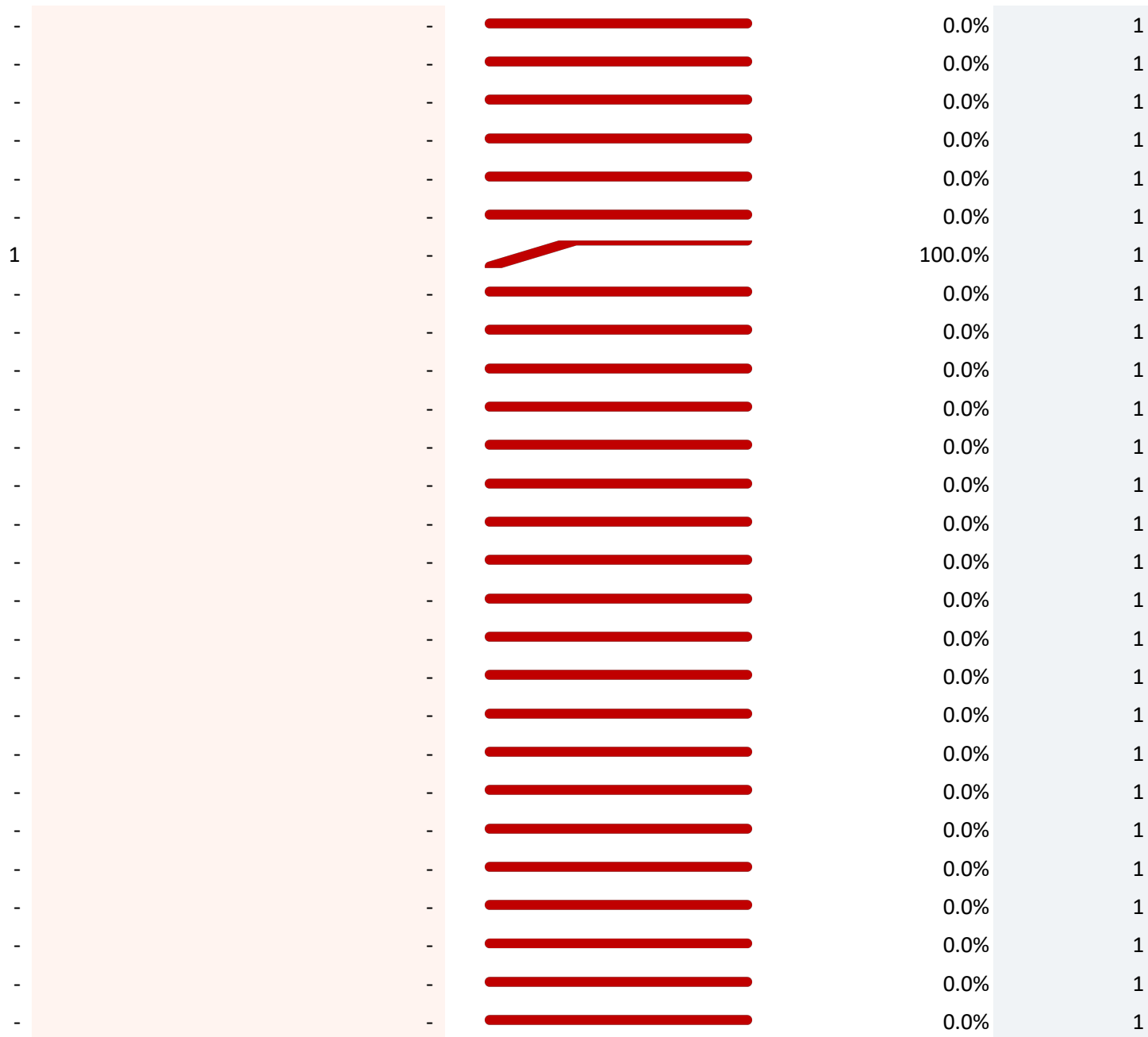
(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

1		1		0.0%	1
1		1		0.0%	1
1		1		0.0%	1
1		1		0.0%	1
1		1		0.0%	1
1		1		0.0%	1
1		1		0.0%	1
1		1		0.0%	1
1		1		0.0%	1
1		1		0.0%	1
2		1		100.0%	4
1		1		100.0%	1
1		1		0.0%	1
2		1		100.0%	6
1		1		0.0%	1
1		1		0.0%	1
1		1		0.0%	1
1		1		0.0%	1
1		1		0.0%	1
1		1		100.0%	1
1		1		100.0%	1
1		1		100.0%	1
1		1		100.0%	1
1		1		100.0%	1
1		1		100.0%	1
1		1		100.0%	1
1		1		100.0%	1
1		1		100.0%	1
1		1		100.0%	1
1		1		100.0%	1
1		1		100.0%	1
1		1		100.0%	1













1	1	100.0%	1
1	1	100.0%	1
-	-	0.0%	1
-	-	0.0%	1
-	-	0.0%	1
2	-	0.0%	2
-	-	0.0%	1
-	-	0.0%	1
-	-	0.0%	1
2	-	0.0%	2
1	-	0.0%	1
-	-	0.0%	1
1	-	0.0%	1
-	-	0.0%	1
1	-	0.0%	1
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1	-	0.0%	1
1	-	0.0%	1
1	-	0.0%	1
1	-	0.0%	1
1	-	0.0%	1
1	-	0.0%	1
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1	-	0.0%	1
1	-	0.0%	1
-	-	0.0%	1
-	-	0.0%	1
-	-	0.0%	1



-	-		0.0%	1
-	-		0.0%	1
-	-		0.0%	1
-	-		0.0%	1
-	-		0.0%	1
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-	-		0.0%	1
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-	-		0.0%	1
-	-		0.0%	1
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-	-		0.0%	1
-	-		0.0%	1
-	-		0.0%	1
-	-		0.0%	1
-	-		0.0%	1
-	-		0.0%	1
-	-		0.0%	1
-	-		0.0%	1



(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

-	-		0.0%	1
-	-		0.0%	1
-	-		0.0%	1
-	-		0.0%	1
-	-		0.0%	1
-	-		0.0%	1
-	-		0.0%	1
-	-		0.0%	1
-	-		0.0%	1
-	-		0.0%	1
-	-		0.0%	1
-	-		0.0%	1

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Projected Cases in 7 Days	Projected Cases in 4 Days Per 10k Population	Projected Cases in 7 Days Per 10k Population	Deaths	Remaining Vents Capacity (% -DefHC)	Median Household Income (\$ 2018)
389,604	37,809	353,799	1	0.0%	\$ 49,280
839	621	627	-	0.0%	\$ 44,951
2,226	768	1,108	1	0.0%	\$ 55,522
1,620	591	739	1	0.0%	\$ 55,766
607	409	411	-	0.0%	\$ 40,195
12,830	383	394	511	0.0%	\$ 88,960
2,659	386	407	4	0.0%	\$ 45,419
1,610	385	424	1	0.0%	\$ 48,598
32,216	322	333	1,031	35.9%	\$ 94,521
1,738	299	299	21	0.0%	\$ 58,742
43,244	289	302	-	50.9%	\$ 38,566
39,093	280	288	1,700	53.9%	\$ 115,301
15,760	292	313	516	0.0%	\$ 71,959
13,175	268	277	-	46.4%	\$ 79,719
687	287	315	-	0.0%	\$ 50,671
298	260	267	2	0.0%	\$ 49,585
1,292	313	381	1	0.0%	\$ 56,052
174	247	255	19	0.0%	\$ 28,298
14,863	253	266	653	32.7%	\$ 80,737
37,843	247	256	1,177	54.0%	\$ 100,075
58,743	248	258	-	0.0%	\$ 68,432
9,815	247	257	320	59.8%	\$ 75,048
17,887	250	265	758	82.1%	\$ 73,337
807	288	340	-	100.0%	\$ 56,818
497	220	220	5	0.0%	\$ 76,113

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

193	221	224	18	0.0%	\$	35,290
225	217	220	21	100.0%	\$	34,984
1,977	264	321	29	0.0%	\$	53,792
615	236	286	3	100.0%	\$	53,785
16,673	197	208	1,139	50.0%	\$	62,875
51,895	192	201	-	62.4%	\$	60,862
782	180	181	69	0.0%	\$	50,830
17,569	181	188	1,057	58.5%	\$	100,181
16,179	187	200	524	29.0%	\$	68,743
339	186	201	7	0.0%	\$	56,954
1,611	173	177	119	0.0%	\$	38,806
126	184	198	4	0.0%	\$	33,393
6,751	170	173	434	0.0%	\$	38,855
147	162	163	-	0.0%	\$	49,399
1,490	184	206	16	100.0%	\$	33,976
14,852	167	179	531	68.8%	\$	87,666
1,087	210	272	2	0.0%	\$	59,552
1,301	513	1,196	-	0.0%	\$	55,787
643	286	448	-	0.0%	\$	54,569
6,873	154	158	346	16.7%	\$	50,871
548	158	167	30	0.0%	\$	47,917
341	150	154	30	0.0%	\$	36,788
24,827	147	152	-	0.0%	\$	84,610
474	155	166	16	0.0%	\$	55,387
315	141	146	1	100.0%	\$	53,168
407	134	137	28	40.0%	\$	37,562
487	152	172	-	0.0%	\$	38,034

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

1,302	151	172	22	89.3%	\$	51,985
13,182	134	140	810	0.0%	\$	91,183
1,156	217	316	1	0.0%	\$	56,206
1,071	217	330	4	0.0%	\$	42,879
6,146	145	166	220	0.0%	\$	79,979
12,032	138	152	448	40.0%	\$	76,373
258	121	123	19	0.0%	\$	53,903
8,194	126	136	367	27.3%	\$	68,483
667	280	568	-	0.0%	\$	43,157
6,058	118	123	387	0.0%	\$	112,396
4,309	122	130	252	0.0%	\$	119,731
65	112	112	6	0.0%	\$	37,445
230	149	180	3	0.0%	\$	43,048
2,414	119	125	8	76.4%	\$	60,033
9,134	129	144	132	0.0%	\$	56,141
354	115	119	20	0.0%	\$	66,090
610	113	115	38	0.0%	\$	67,585
3,037	197	296	1	0.0%	\$	60,059
3,120	123	136	58	87.5%	\$	59,821
6,674	119	129	285	66.7%	\$	89,678
3,424	112	117	37	0.0%	\$	79,604
322	124	141	2	100.0%	\$	37,212
1,122	109	113	7	0.0%	\$	100,887
92	103	104	9	0.0%	\$	35,961
504	105	108	20	0.0%	\$	43,983
6,917	107	111	317	0.0%	\$	99,223
566	102	103	7	0.0%	\$	86,896

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

1,802	119	136	13	0.0%	\$	52,320
18,666	103	106	1,035	59.4%	\$	46,440
568	177	278	1	0.0%	\$	51,812
140	99	102	9	0.0%	\$	37,278
168	97	97	4	0.0%	\$	61,268
280	139	181	2	0.0%	\$	60,296
18,550	106	115	845	46.9%	\$	100,374
9,357	103	109	512	58.5%	\$	67,720
254	120	144	5	100.0%	\$	26,449
1,099	98	104	81	0.0%	\$	77,571
393	92	94	-	0.0%	\$	105,374
7,293	97	103	499	0.0%	\$	100,184
324	93	96	21	0.0%	\$	39,917
629	104	116	11	0.0%	\$	42,640
263	95	100	17	0.0%	\$	40,965
238	99	107	6	0.0%	\$	48,120
237	96	104	-	0.0%	\$	43,776
474	99	110	14	0.0%	\$	58,465
72	90	91	8	0.0%	\$	33,261
35	107	121	2	0.0%	\$	30,239
4,855	96	103	373	0.0%	\$	52,682
3,217	123	159	20	0.0%	\$	61,631
15,613	92	99	424	44.8%	\$	46,149
59,343	99	115	1,607	53.0%	\$	63,347
11,516	105	127	229	0.0%	\$	82,445
1,240	301	729	-	0.0%	\$	45,889
187	87	92	10	0.0%	\$	48,708

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

3,257	85	88	74	0.0%	\$	62,139
5,224	91	103	136	38.1%	\$	67,135
69	78	78	7	100.0%	\$	29,900
61	80	82	-	0.0%	\$	33,709
188	79	80	17	0.0%	\$	58,643
8,563	91	103	265	20.0%	\$	71,767
142	108	142	2	0.0%	\$	33,437
1,507	80	84	30	97.4%	\$	63,073
207	77	77	21	0.0%	\$	57,441
175	76	77	3	50.0%	\$	36,096
685	115	151	7	0.0%	\$	51,829
125	99	119	-	0.0%	\$	32,167
28	81	84	-	0.0%	\$	40,945
443	104	133	1	0.0%	\$	47,982
23	74	74	2	0.0%	\$	38,288
2,682	81	88	94	0.0%	\$	68,217
770	91	107	6	100.0%	\$	33,652
5,307	84	94	235	18.5%	\$	71,961
296	89	102	3	100.0%	\$	36,236
319	76	79	18	0.0%	\$	42,205
127	111	152	1	0.0%	\$	31,716
131	73	74	1	0.0%	\$	52,741
476	79	85	14	0.0%	\$	62,657
220	77	80	11	100.0%	\$	44,457
122	80	88	3	0.0%	\$	53,359
5,277	84	94	172	45.2%	\$	66,005
2,490	75	78	88	0.0%	\$	53,469

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

7,028	87	100	224	64.7%	\$	82,533
89	81	89	1	0.0%	\$	33,973
25,583	1,872	30,251	-	0.0%	\$	40,814
962	80	87	21	100.0%	\$	40,650
67	77	81	1	0.0%	\$	28,524
3,370	75	80	117	84.3%	\$	62,519
1,087	73	77	99	0.0%	\$	92,284
1,291	73	76	54	0.0%	\$	63,318
7,607	78	85	698	66.3%	\$	73,037
4,023	80	90	117	12.5%	\$	84,470
714	71	73	45	100.0%	\$	52,651
276	75	82	17	0.0%	\$	36,722
90	77	85	2	0.0%	\$	25,385
164	71	74	7	100.0%	\$	65,849
146	72	76	14	0.0%	\$	45,174
6,335	70	72	603	65.3%	\$	62,191
1,793	71	74	107	0.0%	\$	40,467
8,023	75	84	214	33.3%	\$	48,409
147	69	73	3	100.0%	\$	34,446
714	197	462	2	100.0%	\$	42,982
179	82	97	-	100.0%	\$	36,761
2,159	116	180	8	0.0%	\$	41,912
463	88	111	3	0.0%	\$	79,141
346	89	110	2	0.0%	\$	55,167
192	123	194	1	0.0%	\$	42,588
177	69	73	4	0.0%	\$	48,831
93	67	71	3	0.0%	\$	32,868

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

351	69	75	18	81.8%	\$	36,850
99	82	102	2	0.0%	\$	34,849
970	87	119	4	0.0%	\$	70,807
118	77	93	2	100.0%	\$	27,859
2,116	64	67	93	20.0%	\$	75,629
8,139	63	65	696	86.1%	\$	80,319
2,018	130	224	-	0.0%	\$	87,267
51	61	62	7	0.0%	\$	58,371
190	74	85	6	0.0%	\$	43,584
29	60	60	6	100.0%	\$	46,326
1,140	76	91	38	95.5%	\$	46,578
6,217	75	89	138	0.0%	\$	87,336
1,396	76	92	10	0.0%	\$	51,790
224	69	77	17	68.4%	\$	29,244
33	58	58	-	0.0%	\$	42,483
27	75	88	-	0.0%	\$	57,052
1,241	64	69	80	0.0%	\$	76,304
224	79	97	3	0.0%	\$	51,192
76	57	57	13	0.0%	\$	34,047
238	65	74	1	100.0%	\$	53,607
1,353	71	84	21	0.0%	\$	99,425
77	112	180	-	0.0%	\$	49,560
739	58	60	10	0.0%	\$	41,572
178	74	90	4	0.0%	\$	50,821
5,189	59	63	351	50.0%	\$	90,155
18	75	90	-	0.0%	\$	59,722
36	62	67	-	0.0%	\$	50,464

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

803	59	64	23	0.0%	\$ 112,335
218	84	112	4	0.0%	\$ 44,968
583	144	296	1	0.0%	\$ 37,365
317	57	61	19	0.0%	\$ 53,992
2,453	73	93	3	46.2%	\$ 62,097
277	57	62	8	0.0%	\$ 42,727
4,524	63	72	205	0.0%	\$ 88,538
600	68	82	8	0.0%	\$ 73,703
490	89	132	1	0.0%	\$ 60,378
888	58	63	9	0.0%	\$ 61,087
780	58	63	40	100.0%	\$ 77,758
1,827	63	73	47	69.0%	\$ 51,377
181	59	64	1	100.0%	\$ 33,111
1,638	58	63	110	81.1%	\$ 67,054
471	57	63	20	48.1%	\$ 40,077
950	56	61	16	72.6%	\$ 44,371
42	50	50	1	0.0%	\$ 39,114
1,295	64	78	55	82.6%	\$ 47,084
280	57	63	6	45.5%	\$ 57,193
7,779	62	74	229	85.0%	\$ 107,758
233	58	66	14	0.0%	\$ 44,681
93	54	58	4	0.0%	\$ 46,764
52	53	56	8	0.0%	\$ 60,608
186	52	56	1	0.0%	\$ 85,380
28	61	71	-	100.0%	\$ 63,248
4,319	54	60	150	58.2%	\$ 68,069
189	55	61	8	0.0%	\$ 33,392

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

1,236	53	59	82	0.0%	\$	52,872
2,700	55	61	137	90.0%	\$	52,945
731	115	219	-	100.0%	\$	63,656
167	72	96	1	0.0%	\$	77,032
112	49	51	15	100.0%	\$	46,603
1,756	54	60	40	0.0%	\$	81,315
1,498	55	63	32	70.4%	\$	120,950
26	49	51	2	0.0%	\$	36,908
79	66	82	2	0.0%	\$	35,812
48	49	50	5	0.0%	\$	54,552
118	54	61	5	0.0%	\$	55,514
682	56	66	7	76.3%	\$	54,313
189	54	61	2	0.0%	\$	80,078
14,664	50	53	352	58.9%	\$	52,043
982	51	55	26	0.0%	\$	54,980
134	51	56	1	0.0%	\$	49,073
135	63	79	-	0.0%	\$	53,532
1,069	56	64	20	81.0%	\$	80,834
147	53	58	4	0.0%	\$	41,961
276	49	51	17	100.0%	\$	46,229
228	48	51	24	0.0%	\$	45,512
1,138	59	73	40	0.0%	\$	69,880
109	51	55	4	0.0%	\$	37,233
130	45	45	12	0.0%	\$	48,731
1,199	51	56	43	0.0%	\$	69,001
181	49	53	10	0.0%	\$	43,478
310	46	47	13	0.0%	\$	50,774












































(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

59	44	44	7	0.0%	\$	35,317
675	48	50	22	92.6%	\$	47,128
99	52	58	7	0.0%	\$	37,429
118	65	84	4	0.0%	\$	53,060
3,293	57	70	22	0.0%	\$	106,200
922	50	56	4	0.0%	\$	69,089
851	49	52	79	43.8%	\$	88,709
125	51	58	-	0.0%	\$	40,792
403	54	64	9	0.0%	\$	64,524
151	46	49	4	100.0%	\$	43,722
207	45	47	19	0.0%	\$	41,642
97	43	43	7	0.0%	\$	62,251
81	42	42	10	0.0%	\$	37,392
289	62	82	4	0.0%	\$	55,226
3,334	47	51	140	0.0%	\$	76,665
3,719	48	54	28	76.0%	\$	60,799
884	125	282	-	0.0%	\$	39,388
2,573	48	53	57	71.5%	\$	55,280
145	49	55	18	0.0%	\$	58,205
1,514	46	49	41	0.0%	\$	64,536
1,396	47	53	37	61.2%	\$	60,826
153	43	44	15	0.0%	\$	54,332
444	51	61	2	0.0%	\$	43,681
516	44	46	32	50.0%	\$	51,665
195	42	43	6	0.0%	\$	38,633
1,234	48	54	80	53.3%	\$	48,010
282	50	58	2	0.0%	\$	49,860

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

242	45	49	20	85.7%	\$	39,764
4,071	51	59	151	66.7%	\$	86,108
1,758	50	58	57	100.0%	\$	43,263
184	53	64	1	100.0%	\$	38,664
223	44	46	5	100.0%	\$	42,606
26	41	41	1	0.0%	\$	37,265
4,815	47	52	266	0.0%	\$	56,375
4,769	49	58	110	94.1%	\$	75,836
66	44	47	4	62.5%	\$	46,930
1,768	42	43	188	57.4%	\$	48,370
67	47	54	-	0.0%	\$	40,510
82	45	50	2	100.0%	\$	40,308
83	45	48	7	0.0%	\$	33,199
28	44	45	-	0.0%	\$	33,053
77	41	42	6	0.0%	\$	42,781
5,234	48	56	163	43.5%	\$	93,540
1,242	44	49	49	0.0%	\$	95,196
842	46	52	43	0.0%	\$	92,616
174	42	44	7	76.5%	\$	33,983
64	40	41	6	0.0%	\$	36,354
656	87	153	1	0.0%	\$	60,579
81	46	52	3	0.0%	\$	41,495
35	39	39	2	0.0%	\$	41,036
3	39	39	-	0.0%	\$	49,843
290	40	41	-	81.1%	\$	54,311
96	39	39	8	0.0%	\$	51,292
6,542	48	57	124	0.0%	\$	122,035

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

870	42	46	59		32.3%	\$ 	48,805
699	56	74	9		33.3%	\$ 	60,483
3,025	45	50	104		66.7%	\$ 	50,501
297	40	42	37		0.0%	\$ 	58,992
293	40	41	21		0.0%	\$ 	42,909
69	44	48	3		100.0%	\$ 	39,176
66	46	51	-		0.0%	\$ 	39,907
10	38	38	2		0.0%	\$ 	38,187
88	39	39	3		0.0%	\$ 	42,785
60	55	71	5		0.0%	\$ 	36,865
396	40	43	21		0.0%	\$ 	62,175
390	56	75	3		91.7%	\$ 	72,111
119	42	47	-		0.0%	\$ 	33,257
636	41	45	42		75.0%	\$ 	60,187
253	48	57	1		0.0%	\$ 	55,518
3,889	113	244	-		0.0%	\$ 	60,843
155	40	42	13		0.0%	\$ 	46,785
267	39	41	10		0.0%	\$ 	52,270
137	53	68	-		100.0%	\$ 	35,103
36	40	43	2		100.0%	\$ 	36,869
25	42	46	-		0.0%	\$ 	38,400
3	37	37	-		0.0%	\$ 	62,149
2,440	41	45	104		81.1%	\$ 	66,270
105	46	56	2		100.0%	\$ 	56,170
3,368	50	63	48		0.0%	\$ 	79,834
407	39	42	6		0.0%	\$ 	46,233
473	37	37	35		0.0%	\$ 	58,375

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

58	36	36	7	100.0%	\$	33,659
68	49	61	1	0.0%	\$	31,739
153	40	43	10	0.0%	\$	38,357
38	37	38	1	0.0%	\$	33,143
3	36	36	-	0.0%	\$	38,782
683	39	42	30	0.0%	\$	74,456
2,345	41	46	62	46.8%	\$	70,199
336	46	56	13	87.5%	\$	64,916
76	38	40	-	0.0%	\$	36,083
726	37	39	37	95.2%	\$	66,171
92	36	37	1	0.0%	\$	54,342
90	35	35	9	100.0%	\$	44,395
121	37	39	10	0.0%	\$	44,832
67	41	45	2	0.0%	\$	34,724
17	37	39	-	0.0%	\$	29,515
33	42	48	-	0.0%	\$	59,744
31	75	136	1	0.0%	\$	33,908
593	36	38	22	0.0%	\$	63,297
2,359	39	42	68	75.8%	\$	69,562
4,087	39	43	177	52.7%	\$	49,771
2,641	40	46	83	0.0%	\$	97,051
487	36	38	34	0.0%	\$	49,522
167	37	39	6	91.3%	\$	39,480
39	34	34	6	0.0%	\$	43,533
120	36	38	7	0.0%	\$	33,116
35	34	34	-	0.0%	\$	67,162
117	40	44	1	100.0%	\$	38,441

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

138	48	61	4	100.0%	\$	40,546
86	36	37	4	0.0%	\$	89,331
164	38	41	3	0.0%	\$	60,379
263	64	109	-	0.0%	\$	58,380
69	34	34	15	100.0%	\$	56,168
293	50	67	2	0.0%	\$	55,283
888	41	49	12	73.1%	\$	63,885
99	34	35	3	0.0%	\$	57,436
4,079	38	41	162	5.3%	\$	66,992
337	38	41	1	0.0%	\$	61,375
248	36	38	9	0.0%	\$	43,510
117	40	45	1	0.0%	\$	45,850
597	37	39	6	75.0%	\$	64,387
414	36	38	25	0.0%	\$	53,884
56	35	37	3	0.0%	\$	51,105
463	36	39	14	75.0%	\$	52,502
109	50	66	1	0.0%	\$	36,987
168	55	82	-	0.0%	\$	46,019
69	45	56	-	0.0%	\$	52,486
17	39	47	-	0.0%	\$	38,294
375	47	61	-	100.0%	\$	48,984
905	36	40	43	87.1%	\$	64,878
1,711	36	40	117	65.4%	\$	47,865
171	36	39	14	0.0%	\$	38,525
317	36	38	7	0.0%	\$	63,067
72	36	39	2	100.0%	\$	38,249
1,139	50	67	11	69.2%	\$	65,013

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

206	38	43	5	0.0%	\$	54,514
67	35	38	4	0.0%	\$	56,800
214	36	39	19	84.6%	\$	45,268
46	40	46	1	0.0%	\$	36,311
143	37	40	-	0.0%	\$	47,624
54	31	31	2	0.0%	\$	54,016
165	37	42	-	100.0%	\$	51,204
2,711	32	33	108	100.0%	\$	87,096
354	32	33	30	0.0%	\$	57,409
303	36	40	12	59.0%	\$	39,061
156	35	38	5	53.1%	\$	45,680
174	34	36	-	0.0%	\$	80,231
532	33	35	36	100.0%	\$	89,584
16	31	31	1	0.0%	\$	45,378
277	75	140	-	0.0%	\$	43,903
35	41	49	-	0.0%	\$	28,024
87	53	87	-	0.0%	\$	40,842
53	44	59	-	100.0%	\$	29,631
3,887	53	80	35	71.7%	\$	68,479
328	43	54	2	0.0%	\$	55,913
3,640	35	39	47	70.6%	\$	47,924
613	37	43	9	75.0%	\$	52,642
263	39	47	9	0.0%	\$	36,862
1,255	35	39	18	0.0%	\$	116,719
116	37	44	3	0.0%	\$	40,780
102	34	37	1	0.0%	\$	51,560
82	32	33	6	0.0%	\$	36,408

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

341	64	107	4	100.0%	\$	46,835
88	39	46	3	0.0%	\$	37,733
1,206	31	33	61	100.0%	\$	72,267
126	32	33	3	0.0%	\$	66,597
91	36	40	3	0.0%	\$	29,380
227	32	34	18	90.0%	\$	85,876
261	32	34	7	0.0%	\$	73,831
81	44	57	2	100.0%	\$	40,133
509	69	138	-	0.0%	\$	51,682
253	61	113	2	0.0%	\$	39,522
357	87	208	1	0.0%	\$	54,828
85	30	30	5	90.9%	\$	42,792
219	32	34	-	0.0%	\$	56,694
7,040	30	32	447	67.1%	\$	94,822
1,643	35	40	55	0.0%	\$	43,598
1,165	32	35	98	0.0%	\$	68,581
1,848	32	35	111	0.0%	\$	99,224
2,628	32	35	46	85.1%	\$	63,477
492	32	34	13	0.0%	\$	57,036
192	46	63	-	100.0%	\$	32,814
666	35	40	46	0.0%	\$	95,956
149	31	33	17	100.0%	\$	50,388
176	40	53	-	0.0%	\$	56,627
32	35	40	-	0.0%	\$	37,327
72	30	31	-	0.0%	\$	99,087
73	29	29	4	0.0%	\$	44,902
21	29	29	2	100.0%	\$	48,342

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

37	31	33	1	85.7%	\$	40,582
67	30	30	3	0.0%	\$	35,156
26	30	31	3	0.0%	\$	28,542
6	29	29	1	0.0%	\$	47,689
89	41	53	2	0.0%	\$	72,873
37	33	36	1	100.0%	\$	38,699
425	31	34	11	0.0%	\$	86,715
454	31	35	13	86.4%	\$	53,478
85	30	32	5	0.0%	\$	73,463
1,452	38	47	16	0.0%	\$	93,645
228	32	36	11	0.0%	\$	65,914
419	30	33	13	96.6%	\$	70,955
3,404	31	32	116	0.0%	\$	70,808
201	31	34	-	0.0%	\$	84,889
31	28	28	1	0.0%	\$	43,031
465	30	33	6	0.0%	\$	48,809
107	33	36	6	100.0%	\$	37,887
51	28	28	2	100.0%	\$	89,034
203	30	32	15	0.0%	\$	53,901
448	34	38	11	0.0%	\$	56,774
78	34	39	1	0.0%	\$	37,586
33	30	31	1	0.0%	\$	42,423
2,783	35	43	33	81.1%	\$	61,675
99	27	27	2	0.0%	\$	72,993
6,289	30	32	185	29.7%	\$	57,200
408	28	29	20	0.0%	\$	46,864
1,536	32	37	31	80.3%	\$	78,714

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

52	29	31	2	0.0%	\$	33,989
194	28	28	10	0.0%	\$	54,149
81	31	34	3	0.0%	\$	45,720
52	27	27	3	0.0%	\$	44,389
1,044	32	36	27	0.0%	\$	46,059
348	31	34	23	61.3%	\$	44,938
160	27	28	3	0.0%	\$	58,925
222	30	33	14	0.0%	\$	38,596
58	30	32	-	0.0%	\$	61,314
233	37	47	5	0.0%	\$	66,502
2,244	98	253	1	0.0%	\$	52,506
94	36	43	-	80.0%	\$	49,121
436	26	26	32	94.9%	\$	74,240
169	41	56	-	0.0%	\$	51,579
809	33	40	41	64.7%	\$	69,212
222	30	34	7	66.7%	\$	45,357
317	42	59	9	0.0%	\$	74,507
63	31	35	-	0.0%	\$	39,498
83	30	33	1	0.0%	\$	68,835
54	26	26	1	0.0%	\$	38,886
519	29	32	65	0.0%	\$	54,823
417	33	39	8	0.0%	\$	75,740
64	28	29	7	100.0%	\$	39,833
288	32	37	9	0.0%	\$	64,992
26	31	33	-	0.0%	\$	51,802
46	27	29	-	0.0%	\$	57,047
259	46	68	-	100.0%	\$	53,700

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

66	26	27	3	0.0%	\$	41,002
246	34	41	5	0.0%	\$	58,956
67	35	42	2	0.0%	\$	40,828
11	33	36	-	0.0%	\$	69,991
38	42	59	-	0.0%	\$	52,292
2	26	26	-	0.0%	\$	60,210
61	62	115	-	0.0%	\$	52,550
32,465	29	32	1,111	61.4%	\$	67,986
517	32	38	5	71.9%	\$	48,040
269	33	39	1	68.2%	\$	42,435
25	25	25	-	0.0%	\$	39,361
151	27	30	1	0.0%	\$	61,794
1,011	28	31	41	100.0%	\$	101,740
179	30	34	-	0.0%	\$	55,122
130	28	31	11	100.0%	\$	52,576
213	37	48	6	0.0%	\$	40,263
57	28	30	2	0.0%	\$	35,433
77	32	40	2	0.0%	\$	38,121
16	29	30	-	0.0%	\$	38,352
121	36	45	3	0.0%	\$	38,097
280	33	39	-	0.0%	\$	66,006
66	41	59	-	0.0%	\$	51,788
15	30	35	-	0.0%	\$	66,383
57	45	74	-	0.0%	\$	56,493
9	25	25	-	100.0%	\$	46,986
89	27	29	-	0.0%	\$	47,757
247	33	43	7	0.0%	\$	41,445

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

215	28	32	7	90.0%	\$	48,989
712	25	26	10	82.8%	\$	54,674
849	26	27	18	100.0%	\$	59,329
1,568	26	27	73	68.8%	\$	85,550
75	29	33	2	0.0%	\$	48,450
422	28	31	13	100.0%	\$	47,949
424	25	26	29	0.0%	\$	48,937
110	27	28	4	100.0%	\$	35,070
117	26	29	9	100.0%	\$	52,658
417	29	33	7	0.0%	\$	93,345
326	27	31	11	70.6%	\$	45,181
209	27	30	9	0.0%	\$	96,924
85	27	29	7	75.0%	\$	48,533
51	25	26	-	100.0%	\$	52,012
1,089	30	35	34	0.0%	\$	86,268
167	38	55	-	0.0%	\$	33,159
35	29	32	3	0.0%	\$	49,995
303	34	49	-	0.0%	\$	60,874
36	29	32	1	0.0%	\$	38,775
33	26	28	1	0.0%	\$	39,687
159	32	38	3	100.0%	\$	44,391
60	31	41	2	0.0%	\$	137,551
28	32	40	1	0.0%	\$	56,872
67	75	162	-	0.0%	\$	67,220
562	30	36	6	0.0%	\$	60,744
3,447	27	30	29	60.8%	\$	73,619
239	26	28	11	0.0%	\$	51,594

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

2,222	27	29	88	0.0%	\$	78,603
1,145	26	28	30	43.0%	\$	52,611
223	23	23	35	0.0%	\$	54,862
125	25	27	9	0.0%	\$	53,187
629	27	30	21	73.3%	\$	55,013
799	27	30	36	0.0%	\$	67,790
600	24	26	12	0.0%	\$	72,970
768	26	28	25	63.6%	\$	57,979
1,560	31	38	14	0.0%	\$	140,382
361	23	23	22	0.0%	\$	52,047
58	24	24	2	0.0%	\$	54,020
152	27	31	1	0.0%	\$	59,193
336	27	31	5	80.8%	\$	52,095
318	24	25	17	0.0%	\$	56,754
246	27	30	4	0.0%	\$	55,365
95	24	25	4	85.2%	\$	36,298
92	24	24	12	100.0%	\$	47,425
19	23	23	-	0.0%	\$	69,458
398	26	27	11	0.0%	\$	60,512
193	26	28	4	0.0%	\$	66,151
141	27	31	-	0.0%	\$	42,259
38	24	26	-	0.0%	\$	33,566
28	23	23	-	0.0%	\$	38,092
50	27	31	1	0.0%	\$	44,424
72	61	126	-	0.0%	\$	54,635
28	29	34	1	0.0%	\$	38,826
48	30	38	-	100.0%	\$	49,730

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

4,282	28	33	73	77.9%	\$	60,383
180	23	24	2	100.0%	\$	48,099
171	23	24	4	0.0%	\$	45,234
659	28	32	29	92.1%	\$	50,531
59	23	23	4	0.0%	\$	81,033
319	23	24	10	25.0%	\$	48,116
189	26	29	4	90.0%	\$	45,138
688	29	35	12	91.7%	\$	60,349
146	33	46	2	0.0%	\$	48,682
203	24	25	42	0.0%	\$	36,624
139	24	26	14	0.0%	\$	51,113
159	23	24	4	0.0%	\$	42,831
101	24	25	7	0.0%	\$	38,704
222	23	25	6	0.0%	\$	59,673
143	22	23	10	37.5%	\$	40,484
50	23	25	1	0.0%	\$	39,444
72	26	30	2	0.0%	\$	44,913
63	23	24	2	60.0%	\$	31,329
103	27	31	-	0.0%	\$	37,259
63	24	25	4	0.0%	\$	34,023
21	25	26	2	0.0%	\$	36,310
43	22	22	-	100.0%	\$	53,871
47	24	25	2	0.0%	\$	32,495
19	23	24	1	14.3%	\$	39,508
86	23	25	10	0.0%	\$	88,481
27	31	45	-	100.0%	\$	60,627
2	22	22	-	0.0%	\$	67,470

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

55	22	22	4	0.0%	\$	41,256
636	25	28	15	0.0%	\$	54,096
1,302	25	28	30	48.0%	\$	59,786
1,919	24	26	115	0.0%	\$	60,240
3,549	23	24	186	56.5%	\$	61,735
354	22	22	21	86.7%	\$	56,557
2,528	25	27	55	0.0%	\$	72,008
285	25	28	6	71.4%	\$	51,441
1,402	26	30	30	71.0%	\$	63,636
370	23	24	10	0.0%	\$	41,390
243	24	27	12	0.0%	\$	69,753
93	30	39	-	100.0%	\$	44,751
179	24	27	2	0.0%	\$	37,206
101	21	21	-	100.0%	\$	50,312
704	24	27	30	100.0%	\$	58,222
46	23	24	2	0.0%	\$	48,323
175	22	23	12	0.0%	\$	86,541
387	56	110	1	0.0%	\$	60,452
217	26	31	5	100.0%	\$	59,114
82	27	34	3	0.0%	\$	42,265
232	25	28	6	75.0%	\$	44,015
58	22	23	3	0.0%	\$	74,646
93	22	22	11	80.0%	\$	40,287
281	31	42	6	0.0%	\$	50,131
40	21	21	2	0.0%	\$	66,901
609	24	26	8	58.9%	\$	44,776
131	24	26	5	37.5%	\$	53,602

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

87	21	21	8	100.0%	\$	52,573
445	22	22	14	0.0%	\$	40,168
28	21	21	1	0.0%	\$	36,317
33	24	26	1	100.0%	\$	43,726
374	23	25	12	0.0%	\$	62,522
31	29	37	-	0.0%	\$	59,938
18	24	26	-	0.0%	\$	27,767
21	21	21	-	0.0%	\$	45,734
45	21	21	4	0.0%	\$	42,768
26	21	21	-	0.0%	\$	43,151
103	50	96	-	0.0%	\$	60,306
201	27	34	-	0.0%	\$	42,725
479	28	35	3	0.0%	\$	69,600
1,067	29	38	11	0.0%	\$	53,795
423	24	27	11	0.0%	\$	71,084
906	24	28	39	66.7%	\$	83,591
171	20	20	9	0.0%	\$	65,987
63	21	21	-	100.0%	\$	50,387
102	24	27	4	0.0%	\$	54,718
86	26	32	2	0.0%	\$	46,525
181	26	31	12	0.0%	\$	49,101
41	20	21	4	100.0%	\$	35,840
120	22	24	5	100.0%	\$	61,129
251	26	31	4	0.0%	\$	61,413
119	26	31	2	0.0%	\$	44,261
158	26	30	4	0.0%	\$	38,818
423	22	23	9	0.0%	\$	46,633

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

74	21	22	8	0.0%	\$	64,304
42	23	25	1	0.0%	\$	53,271
24	20	20	2	0.0%	\$	36,042
44	24	27	1	0.0%	\$	31,831
70	21	22	6	0.0%	\$	44,492
19	21	22	1	100.0%	\$	31,419
21	23	27	1	0.0%	\$	45,689
28	20	20	2	0.0%	\$	46,332
18	25	32	-	0.0%	\$	58,817
117	43	75	-	0.0%	\$	80,698
17	20	20	-	0.0%	\$	62,792
4	20	20	-	100.0%	\$	60,136
137	38	68	1	0.0%	\$	57,092
240	21	22	7	0.0%	\$	56,598
180	21	22	-	0.0%	\$	77,760
5,193	21	23	202	100.0%	\$	57,155
731	22	25	26	0.0%	\$	71,586
492	26	32	15	89.3%	\$	51,509
122	21	23	1	83.3%	\$	46,029
819	22	26	11	0.0%	\$	50,644
198	24	28	2	84.0%	\$	93,462
690	23	27	6	0.0%	\$	87,959
2,957	22	24	112	47.9%	\$	50,006
95	19	20	10	0.0%	\$	60,309
252	23	27	5	0.0%	\$	47,343
34	27	35	2	0.0%	\$	43,302
157	22	25	2	0.0%	\$	58,377

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

315	25	30	8	0.0%	\$	64,234
548	21	22	11	0.0%	\$	82,733
94	21	22	1	0.0%	\$	65,912
492	20	20	20	82.5%	\$	57,821
19	19	19	1	100.0%	\$	49,845
373	22	24	6	0.0%	\$	76,001
174	35	53	2	0.0%	\$	55,583
104	21	22	8	0.0%	\$	36,525
286	19	20	6	0.0%	\$	51,771
43	19	20	5	0.0%	\$	51,205
329	22	23	4	50.0%	\$	76,507
424	21	22	19	0.0%	\$	84,048
382	21	23	20	0.0%	\$	64,644
788	21	23	24	76.2%	\$	71,959
42	24	28	1	0.0%	\$	42,540
173	20	20	24	46.2%	\$	65,209
66	22	25	-	0.0%	\$	33,534
178	32	45	2	0.0%	\$	65,831
48	22	26	-	100.0%	\$	44,230
22	20	22	1	0.0%	\$	43,349
45	20	20	-	0.0%	\$	46,064
24	29	39	-	0.0%	\$	56,259
137	31	44	1	0.0%	\$	51,487
9	25	28	-	0.0%	\$	43,894
146	83	227	-	0.0%	\$	36,571
2,289	290	3,115	-	0.0%	\$	41,186
73	21	24	2	0.0%	\$	71,888

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

388	20	22	17	76.2%	\$	49,960
1,621	20	21	90	0.0%	\$	55,860
362	21	24	2	92.9%	\$	108,421
1,846	20	21	25	100.0%	\$	110,601
639	23	28	6	0.0%	\$	49,640
56	21	24	1	0.0%	\$	38,216
261	19	19	13	91.7%	\$	48,413
167	24	30	-	100.0%	\$	47,892
192	19	21	8	0.0%	\$	106,270
939	24	29	11	0.0%	\$	64,170
635	19	21	43	56.4%	\$	50,377
291	22	25	2	0.0%	\$	65,182
115	19	20	3	0.0%	\$	60,909
62	22	25	1	0.0%	\$	34,382
601	22	26	14	56.3%	\$	48,747
123	22	27	2	100.0%	\$	46,049
47	18	19	-	0.0%	\$	44,684
377	24	29	13	0.0%	\$	55,324
464	19	20	9	85.7%	\$	115,930
43	19	20	3	0.0%	\$	49,931
255	22	25	8	0.0%	\$	72,739
30	18	19	-	0.0%	\$	34,297
80	19	20	7	100.0%	\$	37,731
80	25	33	1	0.0%	\$	40,741
63	18	18	2	0.0%	\$	74,686
99	24	30	1	81.8%	\$	34,113
25	18	19	-	0.0%	\$	47,132

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

34	27	34	-	0.0%	\$	57,786
9	16	14	3	0.0%	\$	61,387
52	19	19	-	0.0%	\$	38,173
26	18	18	1	0.0%	\$	66,499
7	18	18	-	100.0%	\$	60,808
29	18	18	2	0.0%	\$	46,949
2	18	18	-	0.0%	\$	55,384
794	24	30	13	0.0%	\$	55,881
3,534	23	28	225	80.9%	\$	76,067
442	20	23	22	70.2%	\$	50,928
4,592	18	19	149	75.5%	\$	66,793
438	24	31	3	0.0%	\$	48,372
1,385	20	22	7	60.0%	\$	75,296
605	19	21	11	69.6%	\$	52,837
1,868	20	23	71	73.1%	\$	57,300
111	18	18	12	91.3%	\$	50,904
117	19	21	5	100.0%	\$	57,197
393	19	20	7	38.9%	\$	46,628
139	19	20	7	0.0%	\$	43,535
824	21	24	19	0.0%	\$	80,734
190	21	24	5	0.0%	\$	45,512
281	21	24	9	0.0%	\$	43,096
20	17	17	1	100.0%	\$	45,853
391	18	20	31	0.0%	\$	47,424
95	17	17	3	80.0%	\$	49,381
77	17	17	3	87.1%	\$	33,991
38	20	23	-	100.0%	\$	35,020

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

202	19	21	3	100.0%	\$	53,688
74	18	18	5	100.0%	\$	57,709
371	22	27	15	0.0%	\$	63,088
33	21	24	-	100.0%	\$	51,241
64	17	18	3	0.0%	\$	48,830
67	17	17	-	0.0%	\$	99,497
74	17	17	3	100.0%	\$	54,441
62	17	17	-	0.0%	\$	60,412
760	19	20	19	0.0%	\$	70,649
274	21	23	20	0.0%	\$	54,012
97	26	35	-	0.0%	\$	51,456
28	17	17	2	0.0%	\$	40,486
139	24	29	4	0.0%	\$	61,341
21	19	20	-	0.0%	\$	44,152
186	19	20	13	0.0%	\$	84,093
24	17	18	1	100.0%	\$	39,201
20	22	28	1	0.0%	\$	50,587
34	21	23	-	100.0%	\$	45,742
19	19	20	1	100.0%	\$	38,156
128	28	40	1	0.0%	\$	51,730
54	18	19	2	0.0%	\$	45,075
16	25	30	-	0.0%	\$	59,815
81	30	48	-	100.0%	\$	49,716
36	22	26	-	0.0%	\$	39,057
3,429	166	974	-	0.0%	\$	48,226
5	17	17	-	0.0%	\$	48,778
18	18	19	1	0.0%	\$	48,080

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

37	18	20	-	0.0%	\$	67,597
16	25	31	-	100.0%	\$	48,018
45	31	48	-	0.0%	\$	63,503
4,545	28	42	47	0.0%	\$	64,509
385	16	17	11	65.0%	\$	83,210
687	18	20	17	73.8%	\$	56,408
1,067	20	23	40	71.3%	\$	48,763
186	17	17	-	87.5%	\$	49,356
507	24	31	6	100.0%	\$	57,675
107	17	18	2	100.0%	\$	74,421
1,397	17	18	48	86.2%	\$	122,930
291	17	19	13	0.0%	\$	60,728
723	17	18	55	0.0%	\$	59,587
777	19	21	22	0.0%	\$	54,473
1,587	17	18	49	69.8%	\$	75,022
81	17	19	2	0.0%	\$	50,477
67	19	22	1	0.0%	\$	46,786
591	18	19	30	84.4%	\$	59,265
61	16	16	2	0.0%	\$	68,878
337	18	19	4	79.4%	\$	68,126
49	17	18	-	0.0%	\$	44,534
165	19	22	1	0.0%	\$	39,578
201	17	18	10	0.0%	\$	95,021
13	16	16	3	0.0%	\$	48,395
124	18	20	8	0.0%	\$	75,534
107	16	16	19	0.0%	\$	57,710
321	19	22	4	100.0%	\$	70,974

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

35	17	17	1	0.0%	\$	55,856
55	21	26	-	100.0%	\$	39,633
36	19	21	1	0.0%	\$	46,027
80	18	20	1	0.0%	\$	59,529
34	17	18	2	0.0%	\$	51,769
115	33	54	-	100.0%	\$	49,965
108	16	17	-	0.0%	\$	45,434
13	16	16	1	0.0%	\$	38,479
62	24	32	-	0.0%	\$	39,681
38	19	22	1	0.0%	\$	38,827
23	17	19	-	0.0%	\$	39,551
78	16	17	8	0.0%	\$	48,826
64	25	34	-	0.0%	\$	55,384
34	22	26	-	100.0%	\$	46,019
40	27	44	-	0.0%	\$	26,814
52	21	26	1	100.0%	\$	52,798
12	20	24	-	0.0%	\$	47,869
116	19	22	-	0.0%	\$	51,388
209	17	19	7	0.0%	\$	89,964
1,371	17	18	43	75.0%	\$	56,343
1,770	23	31	18	58.3%	\$	64,580
92	19	23	-	0.0%	\$	65,635
132	15	16	1	0.0%	\$	52,565
774	16	16	16	78.3%	\$	66,827
200	17	19	4	66.7%	\$	50,576
460	17	18	16	68.4%	\$	71,695
39	19	22	-	0.0%	\$	51,414

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

87	19	22	-	0.0%	\$	45,335
386	22	29	3	0.0%	\$	35,407
308	18	20	4	78.1%	\$	62,556
853	16	17	34	72.5%	\$	61,162
5,560	18	21	99	61.6%	\$	59,838
366	17	18	3	0.0%	\$	59,251
147	15	15	11	61.4%	\$	44,906
158	16	17	3	0.0%	\$	51,646
663	18	19	22	0.0%	\$	120,670
12	15	15	-	0.0%	\$	46,967
293	16	17	5	0.0%	\$	69,298
776	16	17	9	100.0%	\$	65,238
118	15	15	9	100.0%	\$	70,967
356	16	17	11	0.0%	\$	69,297
63	17	19	6	0.0%	\$	55,434
1,189	17	18	46	0.0%	\$	55,013
60	15	15	16	0.0%	\$	54,476
102	17	19	-	0.0%	\$	56,166
707	17	18	28	0.0%	\$	82,048
252	16	17	16	0.0%	\$	71,920
30	15	16	-	100.0%	\$	57,978
207	18	21	15	100.0%	\$	46,950
465	16	17	28	70.5%	\$	62,343
345	16	16	12	40.9%	\$	75,663
162	20	23	1	100.0%	\$	68,984
160	26	41	-	85.7%	\$	60,082
162	27	42	3	0.0%	\$	34,035

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

47	16	16	-	0.0%	\$	48,082
719	17	19	6	100.0%	\$	74,225
28	17	19	1	0.0%	\$	52,845
37	16	17	3	0.0%	\$	52,085
75	16	17	3	0.0%	\$	61,645
79	15	15	14	0.0%	\$	53,853
143	17	19	5	82.8%	\$	57,243
276	16	17	40	87.0%	\$	63,689
130	16	16	14	100.0%	\$	62,889
23	22	29	-	0.0%	\$	41,960
15	17	18	-	0.0%	\$	35,184
28	19	23	-	0.0%	\$	48,004
20	18	20	-	0.0%	\$	38,011
30	50	115	-	0.0%	\$	51,559
1	15	15	-	0.0%	\$	37,544
1,448	329	2,630	-	0.0%	\$	48,023
286	15	15	11	0.0%	\$	65,843
274	21	28	4	0.0%	\$	60,367
353	15	16	28	0.0%	\$	62,262
1,250	16	18	35	56.6%	\$	51,372
137	18	21	2	0.0%	\$	61,667
353	20	26	3	0.0%	\$	86,695
449	15	16	16	54.5%	\$	44,919
2,037	15	16	44	66.7%	\$	76,255
1,161	15	16	69	0.0%	\$	67,923
152	15	16	3	0.0%	\$	65,416
197	15	17	1	0.0%	\$	59,619

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

8,209	16	17	109	70.3%	\$	60,241
166	14	14	4	0.0%	\$	41,820
126	19	24	2	53.3%	\$	59,266
632	18	21	14	100.0%	\$	60,627
64	15	15	-	100.0%	\$	43,679
281	15	16	6	50.0%	\$	59,865
152	15	16	1	0.0%	\$	46,651
163	16	18	1	0.0%	\$	77,684
178	22	29	-	79.2%	\$	57,329
149	21	27	3	84.6%	\$	40,433
633	15	16	17	64.1%	\$	49,957
85	15	15	1	0.0%	\$	75,027
1,186	15	17	28	0.0%	\$	55,864
213	23	33	-	0.0%	\$	42,807
598	15	16	7	0.0%	\$	50,473
76	15	16	1	0.0%	\$	42,114
164	15	16	4	0.0%	\$	62,877
153	14	15	9	0.0%	\$	44,903
442	17	19	9	0.0%	\$	105,921
435	15	16	21	100.0%	\$	60,121
83	16	18	1	71.4%	\$	51,161
1,436	16	18	24	76.6%	\$	92,310
61	14	14	4	100.0%	\$	47,382
34	15	15	-	0.0%	\$	45,408
258	17	20	20	0.0%	\$	64,282
38	16	18	1	0.0%	\$	35,636
69	17	19	1	88.9%	\$	52,510

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

52	15	17	-	100.0%	\$	57,757
246	31	55	-	71.4%	\$	47,357
87	17	18	5	0.0%	\$	49,843
92	23	33	-	100.0%	\$	55,247
59	15	15	2	0.0%	\$	79,658
50	22	30	-	100.0%	\$	41,214
16	14	14	-	100.0%	\$	36,132
40	19	23	1	0.0%	\$	39,574
15	14	14	-	0.0%	\$	47,713
84	25	37	-	0.0%	\$	45,517
13	14	14	1	0.0%	\$	74,019
11	14	14	-	0.0%	\$	47,600
17	16	17	-	0.0%	\$	29,267
4	14	14	-	100.0%	\$	44,271
2	14	14	-	0.0%	\$	38,304
8	20	23	-	0.0%	\$	45,058
3	14	14	-	0.0%	\$	63,261
13	17	20	-	0.0%	\$	37,593
3	14	14	1	0.0%	\$	56,590
8	21	28	-	100.0%	\$	46,962
146	13	13	1	100.0%	\$	67,569
361	13	14	21	56.5%	\$	48,121
95	17	21	2	100.0%	\$	38,514
246	15	16	3	0.0%	\$	74,351
92	14	15	1	0.0%	\$	46,527
42	15	16	4	0.0%	\$	86,619
234	15	17	7	100.0%	\$	51,225

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

279	14	15	19	0.0%	\$	52,724
33	13	14	1	100.0%	\$	45,943
363	25	39	-	85.7%	\$	51,030
131	13	13	-	94.1%	\$	57,383
1,553	14	15	80	86.7%	\$	53,395
124	16	20	5	100.0%	\$	61,027
133	20	27	-	57.1%	\$	45,767
54	14	15	-	0.0%	\$	63,714
79	15	16	2	75.1%	\$	56,997
993	16	18	49	66.1%	\$	58,890
24	15	15	-	0.0%	\$	51,131
83	16	18	1	0.0%	\$	39,046
58	18	23	-	0.0%	\$	42,098
237	14	15	5	0.0%	\$	66,296
31	13	13	4	0.0%	\$	47,737
153	16	19	2	100.0%	\$	60,367
70	14	16	1	100.0%	\$	47,547
229	14	14	6	0.0%	\$	61,592
191	16	18	9	0.0%	\$	91,028
42	14	16	3	100.0%	\$	37,148
61	16	18	-	0.0%	\$	54,184
233	17	20	28	90.0%	\$	59,142
73	15	18	-	0.0%	\$	44,715
99	13	14	3	0.0%	\$	40,299
253	16	19	2	0.0%	\$	77,696
153	14	14	27	0.0%	\$	59,922
294	13	14	15	0.0%	\$	62,835

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

13	13	13	-	0.0%	\$	46,300
108	23	34	-	100.0%	\$	60,180
45	15	17	1	100.0%	\$	47,757
59	17	20	-	85.5%	\$	58,448
955	50	139	1	0.0%	\$	44,080
29	17	19	1	0.0%	\$	37,211
34	16	18	-	0.0%	\$	35,871
32	13	13	1	100.0%	\$	41,281
52	19	25	2	0.0%	\$	49,829
237	22	34	2	0.0%	\$	46,195
70	15	17	-	0.0%	\$	63,241
70	14	14	15	0.0%	\$	56,076
55	15	17	1	0.0%	\$	53,389
11	13	13	1	0.0%	\$	57,676
17	17	19	1	100.0%	\$	29,124
57	15	16	2	0.0%	\$	40,285
38	14	15	1	100.0%	\$	62,799
9	15	16	-	0.0%	\$	57,240
37	14	15	-	0.0%	\$	42,412
24	18	22	-	100.0%	\$	51,962
45	16	18	2	0.0%	\$	105,532
25	15	17	1	0.0%	\$	60,896
9	13	13	-	0.0%	\$	27,714
7	13	13	-	0.0%	\$	79,278
26	15	16	-	100.0%	\$	64,188
11	13	13	1	0.0%	\$	60,596
26	22	31	1	0.0%	\$	36,779

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

13	15	16	-	0.0%	\$	47,658
22	18	25	-	0.0%	\$	51,649
5	13	13	-	0.0%	\$	38,667
1,271	14	15	18	68.8%	\$	43,948
4,957	13	15	124	68.2%	\$	78,777
86	15	17	6	0.0%	\$	93,751
75	16	20	1	0.0%	\$	64,245
3,602	15	17	61	74.4%	\$	66,059
82	14	16	1	0.0%	\$	36,760
265	12	12	6	100.0%	\$	53,381
2,397	12	12	111	92.3%	\$	125,933
159	13	14	2	0.0%	\$	58,975
220	13	13	8	0.0%	\$	73,309
150	13	14	6	0.0%	\$	66,716
122	12	12	-	0.0%	\$	43,610
556	12	12	8	89.5%	\$	75,646
171	13	13	13	0.0%	\$	42,112
192	13	15	7	86.4%	\$	69,919
132	12	13	23	100.0%	\$	50,301
175	14	17	12	77.8%	\$	50,684
134	14	15	8	88.9%	\$	44,946
37	13	14	1	0.0%	\$	43,439
236	17	23	1	21.1%	\$	63,274
42	12	12	2	0.0%	\$	39,198
31	12	12	-	50.0%	\$	39,381
175	14	17	4	0.0%	\$	47,074
33	14	14	-	100.0%	\$	56,535

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

297	13	13	8	0.0%	\$	65,150
47	16	19	-	100.0%	\$	38,023
27	12	13	1	0.0%	\$	49,731
32	15	18	1	0.0%	\$	70,224
141	21	31	-	100.0%	\$	49,019
51	13	13	11	0.0%	\$	49,482
37	15	16	-	0.0%	\$	42,568
174	28	58	-	0.0%	\$	42,887
27	13	13	-	0.0%	\$	37,401
145	13	14	8	0.0%	\$	58,738
53	13	14	3	0.0%	\$	57,005
23	12	12	2	0.0%	\$	41,874
79	17	21	1	50.0%	\$	40,203
46	14	15	2	0.0%	\$	34,365
44	17	21	-	0.0%	\$	38,131
9	12	12	-	100.0%	\$	43,084
19	14	15	1	0.0%	\$	57,280
28	15	18	1	0.0%	\$	60,944
37	13	14	1	0.0%	\$	98,247
41	14	15	1	0.0%	\$	48,818
22	12	12	-	0.0%	\$	44,622
5	12	12	-	100.0%	\$	52,367
34	14	16	-	100.0%	\$	55,405
26	13	14	-	0.0%	\$	84,946
4	12	12	-	100.0%	\$	66,075
44	16	21	-	100.0%	\$	50,467
16	13	14	-	0.0%	\$	69,048

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

27	17	23	1	0.0%	\$	46,218
3	12	12	-	0.0%	\$	54,874
6	12	12	-	100.0%	\$	47,365
37	20	30	-	0.0%	\$	65,060
68	28	55	-	0.0%	\$	74,872
11	15	16	1	0.0%	\$	35,527
135	27	50	-	0.0%	\$	39,169
8	12	12	-	100.0%	\$	48,799
15	13	14	-	0.0%	\$	46,869
4	12	12	-	0.0%	\$	41,129
24	20	28	-	0.0%	\$	50,530
80	39	89	-	0.0%	\$	51,861
308	13	16	9	89.5%	\$	62,242
478	13	14	19	100.0%	\$	71,306
65	11	12	-	0.0%	\$	66,219
323	13	14	9	0.0%	\$	80,428
16	11	11	-	0.0%	\$	68,309
1,486	12	12	94	72.5%	\$	59,881
62	12	13	1	86.7%	\$	43,799
1,004	12	13	30	70.9%	\$	52,346
1,130	12	12	20	69.7%	\$	55,733
382	14	16	6	73.7%	\$	78,846
21	11	11	2	0.0%	\$	49,712
232	13	14	7	0.0%	\$	47,758
490	12	12	7	64.7%	\$	62,958
18	13	14	-	0.0%	\$	60,450
30	11	11	2	0.0%	\$	49,344

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

86	12	12	2	0.0%	\$	39,491
67	11	11	4	71.4%	\$	54,321
424	12	12	25	90.8%	\$	58,398
546	13	15	50	58.3%	\$	52,310
47	11	11	7	0.0%	\$	45,700
116	12	13	-	0.0%	\$	47,243
330	11	12	5	0.0%	\$	51,026
37	12	12	-	0.0%	\$	52,010
114	11	12	4	0.0%	\$	58,035
174	11	11	4	0.0%	\$	82,184
789	12	13	12	90.9%	\$	77,598
1,320	13	15	7	89.5%	\$	51,586
1,005	33	66	1	84.6%	\$	58,255
56	11	12	1	100.0%	\$	51,317
71	12	12	-	0.0%	\$	39,104
48	13	15	2	0.0%	\$	37,049
24	11	11	2	100.0%	\$	55,995
24	12	12	1	0.0%	\$	50,704
10	11	11	-	0.0%	\$	53,500
153	13	16	2	0.0%	\$	55,762
22	11	11	-	0.0%	\$	44,571
34	11	11	-	0.0%	\$	52,388
42	13	13	1	90.0%	\$	38,194
46	12	14	-	0.0%	\$	42,116
83	11	11	3	0.0%	\$	67,094
15	11	11	1	0.0%	\$	39,048
73	12	14	-	100.0%	\$	52,151

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

19	12	13	1	0.0%	\$	48,413
87	12	12	6	100.0%	\$	54,478
28	11	11	2	0.0%	\$	64,850
42	12	13	1	100.0%	\$	66,720
28	13	14	-	0.0%	\$	50,893
16	11	11	-	0.0%	\$	60,044
29	12	13	1	0.0%	\$	90,858
16	16	19	-	0.0%	\$	56,432
22	11	11	1	100.0%	\$	77,838
24	11	12	-	0.0%	\$	75,955
8	11	11	-	0.0%	\$	47,905
5	11	11	-	100.0%	\$	28,887
3	11	11	-	0.0%	\$	53,785
19	11	11	1	100.0%	\$	53,793
2	11	11	-	0.0%	\$	57,210
677	16	21	1	51.2%	\$	58,618
6,500	13	15	145	68.0%	\$	65,234
157	12	13	2	0.0%	\$	62,247
75	12	13	2	88.9%	\$	44,348
513	11	12	17	79.5%	\$	38,106
1,553	11	11	34	0.0%	\$	58,037
238	11	12	7	0.0%	\$	65,984
108	11	11	-	0.0%	\$	63,839
2,163	12	13	60	75.0%	\$	101,744
11	10	10	-	0.0%	\$	97,525
120	10	11	4	0.0%	\$	80,392
799	11	12	33	66.7%	\$	55,796

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

134	13	15	1	92.6%	\$	37,134
73	14	17	-	90.9%	\$	45,254
2,545	11	12	93	71.3%	\$	63,310
57	13	16	-	0.0%	\$	63,681
55	11	11	3	92.3%	\$	39,130
6	10	10	-	0.0%	\$	43,390
64	12	13	-	0.0%	\$	58,042
364	11	12	9	0.0%	\$	53,567
180	11	12	2	81.5%	\$	67,654
118	11	11	4	97.9%	\$	51,070
47	13	15	1	0.0%	\$	67,335
628	12	14	11	100.0%	\$	58,848
120	12	13	3	30.0%	\$	50,122
41	11	11	1	0.0%	\$	54,581
68	12	14	-	100.0%	\$	44,553
246	11	12	1	65.0%	\$	52,557
56	10	11	2	0.0%	\$	41,929
124	12	14	2	0.0%	\$	61,883
21	11	12	-	100.0%	\$	37,799
72	11	12	3	0.0%	\$	53,168
72	13	15	1	0.0%	\$	42,720
31	10	10	1	100.0%	\$	47,662
109	11	12	9	0.0%	\$	60,904
159	17	25	3	100.0%	\$	57,256
185	10	10	6	0.0%	\$	67,161
41	10	11	-	0.0%	\$	44,302
13	10	10	-	100.0%	\$	76,224

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

17	10	10	2	0.0%	\$	46,068
25	10	10	2	0.0%	\$	60,230
185	10	10	15	100.0%	\$	76,475
87	11	12	-	100.0%	\$	73,584
17	12	12	-	100.0%	\$	68,162
17	12	13	-	0.0%	\$	48,337
31	10	11	-	0.0%	\$	55,737
13	10	10	-	100.0%	\$	40,199
25	10	10	1	0.0%	\$	37,370
101	11	11	9	0.0%	\$	83,014
29	10	10	1	0.0%	\$	50,819
34	10	11	1	0.0%	\$	49,561
15	10	11	-	100.0%	\$	48,764
27	16	25	-	0.0%	\$	50,785
34	12	14	3	0.0%	\$	53,965
11	10	10	1	0.0%	\$	37,729
33	11	12	1	100.0%	\$	53,138
44	16	22	-	0.0%	\$	47,420
45	11	11	-	100.0%	\$	58,345
49	17	25	-	0.0%	\$	56,976
5	10	10	1	0.0%	\$	68,900
4	10	10	-	0.0%	\$	36,765
26	10	10	-	0.0%	\$	57,274
19	12	12	-	0.0%	\$	39,123
7	10	10	-	0.0%	\$	41,750
52	11	12	-	0.0%	\$	89,513
20	14	17	-	100.0%	\$	58,862

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

12	10	10	-	0.0%	\$	51,027
84	34	80	-	100.0%	\$	44,709
8	10	10	-	0.0%	\$	42,054
18	11	12	1	100.0%	\$	38,274
7	10	10	-	0.0%	\$	50,300
86	28	59	-	0.0%	\$	38,323
21	18	29	-	0.0%	\$	61,614
387	12	13	9	100.0%	\$	70,420
210	11	13	10	0.0%	\$	48,308
150	10	10	5	100.0%	\$	48,883
498	10	11	12	0.0%	\$	76,520
444	10	10	42	82.4%	\$	61,652
69	10	11	2	0.0%	\$	48,950
39	10	10	1	0.0%	\$	46,355
825	10	10	42	90.0%	\$	70,756
41	11	13	2	0.0%	\$	65,062
247	10	11	16	100.0%	\$	50,113
201	9	10	6	78.6%	\$	45,355
3,766	10	12	45	70.9%	\$	89,373
691	11	13	21	72.8%	\$	50,285
36	9	9	4	0.0%	\$	47,097
251	10	10	12	94.4%	\$	122,933
107	9	9	6	85.7%	\$	52,154
1,769	11	12	23	43.4%	\$	58,361
581	9	10	11	0.0%	\$	82,819
64	9	9	7	87.5%	\$	47,056
109	10	10	4	53.3%	\$	47,993

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

188	10	10	5	65.0%	\$	41,926
145	10	11	1	0.0%	\$	54,763
424	10	11	16	0.0%	\$	87,333
107	9	10	9	100.0%	\$	62,930
481	11	13	7	0.0%	\$	61,053
954	13	17	26	66.7%	\$	62,937
77	13	18	2	72.7%	\$	42,376
49	11	14	-	0.0%	\$	50,247
164	9	9	7	100.0%	\$	69,541
337	9	10	2	0.0%	\$	84,381
222	9	10	3	0.0%	\$	57,588
284	10	12	3	81.0%	\$	48,519
378	10	12	10	33.6%	\$	55,358
43	10	11	1	0.0%	\$	36,015
66	14	19	1	0.0%	\$	56,803
138	11	12	3	72.7%	\$	45,400
215	10	10	4	0.0%	\$	103,536
37	9	9	1	0.0%	\$	41,873
11	9	9	-	0.0%	\$	45,502
28	9	9	-	0.0%	\$	55,893
85	13	16	6	100.0%	\$	57,328
937	10	11	20	0.0%	\$	88,384
202	9	10	6	0.0%	\$	51,740
36	9	10	-	100.0%	\$	46,096
36	9	9	1	0.0%	\$	50,201
61	10	11	1	80.0%	\$	56,382
43	11	13	-	71.4%	\$	51,031

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

60	11	12	1	100.0%	\$	50,183
18	9	10	1	100.0%	\$	42,494
41	9	10	4	100.0%	\$	46,184
17	9	9	-	0.0%	\$	51,709
27	11	13	-	0.0%	\$	61,807
66	10	12	4	0.0%	\$	59,338
30	12	14	-	0.0%	\$	43,591
31	10	11	-	100.0%	\$	67,269
41	10	11	-	0.0%	\$	68,133
30	11	13	1	0.0%	\$	42,904
12	9	9	-	100.0%	\$	61,478
18	10	11	-	0.0%	\$	41,803
31	10	12	-	0.0%	\$	38,849
28	9	9	4	100.0%	\$	52,936
16	9	9	3	100.0%	\$	34,648
20	10	10	-	100.0%	\$	45,661
21	9	9	-	0.0%	\$	37,574
26	9	9	3	0.0%	\$	59,362
84	9	9	-	0.0%	\$	57,284
26	9	9	-	0.0%	\$	40,686
232	11	13	6	0.0%	\$	76,792
37	9	9	-	100.0%	\$	48,040
8	9	9	1	0.0%	\$	53,031
5	9	9	-	0.0%	\$	48,394
17	9	9	-	0.0%	\$	39,412
40	10	11	4	0.0%	\$	37,233
11	10	11	-	100.0%	\$	53,253

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

46	13	17	2	0.0%	\$	57,599
40	10	12	4	0.0%	\$	42,782
89	19	31	1	100.0%	\$	46,600
18	10	10	1	0.0%	\$	53,968
34	12	15	-	0.0%	\$	43,569
18	10	11	1	0.0%	\$	48,779
20	9	9	1	0.0%	\$	46,764
12	9	9	-	0.0%	\$	43,659
8	12	14	-	0.0%	\$	72,451
12	11	12	1	0.0%	\$	41,564
9	9	9	-	100.0%	\$	31,787
38	13	19	1	0.0%	\$	63,612
15	10	11	1	0.0%	\$	32,692
29	12	14	-	100.0%	\$	59,724
4	9	9	-	0.0%	\$	48,566
99	21	39	-	0.0%	\$	66,360
128	24	49	-	0.0%	\$	63,099
28	14	20	-	100.0%	\$	66,937
4	9	9	-	0.0%	\$	44,438
7	9	9	-	0.0%	\$	55,008
11	9	9	-	100.0%	\$	41,268
95	28	64	-	100.0%	\$	54,088
29	15	22	-	0.0%	\$	40,499
5	9	9	1	0.0%	\$	43,386
2	9	9	-	0.0%	\$	45,089
8	11	12	-	0.0%	\$	57,392
1	9	9	-	0.0%	\$	53,866

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

7	10	12	-	0.0%	\$	58,022
5	9	9	1	0.0%	\$	43,436
128	54	232	-	100.0%	\$	51,210
14	8	8	-	0.0%	\$	62,249
88	9	9	2	93.8%	\$	74,268
1,029	9	9	17	0.0%	\$	80,169
404	10	12	7	77.0%	\$	46,779
626	10	12	26	0.0%	\$	52,166
283	8	9	22	0.0%	\$	53,377
27	8	8	-	0.0%	\$	79,173
251	8	9	9	0.0%	\$	54,165
437	9	9	8	60.0%	\$	67,187
2,409	10	12	46	57.5%	\$	54,210
356	13	17	6	0.0%	\$	53,251
102	9	10	-	82.8%	\$	42,715
54	9	9	1	0.0%	\$	62,238
201	9	11	-	57.1%	\$	79,358
115	12	15	-	100.0%	\$	53,917
35	8	8	1	0.0%	\$	48,580
455	8	8	22	90.2%	\$	71,789
44	9	10	-	0.0%	\$	47,648
61	8	9	8	100.0%	\$	54,093
88	9	9	-	0.0%	\$	72,277
859	8	9	37	44.4%	\$	52,226
313	12	16	2	73.7%	\$	52,269
33	8	8	1	0.0%	\$	56,991
469	9	9	9	70.7%	\$	56,381

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

175	8	8	4	88.9%	\$	62,779
1,095	9	10	27	94.9%	\$	101,463
105	11	14	2	0.0%	\$	57,363
85	9	9	1	0.0%	\$	61,118
148	10	12	1	62.5%	\$	51,382
77	9	10	2	0.0%	\$	41,630
201	9	9	10	0.0%	\$	62,204
64	8	9	3	0.0%	\$	53,135
101	10	12	1	0.0%	\$	43,200
250	9	9	3	68.0%	\$	64,904
74	9	10	-	0.0%	\$	43,879
62	10	11	1	0.0%	\$	51,723
84	9	10	4	0.0%	\$	55,517
1,007	9	10	19	83.3%	\$	96,936
219	8	9	4	66.7%	\$	81,925
196	10	11	1	60.8%	\$	50,500
20	8	9	-	100.0%	\$	54,351
634	8	8	25	73.2%	\$	63,567
202	9	10	12	0.0%	\$	60,296
96	9	10	3	75.9%	\$	59,471
173	8	8	1	0.0%	\$	68,180
590	9	10	40	58.3%	\$	87,087
93	9	10	2	82.0%	\$	47,339
277	9	9	3	0.0%	\$	51,046
35	8	8	2	0.0%	\$	46,262
76	9	9	4	62.5%	\$	51,088
73	9	9	1	0.0%	\$	56,556

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

96	9	9	7	0.0%	\$	39,994
555	12	16	10	0.0%	\$	82,284
44	9	10	-	88.0%	\$	55,679
48	8	9	2	0.0%	\$	46,244
39	9	10	-	100.0%	\$	46,810
47	8	9	2	100.0%	\$	57,438
81	9	10	4	0.0%	\$	47,999
28	8	8	3	0.0%	\$	71,874
190	8	9	16	0.0%	\$	67,804
27	9	9	1	0.0%	\$	51,338
34	9	9	-	0.0%	\$	50,999
65	8	8	6	0.0%	\$	48,418
18	8	8	2	0.0%	\$	49,776
35	9	10	1	100.0%	\$	58,295
24	8	8	2	80.0%	\$	68,043
29	10	11	1	0.0%	\$	52,699
72	11	14	-	100.0%	\$	79,348
31	8	8	-	100.0%	\$	54,376
122	10	12	1	0.0%	\$	102,858
48	11	14	-	100.0%	\$	36,730
21	8	8	1	0.0%	\$	51,089
19	9	9	-	0.0%	\$	41,127
43	9	9	3	100.0%	\$	63,754
57	11	14	1	64.4%	\$	48,689
20	9	9	3	100.0%	\$	56,503
15	9	10	-	0.0%	\$	51,302
54	8	8	2	83.3%	\$	49,436

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

13	8	8	1	0.0%	\$	44,213
211	24	52	-	0.0%	\$	61,341
51	8	8	2	0.0%	\$	80,063
25	8	9	-	0.0%	\$	58,017
37	8	8	1	0.0%	\$	42,162
29	9	9	-	0.0%	\$	49,580
32	10	11	2	0.0%	\$	37,331
47	11	12	4	0.0%	\$	39,079
50	12	15	-	100.0%	\$	36,976
41	9	11	1	0.0%	\$	48,029
39	10	11	1	80.0%	\$	38,418
11	10	12	-	0.0%	\$	53,132
16	8	8	-	0.0%	\$	32,144
16	10	10	-	0.0%	\$	46,368
39	8	9	-	0.0%	\$	47,031
18	10	11	2	0.0%	\$	53,493
21	10	11	-	0.0%	\$	53,626
38	11	15	-	0.0%	\$	37,834
32	10	11	1	0.0%	\$	49,498
20	11	14	-	0.0%	\$	36,230
31	21	43	-	100.0%	\$	48,726
16	8	8	-	100.0%	\$	47,554
25	11	13	-	0.0%	\$	72,121
11	8	8	-	0.0%	\$	40,936
21	8	8	1	0.0%	\$	50,002
5	8	8	-	100.0%	\$	33,541
11	10	12	-	100.0%	\$	59,219

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

14	9	10	-	0.0%	\$	43,074
46	15	23	-	0.0%	\$	38,430
19	9	9	-	0.0%	\$	48,392
13	9	11	-	0.0%	\$	41,382
12	8	8	1	0.0%	\$	46,495
23	12	17	-	0.0%	\$	53,147
9	8	8	-	0.0%	\$	68,749
12	8	8	-	0.0%	\$	51,859
5	8	8	-	0.0%	\$	66,228
19	12	16	-	0.0%	\$	51,746
16	12	16	-	0.0%	\$	50,539
27	9	10	3	100.0%	\$	52,804
2	8	8	-	0.0%	\$	45,221
9	15	19	-	100.0%	\$	49,685
4	8	8	-	100.0%	\$	42,053
13	9	11	1	0.0%	\$	45,161
3	8	8	-	0.0%	\$	31,557
25	14	22	-	100.0%	\$	55,343
10	12	17	-	0.0%	\$	45,966
6	8	8	-	0.0%	\$	31,659
10	11	14	-	0.0%	\$	71,035
3	8	8	-	0.0%	\$	47,429
14	8	8	-	0.0%	\$	52,050
8	12	13	-	0.0%	\$	65,771
17	15	26	-	0.0%	\$	57,548
10	17	28	-	0.0%	\$	47,279
4	8	8	-	100.0%	\$	52,401

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

2	8	8	-	0.0%	\$	50,553
1	8	8	-	0.0%	\$	41,009
1	8	8	-	0.0%	\$	52,496
17	15	23	-	100.0%	\$	45,405
2	8	8	-	0.0%	\$	43,274
7	16	28	-	0.0%	\$	64,399
116	7	7	5	100.0%	\$	78,503
70	8	8	1	50.0%	\$	53,906
157	8	9	5	0.0%	\$	53,612
146	8	8	2	0.0%	\$	43,303
397	7	8	21	92.9%	\$	59,408
150	10	13	-	0.0%	\$	53,820
442	9	12	5	0.0%	\$	50,112
633	8	9	23	0.0%	\$	51,354
252	7	7	15	0.0%	\$	49,082
201	8	9	1	25.0%	\$	38,409
47	7	7	-	0.0%	\$	45,788
1,221	8	8	43	45.0%	\$	69,475
58	8	9	1	100.0%	\$	50,396
100	8	9	-	84.5%	\$	45,615
89	7	7	7	69.2%	\$	54,292
68	8	8	5	79.2%	\$	58,057
144	8	8	7	0.0%	\$	50,283
80	9	11	-	50.0%	\$	47,057
99	7	7	11	0.0%	\$	41,556
117	9	10	2	0.0%	\$	49,668
59	7	8	1	94.1%	\$	52,945

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

154	7	7	2	0.0%	\$	56,102
40	7	7	1	100.0%	\$	56,555
345	7	7	19	0.0%	\$	73,971
223	11	13	1	0.0%	\$	50,480
249	8	9	1	0.0%	\$	70,626
30	7	8	1	0.0%	\$	70,938
65	7	8	-	0.0%	\$	45,796
71	9	11	-	0.0%	\$	58,132
43	7	7	2	0.0%	\$	41,541
9	7	7	-	0.0%	\$	55,418
130	8	9	-	77.4%	\$	60,187
19	7	7	1	0.0%	\$	48,589
252	7	7	12	0.0%	\$	52,447
162	7	7	3	51.3%	\$	52,798
46	7	7	-	100.0%	\$	55,807
519	9	9	11	0.0%	\$	59,616
49	7	7	1	0.0%	\$	42,821
65	8	9	-	0.0%	\$	46,365
145	8	8	5	0.0%	\$	60,044
62	8	8	1	0.0%	\$	62,817
137	9	11	-	0.0%	\$	50,610
20	8	8	-	0.0%	\$	38,613
84	8	8	3	100.0%	\$	59,428
142	8	8	5	90.0%	\$	66,145
41	10	13	-	100.0%	\$	45,817
651	7	8	18	90.5%	\$	84,170
55	9	10	-	0.0%	\$	49,494

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

51	7	7	-	0.0%	\$	43,767
26	8	9	1	0.0%	\$	41,262
29	8	8	-	0.0%	\$	54,915
186	13	20	2	0.0%	\$	48,707
48	8	9	1	0.0%	\$	56,489
41	7	8	1	0.0%	\$	52,532
181	8	8	7	0.0%	\$	65,883
22	8	9	-	0.0%	\$	47,747
93	12	17	2	50.0%	\$	49,055
21	7	8	-	0.0%	\$	48,578
40	7	7	-	0.0%	\$	59,443
31	7	7	3	87.8%	\$	48,020
48	8	9	3	0.0%	\$	45,510
236	9	10	11	0.0%	\$	87,391
49	7	7	1	0.0%	\$	86,317
17	7	7	1	0.0%	\$	36,423
63	7	8	2	0.0%	\$	61,022
89	10	12	-	0.0%	\$	60,973
69	8	9	-	0.0%	\$	48,017
54	9	11	-	75.0%	\$	45,309
34	7	7	-	100.0%	\$	59,413
90	7	7	1	0.0%	\$	67,434
56	9	11	-	0.0%	\$	58,186
104	7	7	3	91.7%	\$	70,942
15	8	9	1	0.0%	\$	44,100
36	7	8	1	0.0%	\$	55,766
50	16	28	-	83.3%	\$	70,093

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

19	9	11	2	100.0%	\$	42,897
46	9	10	1	0.0%	\$	62,366
108	8	8	4	0.0%	\$	75,799
16	7	7	1	0.0%	\$	51,835
17	8	8	-	100.0%	\$	41,201
36	8	9	-	0.0%	\$	53,947
23	7	7	-	0.0%	\$	42,351
67	7	8	-	100.0%	\$	66,898
22	7	8	1	100.0%	\$	50,568
63	11	15	1	0.0%	\$	62,782
29	8	9	1	90.9%	\$	48,976
30	8	8	-	0.0%	\$	50,956
50	8	8	3	0.0%	\$	46,058
37	8	9	1	0.0%	\$	67,498
26	8	8	1	0.0%	\$	58,203
23	7	8	-	0.0%	\$	40,808
38	8	8	-	0.0%	\$	53,409
89	8	10	3	0.0%	\$	61,849
16	7	7	2	100.0%	\$	47,484
35	8	10	1	0.0%	\$	59,323
36	7	7	3	100.0%	\$	71,207
38	7	7	1	0.0%	\$	49,788
25	7	7	1	0.0%	\$	51,868
15	7	7	1	0.0%	\$	49,208
15	8	9	2	0.0%	\$	53,050
33	7	8	2	0.0%	\$	60,801
74	9	10	4	0.0%	\$	48,499

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

37	8	8	-	100.0%	\$	40,545
28	7	7	-	0.0%	\$	53,387
49	8	8	-	0.0%	\$	50,412
19	8	8	-	0.0%	\$	41,156
35	9	11	2	100.0%	\$	44,297
26	8	9	1	0.0%	\$	43,125
27	7	7	1	0.0%	\$	53,904
6	7	7	-	0.0%	\$	40,639
12	7	7	-	0.0%	\$	49,639
37	10	13	-	0.0%	\$	47,733
36	7	7	3	0.0%	\$	66,056
8	7	7	-	0.0%	\$	54,871
20	10	11	-	0.0%	\$	49,487
22	8	10	-	0.0%	\$	43,502
19	7	8	1	0.0%	\$	46,720
18	7	7	-	100.0%	\$	66,164
17	9	10	-	100.0%	\$	49,332
7	7	7	-	0.0%	\$	55,444
51	15	23	1	0.0%	\$	56,492
21	8	8	1	0.0%	\$	52,891
12	8	8	2	0.0%	\$	51,963
18	10	12	-	0.0%	\$	84,021
17	8	8	-	0.0%	\$	44,624
19	8	8	1	0.0%	\$	49,972
13	7	7	-	100.0%	\$	49,857
9	7	7	-	0.0%	\$	32,613
28	11	17	-	0.0%	\$	41,968

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

7	7	7	-	100.0%	\$	59,705
5	7	7	-	100.0%	\$	64,053
4	7	7	-	100.0%	\$	52,840
5	7	7	-	0.0%	\$	48,421
12	9	11	-	100.0%	\$	28,452
6	7	7	-	0.0%	\$	56,769
28	9	11	-	0.0%	\$	58,033
9	7	7	1	0.0%	\$	55,357
9	9	10	-	100.0%	\$	59,003
12	9	10	-	0.0%	\$	50,565
3	7	7	-	0.0%	\$	45,311
3	7	7	-	100.0%	\$	40,426
28	13	21	-	100.0%	\$	37,828
13	7	7	-	0.0%	\$	85,899
8	7	7	-	0.0%	\$	48,192
8	10	12	-	0.0%	\$	53,632
43	18	35	-	0.0%	\$	41,418
1	7	7	-	0.0%	\$	59,457
17	14	21	-	100.0%	\$	57,208
4	7	7	-	0.0%	\$	56,451
14	7	7	1	0.0%	\$	37,350
4	7	7	1	0.0%	\$	59,913
9	7	7	-	0.0%	\$	98,875
9	12	15	-	0.0%	\$	35,249
3	7	7	-	0.0%	\$	59,020
7	7	7	-	0.0%	\$	45,342
379	58	217	-	0.0%	\$	51,402

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

10	16	33	-	0.0%	\$	47,499
17	15	29	1	0.0%	\$	35,880
1	7	7	-	0.0%	\$	83,330
1	7	7	-	0.0%	\$	44,409
364	6	6	8	0.0%	\$	87,817
101	6	7	-	100.0%	\$	47,840
840	8	8	7	100.0%	\$	52,318
126	9	12	1	100.0%	\$	54,063
40	6	7	-	0.0%	\$	47,685
261	7	7	4	0.0%	\$	63,755
176	8	10	3	95.2%	\$	56,478
61	7	7	-	0.0%	\$	46,653
77	7	7	5	0.0%	\$	48,335
40	6	6	-	0.0%	\$	55,174
114	7	7	1	100.0%	\$	58,258
206	7	7	4	93.5%	\$	82,113
273	6	6	5	0.0%	\$	82,808
91	7	8	-	0.0%	\$	52,797
65	6	6	-	100.0%	\$	52,798
54	7	7	1	0.0%	\$	60,556
110	6	6	3	0.0%	\$	67,087
180	7	7	2	0.0%	\$	68,106
56	6	6	1	75.0%	\$	52,538
412	7	8	10	80.0%	\$	51,071
192	7	7	10	100.0%	\$	95,840
29	7	7	-	0.0%	\$	38,067
25	7	8	-	0.0%	\$	38,405

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

152	6	6	2	0.0%	\$	76,530
75	6	6	3	0.0%	\$	53,745
49	6	6	1	73.7%	\$	51,962
4	6	6	1	0.0%	\$	54,663
21	6	6	2	62.5%	\$	58,891
42	6	7	-	80.0%	\$	45,969
110	7	7	3	0.0%	\$	65,468
22	7	8	-	100.0%	\$	38,341
186	8	9	10	90.0%	\$	45,129
65	14	24	1	0.0%	\$	50,374
72	7	8	-	0.0%	\$	68,734
43	6	6	2	0.0%	\$	44,366
31	8	9	-	0.0%	\$	45,604
50	7	8	2	66.7%	\$	45,130
113	7	7	7	0.0%	\$	58,228
90	7	7	4	0.0%	\$	50,381
33	6	7	2	0.0%	\$	46,259
39	6	7	1	100.0%	\$	61,808
157	7	7	3	100.0%	\$	56,848
107	6	6	1	0.0%	\$	55,136
62	6	7	-	100.0%	\$	65,163
54	8	9	-	0.0%	\$	64,777
43	7	7	1	100.0%	\$	64,121
133	7	8	6	0.0%	\$	52,633
70	6	6	1	0.0%	\$	63,677
30	6	6	1	88.9%	\$	63,398
41	8	11	-	0.0%	\$	65,323

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

17	6	6	-	64.3%	\$	47,528
38	6	6	1	0.0%	\$	65,793
27	6	6	1	95.0%	\$	42,913
23	6	7	-	0.0%	\$	62,056
130	6	6	2	50.0%	\$	63,119
69	6	6	1	0.0%	\$	48,788
23	6	6	1	0.0%	\$	46,284
50	7	8	1	0.0%	\$	52,689
25	9	11	-	0.0%	\$	47,117
47	7	8	1	100.0%	\$	48,263
61	8	10	5	0.0%	\$	53,978
28	6	6	-	100.0%	\$	51,751
79	6	6	2	0.0%	\$	53,882
48	7	8	2	0.0%	\$	50,978
39	7	8	2	0.0%	\$	55,978
18	7	7	1	0.0%	\$	55,776
29	7	7	3	0.0%	\$	50,951
11	6	6	-	0.0%	\$	43,591
19	7	7	2	0.0%	\$	50,180
41	6	6	-	94.4%	\$	45,374
7	6	6	-	100.0%	\$	44,171
65	6	6	6	100.0%	\$	71,374
20	6	6	2	0.0%	\$	42,479
15	6	6	2	0.0%	\$	39,513
30	7	7	-	0.0%	\$	62,126
22	6	6	1	0.0%	\$	38,045
22	6	7	-	0.0%	\$	47,205

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

13	8	8	-	0.0%	\$	47,008
47	6	6	-	0.0%	\$	56,651
63	9	11	-	0.0%	\$	59,732
14	6	6	1	100.0%	\$	44,635
13	6	6	1	0.0%	\$	44,565
90	13	23	-	0.0%	\$	41,511
42	6	6	1	100.0%	\$	42,099
42	8	9	1	0.0%	\$	43,972
6	6	6	-	0.0%	\$	46,645
18	6	6	1	0.0%	\$	42,025
14	7	8	1	0.0%	\$	48,056
59	8	9	-	92.9%	\$	49,341
18	7	7	2	0.0%	\$	46,441
25	8	9	-	0.0%	\$	57,257
13	6	6	-	100.0%	\$	56,832
7	6	6	-	0.0%	\$	48,951
13	6	6	-	50.0%	\$	40,909
15	7	8	-	0.0%	\$	52,332
127	16	31	1	90.9%	\$	48,988
20	6	6	-	0.0%	\$	50,162
13	6	6	1	100.0%	\$	39,556
27	7	8	1	0.0%	\$	67,758
10	6	6	-	100.0%	\$	37,732
8	6	6	-	100.0%	\$	53,337
16	6	7	1	100.0%	\$	43,226
22	6	6	-	0.0%	\$	43,096
14	7	8	-	0.0%	\$	38,093

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

8	6	6	-	100.0%	\$	47,067
7	6	6	-	0.0%	\$	37,563
23	6	7	4	0.0%	\$	55,245
18	7	7	-	0.0%	\$	42,132
32	7	8	1	75.0%	\$	50,149
30	10	13	-	0.0%	\$	66,557
64	11	17	1	0.0%	\$	49,070
6	6	6	1	0.0%	\$	44,683
11	6	6	-	0.0%	\$	30,029
12	8	9	-	0.0%	\$	46,447
29	6	7	-	100.0%	\$	62,800
5	6	6	-	100.0%	\$	55,190
7	6	6	-	100.0%	\$	35,841
10	6	6	-	0.0%	\$	47,508
5	6	6	-	0.0%	\$	34,238
4	6	6	-	0.0%	\$	47,075
6	6	6	1	0.0%	\$	48,179
5	6	6	-	100.0%	\$	49,210
16	7	7	1	100.0%	\$	59,117
12	8	10	-	0.0%	\$	34,009
5	6	6	-	0.0%	\$	38,927
17	7	7	1	100.0%	\$	47,246
4	6	6	-	0.0%	\$	48,070
8	7	7	-	0.0%	\$	35,596
9	6	6	-	0.0%	\$	49,767
273	15	28	-	0.0%	\$	81,850
13	6	6	1	0.0%	\$	33,171

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

35	6	7	-	0.0%	\$	59,807
16	7	8	1	0.0%	\$	58,761
12	6	6	1	100.0%	\$	52,919
9	6	6	-	0.0%	\$	57,971
19	7	8	-	100.0%	\$	69,975
5	6	6	-	0.0%	\$	44,688
8	9	10	-	0.0%	\$	32,691
4	6	6	-	0.0%	\$	32,922
3	6	6	-	0.0%	\$	51,028
4	6	6	-	100.0%	\$	50,278
2	6	6	-	0.0%	\$	57,332
7	6	6	-	100.0%	\$	65,379
2	6	6	-	0.0%	\$	41,899
4	6	6	-	100.0%	\$	64,456
33	12	20	1	100.0%	\$	74,794
3	6	6	-	0.0%	\$	36,176
2	6	6	-	0.0%	\$	49,773
5	6	6	-	0.0%	\$	37,831
6	6	6	-	0.0%	\$	53,661
7	7	10	-	0.0%	\$	67,746
2	6	6	-	0.0%	\$	46,101
14	11	15	-	0.0%	\$	48,182
7	6	6	-	100.0%	\$	40,179
1	6	6	-	0.0%	\$	58,838
3	6	6	-	0.0%	\$	50,858
1	6	6	-	0.0%	\$	34,090
27	8	10	2	0.0%	\$	61,221

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

65	5	5	2	69.8%	\$	47,477
70	5	6	1	100.0%	\$	51,393
44	5	5	1	0.0%	\$	47,748
38	5	5	-	66.7%	\$	64,714
368	6	6	8	85.9%	\$	57,612
292	6	7	5	93.8%	\$	69,665
208	6	6	3	93.3%	\$	54,292
88	5	5	2	44.8%	\$	59,975
46	6	6	1	0.0%	\$	49,385
100	6	7	2	100.0%	\$	50,089
279	6	6	5	0.0%	\$	55,874
311	6	6	2	64.7%	\$	81,002
50	5	6	2	0.0%	\$	45,278
219	5	6	13	0.0%	\$	57,196
83	6	8	-	0.0%	\$	58,624
87	5	5	4	0.0%	\$	60,431
103	5	5	5	0.0%	\$	45,884
55	5	6	1	0.0%	\$	47,202
208	6	6	4	75.0%	\$	44,517
100	5	6	6	0.0%	\$	80,189
49	5	5	-	0.0%	\$	57,337
63	6	6	1	0.0%	\$	50,427
253	6	6	7	0.0%	\$	81,061
87	6	7	3	0.0%	\$	57,939
80	6	7	2	0.0%	\$	49,935
46	5	5	1	100.0%	\$	62,389
41	6	6	-	100.0%	\$	46,187

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

101	6	6	-	85.7%	\$	73,864
58	7	8	2	0.0%	\$	43,766
14	7	8	-	0.0%	\$	37,148
67	5	6	2	0.0%	\$	61,906
14	5	5	-	0.0%	\$	55,580
375	6	7	7	0.0%	\$	53,788
15	6	7	-	0.0%	\$	53,447
29	6	6	-	0.0%	\$	55,602
79	5	6	2	100.0%	\$	85,624
41	5	5	1	71.4%	\$	57,367
194	6	7	3	0.0%	\$	56,169
33	5	5	1	0.0%	\$	47,942
47	5	5	-	0.0%	\$	64,863
152	5	6	2	0.0%	\$	84,213
40	7	8	-	83.3%	\$	48,860
143	6	7	3	0.0%	\$	65,280
166	6	8	1	0.0%	\$	44,116
13	5	5	1	0.0%	\$	54,491
36	6	6	-	0.0%	\$	61,995
29	5	5	4	0.0%	\$	51,491
47	5	5	2	0.0%	\$	42,728
31	5	6	-	0.0%	\$	51,393
40	5	5	2	0.0%	\$	60,251
20	5	5	-	100.0%	\$	48,606
50	5	5	-	0.0%	\$	39,790
345	6	8	10	0.0%	\$	86,403
135	6	8	4	0.0%	\$	62,635

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

69	5	6	1	100.0%	\$	48,794
9	5	5	-	0.0%	\$	35,293
63	6	7	2	83.3%	\$	53,360
21	5	5	1	100.0%	\$	48,345
41	5	5	1	93.0%	\$	61,579
24	5	5	1	0.0%	\$	50,257
48	6	6	-	100.0%	\$	65,831
23	5	5	1	0.0%	\$	45,566
12	5	5	-	0.0%	\$	40,395
11	5	5	-	0.0%	\$	53,921
22	5	6	1	60.0%	\$	51,805
22	5	5	1	0.0%	\$	46,512
4	5	5	-	0.0%	\$	61,764
37	6	7	-	0.0%	\$	78,192
25	6	7	1	0.0%	\$	47,551
16	6	6	-	0.0%	\$	47,319
29	6	6	1	0.0%	\$	53,970
35	6	6	1	100.0%	\$	65,435
38	6	6	1	92.3%	\$	55,202
18	6	6	1	0.0%	\$	57,613
30	5	5	2	0.0%	\$	42,188
88	7	9	2	0.0%	\$	56,337
9	5	5	-	0.0%	\$	36,032
10	5	5	1	0.0%	\$	67,498
8	5	5	-	0.0%	\$	61,044
17	5	6	-	100.0%	\$	50,368
11	6	8	-	0.0%	\$	36,658

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

19	5	5	-	0.0%	\$	65,969
20	5	5	1	100.0%	\$	56,740
19	5	5	1	0.0%	\$	48,670
22	5	5	-	0.0%	\$	47,885
31	6	8	-	100.0%	\$	44,623
10	5	5	-	100.0%	\$	52,313
17	5	5	-	0.0%	\$	46,420
22	8	11	-	0.0%	\$	41,038
10	5	5	-	0.0%	\$	38,040
11	5	5	-	0.0%	\$	35,685
13	5	5	1	0.0%	\$	51,804
22	6	7	1	0.0%	\$	42,532
17	6	6	1	0.0%	\$	47,858
19	7	8	1	0.0%	\$	37,901
44	6	7	-	0.0%	\$	102,136
10	5	5	-	100.0%	\$	48,258
12	5	5	-	0.0%	\$	39,225
8	5	5	-	0.0%	\$	56,690
52	13	25	-	0.0%	\$	57,002
5	5	5	-	0.0%	\$	40,650
59	9	17	-	100.0%	\$	70,162
19	5	5	-	0.0%	\$	39,037
30	7	10	-	0.0%	\$	41,517
11	5	5	-	0.0%	\$	58,641
13	5	5	1	0.0%	\$	52,269
17	8	11	-	100.0%	\$	54,313
10	5	5	1	100.0%	\$	56,509

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

28	5	6	-	0.0%	\$	67,039
8	5	5	-	0.0%	\$	40,486
28	8	12	-	0.0%	\$	50,376
49	14	29	1	0.0%	\$	68,724
12	6	6	-	100.0%	\$	41,700
28	6	6	1	0.0%	\$	58,987
22	6	6	-	100.0%	\$	53,111
7	5	5	-	0.0%	\$	33,160
6	5	5	-	100.0%	\$	59,500
4	5	5	-	0.0%	\$	44,467
33	8	11	-	0.0%	\$	50,064
8	5	5	1	0.0%	\$	71,024
12	7	7	-	100.0%	\$	55,303
20	6	7	-	0.0%	\$	88,475
6	5	5	-	0.0%	\$	96,057
7	5	5	-	100.0%	\$	49,287
9	6	7	-	0.0%	\$	43,714
17	9	12	-	0.0%	\$	43,573
54	6	6	-	100.0%	\$	52,577
13	6	8	-	0.0%	\$	53,405
5	5	5	1	100.0%	\$	38,284
5	5	5	-	100.0%	\$	47,412
22	6	7	-	0.0%	\$	44,154
5	5	5	-	0.0%	\$	54,213
22	6	8	-	0.0%	\$	46,742
9	6	6	-	0.0%	\$	46,378
15	5	6	-	0.0%	\$	68,162

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

23	5	6	-	100.0%	\$	36,718
3	5	5	-	100.0%	\$	51,514
56	9	13	-	0.0%	\$	52,588
49	10	18	-	0.0%	\$	42,603
7	5	5	-	0.0%	\$	56,738
8	5	5	-	0.0%	\$	58,384
3	5	5	1	0.0%	\$	34,134
23	6	6	-	0.0%	\$	50,157
14	6	7	-	0.0%	\$	69,246
16	7	9	-	0.0%	\$	52,513
10	5	5	1	0.0%	\$	40,064
7	5	5	-	0.0%	\$	44,431
6	5	5	-	0.0%	\$	43,457
5	5	5	-	0.0%	\$	47,153
4	5	5	1	0.0%	\$	33,085
10	6	7	-	0.0%	\$	36,299
2	5	5	-	0.0%	\$	47,682
66	10	17	-	100.0%	\$	59,983
4	5	5	-	0.0%	\$	64,570
1	5	5	-	0.0%	\$	50,123
11	5	5	-	0.0%	\$	58,693
3	5	5	-	0.0%	\$	43,083
19	7	7	-	0.0%	\$	33,108
8	7	7	-	100.0%	\$	37,319
3	5	5	-	0.0%	\$	34,002
2	5	5	-	0.0%	\$	53,188
6	5	5	-	0.0%	\$	54,210

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

9	9	12	-	0.0%	\$	50,949
3	5	5	-	0.0%	\$	50,590
3	5	5	-	100.0%	\$	49,287
4	5	5	1	100.0%	\$	52,681
7	5	5	-	0.0%	\$	46,565
4	5	5	-	100.0%	\$	48,780
2	5	5	-	100.0%	\$	47,360
3	5	5	-	100.0%	\$	51,305
18	6	8	-	0.0%	\$	63,633
2	5	5	-	100.0%	\$	58,261
3	5	5	-	0.0%	\$	44,837
3	5	5	-	0.0%	\$	58,234
38	16	34	-	0.0%	\$	39,735
7	5	5	1	0.0%	\$	45,385
8	8	13	-	0.0%	\$	55,371
6	5	5	-	0.0%	\$	64,832
1	5	5	-	0.0%	\$	25,973
22	13	23	-	0.0%	\$	64,524
8	5	5	-	0.0%	\$	59,266
2	5	5	-	0.0%	\$	34,442
1	5	5	-	0.0%	\$	46,777
2	5	5	-	0.0%	\$	55,692
2	5	5	-	0.0%	\$	49,073
1	5	5	-	0.0%	\$	43,119
6	7	10	-	0.0%	\$	64,799
3	5	5	-	100.0%	\$	39,891
1	5	5	-	0.0%	\$	51,235

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

3	5	5	-	0.0%	\$	46,690
1	5	5	-	0.0%	\$	68,243
200	45	213	-	0.0%	\$	58,105
1	5	5	-	0.0%	\$	44,572
73	29	111	-	0.0%	\$	46,490
76	4	4	-	87.5%	\$	56,383
402	4	4	11	76.7%	\$	83,695
96	5	6	-	0.0%	\$	57,069
122	4	4	-	0.0%	\$	68,978
21	5	6	1	0.0%	\$	64,768
383	4	4	6	67.4%	\$	38,785
54	4	4	-	100.0%	\$	49,471
88	4	5	3	0.0%	\$	51,777
84	4	4	-	0.0%	\$	67,372
16	4	4	-	0.0%	\$	56,678
100	4	4	4	0.0%	\$	48,858
85	4	4	11	73.3%	\$	53,833
22	4	4	1	100.0%	\$	47,291
98	4	4	3	81.0%	\$	50,893
29	5	5	-	100.0%	\$	53,522
63	4	5	3	100.0%	\$	61,508
47	4	5	4	92.9%	\$	50,748
27	4	4	3	0.0%	\$	55,052
112	5	6	2	78.1%	\$	65,993
13	4	4	2	100.0%	\$	49,292
131	6	8	1	83.7%	\$	57,785
130	4	5	1	0.0%	\$	72,400

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

41	5	6	1	0.0%	\$	63,938
65	4	4	1	69.2%	\$	53,738
197	5	5	8	0.0%	\$	89,175
46	5	6	-	0.0%	\$	61,186
37	4	4	2	0.0%	\$	54,382
37	5	5	1	0.0%	\$	44,811
66	5	5	-	0.0%	\$	49,242
20	5	7	-	100.0%	\$	51,083
13	4	4	1	80.0%	\$	34,894
12	4	4	-	100.0%	\$	58,307
27	4	4	5	0.0%	\$	43,911
71	4	5	6	0.0%	\$	76,523
27	4	4	1	0.0%	\$	45,584
39	4	4	7	0.0%	\$	61,776
15	5	5	-	0.0%	\$	46,629
41	4	4	1	100.0%	\$	66,681
21	4	4	2	95.2%	\$	53,961
23	4	5	-	0.0%	\$	46,017
62	4	4	-	63.6%	\$	56,188
46	5	6	-	0.0%	\$	43,328
25	4	4	1	0.0%	\$	43,527
31	5	6	1	0.0%	\$	36,471
38	5	6	-	100.0%	\$	48,352
22	5	5	-	0.0%	\$	61,699
28	4	4	1	0.0%	\$	50,672
28	5	6	-	100.0%	\$	70,495
21	4	4	-	0.0%	\$	47,202

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

9	4	4	-	0.0%	\$	67,349
13	4	4	-	100.0%	\$	62,109
40	5	5	-	100.0%	\$	50,504
21	4	4	-	0.0%	\$	46,411
13	4	4	-	0.0%	\$	56,211
17	4	4	-	0.0%	\$	43,651
53	4	4	-	83.3%	\$	57,120
61	7	10	-	0.0%	\$	35,594
11	4	4	-	0.0%	\$	47,401
32	5	5	-	0.0%	\$	59,528
120	5	5	1	0.0%	\$	48,758
54	5	6	1	100.0%	\$	63,608
16	4	4	-	0.0%	\$	36,192
14	5	5	1	0.0%	\$	46,345
10	4	4	-	0.0%	\$	56,456
10	4	5	-	100.0%	\$	39,048
13	4	4	-	100.0%	\$	44,607
13	4	4	-	0.0%	\$	40,972
20	4	5	-	0.0%	\$	42,439
8	4	4	-	0.0%	\$	40,025
11	4	4	-	0.0%	\$	39,859
112	6	8	1	0.0%	\$	101,427
11	4	4	1	100.0%	\$	39,394
28	5	5	-	0.0%	\$	43,031
70	5	6	-	0.0%	\$	52,278
30	4	5	-	100.0%	\$	65,439
13	4	4	-	100.0%	\$	49,577

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

19	5	5	1	0.0%	\$	39,443
26	5	6	-	100.0%	\$	46,512
16	4	4	1	0.0%	\$	48,799
42	6	8	-	0.0%	\$	49,611
13	4	4	-	0.0%	\$	43,159
29	4	4	3	100.0%	\$	57,019
24	4	4	-	0.0%	\$	73,500
19	5	6	-	0.0%	\$	50,580
7	4	4	1	100.0%	\$	40,602
13	5	6	-	100.0%	\$	42,149
9	4	4	-	0.0%	\$	41,440
16	5	5	-	0.0%	\$	50,856
27	5	6	-	0.0%	\$	44,502
5	4	4	-	100.0%	\$	41,592
6	4	4	-	0.0%	\$	42,618
9	4	4	-	0.0%	\$	47,284
33	7	10	2	100.0%	\$	66,209
16	4	4	-	0.0%	\$	51,534
17	4	4	1	0.0%	\$	57,701
13	4	4	-	0.0%	\$	47,101
78	5	6	1	0.0%	\$	87,377
34	5	5	1	66.7%	\$	58,239
19	5	6	-	75.0%	\$	56,099
11	4	5	1	0.0%	\$	60,908
15	4	4	-	0.0%	\$	51,141
17	5	5	-	0.0%	\$	51,249
20	4	4	2	0.0%	\$	59,304

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

12	4	4	-	0.0%	\$	43,050
19	4	4	1	0.0%	\$	50,594
13	4	4	-	100.0%	\$	59,942
3	4	4	-	0.0%	\$	36,869
16	5	6	-	100.0%	\$	57,690
28	4	5	-	100.0%	\$	84,861
14	5	5	-	0.0%	\$	47,171
5	4	4	-	0.0%	\$	42,878
5	4	4	-	0.0%	\$	64,190
6	4	4	-	0.0%	\$	46,538
19	4	4	-	0.0%	\$	56,696
45	8	13	-	0.0%	\$	48,241
3	4	4	-	100.0%	\$	44,887
5	4	4	-	0.0%	\$	32,802
19	5	6	-	0.0%	\$	43,909
4	4	4	1	0.0%	\$	39,862
5	4	4	1	0.0%	\$	44,992
13	5	6	-	0.0%	\$	34,796
4	4	4	1	100.0%	\$	43,624
16	4	4	-	0.0%	\$	90,937
3	4	4	-	100.0%	\$	58,766
18	4	4	-	0.0%	\$	48,554
6	4	4	1	0.0%	\$	41,807
5	4	4	-	0.0%	\$	58,855
10	5	6	1	0.0%	\$	38,940
5	4	4	-	0.0%	\$	50,246
14	5	5	-	0.0%	\$	37,823

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

18	7	10	-	100.0%	\$	53,553
43	8	14	-	100.0%	\$	42,624
5	4	4	-	0.0%	\$	48,814
7	4	4	1	0.0%	\$	59,043
5	4	4	-	0.0%	\$	58,644
4	4	4	-	0.0%	\$	39,332
8	4	4	-	0.0%	\$	44,475
7	4	4	-	100.0%	\$	50,190
15	8	10	-	0.0%	\$	42,513
5	4	4	-	0.0%	\$	38,171
5	4	4	-	0.0%	\$	37,288
7	4	4	-	100.0%	\$	67,460
34	7	10	-	100.0%	\$	63,491
15	4	5	-	100.0%	\$	47,299
16	4	4	-	100.0%	\$	42,354
7	4	4	-	0.0%	\$	61,174
8	4	4	-	0.0%	\$	53,876
49	8	12	-	100.0%	\$	56,022
15	7	9	-	0.0%	\$	60,711
23	5	6	-	0.0%	\$	63,160
10	6	7	-	0.0%	\$	52,560
2	4	4	1	0.0%	\$	44,130
10	7	12	-	0.0%	\$	51,255
65	6	10	2	0.0%	\$	66,387
39	6	8	-	0.0%	\$	72,645
12	5	6	-	0.0%	\$	41,455
6	4	4	1	0.0%	\$	45,955

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

4	4	4	-	100.0%	\$	45,641
8	4	4	1	100.0%	\$	48,614
11	5	7	-	0.0%	\$	46,370
10	6	7	-	0.0%	\$	52,277
6	4	4	-	100.0%	\$	39,254
22	5	6	-	0.0%	\$	48,039
31	9	16	-	0.0%	\$	52,683
4	4	4	-	0.0%	\$	60,166
3	4	4	-	0.0%	\$	35,069
9	4	4	-	0.0%	\$	67,897
1	4	4	-	0.0%	\$	51,036
3	4	4	-	0.0%	\$	51,674
17	8	16	-	0.0%	\$	52,814
5	4	4	1	100.0%	\$	51,712
10	6	8	-	0.0%	\$	37,776
6	4	4	1	100.0%	\$	54,800
3	4	4	-	0.0%	\$	42,719
3	4	4	-	0.0%	\$	40,415
2	4	4	-	0.0%	\$	43,330
3	4	4	-	0.0%	\$	36,078
3	4	4	-	0.0%	\$	54,434
16	7	11	-	100.0%	\$	50,301
12	5	6	-	100.0%	\$	60,767
10	9	14	-	0.0%	\$	51,124
2	4	4	-	0.0%	\$	49,122
1	4	4	-	0.0%	\$	43,880
4	4	4	-	0.0%	\$	54,984

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

2	4	4	-	0.0%	\$	51,058
51	11	26	-	0.0%	\$	49,317
1	4	4	-	0.0%	\$	39,627
5	4	4	1	0.0%	\$	42,022
3	4	4	1	0.0%	\$	56,102
1	4	4	-	0.0%	\$	58,715
1	4	4	-	0.0%	\$	51,327
1	4	4	-	0.0%	\$	38,449
1	4	4	-	0.0%	\$	47,288
6	4	4	-	0.0%	\$	37,719
2	4	4	-	100.0%	\$	50,728
2	4	4	-	0.0%	\$	43,162
3	4	4	-	100.0%	\$	56,781
22	6	9	-	0.0%	\$	66,607
1	4	4	-	0.0%	\$	41,295
2	4	4	-	0.0%	\$	26,278
6	4	4	1	0.0%	\$	38,680
1	4	4	-	0.0%	\$	53,107
3	4	4	-	0.0%	\$	52,355
15	11	27	1	0.0%	\$	56,697
1	4	4	-	0.0%	\$	42,742
1	4	4	-	0.0%	\$	43,650
1	4	4	-	0.0%	\$	50,981
2	4	4	-	0.0%	\$	61,987
1	4	4	-	0.0%	\$	49,626
3	4	4	-	0.0%	\$	57,299
2	4	4	-	0.0%	\$	55,242

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

1	4	4	-	0.0%	\$	49,068
4	4	4	-	100.0%	\$	31,921
1	4	4	-	0.0%	\$	39,850
2	4	4	-	0.0%	\$	41,249
22	9	19	-	100.0%	\$	56,312
1	4	4	-	0.0%	\$	42,873
15	13	34	-	0.0%	\$	28,962
38	21	56	-	0.0%	\$	55,865
1	4	4	-	0.0%	\$	60,205
7	7	13	-	0.0%	\$	47,252
21	3	3	-	0.0%	\$	73,981
92	4	4	3	0.0%	\$	53,419
49	3	3	-	79.4%	\$	51,132
67	3	3	1	0.0%	\$	50,531
130	3	4	3	66.7%	\$	53,034
102	4	4	2	0.0%	\$	48,453
108	4	4	4	0.0%	\$	53,960
15	3	3	-	0.0%	\$	78,112
47	3	3	2	0.0%	\$	60,163
23	3	4	1	100.0%	\$	53,481
16	3	3	-	0.0%	\$	44,276
46	4	4	-	0.0%	\$	60,315
104	3	4	7	0.0%	\$	44,799
55	3	3	1	0.0%	\$	46,024
69	4	4	2	80.5%	\$	53,632
11	3	3	-	95.2%	\$	47,302
19	4	4	-	0.0%	\$	53,134

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

37	4	4	5	82.1%	\$	63,600
39	3	3	1	0.0%	\$	56,207
93	3	4	1	72.7%	\$	68,943
27	4	4	3	0.0%	\$	60,917
54	3	3	4	0.0%	\$	68,380
70	5	7	-	66.7%	\$	60,111
27	3	3	1	0.0%	\$	46,578
14	3	3	-	0.0%	\$	51,939
21	3	3	2	0.0%	\$	44,040
39	3	3	-	100.0%	\$	49,164
14	3	3	1	93.8%	\$	45,804
31	3	3	1	0.0%	\$	51,897
31	4	4	-	80.0%	\$	50,529
48	3	4	1	0.0%	\$	45,163
6	3	3	-	0.0%	\$	41,807
53	4	5	1	92.3%	\$	57,464
11	3	3	-	0.0%	\$	73,315
43	3	3	3	100.0%	\$	45,689
13	3	4	-	100.0%	\$	79,354
15	3	3	-	87.5%	\$	48,722
50	5	8	1	0.0%	\$	67,024
36	3	3	-	0.0%	\$	82,567
15	3	3	1	0.0%	\$	79,134
12	3	3	1	0.0%	\$	47,087
9	3	3	-	0.0%	\$	48,688
39	4	5	-	0.0%	\$	43,337
22	4	5	1	0.0%	\$	50,670

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

17	3	3	2	0.0%	\$	41,425
8	3	3	-	0.0%	\$	45,429
26	3	3	2	0.0%	\$	41,869
10	4	5	1	100.0%	\$	51,724
33	3	3	2	0.0%	\$	57,879
12	3	3	-	92.9%	\$	33,218
17	3	3	-	100.0%	\$	43,755
25	4	4	1	100.0%	\$	52,387
11	3	3	1	0.0%	\$	55,334
7	3	3	-	100.0%	\$	33,701
25	4	4	1	0.0%	\$	56,885
7	3	3	1	0.0%	\$	44,442
80	4	6	-	72.7%	\$	51,403
8	3	3	-	100.0%	\$	45,607
14	3	3	1	0.0%	\$	58,391
16	3	3	2	0.0%	\$	47,664
20	4	5	-	0.0%	\$	37,867
2	3	3	-	0.0%	\$	49,356
9	3	3	2	0.0%	\$	46,396
34	4	4	-	0.0%	\$	62,963
14	3	3	1	0.0%	\$	52,165
10	4	5	1	0.0%	\$	38,682
34	3	4	-	0.0%	\$	46,706
9	3	3	-	0.0%	\$	51,774
15	3	3	-	0.0%	\$	44,243
10	3	3	-	0.0%	\$	50,834
17	3	3	-	0.0%	\$	42,542

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

21	3	4	1	0.0%	\$	62,689
55	3	4	-	0.0%	\$	73,718
4	3	3	1	0.0%	\$	39,934
10	3	3	1	0.0%	\$	48,450
6	3	3	-	100.0%	\$	63,401
10	3	3	1	87.5%	\$	40,010
29	4	5	1	0.0%	\$	54,900
82	7	14	-	0.0%	\$	53,778
7	3	3	1	100.0%	\$	44,978
8	3	3	-	0.0%	\$	42,774
8	3	3	1	100.0%	\$	60,626
23	4	4	1	0.0%	\$	51,152
8	3	3	-	78.9%	\$	53,840
13	3	3	1	0.0%	\$	72,247
14	4	4	-	0.0%	\$	49,457
6	3	3	-	100.0%	\$	124,947
15	4	4	-	0.0%	\$	41,827
9	4	4	-	0.0%	\$	54,339
6	3	3	-	100.0%	\$	55,603
8	3	3	1	100.0%	\$	38,591
6	3	3	1	0.0%	\$	50,542
8	3	3	-	0.0%	\$	48,024
17	3	4	-	100.0%	\$	42,071
13	3	3	-	97.0%	\$	45,596
5	3	3	-	0.0%	\$	46,428
11	3	3	-	0.0%	\$	36,863
3	3	3	-	100.0%	\$	49,034

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

10	4	4	-	0.0%	\$	37,624
12	3	3	3	100.0%	\$	38,998
12	3	4	1	0.0%	\$	46,067
21	3	4	-	100.0%	\$	38,709
12	3	3	1	0.0%	\$	60,034
3	3	3	-	0.0%	\$	54,814
14	4	5	-	0.0%	\$	47,028
5	3	3	-	0.0%	\$	43,967
6	3	3	-	100.0%	\$	69,598
17	3	4	-	90.0%	\$	39,545
3	3	3	-	0.0%	\$	31,118
6	3	3	-	100.0%	\$	46,715
3	3	3	-	0.0%	\$	47,591
8	3	3	-	0.0%	\$	44,975
6	3	3	-	100.0%	\$	44,041
13	3	3	-	0.0%	\$	62,984
19	5	7	-	0.0%	\$	43,491
28	4	5	1	100.0%	\$	43,483
9	3	3	-	100.0%	\$	49,991
4	3	3	-	0.0%	\$	41,421
6	3	3	-	0.0%	\$	40,397
23	4	5	-	0.0%	\$	57,506
9	3	3	-	100.0%	\$	52,660
5	3	3	-	0.0%	\$	59,901
4	3	3	1	0.0%	\$	44,183
12	4	5	-	0.0%	\$	58,113
5	3	3	-	0.0%	\$	45,458

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

10	4	4	-	0.0%	\$	53,413
2	3	3	-	0.0%	\$	36,592
14	3	3	-	0.0%	\$	45,389
5	3	3	-	0.0%	\$	54,583
14	3	3	-	0.0%	\$	63,338
6	3	3	1	0.0%	\$	51,128
3	3	3	-	0.0%	\$	41,534
5	3	3	-	0.0%	\$	54,092
7	3	3	-	100.0%	\$	51,394
46	3	4	-	80.0%	\$	104,248
8	4	4	1	100.0%	\$	29,945
16	5	7	1	0.0%	\$	30,570
13	3	5	-	0.0%	\$	37,690
4	3	3	-	0.0%	\$	42,905
19	4	4	1	0.0%	\$	69,114
3	3	3	-	0.0%	\$	46,054
17	6	10	-	100.0%	\$	49,200
19	5	6	1	0.0%	\$	42,605
4	3	3	-	0.0%	\$	40,557
4	3	3	-	0.0%	\$	48,448
6	3	3	-	0.0%	\$	27,292
7	3	3	1	0.0%	\$	40,161
5	3	3	-	0.0%	\$	48,792
7	4	4	-	0.0%	\$	56,338
9	5	5	-	0.0%	\$	47,065
17	5	7	-	0.0%	\$	39,533
3	3	3	-	100.0%	\$	58,942

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

5	3	3	-	100.0%	\$	61,342
4	3	3	-	0.0%	\$	53,884
5	3	3	-	0.0%	\$	49,707
3	3	3	-	0.0%	\$	60,572
3	3	3	-	100.0%	\$	51,715
7	3	3	-	100.0%	\$	68,017
2	3	3	-	0.0%	\$	65,776
3	3	3	-	100.0%	\$	56,528
18	4	4	-	0.0%	\$	55,624
8	4	4	-	100.0%	\$	54,663
3	3	3	1	0.0%	\$	28,080
18	4	5	2	0.0%	\$	53,809
16	5	9	-	0.0%	\$	58,335
10	5	7	-	100.0%	\$	59,787
4	3	3	-	0.0%	\$	44,233
3	3	3	-	0.0%	\$	58,356
5	3	3	-	100.0%	\$	69,214
17	3	3	-	93.8%	\$	43,585
5	3	3	-	0.0%	\$	53,864
7	3	4	-	100.0%	\$	43,767
6	4	6	-	100.0%	\$	52,541
25	5	6	-	0.0%	\$	42,258
5	3	3	1	0.0%	\$	39,776
3	3	3	-	100.0%	\$	67,242
30	7	14	-	100.0%	\$	38,110
4	3	3	1	0.0%	\$	59,087
9	3	4	-	0.0%	\$	41,829

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

4	3	3	-	0.0%	\$	60,733
8	5	5	-	0.0%	\$	61,773
6	3	3	-	0.0%	\$	53,008
3	3	3	-	0.0%	\$	51,686
3	3	3	-	0.0%	\$	60,859
4	3	3	-	0.0%	\$	57,422
3	3	3	-	0.0%	\$	39,756
1	3	3	-	0.0%	\$	62,270
10	7	11	-	100.0%	\$	55,378
4	3	3	-	100.0%	\$	43,783
2	3	3	-	100.0%	\$	42,890
8	4	4	-	0.0%	\$	42,186
1	3	3	-	0.0%	\$	52,568
2	3	3	-	0.0%	\$	43,671
32	8	18	-	0.0%	\$	57,459
6	3	5	-	100.0%	\$	53,540
3	3	3	-	0.0%	\$	28,925
2	3	3	-	0.0%	\$	51,921
9	5	6	-	0.0%	\$	43,121
2	3	3	-	0.0%	\$	50,768
7	6	10	-	0.0%	\$	46,782
2	3	3	-	0.0%	\$	38,265
4	3	3	-	0.0%	\$	32,228
2	3	3	-	0.0%	\$	37,338
8	5	8	-	0.0%	\$	59,558
8	5	8	-	0.0%	\$	52,122
10	5	9	-	0.0%	\$	35,156

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

1	3	3	-	0.0%	\$	39,726
1	3	3	-	0.0%	\$	55,159
614	34	179	-	100.0%	\$	59,440
1	3	3	-	0.0%	\$	48,517
1	3	3	-	0.0%	\$	54,412
8	5	8	-	0.0%	\$	59,367
1	3	3	-	0.0%	\$	58,096
3	3	3	-	0.0%	\$	50,750
48	16	47	-	0.0%	\$	31,876
1	3	3	-	100.0%	\$	41,713
1	3	3	1	0.0%	\$	34,777
2	3	3	-	100.0%	\$	38,242
1	3	3	-	0.0%	\$	64,756
9	5	7	-	0.0%	\$	42,700
2	3	3	-	0.0%	\$	32,355
1	3	3	-	0.0%	\$	66,849
8	5	5	-	100.0%	\$	45,906
2	3	3	-	100.0%	\$	56,484
1	3	3	-	0.0%	\$	55,112
1	3	3	-	0.0%	\$	50,093
3	3	3	-	0.0%	\$	64,344
1	3	3	1	100.0%	\$	47,976
2	3	3	1	0.0%	\$	37,911
49	2	2	-	0.0%	\$	55,511
21	3	3	-	100.0%	\$	57,183
2	2	2	-	0.0%	\$	33,892
19	2	2	5	0.0%	\$	64,591

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

32	3	3	-	0.0%	\$	60,619
31	2	3	-	0.0%	\$	46,596
28	2	2	-	96.6%	\$	60,444
31	2	2	4	86.2%	\$	53,908
55	3	3	-	97.1%	\$	81,869
21	3	3	1	100.0%	\$	44,638
26	2	2	-	100.0%	\$	47,020
21	2	2	1	0.0%	\$	74,649
26	2	2	-	0.0%	\$	49,244
22	2	2	-	100.0%	\$	82,575
22	3	3	1	86.8%	\$	47,504
15	3	3	1	0.0%	\$	40,887
19	2	2	-	0.0%	\$	58,057
17	2	2	-	87.5%	\$	63,860
17	3	3	1	0.0%	\$	44,710
6	2	2	-	0.0%	\$	41,806
15	2	2	2	0.0%	\$	50,054
16	3	3	-	0.0%	\$	51,525
10	2	2	1	0.0%	\$	49,161
16	3	3	1	0.0%	\$	58,320
6	2	2	-	0.0%	\$	39,725
12	2	2	-	75.0%	\$	48,763
10	2	2	-	0.0%	\$	75,421
17	2	2	-	86.8%	\$	41,267
41	3	5	-	0.0%	\$	49,586
5	2	2	-	0.0%	\$	46,486
10	2	2	-	100.0%	\$	52,148

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

4	2	2	-	0.0%	\$	51,905
19	2	2	-	0.0%	\$	50,805
20	3	4	1	0.0%	\$	82,814
20	2	3	-	100.0%	\$	51,656
29	3	4	-	100.0%	\$	46,342
6	2	2	-	0.0%	\$	38,572
6	2	2	-	0.0%	\$	53,805
12	2	2	-	0.0%	\$	53,559
21	3	4	1	0.0%	\$	39,202
6	2	2	-	0.0%	\$	63,631
3	2	2	1	0.0%	\$	53,637
11	2	3	-	0.0%	\$	42,475
10	2	2	-	0.0%	\$	37,860
19	3	3	2	77.8%	\$	37,124
10	2	2	1	0.0%	\$	49,220
5	2	2	-	0.0%	\$	41,864
2	2	2	-	100.0%	\$	40,297
20	3	3	-	0.0%	\$	47,183
7	2	2	-	100.0%	\$	62,300
8	2	2	-	0.0%	\$	47,561
8	2	2	-	0.0%	\$	37,390
5	2	2	-	0.0%	\$	47,825
16	2	2	-	100.0%	\$	65,953
4	2	2	-	0.0%	\$	47,198
10	2	3	1	100.0%	\$	60,773
10	2	3	-	0.0%	\$	53,806
9	2	2	-	0.0%	\$	50,637

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

5	2	2	-	100.0%	\$	47,365
21	2	3	1	0.0%	\$	56,466
19	5	9	-	0.0%	\$	45,276
10	3	4	-	0.0%	\$	64,426
2	2	2	-	0.0%	\$	41,834
3	2	2	1	0.0%	\$	46,964
13	2	3	1	0.0%	\$	43,445
4	2	2	1	100.0%	\$	49,301
4	2	2	-	0.0%	\$	50,616
10	2	3	-	80.0%	\$	52,093
11	2	2	-	0.0%	\$	50,344
6	2	2	-	80.0%	\$	52,486
4	2	2	-	100.0%	\$	46,365
5	2	2	1	0.0%	\$	42,190
18	3	4	-	0.0%	\$	48,384
10	2	2	-	0.0%	\$	50,826
10	3	4	-	100.0%	\$	45,023
6	2	2	-	0.0%	\$	73,468
17	3	3	1	100.0%	\$	58,648
7	2	3	2	0.0%	\$	52,348
6	2	2	-	0.0%	\$	30,742
4	2	2	-	100.0%	\$	42,552
19	3	5	-	0.0%	\$	52,079
1	2	2	-	100.0%	\$	49,356
6	2	2	-	100.0%	\$	44,833
8	3	4	-	0.0%	\$	37,038
4	2	2	-	100.0%	\$	48,788

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

2	2	2	-	0.0%	\$	60,285
9	3	4	-	0.0%	\$	46,698
3	2	2	-	100.0%	\$	51,676
3	2	2	-	100.0%	\$	46,490
5	2	2	-	0.0%	\$	56,862
7	2	2	-	100.0%	\$	52,959
9	2	3	-	0.0%	\$	57,471
19	4	6	-	0.0%	\$	48,651
2	2	2	-	100.0%	\$	55,195
9	2	2	1	66.7%	\$	43,852
6	2	2	1	0.0%	\$	43,785
5	2	2	-	0.0%	\$	37,987
10	3	4	-	0.0%	\$	75,177
4	2	2	-	0.0%	\$	38,879
9	2	2	1	0.0%	\$	51,183
8	3	3	-	0.0%	\$	32,906
4	2	2	-	0.0%	\$	44,883
12	3	3	1	100.0%	\$	56,693
3	2	2	-	0.0%	\$	48,920
5	2	2	-	0.0%	\$	61,927
4	2	2	-	0.0%	\$	36,687
16	2	3	-	0.0%	\$	54,362
4	2	2	-	0.0%	\$	48,460
2	2	2	-	0.0%	\$	38,173
3	2	2	-	0.0%	\$	47,314
3	2	2	-	0.0%	\$	35,308
3	2	2	-	0.0%	\$	37,687

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

3	2	2	-	100.0%	\$	48,743
12	2	3	-	100.0%	\$	52,047
2	2	2	-	0.0%	\$	47,623
3	2	2	-	100.0%	\$	48,152
7	2	2	-	100.0%	\$	56,960
16	4	6	-	0.0%	\$	60,010
5	2	2	-	0.0%	\$	44,132
4	2	2	-	100.0%	\$	55,079
3	2	2	-	0.0%	\$	46,314
2	2	2	-	0.0%	\$	36,044
2	2	2	-	0.0%	\$	51,155
2	2	2	-	0.0%	\$	31,182
59	6	13	-	100.0%	\$	53,143
2	2	2	-	100.0%	\$	47,049
4	2	2	-	0.0%	\$	40,204
8	2	3	-	0.0%	\$	52,910
4	2	2	-	0.0%	\$	41,213
8	3	3	-	0.0%	\$	42,154
3	2	2	-	100.0%	\$	41,485
7	2	3	-	100.0%	\$	40,761
4	2	2	-	0.0%	\$	40,691
8	2	2	-	0.0%	\$	58,515
3	2	2	1	100.0%	\$	52,251
2	2	2	-	0.0%	\$	39,467
7	2	2	-	0.0%	\$	51,398
4	2	2	-	100.0%	\$	37,428
1	2	2	-	0.0%	\$	48,604

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

3	2	2	-	100.0%	\$	55,300
4	2	2	1	0.0%	\$	43,000
4	2	2	-	100.0%	\$	50,591
3	2	2	-	0.0%	\$	39,254
2	2	2	-	0.0%	\$	68,381
3	2	2	-	0.0%	\$	40,569
3	2	2	-	100.0%	\$	44,773
2	2	2	-	0.0%	\$	47,572
1	2	2	-	0.0%	\$	54,438
41	8	20	-	0.0%	\$	60,531
2	2	2	-	0.0%	\$	46,371
9	3	4	-	0.0%	\$	55,151
8	3	5	-	0.0%	\$	44,917
7	2	2	-	0.0%	\$	44,726
37	5	11	-	0.0%	\$	37,665
19	4	7	-	0.0%	\$	38,966
10	6	11	-	0.0%	\$	42,689
3	2	2	-	0.0%	\$	40,425
1	2	2	-	0.0%	\$	40,682
8	3	5	-	100.0%	\$	56,760
1	2	2	-	0.0%	\$	44,564
2	2	2	-	100.0%	\$	53,028
1	2	2	-	0.0%	\$	45,570
17	5	8	-	0.0%	\$	41,729
3	2	2	-	100.0%	\$	54,802
12	3	4	-	0.0%	\$	57,934
3	2	2	-	100.0%	\$	44,685

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

1	2	2	-	0.0%	\$	34,024
3	2	2	-	0.0%	\$	35,751
2	2	2	-	100.0%	\$	51,552
2	2	2	-	0.0%	\$	47,906
2	2	2	-	0.0%	\$	40,541
2	2	2	-	0.0%	\$	37,013
8	4	6	2	0.0%	\$	44,298
1	2	2	-	0.0%	\$	37,002
2	2	2	-	0.0%	\$	43,245
2	2	2	-	100.0%	\$	37,755
2	2	2	-	0.0%	\$	51,475
2	2	2	-	0.0%	\$	54,433
1	2	2	-	0.0%	\$	47,634
8	3	5	-	0.0%	\$	48,315
1	2	2	-	0.0%	\$	47,191
1	2	2	1	0.0%	\$	54,795
1	2	2	-	100.0%	\$	43,196
3	2	2	-	0.0%	\$	35,778
1	2	2	-	100.0%	\$	47,405
5	2	2	-	100.0%	\$	57,705
3	2	2	-	0.0%	\$	40,322
15	6	14	-	0.0%	\$	32,720
2	2	2	-	100.0%	\$	45,427
1	2	2	-	0.0%	\$	49,782
1	2	2	-	0.0%	\$	43,731
2	2	2	-	0.0%	\$	65,818
2	2	2	-	0.0%	\$	48,725

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

1	2	2	-	100.0%	\$	52,445
1	2	2	-	0.0%	\$	63,790
6	2	3	-	100.0%	\$	43,887
1	2	2	-	0.0%	\$	47,781
2	2	2	-	0.0%	\$	45,767
1	2	2	-	0.0%	\$	40,653
10	4	7	-	0.0%	\$	64,271
1	2	2	-	0.0%	\$	40,504
1	2	2	-	0.0%	\$	56,862
8	3	4	-	100.0%	\$	55,512
1	2	2	-	100.0%	\$	49,151
1	2	2	-	0.0%	\$	55,404
1	2	2	-	100.0%	\$	63,411
2	2	2	-	0.0%	\$	56,330
1	2	2	-	0.0%	\$	41,770
15	6	14	-	0.0%	\$	65,955
7	2	3	1	0.0%	\$	56,946
1	2	2	-	0.0%	\$	43,371
10	4	8	-	0.0%	\$	54,265
15	6	14	-	0.0%	\$	48,222
1	2	2	-	0.0%	\$	38,912
1	2	2	-	0.0%	\$	44,290
1	2	2	-	0.0%	\$	52,952
1	2	2	-	0.0%	\$	40,987
1	2	2	-	0.0%	\$	56,099
1	2	2	-	100.0%	\$	53,700
1	2	2	-	0.0%	\$	34,306

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

1	2	2	-	0.0%	\$	44,410
2	2	2	-	0.0%	\$	53,326
1	2	2	-	0.0%	\$	61,634
1	2	2	-	0.0%	\$	48,998
1	2	2	-	0.0%	\$	72,949
1	2	2	-	0.0%	\$	52,651
1	2	2	-	0.0%	\$	47,835
15	6	15	-	0.0%	\$	42,205
1	2	2	-	0.0%	\$	55,327
1	2	2	-	0.0%	\$	54,917
1	2	2	-	0.0%	\$	41,942
1	2	2	-	0.0%	\$	41,978
1	2	2	-	0.0%	\$	46,725
68	2	2	2	0.0%	\$	53,161
11	1	1	-	0.0%	\$	51,300
16	1	1	-	87.5%	\$	50,945
22	2	2	1	63.6%	\$	63,442
12	1	1	-	100.0%	\$	51,386
19	2	2	1	0.0%	\$	58,738
8	1	1	-	0.0%	\$	48,489
13	1	1	-	0.0%	\$	46,843
3	1	1	-	100.0%	\$	42,307
5	1	1	-	0.0%	\$	39,686
6	1	1	-	0.0%	\$	46,529
5	1	1	-	0.0%	\$	53,704
5	1	1	-	0.0%	\$	36,762
4	1	1	1	0.0%	\$	50,423

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

6	1	1	-	0.0%	\$	47,073
3	1	1	-	0.0%	\$	54,019
23	2	3	-	0.0%	\$	41,298
5	1	1	-	0.0%	\$	49,538
4	1	1	-	92.3%	\$	44,482
9	1	1	-	0.0%	\$	30,490
7	1	1	-	0.0%	\$	45,761
5	1	1	-	81.8%	\$	49,265
2	1	1	-	100.0%	\$	44,627
4	1	1	-	100.0%	\$	61,959
3	1	1	-	0.0%	\$	46,026
4	1	1	-	77.8%	\$	49,393
2	1	1	-	0.0%	\$	48,749
4	1	1	-	100.0%	\$	59,990
3	1	1	-	0.0%	\$	57,249
5	1	1	-	0.0%	\$	42,457
2	1	1	-	100.0%	\$	47,380
4	1	1	-	100.0%	\$	49,147
7	1	1	-	0.0%	\$	54,440
2	1	1	-	0.0%	\$	49,507
3	1	1	1	0.0%	\$	46,426
5	1	1	-	100.0%	\$	39,450
7	1	1	-	80.0%	\$	45,086
6	1	1	-	100.0%	\$	42,074
4	1	1	-	0.0%	\$	40,064
1	1	1	-	0.0%	\$	74,570
19	3	4	-	0.0%	\$	46,751

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

2	1	1	-	0.0%	\$	46,176
2	1	1	-	0.0%	\$	42,282
9	2	3	-	0.0%	\$	54,876
3	1	1	-	0.0%	\$	48,518
5	1	1	-	100.0%	\$	50,055
3	1	1	-	0.0%	\$	39,381
5	1	1	-	0.0%	\$	47,560
10	1	1	-	0.0%	\$	59,032
2	1	1	-	0.0%	\$	53,059
1	1	1	-	0.0%	\$	71,825
2	1	1	-	88.9%	\$	41,196
4	1	1	-	100.0%	\$	56,500
1	1	1	-	100.0%	\$	55,318
4	1	1	-	100.0%	\$	50,941
2	1	1	-	0.0%	\$	39,292
2	1	1	-	0.0%	\$	42,571
4	1	1	-	0.0%	\$	49,138
2	1	1	-	0.0%	\$	35,292
2	1	1	-	0.0%	\$	45,440
8	1	1	1	0.0%	\$	40,416
1	1	1	-	0.0%	\$	37,776
2	1	1	-	0.0%	\$	42,862
6	1	1	1	0.0%	\$	60,828
2	1	1	-	0.0%	\$	51,203
2	1	1	-	100.0%	\$	44,259
2	1	1	-	100.0%	\$	55,486
2	1	1	-	100.0%	\$	45,095

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

2	1	1	-	100.0%	\$	52,282
2	1	1	-	100.0%	\$	56,321
3	1	1	-	0.0%	\$	45,163
1	1	1	-	0.0%	\$	74,109
1	1	1	-	0.0%	\$	49,147
10	1	1	-	88.9%	\$	42,701
5	1	1	-	0.0%	\$	71,770
1	1	1	-	0.0%	\$	44,248
1	1	1	-	0.0%	\$	52,018
2	1	1	-	100.0%	\$	66,209
1	1	1	-	0.0%	\$	52,069
7	1	1	1	0.0%	\$	48,660
2	1	1	-	0.0%	\$	37,468
1	1	1	-	100.0%	\$	43,402
1	1	1	-	0.0%	\$	36,782
10	1	2	-	0.0%	\$	47,363
2	1	1	1	100.0%	\$	53,289
2	1	1	-	0.0%	\$	50,471
1	1	1	-	0.0%	\$	42,291
3	1	1	-	0.0%	\$	48,342
3	1	1	-	0.0%	\$	41,471
1	1	1	-	100.0%	\$	42,455
1	1	1	-	0.0%	\$	41,428
3	1	1	-	100.0%	\$	51,258
1	1	1	-	100.0%	\$	40,641
1	1	1	-	0.0%	\$	50,136
1	1	1	-	0.0%	\$	39,502

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

4	1	1	-	0.0%	\$	51,373
1	1	1	-	0.0%	\$	45,697
1	1	1	-	0.0%	\$	47,674
2	1	1	-	100.0%	\$	52,340
17	2	4	-	0.0%	\$	41,919
1	1	1	-	100.0%	\$	49,887
1	1	1	-	100.0%	\$	42,021
1	1	1	-	0.0%	\$	46,832
2	1	1	-	0.0%	\$	42,258
1	1	1	-	0.0%	\$	60,239
73	5	19	-	100.0%	\$	60,979
1	1	1	-	0.0%	\$	37,259
1	1	1	-	0.0%	\$	30,076
1	1	1	-	0.0%	\$	54,282
1	1	1	-	100.0%	\$	59,567
1	1	1	-	100.0%	\$	50,482
1	1	1	-	0.0%	\$	42,146
2	1	1	-	100.0%	\$	39,522
3	1	1	1	0.0%	\$	58,429
1	1	1	-	0.0%	\$	57,549
1	1	1	-	0.0%	\$	57,367
2	1	1	-	0.0%	\$	46,912
2	1	1	-	0.0%	\$	50,605
2	1	1	-	0.0%	\$	55,834
2	1	1	1	0.0%	\$	32,917
1	1	1	-	0.0%	\$	55,970
6	2	3	-	0.0%	\$	44,286

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

1	1	1	-	100.0%	\$	43,115
1	1	1	-	0.0%	\$	37,626
48	6	18	-	100.0%	\$	61,433
3	1	1	-	0.0%	\$	54,331
2	1	1	-	0.0%	\$	43,367
1	1	1	-	0.0%	\$	46,141
1	1	1	-	0.0%	\$	48,998
1	1	1	-	0.0%	\$	57,952
6	2	3	-	0.0%	\$	32,321
1	1	1	-	100.0%	\$	40,191
1	1	1	-	0.0%	\$	35,906
2	1	1	-	0.0%	\$	50,330
2	1	1	-	0.0%	\$	43,696
1	1	1	-	100.0%	\$	40,468
2	1	1	-	0.0%	\$	38,765
15	2	6	-	0.0%	\$	47,225
1	1	1	-	0.0%	\$	49,060
1	1	1	-	0.0%	\$	37,026
1	1	1	-	100.0%	\$	53,414
1	1	1	-	0.0%	\$	63,527
1	1	1	-	0.0%	\$	57,494
1	1	1	-	0.0%	\$	61,560
1	1	1	-	0.0%	\$	47,032
1	1	1	-	0.0%	\$	39,702
1	1	1	-	0.0%	\$	35,848
1	1	1	-	0.0%	\$	52,567
1	1	1	-	0.0%	\$	31,741

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

1	1	1	-	100.0%	\$	35,630
1	1	1	-	0.0%	\$	44,304
3	1	1	-	0.0%	\$	56,978
2	1	1	1	100.0%	\$	47,864
1	1	1	-	100.0%	\$	37,545
1	1	1	-	0.0%	\$	66,226
1	1	1	-	100.0%	\$	48,529
1	1	1	-	0.0%	\$	45,426
1	1	1	-	0.0%	\$	44,735
1	1	1	-	0.0%	\$	40,072
15	4	11	-	0.0%	\$	50,031
1	1	1	-	100.0%	\$	37,177
1	1	1	-	0.0%	\$	58,587
1	1	1	-	0.0%	\$	36,581
10	3	6	-	0.0%	\$	60,734
1	1	1	-	0.0%	\$	48,137
1	1	1	-	0.0%	\$	47,815
1	1	1	-	0.0%	\$	54,830
2	1	1	-	0.0%	\$	39,766
2	1	1	-	0.0%	\$	49,750
1	1	1	-	0.0%	\$	46,312
2	1	1	-	0.0%	\$	37,550
1	1	1	-	0.0%	\$	38,318
1	1	1	-	50.0%	\$	36,667
1	1	1	-	0.0%	\$	34,358
10	3	6	-	0.0%	\$	43,688
1	1	1	-	0.0%	\$	40,066

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

1	1	1	-	0.0%	\$	59,613
1	1	1	-	0.0%	\$	45,445
1	1	1	-	100.0%	\$	50,356
1	1	1	-	0.0%	\$	31,662
1	1	1	-	0.0%	\$	49,966
1	1	1	-	100.0%	\$	61,219
1	1	1	-	0.0%	\$	42,233
1	1	1	-	0.0%	\$	34,768
1	1	1	-	0.0%	\$	46,281
7	2	4	-	0.0%	\$	36,903
1	1	1	-	100.0%	\$	39,484
1	1	1	-	0.0%	\$	35,826
15	4	10	-	0.0%	\$	42,522
1	1	1	-	100.0%	\$	44,016
1	1	1	-	0.0%	\$	36,573
1	1	1	-	0.0%	\$	42,674
1	1	1	-	0.0%	\$	30,116
1	1	1	-	0.0%	\$	43,370
1	1	1	-	100.0%	\$	56,950
1	1	1	-	100.0%	\$	43,435
1	1	1	-	100.0%	\$	53,811
1	1	1	-	0.0%	\$	43,717
1	1	1	-	0.0%	\$	52,086
1	1	1	-	0.0%	\$	44,756
1	1	1	-	100.0%	\$	45,670
1	1	1	-	0.0%	\$	56,698
1	1	1	-	0.0%	\$	56,541

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

1	1	1	-	0.0%	\$	54,865
1	1	1	-	100.0%	\$	55,965
1	1	1	-	0.0%	\$	34,735
1	1	1	-	0.0%	\$	45,341
1	1	1	-	0.0%	\$	47,487
2	-	-	-	0.0%	\$	43,079
1	1	1	-	100.0%	\$	36,384
1	1	1	-	100.0%	\$	47,118
1	1	1	-	0.0%	\$	35,701
2	-	-	-	0.0%	\$	55,879
1	-	-	-	0.0%	\$	55,134
1	4	4	-	0.0%	\$	37,360
1	-	-	-	0.0%	\$	51,348
1	2	2	-	0.0%	\$	48,104
1	-	-	-	100.0%	\$	58,873
1	-	-	-	0.0%	\$	59,524
1	-	-	1	0.0%	\$	47,572
1	-	-	-	0.0%	\$	28,146
1	-	-	-	0.0%	\$	44,693
1	-	-	-	0.0%	\$	44,340
1	-	-	-	0.0%	\$	35,460
1	-	-	-	100.0%	\$	51,692
1	-	-	-	0.0%	\$	45,336
1	-	-	-	66.7%	\$	50,554
1	6	6	-	100.0%	\$	54,058
1	4	4	-	0.0%	\$	50,050
1	6	6	-	0.0%	\$	59,240

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

1	4	4	-	0.0%	\$	51,757
1	1	1	-	0.0%	\$	60,312
1	2	2	-	100.0%	\$	51,911
1	5	5	-	0.0%	\$	66,929
1	1	1	-	0.0%	\$	59,931
1	11	11	-	0.0%	\$	76,235
1	4	4	-	0.0%	\$	51,455
1	1	1	-	100.0%	\$	82,303
1	4	4	-	0.0%	\$	40,009
1	1	1	-	100.0%	\$	51,497
1	3	3	-	0.0%	\$	45,261
1	3	3	-	100.0%	\$	39,536
1	1	1	-	0.0%	\$	50,646
1	1	1	-	100.0%	\$	44,423
1	2	2	-	100.0%	\$	55,504
1	2	2	-	0.0%	\$	42,671
1	1	1	-	0.0%	\$	56,837
1	114	114	-	0.0%	.	
1	5	5	-	0.0%	\$	75,477
1	13	13	-	0.0%	\$	64,633
1	4	4	-	0.0%	\$	38,537
1	2	2	-	0.0%	\$	44,969
1	2	2	-	0.0%	\$	51,299
1	2	2	-	0.0%	\$	42,522
1	2	2	-	0.0%	\$	68,236
1	3	3	-	0.0%	\$	52,308
1	1	1	-	0.0%	\$	44,847

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

1	-	-	-	0.0%	\$	57,705
1	1	1	-	100.0%	\$	45,227
1	7	7	-	0.0%	\$	51,457
1	1	1	-	0.0%	\$	55,295
1	13	13	-	0.0%	\$	46,878
1	5	5	-	0.0%	\$	47,482
1	4	4	-	0.0%	\$	58,943
1	5	5	-	0.0%	\$	51,188
1	1	1	-	100.0%	\$	44,821
1	1	1	-	0.0%	\$	60,975
1	1	1	-	0.0%	\$	29,124
1	1	1	-	0.0%	\$	51,577
1	4	4	-	0.0%	\$	57,832
1	1	1	-	0.0%	\$	46,417
1	3	3	-	0.0%	\$	44,911
1	2	2	-	0.0%	\$	66,319
1	-	-	-	0.0%	\$	44,562
1	1	1	-	0.0%	\$	35,025
1	14	14	-	0.0%	\$	53,865
1	1	1	-	100.0%	\$	54,165
1	1	1	-	0.0%	\$	47,441
1	1	1	-	0.0%	\$	40,959
1	2	2	-	0.0%	\$	54,609
1	4	4	-	0.0%	\$	45,401
1	7	7	-	0.0%	\$	39,439
1	2	2	-	0.0%	\$	43,827
1	2	2	-	0.0%	\$	47,068

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

1	1	1	-	100.0%	\$	48,451
1	4	4	-	0.0%	\$	60,695
1	10	10	-	0.0%	\$	58,910
1	8	8	-	0.0%	\$	26,936
1	3	3	-	0.0%	\$	42,820
1	3	3	-	0.0%	\$	32,597
1	1	1	-	100.0%	\$	56,005
1	1	1	-	0.0%	\$	61,190
1	3	3	-	0.0%	\$	41,180
1	3	3	-	0.0%	\$	65,273
1	3	3	-	0.0%	\$	44,804
1	7	7	-	0.0%	\$	56,775
1	5	5	-	0.0%	\$	35,881
1	3	3	-	100.0%	\$	47,317
1	8	8	-	0.0%	\$	59,064
1	1	1	-	0.0%	\$	68,528
1	1	1	-	0.0%	\$	35,983
1	1	1	-	0.0%	\$	51,066
1	1	1	-	100.0%	\$	41,701
1	23	23	-	0.0%	\$	42,153
1	1	1	-	100.0%	\$	40,680
1	1	1	-	0.0%	\$	57,674
1	15	15	-	0.0%	\$	50,774
1	2	2	-	100.0%	\$	50,564
1	1	1	-	100.0%	\$	37,566
1	2	2	-	0.0%	\$	39,396
1	3	3	-	0.0%	\$	58,977

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

1	2	2	-	0.0%	\$	53,286
1	8	8	-	0.0%	\$	50,861
1	1	1	-	0.0%	\$	47,484
1	1	1	-	0.0%	\$	49,513
1	5	5	-	100.0%	\$	54,504
1	7	7	-	0.0%	\$	51,350
1	4	4	-	0.0%	\$	45,487
1	1	1	-	0.0%	\$	33,703
1	2	2	-	0.0%	\$	34,491
1	1	1	-	100.0%	\$	43,559
1	1	1	-	100.0%	\$	38,777
1	1	1	-	0.0%	\$	61,015
1	3	3	-	100.0%	\$	53,867
1	1	1	-	100.0%	\$	53,621
1	13	13	-	0.0%	\$	55,531
1	11	11	-	0.0%	\$	47,047
1	20	20	-	0.0%	\$	53,207
1	3	3	-	0.0%	\$	57,251
1	4	4	-	0.0%	\$	47,175
1	2	2	-	0.0%	\$	39,882
1	1	1	-	100.0%	\$	54,319
1	6	6	-	0.0%	\$	47,378
1	2	2	-	0.0%	\$	42,503
1	15	15	-	0.0%	\$	66,101
1	7	7	-	0.0%	\$	46,915
1	3	3	-	0.0%	\$	57,126
1	2	2	-	0.0%	\$	40,880

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

1	21	21	-	0.0%	\$	44,467
1	5	5	-	0.0%	\$	46,245
1	16	16	-	0.0%	\$	47,797
1	5	5	-	0.0%	\$	45,146
1	1	1	-	0.0%	\$	59,813
1	6	6	-	0.0%	\$	35,087
1	3	3	-	0.0%	\$	43,192
1	5	5	-	0.0%	\$	37,812
1	3	3	-	0.0%	\$	49,117
1	3	3	-	0.0%	\$	54,774
1	12	12	-	0.0%	\$	41,413
1	-	-	-	0.0%	\$	34,824
1	4	4	-	0.0%	\$	50,185
1	1	1	-	0.0%	\$	48,966
1	1	1	-	100.0%	\$	39,861
1	2	2	-	0.0%	\$	48,368
1	2	2	-	100.0%	\$	52,602
1	2	2	-	100.0%	\$	53,780
1	1	1	-	0.0%	\$	58,170
1	3	3	-	0.0%	\$	42,469
1	1	1	-	0.0%	\$	44,725
1	1	1	-	0.0%	\$	41,381
1	-	-	-	0.0%	\$	45,074
1	6	6	-	0.0%	\$	58,075
1	10	10	-	0.0%	\$	49,532
1	2	2	-	100.0%	\$	55,940
1	1	1	-	0.0%	\$	41,583

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

1	3	3	-	0.0%	\$	48,410
1	2	2	-	100.0%	\$	43,458
1	2	2	-	100.0%	\$	50,261
1	3	3	-	0.0%	\$	44,439
1	1	1	-	0.0%	\$	63,929
1	5	5	-	0.0%	\$	59,800
1	5	5	-	0.0%	\$	51,801
1	11	11	-	0.0%	\$	49,609
1	4	4	-	0.0%	\$	32,341
1	2	2	-	0.0%	\$	37,659
1	1	1	-	0.0%	\$	36,762
1	1	1	-	0.0%	\$	36,085
1	2	2	-	100.0%	\$	49,732
1	3	3	-	0.0%	\$	39,309
1	2	2	-	0.0%	\$	40,866
1	2	2	-	0.0%	\$	39,463
1	1	1	-	0.0%	\$	56,348
1	2	2	-	0.0%	\$	55,198
1	1	1	-	0.0%	\$	45,051
1	-	-	-	66.7%	\$	29,521
1	1	1	-	0.0%	\$	35,047
1	1	1	-	0.0%	\$	49,956
1	4	4	-	0.0%	\$	51,343
1	7	7	-	0.0%	\$	45,737
1	5	5	-	0.0%	\$	54,722
1	5	5	-	0.0%	\$	54,325
1	12	12	-	0.0%	\$	50,179

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

1	-	-	-	0.0%	\$	56,981
1	3	3	-	100.0%	\$	54,866
1	6	6	-	100.0%	\$	48,574
1	3	3	-	0.0%	\$	51,690
1	2	2	-	0.0%	\$	30,691
1	2	2	-	0.0%	\$	47,681
1	3	3	-	0.0%	\$	52,747
1	5	5	-	0.0%	\$	70,036
1	6	6	-	0.0%	\$	49,403
1	3	3	-	0.0%	\$	53,871
1	1	1	-	0.0%	\$	45,156
1	1	1	-	0.0%	\$	34,367
1	5	5	-	0.0%	\$	47,097
1	5	5	-	0.0%	\$	39,192
1	2	2	-	100.0%	\$	46,954
1	1	1	-	0.0%	\$	41,101
1	2	2	-	0.0%	\$	48,754
1	1	1	-	0.0%	\$	40,315
1	3	3	-	0.0%	\$	46,014
1	3	3	-	0.0%	\$	63,772
1	1	1	-	0.0%	\$	30,950
1	2	2	-	0.0%	\$	40,182
1	3	3	-	0.0%	\$	49,321
1	2	2	-	0.0%	\$	44,645
1	5	5	-	0.0%	\$	50,197
1	66	66	-	0.0%	\$	78,637
1	5	5	-	100.0%	\$	42,164

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

1	3	3	-	0.0%	\$	39,506
1	4	4	-	0.0%	\$	54,250
1	2	2	-	0.0%	\$	54,514
1	5	5	-	0.0%	\$	50,141
1	1	1	-	0.0%	\$	44,388
1	1	1	-	0.0%	\$	51,334
1	-	-	-	0.0%	\$	56,645
1	1	1	-	0.0%	\$	47,529
1	2	2	-	0.0%	\$	40,798
1	7	7	-	0.0%	\$	39,579
1	1	1	-	0.0%	\$	58,806
1	3	3	-	0.0%	\$	34,122
1	1	1	-	0.0%	\$	54,658
1	3	3	-	0.0%	\$	51,577
1	3	3	-	0.0%	\$	62,029
1	4	4	-	0.0%	\$	53,162
1	1	1	-	100.0%	\$	39,392
1	3	3	-	0.0%	\$	60,314
1	8	8	-	0.0%	\$	47,985
1	4	4	-	0.0%	\$	48,520
1	3	3	-	0.0%	\$	44,121
1	1	1	-	100.0%	\$	45,879
1	4	4	-	0.0%	\$	41,906
1	-	-	-	100.0%	\$	29,362
1	7	7	-	0.0%	\$	40,387
1	1	1	-	100.0%	\$	55,322
1	1	1	-	0.0%	\$	34,054

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

1	3	3	-	100.0%	\$	51,867
1	2	2	-	100.0%	\$	40,583
1	5	5	-	0.0%	\$	42,431
1	4	4	-	0.0%	\$	46,638
1	3	3	-	0.0%	\$	44,774
1	1	1	-	0.0%	\$	32,715
1	12	12	-	0.0%	\$	53,369
1	1	1	-	100.0%	\$	45,972
1	1	1	-	0.0%	\$	42,407
1	5	5	-	0.0%	\$	51,848
1	36	36	-	0.0%	\$	57,925
1	8	8	-	0.0%	\$	37,648
1	1	1	-	0.0%	\$	46,216
1	2	2	-	100.0%	\$	47,039
1	-	-	-	0.0%	\$	55,687
1	3	3	-	0.0%	\$	52,058
1	1	1	-	100.0%	\$	55,345
1	4	4	-	0.0%	\$	50,267
1	7	7	-	100.0%	\$	42,701
1	7	7	-	0.0%	\$	44,704
1	5	5	-	0.0%	\$	32,780
1	2	2	-	0.0%	\$	45,710
1	1	1	-	0.0%	\$	30,144
1	1	1	-	0.0%	\$	47,573
1	1	1	-	0.0%	\$	35,446
1	2	2	-	0.0%	\$	43,053
1	6	6	-	0.0%	\$	46,818

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

1	2	2	-	0.0%	\$	59,161
1	2	2	-	0.0%	\$	51,280
1	12	12	-	0.0%	\$	48,471
1	2	2	-	100.0%	\$	43,819
1	1	1	-	0.0%	\$	61,929
1	8	8	-	0.0%	\$	51,606
1	5	5	-	0.0%	\$	51,641
1	1	1	-	0.0%	\$	56,167
1	6	6	-	0.0%	\$	43,650
1	14	14	-	0.0%	\$	47,625
1	1	1	-	0.0%	\$	32,728
1	1	1	-	100.0%	\$	59,337
1	8	8	-	0.0%	\$	55,017
1	6	6	-	0.0%	\$	44,659
1	1	1	-	100.0%	\$	48,390
1	3	3	-	0.0%	\$	55,626
1	1	1	-	0.0%	\$	39,237
1	19	19	-	0.0%	\$	41,009
1	2	2	-	100.0%	\$	44,730
1	12	12	-	0.0%	\$	48,429
1	3	3	-	0.0%	\$	37,071
1	15	15	-	0.0%	\$	46,220
1	15	15	-	0.0%	\$	56,724
1	3	3	-	100.0%	\$	46,191
1	14	14	-	0.0%	\$	48,275
1	2	2	-	0.0%	\$	54,524
1	1	1	-	100.0%	\$	89,276

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

1	22	22	-	0.0%	\$	46,862
1	3	3	-	0.0%	\$	70,081
1	2	2	-	0.0%	\$	82,633
1	11	11	-	0.0%	\$	77,257
1	9	9	-	0.0%	\$	74,635
1	17	17	-	0.0%	\$	59,523
1	2	2	-	0.0%	\$	54,465
1	1	1	-	100.0%	\$	50,525
1	8	8	-	0.0%	\$	44,580
1	9	9	-	0.0%	\$	42,754
1	7	7	-	0.0%	\$	48,260
1	1	1	-	0.0%	\$	37,738

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Population (Est. 2019, GeoSpark)	HHS Region	Num. Hospitals (GeoSpark)	ICU Beds (DefHC)	Licensed Beds (DefHC)	Staffed Beds (DefHC)	Est. Avail Vents (DefHC)
11,012	4	1	-	-	-	-
13,383	6	-	-	-	-	-
20,083	7	-	-	-	-	-
21,924	5	1	-	-	-	-
14,755	4	1	-	-	-	-
325,695	2	5	-	-	-	-
65,256	5	1	-	-	-	-
37,955	5	3	-	15	5	-
967,612	2	14	68	1,122	833	106
58,086	5	1	-	-	-	-
1,432,132	2	12	66	1,750	1,356	235
1,358,343	2	10	37	709	444	83
503,310	2	2	-	-	-	-
476,179	2	4	32	311	288	39
21,780	7	1	-	-	-	-
11,169	7	-	-	-	-	-
33,888	7	1	-	-	-	-
6,833	4	1	-	-	-	-
558,067	2	5	-	84	74	17
1,481,093	2	17	111	2,047	1,447	277
2,278,906	2	13	-	-	-	-
381,951	2	6	39	543	290	49
676,061	2	8	2	237	111	23
23,709	7	3	-	12	5	1
22,601	10	1	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

8,611	4	-	-	-	-	-
10,247	4	1	-	142	81	3
61,607	7	1	-	-	-	-
21,485	6	1	1	25	10	5
799,767	2	11	-	245	150	58
2,582,830	2	16	41	1,331	864	261
43,184	6	1	-	-	-	-
936,692	2	8	9	346	209	48
807,252	1	21	10	1,192	894	20
16,904	7	-	-	-	-	-
91,243	4	1	-	-	-	-
6,352	4	-	-	-	-	-
391,006	6	15	-	36	22	-
9,038	3	-	-	-	-	-
72,290	6	4	-	10	2	2
829,685	2	10	28	526	298	53
39,981	7	1	-	-	-	-
10,881	7	1	-	-	-	-
14,350	7	2	-	-	-	-
434,051	6	16	2	114	84	2
32,721	6	1	-	-	-	-
22,192	4	1	-	-	-	-
1,628,701	2	28	-	133	73	-
28,558	8	2	-	-	-	-
21,528	8	1	-	18	7	7
29,733	4	1	2	31	28	4
28,287	4	1	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

75,498	2	2	15	116	58	25
943,823	1	8	-	-	-	-
36,611	7	1	-	-	-	-
32,412	3	1	-	-	-	-
369,811	2	7	-	-	-	-
790,638	1	8	8	60	43	2
21,037	6	2	-	-	-	-
601,651	2	8	-	50	35	12
11,735	3	-	-	-	-	-
494,228	2	6	-	38	29	-
331,164	2	4	-	-	-	-
5,821	6	1	-	-	-	-
12,772	4	-	-	-	-	-
192,876	8	8	24	310	170	42
636,084	1	11	-	-	-	-
29,764	4	-	-	-	-	-
52,879	6	1	-	-	-	-
102,539	7	2	-	-	-	-
229,286	3	4	4	320	241	70
518,132	1	6	5	296	216	12
293,718	2	4	-	-	-	-
22,763	4	1	-	25	9	2
98,892	2	1	-	-	-	-
8,812	4	-	-	-	-	-
46,721	6	1	-	-	-	-
621,354	2	6	-	-	-	-
54,993	8	1	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

132,408	7	3	-	-	-	-
1,753,893	5	27	21	707	407	79
20,455	6	1	-	-	-	-
13,706	4	-	-	-	-	-
17,246	8	1	-	-	-	-
15,460	6	1	-	-	-	-
1,614,714	1	18	14	1,249	869	15
857,620	1	13	14	228	154	24
17,622	4	1	-	25	3	1
105,779	2	2	-	-	-	-
41,933	8	1	-	-	-	-
705,388	1	13	-	58	57	-
33,615	4	1	-	-	-	-
54,033	3	-	-	-	-	-
26,215	4	1	-	-	-	-
22,300	6	1	-	-	-	-
22,895	7	1	-	-	-	-
42,929	7	1	-	-	-	-
7,912	4	-	-	-	-	-
2,887	4	-	-	-	-	-
470,406	1	8	-	10	1	-
202,148	4	1	-	-	-	-
1,584,138	3	28	12	531	396	30
5,180,493	5	68	351	5,353	3,254	466
909,308	3	4	-	-	-	-
16,999	3	-	-	-	-	-
20,299	4	1	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

368,100	3	7	-	70	45	-
507,078	2	6	7	476	360	16
8,792	4	-	-	16	13	2
7,411	4	-	-	-	-	-
23,410	6	-	-	-	-	-
830,839	1	18	-	167	83	4
10,027	4	1	-	-	-	-
178,599	2	3	7	252	62	38
26,794	5	1	-	-	-	-
22,601	4	1	-	54	51	10
45,388	4	1	-	-	-	-
10,535	4	1	-	25	9	-
3,319	6	-	-	-	-	-
33,406	7	1	-	-	-	-
3,092	4	-	-	-	-	-
304,807	3	4	-	-	-	-
71,818	9	4	1	45	21	11
564,751	3	5	-	57	41	5
29,125	4	2	4	70	16	7
40,497	4	2	-	27	17	-
8,348	4	-	-	-	-	-
17,586	3	-	-	-	-	-
55,933	3	-	-	-	-	-
27,436	6	1	-	34	1	1
13,832	7	1	-	-	-	-
564,022	1	9	10	336	261	14
317,646	3	7	-	47	17	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

702,455	3	15	16	425	175	77
9,974	4	-	-	-	-	-
8,457	4	-	-	-	-	-
110,445	9	5	-	40	11	5
8,233	4	1	-	-	-	-
420,152	3	6	9	195	96	43
140,799	2	1	-	-	-	-
169,507	3	2	-	-	-	-
892,697	1	13	31	541	324	57
445,384	2	7	-	161	129	3
98,115	6	3	1	18	3	3
33,700	4	1	-	-	-	-
10,627	4	1	-	-	-	-
22,141	7	1	-	17	6	1
19,305	6	2	-	-	-	-
874,759	5	7	28	442	248	32
242,922	6	12	-	-	-	-
954,670	5	19	-	240	165	4
20,156	6	1	-	27	9	2
15,449	8	2	2	18	1	3
18,365	4	1	-	25	11	3
119,648	6	6	-	44	19	-
41,641	3	1	-	-	-	-
31,511	7	2	-	-	-	-
9,911	4	-	-	-	-	-
24,193	4	1	-	-	-	-
13,143	4	1	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

46,582	6	2	3	56	21	9
9,708	4	-	-	-	-	-
81,352	7	3	-	-	-	-
12,691	4	1	-	27	7	1
314,305	8	2	-	60	57	1
1,259,201	5	16	23	203	77	31
90,180	7	1	-	-	-	-
8,233	7	1	-	25	4	-
22,330	6	2	-	-	-	-
4,853	8	1	1	21	2	2
125,043	6	3	2	60	23	21
700,832	5	7	-	-	-	-
150,972	2	2	-	41	36	-
28,919	4	1	15	208	51	13
5,686	4	1	-	-	-	-
3,079	6	-	-	-	-	-
181,111	1	2	-	-	-	-
23,148	6	1	-	-	-	-
13,308	6	1	-	21	5	-
32,106	5	4	2	332	273	6
160,530	3	2	-	-	-	-
4,280	6	-	-	-	-	-
123,248	4	2	-	-	-	-
19,785	5	1	-	-	-	-
828,604	3	16	22	494	314	20
1,996	7	-	-	-	-	-
5,360	10	-	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

124,714	2	1	-	-	-	-
19,489	5	1	-	-	-	-
19,680	4	1	-	-	-	-
51,843	6	1	-	-	-	-
263,378	5	8	17	327	175	24
44,823	4	2	-	-	-	-
628,195	3	10	-	74	53	-
73,139	4	1	-	-	-	-
37,147	7	1	-	-	-	-
141,314	3	3	-	-	-	-
124,672	6	5	-	25	-	2
251,446	10	4	19	297	213	29
28,248	4	1	-	25	14	1
258,111	6	13	17	438	215	30
75,317	4	7	9	260	141	13
154,475	6	10	19	402	221	45
8,351	4	-	-	-	-	-
165,324	7	4	6	150	60	19
44,593	5	1	7	56	29	5
1,052,567	3	11	10	200	57	17
35,564	4	2	-	-	-	-
16,002	4	1	-	-	-	-
9,280	7	1	-	-	-	-
33,240	8	1	-	-	-	-
3,943	7	1	-	25	4	4
716,492	8	12	129	1,268	612	85
31,192	4	1	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

210,793	3	5	-	50	25	-
440,956	6	19	9	100	55	9
33,363	7	1	6	65	7	5
17,307	3	-	-	-	-	-
21,940	6	1	-	37	5	6
291,408	2	2	-	-	-	-
237,521	3	1	4	394	333	38
5,121	3	1	-	-	-	-
9,608	6	-	-	-	-	-
9,611	5	-	-	-	-	-
19,383	3	1	-	-	-	-
103,195	3	4	43	455	248	45
31,007	8	1	-	-	-	-
2,761,581	4	30	80	876	443	66
178,550	3	3	-	-	-	-
23,933	3	1	-	-	-	-
17,032	5	1	-	-	-	-
167,009	5	2	17	150	61	17
25,418	6	-	-	-	-	-
53,621	6	2	-	16	8	4
45,068	4	2	-	-	-	-
156,225	5	3	-	-	-	-
19,676	4	-	-	-	-	-
28,706	3	1	-	-	-	-
213,413	1	5	-	60	39	-
34,205	4	1	-	-	-	-
65,456	3	2	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

13,442	4	-	-	-	-	-	-
133,777	6	8	19	431	201	63	
17,171	4	1	-	-	-	-	-
14,011	5	-	-	-	-	-	-
468,011	3	2	-	-	-	-	-
163,861	1	1	-	-	-	-	-
162,682	1	4	1	826	630	14	
21,443	4	1	-	-	-	-	-
62,607	2	2	-	-	-	-	-
30,774	4	1	1	30	11	3	
44,448	4	1	-	-	-	-	-
22,736	5	-	-	-	-	-	-
19,215	4	-	-	-	-	-	-
35,392	7	1	-	-	-	-	-
651,215	8	8	-	96	62	-	
692,587	4	14	137	1,423	804	212	
31,363	4	2	-	22	9	-	
484,411	5	15	135	1,237	608	93	
26,427	6	-	-	-	-	-	-
307,117	2	5	-	-	-	-	-
265,429	2	5	23	439	287	82	
35,108	6	1	-	-	-	-	-
72,480	6	1	-	-	-	-	-
111,021	6	5	4	99	56	6	
45,592	4	2	-	-	-	-	-
229,642	5	6	-	64	48	8	
49,038	4	1	-	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

49,774	6	2	2	45	16	12
692,310	5	4	3	245	181	22
302,838	7	11	7	202	36	9
28,543	4	1	-	25	17	2
48,342	6	2	-	11	1	2
6,272	4	-	-	-	-	-
919,719	2	12	-	88	36	-
828,431	3	6	55	293	128	16
13,901	5	1	3	18	9	5
406,892	5	4	40	706	498	74
12,455	4	1	-	25	10	-
16,434	6	1	-	25	6	1
17,142	4	-	-	-	-	-
6,199	4	-	-	-	-	-
18,507	4	1	-	-	-	-
928,589	5	8	18	210	172	10
255,648	3	1	-	-	-	-
161,503	3	1	-	-	-	-
39,563	4	2	15	120	47	13
15,513	4	1	-	-	-	-
42,855	5	2	-	-	-	-
15,604	4	1	-	-	-	-
9,036	4	-	-	-	-	-
763	8	-	-	-	-	-
70,770	8	4	5	269	173	30
24,665	5	1	-	-	-	-
1,150,795	3	8	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

190,800	5	5	16	718	478	10
94,347	10	1	2	25	13	1
602,495	3	19	-	46	36	4
70,963	1	1	-	-	-	-
70,941	6	2	-	40	20	-
14,436	4	1	-	25	12	1
12,841	4	1	-	-	-	-
2,611	4	-	-	-	-	-
22,423	4	1	-	-	-	-
8,477	6	2	-	12	7	-
92,560	2	1	-	-	-	-
51,859	3	1	15	98	29	11
25,439	6	1	-	-	-	-
142,854	9	5	-	121	72	6
44,111	5	1	-	-	-	-
159,256	5	5	-	-	-	-
37,317	4	1	-	-	-	-
65,592	4	1	-	-	-	-
20,192	6	2	2	54	9	14
8,315	4	1	-	25	13	2
5,463	5	-	-	-	-	-
811	8	-	-	-	-	-
543,557	3	5	38	620	366	73
18,699	7	1	2	49	12	5
534,216	5	6	-	-	-	-
96,109	4	1	-	-	-	-
126,348	1	3	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

15,944	6	1	4	33	8	10
11,234	4	1	-	25	5	-
35,680	4	1	-	-	-	-
9,944	4	-	-	-	-	-
826	8	-	-	-	-	-
161,355	1	2	-	-	-	-
511,868	8	8	88	611	275	59
59,916	2	1	4	95	76	21
18,853	4	1	-	35	29	-
187,149	4	2	22	258	98	20
24,704	3	-	-	-	-	-
25,605	6	2	2	26	8	5
30,650	3	1	-	-	-	-
14,726	4	1	-	20	5	-
4,341	6	1	-	-	-	-
6,899	7	-	-	-	-	-
2,279	4	-	-	-	-	-
155,350	2	2	-	-	-	-
559,335	3	9	62	1,309	812	138
948,201	5	15	10	291	132	29
576,031	3	2	-	-	-	-
129,641	5	3	-	-	-	-
43,093	4	1	1	67	47	21
11,627	3	-	-	-	-	-
31,333	4	1	-	-	-	-
10,218	8	1	-	-	-	-
26,575	4	1	5	35	12	4

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

22,725	4	1	-	15	3	2
23,244	3	-	-	-	-	-
40,350	5	1	-	-	-	-
24,133	5	1	-	-	-	-
20,027	8	1	2	45	7	1
43,497	3	1	-	-	-	-
181,516	8	8	28	262	76	19
28,523	5	1	-	-	-	-
996,945	7	18	-	141	117	1
81,244	3	1	-	-	-	-
66,100	4	1	-	-	-	-
26,035	4	1	-	-	-	-
151,260	7	4	9	100	71	18
110,024	5	2	-	-	-	-
15,054	4	-	-	-	-	-
118,121	4	2	13	240	162	24
16,428	4	1	-	-	-	-
20,544	4	-	-	-	-	-
12,260	5	-	-	-	-	-
3,585	8	1	-	-	-	-
61,452	4	1	4	50	37	6
225,909	7	2	58	214	92	27
429,899	5	13	15	584	353	53
44,191	4	1	-	-	-	-
82,753	5	1	-	-	-	-
18,529	4	1	-	7	7	2
169,290	5	2	10	236	98	18

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

47,491	2	-	-	-	-	-
17,833	3	-	-	-	-	-
55,387	4	2	3	56	21	11
10,023	4	1	-	27	7	-
35,567	5	1	-	-	-	-
17,698	4	2	-	-	-	-
39,531	8	1	4	146	27	9
814,901	10	5	3	31	10	6
106,408	4	1	-	-	-	-
75,036	4	2	14	479	289	49
40,571	4	1	3	152	138	17
48,649	1	-	-	-	-	-
150,921	1	3	9	56	14	5
5,236	4	-	-	-	-	-
19,817	6	1	-	15	1	-
7,106	4	1	1	38	10	-
9,960	6	2	-	-	-	-
9,002	4	1	-	22	8	1
487,204	7	7	13	865	666	71
61,197	2	-	-	-	-	-
935,764	4	19	50	1,534	819	113
143,477	5	2	7	168	100	15
55,655	4	1	-	-	-	-
323,196	3	2	-	289	286	-
26,321	4	1	-	-	-	-
27,611	5	1	-	-	-	-
24,715	4	1	6	38	13	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

32,006	5	1	5	33	7	8
19,066	4	1	-	-	-	-
370,963	5	7	-	68	1	2
37,639	5	1	-	-	-	-
22,628	4	1	-	-	-	-
66,999	5	1	10	78	35	9
76,351	5	2	-	-	-	-
14,134	6	1	5	41	15	3
36,791	7	1	-	-	-	-
22,402	4	-	-	-	-	-
17,158	7	1	-	-	-	-
28,360	5	1	5	139	39	10
64,265	2	1	-	-	-	-
2,233,163	10	26	42	580	388	51
413,757	4	7	-	-	-	-
329,261	3	4	-	-	-	-
522,046	3	10	-	48	30	-
756,558	4	11	88	656	365	228
145,179	6	1	-	-	-	-
30,606	4	1	4	17	5	3
168,429	3	2	-	-	-	-
45,749	5	1	1	55	17	4
33,304	3	-	-	-	-	-
8,013	3	1	-	-	-	-
23,081	8	1	-	-	-	-
24,965	6	1	-	-	-	-
7,163	8	1	-	19	6	2

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

11,069	4	1	4	37	8	6
22,082	6	1	-	-	-	-
8,257	4	-	-	-	-	-
2,043	8	1	-	10	1	-
16,786	9	1	-	-	-	-
10,262	6	1	-	25	5	3
126,179	1	2	-	-	-	-
131,264	4	5	21	364	271	76
26,783	3	-	-	-	-	-
309,176	1	6	-	122	99	-
63,955	5	-	-	-	-	-
128,206	10	3	14	163	123	28
1,050,114	4	14	-	-	-	-
58,807	8	2	-	11	3	-
11,237	3	-	-	-	-	-
142,067	3	4	-	-	-	-
29,763	4	2	4	53	15	2
17,950	8	1	4	25	-	5
64,227	3	1	-	-	-	-
117,360	5	2	-	-	19	-
19,938	4	-	-	-	-	-
10,715	4	-	-	-	-	-
653,786	5	7	94	1,607	995	219
36,953	3	-	-	-	-	-
1,951,260	4	21	3	195	98	11
141,262	4	2	-	-	-	-
415,247	1	8	83	475	247	53

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

16,735	6	1	-	-	-	-
68,192	5	1	-	-	-	-
23,517	4	-	-	-	-	-
19,389	4	-	-	-	-	-
289,615	4	3	-	-	-	-
102,665	5	2	-	78	38	19
57,511	2	2	-	-	-	-
68,114	6	1	-	-	-	-
18,240	3	4	-	-	-	-
49,568	5	2	-	-	-	-
88,571	7	3	-	-	-	-
21,895	6	1	11	120	11	4
164,572	1	2	33	562	308	93
29,970	4	-	-	-	-	-
201,877	10	4	4	99	54	11
65,711	6	3	2	227	50	6
53,577	5	-	-	-	-	-
18,165	4	1	-	-	-	-
25,083	4	-	-	-	-	-
21,068	4	3	-	-	-	-
164,742	3	2	-	-	-	-
105,630	4	1	-	-	-	-
21,995	4	1	-	35	6	3
77,781	5	3	-	38	19	-
7,824	8	1	-	-	-	-
16,121	7	-	-	-	-	-
38,346	5	1	1	25	12	5

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

24,748	4	1	-	-	-	-
60,115	4	4	-	438	361	-
15,902	6	1	-	-	-	-
3,022	8	-	-	-	-	-
6,468	7	1	-	-	-	-
776	8	-	-	-	-	-
5,319	6	1	-	-	-	-
10,105,518	9	110	453	8,724	5,377	970
137,640	6	6	8	388	160	23
68,461	4	1	1	153	66	15
9,876	4	1	-	-	-	-
50,923	5	1	-	-	-	-
330,086	5	8	-	20	4	1
51,909	4	1	-	-	-	-
42,214	8	1	23	85	13	13
44,582	4	1	-	-	-	-
19,026	4	1	-	-	-	-
19,386	4	1	-	-	-	-
5,251	4	-	-	-	-	-
26,746	6	2	-	10	5	-
71,012	4	1	-	-	-	-
11,277	5	2	-	-	-	-
4,332	8	-	-	-	-	-
7,733	7	1	-	16	1	-
3,618	7	1	-	8	4	1
30,816	4	-	-	-	-	-
57,419	5	2	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

67,505	5	3	-	50	13	18
270,771	5	5	22	507	126	24
316,739	4	7	-	31	9	1
580,233	8	5	66	349	155	33
22,950	3	1	-	-	-	-
138,159	4	5	-	37	17	1
163,941	4	1	-	-	-	-
38,798	6	2	7	121	62	13
40,612	2	1	-	52	6	9
127,915	5	-	-	-	-	-
106,512	4	1	7	283	118	12
69,267	8	1	-	-	-	-
28,977	6	2	-	25	18	3
19,759	10	2	-	12	3	1
308,570	5	3	-	-	-	-
30,599	4	1	-	-	-	-
10,840	7	2	-	12	1	-
61,581	4	1	-	-	-	-
11,185	4	1	-	-	-	-
11,931	4	1	-	22	1	-
41,556	4	1	-	22	5	3
14,772	3	-	-	-	-	-
6,941	3	-	-	-	-	-
4,146	7	1	-	-	-	-
154,835	3	3	-	-	-	-
1,152,633	8	20	116	941	453	59
86,081	10	1	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

756,865	4	4	-	-	-	-
414,576	4	10	240	1,267	653	37
95,796	2	4	-	-	-	-
45,668	5	2	-	-	-	-
210,433	2	3	4	148	64	11
266,784	1	3	-	64	44	-
230,220	4	1	-	-	-	-
277,097	3	5	39	644	450	49
406,850	3	4	-	-	-	-
158,823	5	3	-	-	-	-
24,015	10	1	-	-	-	-
49,615	7	2	-	-	-	-
110,007	5	2	7	125	81	21
127,185	6	5	-	-	-	-
82,366	5	3	-	-	-	-
38,659	6	2	2	96	29	23
37,820	5	2	6	47	9	3
8,191	8	-	-	-	-	-
145,331	4	1	-	-	-	-
70,116	5	1	-	-	-	-
45,894	4	1	-	-	-	-
14,465	4	1	-	25	5	-
12,326	4	1	-	-	-	-
16,378	4	1	-	-	-	-
5,709	7	-	-	-	-	-
8,232	6	1	-	-	-	-
12,469	5	1	-	25	4	3

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

1,310,300	5	27	44	400	163	148
74,808	6	1	4	25	2	4
70,034	4	1	-	-	-	-
203,112	6	9	43	505	188	82
25,733	8	1	-	-	-	-
130,562	6	11	-	177	112	2
65,936	5	3	23	99	56	9
196,584	5	3	2	35	33	11
31,998	3	1	-	84	71	-
82,764	6	3	-	20	12	-
52,516	5	3	-	-	-	-
66,826	4	1	-	-	-	-
39,944	3	1	-	-	-	-
90,594	4	1	-	-	-	-
62,190	6	3	1	75	51	3
20,386	4	1	-	-	-	-
23,878	5	1	-	-	-	-
25,735	4	3	4	53	25	3
33,338	4	1	-	-	-	-
25,398	6	3	-	10	10	-
8,039	4	-	-	-	-	-
19,150	7	1	-	49	8	2
18,439	4	1	-	-	-	-
7,788	4	1	-	25	25	1
34,335	5	-	-	-	-	-
6,040	7	1	-	19	4	1
903	6	-	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

25,081	5	1	-	-	-	-
229,577	2	6	-	-	-	-
461,809	2	5	40	341	148	12
742,474	2	7	-	-	-	-
1,485,941	4	17	36	1,370	879	91
159,337	5	3	3	87	30	13
927,781	4	4	-	-	-	-
101,104	4	2	16	434	216	20
465,735	9	11	47	449	215	22
153,095	4	6	-	-	-	-
91,185	3	1	-	-	-	-
24,087	4	1	4	25	10	2
66,802	4	2	-	-	-	-
47,536	2	1	5	23	4	7
261,059	5	4	6	30	1	4
19,000	4	-	-	-	-	-
76,397	3	2	-	-	-	-
35,112	5	1	-	-	-	-
70,795	2	2	11	92	34	22
24,265	4	1	-	25	8	-
81,455	4	1	2	184	84	15
24,947	7	2	-	-	-	-
42,733	6	1	1	59	28	4
66,726	6	1	-	-	-	-
18,634	4	-	-	-	-	-
237,085	4	8	38	1,196	695	99
51,276	3	1	6	130	30	3

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

40,589	3	2	4	50	10	3
201,554	4	9	-	-	-	-
13,346	4	-	-	-	-	-
12,619	6	1	-	21	6	1
150,439	5	1	-	-	-	-
8,276	5	1	-	-	-	-
7,051	4	-	-	-	-	-
10,218	6	1	-	-	-	-
21,531	4	1	-	-	-	-
12,274	4	-	-	-	-	-
10,720	7	1	-	-	-	-
58,856	4	1	-	-	-	-
136,271	6	-	-	-	-	-
284,081	5	5	-	-	-	-
159,442	2	3	-	-	-	-
326,078	8	6	54	745	258	22
84,460	10	2	-	-	-	-
29,483	5	1	-	72	3	1
37,779	5	1	-	-	-	-
27,297	4	1	-	-	-	-
57,685	4	1	-	-	-	-
19,572	6	2	5	25	18	3
49,421	1	1	14	94	17	7
80,809	4	1	-	-	-	-
38,458	7	1	-	-	-	-
52,005	4	1	-	-	-	-
181,827	9	2	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

33,780	5	-	-	-	-	-
16,663	5	1	-	-	-	-
11,859	4	1	-	-	-	-
16,272	7	1	-	-	-	-
31,582	6	3	-	20	11	-
8,683	4	1	2	25	7	2
7,665	6	1	-	17	2	-
14,288	4	-	-	-	-	-
5,559	7	1	-	-	-	-
15,619	8	1	-	-	-	-
8,424	8	1	-	-	-	-
1,987	7	1	-	13	1	1
20,127	5	-	-	-	-	-
109,541	4	1	-	-	-	-
82,542	1	1	-	-	-	-
2,231,647	9	41	-	104	48	1
293,557	1	6	-	-	-	-
154,141	5	2	23	371	184	25
53,285	4	1	3	60	24	5
315,534	4	4	-	-	-	-
70,675	3	1	2	97	49	21
253,956	3	2	-	-	-	-
1,243,857	5	26	201	2,807	1,471	173
48,560	2	-	-	-	-	-
94,632	3	2	-	-	-	-
9,637	4	-	-	-	-	-
62,447	4	2	-	50	38	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

103,718	5	2	-	-	-	-
254,149	4	1	-	-	-	-
42,907	10	-	-	-	-	-
242,782	6	14	16	454	325	52
9,947	6	1	-	15	3	3
156,277	5	4	-	-	-	-
32,955	4	1	-	-	-	-
47,196	6	4	-	7	6	-
143,277	4	1	-	-	-	-
21,809	4	-	-	-	-	-
140,625	4	1	3	185	46	6
191,224	5	2	-	-	-	-
166,051	4	3	-	197	59	-
337,890	6	3	71	889	455	80
15,041	5	1	-	-	-	-
88,028	5	1	15	178	52	6
26,398	4	-	-	-	-	-
39,985	6	1	-	26	3	-
18,760	6	1	2	42	5	3
9,788	4	1	-	-	-	-
22,400	4	1	-	35	16	-
6,214	7	-	-	-	-	-
31,280	5	1	-	-	-	-
3,183	7	-	-	-	-	-
6,423	3	1	-	-	-	-
7,348	6	-	-	-	-	-
30,997	8	1	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

173,588	5	2	24	285	132	32
770,517	4	10	-	-	-	-
149,960	3	1	9	100	48	13
883,305	9	17	6	147	36	6
225,763	4	6	-	-	-	-
23,659	4	1	-	-	-	-
134,487	5	4	11	77	36	11
54,764	4	2	-	8	5	1
92,003	3	1	-	-	-	-
324,890	4	4	-	-	-	-
307,412	6	10	55	570	407	44
117,027	1	2	-	-	-	-
57,207	6	1	-	-	-	-
24,881	4	1	-	53	18	-
228,783	3	5	81	813	574	120
46,176	4	2	-	28	28	3
25,063	4	1	-	-	-	-
128,754	4	2	-	-	-	-
231,729	4	3	28	244	86	6
21,493	7	1	-	-	-	-
102,826	3	2	-	-	-	-
15,876	4	-	-	-	-	-
40,462	6	3	-	48	25	2
23,920	4	2	-	-	-	-
34,475	4	-	-	-	-	-
33,443	6	2	13	155	69	9
13,111	4	-	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

9,911	5	1	-	-	-	-
6,254	5	1	-	-	-	-
26,758	4	2	-	55	40	-
14,250	9	1	-	-	-	-
3,997	7	1	-	13	2	2
16,390	6	1	-	-	-	-
1,101	9	-	-	-	-	-
264,870	5	3	-	-	-	-
1,259,428	5	14	17	301	186	38
191,659	2	3	31	664	315	40
2,450,758	9	20	18	504	207	40
143,351	4	1	-	-	-	-
622,213	8	9	-	120	62	6
292,735	5	3	3	389	114	16
816,684	5	19	51	571	405	125
60,155	5	2	11	239	185	21
55,626	5	2	12	109	54	9
194,160	4	5	2	133	71	7
70,975	3	2	-	88	81	-
348,556	3	3	-	68	55	-
78,843	4	2	-	-	-	-
114,772	5	3	-	34	15	-
11,852	4	1	3	22	12	4
198,627	5	5	-	65	34	-
54,793	4	1	4	217	115	16
45,063	4	2	10	120	62	27
16,787	4	1	1	46	34	6

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

97,331	10	4	-	35	18	4
40,085	2	1	6	93	31	4
139,567	6	1	-	-	-	-
14,040	4	1	-	12	6	1
36,552	6	2	-	-	-	-
39,272	4	-	-	-	-	-
42,756	1	3	-	175	78	4
35,837	5	2	1	25	7	-
378,488	4	4	-	-	-	-
116,748	4	2	-	-	-	-
28,108	3	1	-	-	-	-
16,603	6	1	-	-	-	-
47,532	5	2	-	-	-	-
10,558	5	-	-	-	-	-
94,031	5	1	-	-	-	-
13,275	4	1	3	50	9	3
7,200	6	-	-	-	-	-
14,917	6	2	-	34	19	4
9,398	4	1	-	28	6	1
32,250	5	1	-	-	-	-
27,732	4	1	-	-	-	-
5,278	7	1	1	16	-	-
16,841	5	2	-	25	4	13
13,824	4	2	-	-	-	-
35,205	7	1	-	-	-	-
3,023	7	1	-	-	-	-
9,252	4	-	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

18,627	7	-	-	-	-	-
5,191	6	2	-	10	3	1
9,414	5	1	-	-	-	-
1,093,901	4	11	-	-	-	-
230,163	2	2	16	183	120	13
346,868	10	5	42	573	248	31
465,861	9	5	26	590	338	87
108,047	2	6	5	278	142	35
163,129	5	4	-	17	5	2
59,770	8	2	16	65	25	18
769,545	9	9	19	219	42	25
155,469	4	2	-	-	-	-
394,855	4	5	-	37	25	-
375,351	5	12	-	39	5	-
891,299	10	12	168	954	657	67
43,622	5	1	-	-	-	-
30,953	8	1	-	-	-	-
309,461	5	8	18	402	148	38
36,973	1	1	-	-	-	-
182,001	4	3	28	438	215	27
27,943	5	1	-	-	-	-
74,163	4	1	-	-	-	-
113,459	4	1	-	-	-	-
8,009	4	-	-	-	-	-
62,567	5	7	-	48	23	-
67,560	4	-	-	-	-	-
145,864	4	3	5	50	16	6

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

20,067	7	1	-	-	-	-
21,055	4	1	5	52	29	7
17,209	4	-	-	-	-	-
40,507	4	-	-	-	-	-
18,529	4	1	-	-	-	-
21,174	5	2	-	56	8	6
63,711	4	1	-	-	-	-
8,278	4	1	-	-	-	-
19,120	4	1	-	-	-	-
17,162	4	1	-	-	-	-
12,392	4	1	-	26	15	-
47,014	6	2	-	-	-	-
18,988	4	-	-	-	-	-
12,838	4	1	-	25	11	2
9,140	4	-	-	-	-	-
20,092	5	1	1	25	14	2
4,909	8	-	-	-	-	-
53,591	2	1	-	-	-	-
112,664	3	1	-	-	-	-
754,610	4	6	3	88	38	12
566,880	7	16	55	807	427	56
40,003	3	1	-	-	-	-
84,254	2	3	-	-	-	-
469,966	10	9	12	362	201	36
103,923	5	2	7	399	179	12
251,423	3	5	-	40	22	13
17,830	3	-	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

39,126	6	1	-	-	-	-
131,831	4	1	-	-	-	-
150,926	3	3	18	309	152	50
514,213	4	11	140	1,106	651	87
2,637,772	6	45	40	1,381	825	109
205,560	5	3	-	-	-	-
97,927	4	2	100	713	197	35
92,035	6	6	-	-	-	-
342,776	8	6	-	-	-	-
7,915	4	-	-	-	-	-
169,594	5	2	-	-	-	-
448,273	3	6	-	30	-	1
79,332	5	2	-	35	6	2
211,342	4	1	-	-	-	-
33,147	5	1	-	-	-	-
659,300	4	15	-	-	-	-
40,408	10	1	-	-	-	-
53,446	4	1	-	-	-	-
399,182	7	6	-	-	-	-
146,027	4	2	-	-	-	-
18,853	4	1	-	25	5	2
97,493	5	5	6	226	28	10
281,669	6	7	72	1,006	397	43
215,707	4	2	2	265	186	9
70,422	4	1	-	9	-	3
39,316	8	2	8	109	21	12
38,310	4	1	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

28,759	4	-	-	-	-	-
370,200	6	4	-	11	2	2
14,896	3	1	-	-	-	-
21,561	6	1	-	-	-	-
44,413	5	1	-	-	-	-
51,323	5	1	-	-	-	-
77,036	10	4	3	236	97	48
162,927	5	1	6	130	81	20
80,110	6	1	3	18	5	2
8,064	4	1	-	-	-	-
8,271	4	-	-	-	-	-
12,318	4	-	-	-	-	-
9,928	6	-	-	-	-	-
2,607	7	1	-	-	-	-
655	6	-	-	-	-	-
5,505	8	1	-	-	-	-
188,715	4	4	-	-	-	-
96,854	7	3	-	-	-	-
225,685	10	1	-	-	-	-
678,701	6	14	42	427	262	30
64,210	5	1	-	-	-	-
134,238	3	1	-	-	-	-
275,910	6	4	20	306	163	24
1,248,743	6	23	-	95	50	4
713,856	8	8	-	78	112	-
93,503	4	2	-	-	-	-
117,123	3	2	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

4,698,619	6	75	227	4,086	2,475	424
116,321	4	2	-	-	-	-
51,823	3	1	6	51	21	8
295,032	4	2	9	76	18	6
42,470	4	1	-	68	21	1
173,283	7	3	4	55	25	4
97,605	4	5	-	-	-	-
88,355	3	-	-	-	-	-
60,922	10	2	1	142	65	19
55,976	4	1	7	171	67	22
392,680	6	19	176	1,530	1,138	132
56,811	3	1	-	-	-	-
700,307	7	14	-	-	-	-
63,626	4	1	-	-	-	-
367,990	4	4	-	-	-	-
47,325	4	2	-	-	-	-
102,811	3	1	-	-	-	-
102,501	4	4	-	-	-	-
236,612	4	1	-	-	-	-
264,461	5	6	-	25	22	2
45,591	4	1	22	150	23	5
787,858	6	12	37	730	418	72
44,527	2	3	-	75	11	10
22,061	6	1	-	-	-	-
130,696	5	2	-	-	-	-
20,705	4	1	-	-	-	-
35,631	1	1	6	106	20	8

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

31,097	2	1	-	31	10	2
44,753	5	1	3	100	36	5
47,334	4	1	-	-	-	-
27,604	5	1	6	25	5	2
38,109	4	-	-	-	-	-
16,676	6	1	-	25	5	4
11,512	6	2	-	26	6	2
17,335	4	-	-	-	-	-
10,717	5	-	-	-	-	-
22,698	4	-	-	-	-	-
9,605	8	-	-	-	-	-
8,018	6	-	-	-	-	-
10,138	4	1	-	-	-	-
2,841	7	1	-	25	23	1
1,389	6	-	-	-	-	-
3,533	7	1	-	-	-	-
2,100	8	-	-	-	-	-
6,648	4	1	-	-	-	-
2,131	6	-	-	-	-	-
2,849	7	1	-	12	-	1
111,876	8	2	6	189	53	21
255,001	6	9	22	563	379	48
44,887	4	-	5	59	29	6
151,132	1	5	-	-	-	-
59,673	4	1	-	-	-	-
26,575	3	-	-	-	-	-
134,214	4	3	5	131	48	17

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

184,998	4	3	-	-	-	-
24,001	4	1	1	45	28	5
92,176	5	2	5	103	35	12
102,793	2	1	12	162	82	16
1,039,073	9	20	40	812	320	39
63,227	2	1	5	36	15	7
49,728	6	1	5	154	79	8
36,778	3	-	-	-	-	-
48,117	3	1	56	650	372	127
541,918	5	11	26	1,176	712	109
15,841	3	-	-	-	-	-
45,754	4	1	-	-	-	-
25,675	3	-	-	-	-	-
153,902	4	7	-	-	-	-
23,047	5	-	-	-	-	-
81,887	4	2	-	38	24	1
44,153	4	1	4	26	5	3
160,912	4	4	-	80	15	-
107,239	3	2	-	40	33	-
26,887	4	1	3	78	28	7
34,300	2	-	-	-	-	-
115,967	5	2	8	104	45	9
41,550	5	2	-	-	-	-
71,671	4	3	-	-	-	-
131,533	4	2	-	40	40	-
106,222	5	2	-	-	-	-
216,072	4	3	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

9,809	3	-	-	-	-	-
31,529	5	2	7	68	8	4
27,271	4	1	-	22	3	2
29,144	3	2	14	471	235	53
68,557	4	1	-	-	-	-
15,029	4	1	-	-	-	-
19,351	4	1	-	-	-	-
25,315	4	1	5	114	3	2
20,826	6	1	-	-	-	-
70,503	4	3	-	-	-	-
40,439	4	1	-	-	-	-
50,825	5	1	-	-	-	-
32,598	7	1	-	-	-	-
8,460	8	1	-	-	-	-
8,903	4	1	-	25	4	4
35,451	4	1	-	-	-	-
25,642	7	1	-	24	9	2
5,463	6	1	-	-	-	-
24,541	4	1	-	18	5	-
10,980	5	2	-	32	1	1
24,574	3	-	-	-	-	-
15,128	5	1	-	-	-	-
7,037	6	1	-	-	-	-
5,575	9	1	-	5	-	-
16,141	7	1	-	23	4	2
8,263	5	1	-	-	-	-
8,297	4	-	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

7,979	4	-	-	-	-	-
8,653	5	-	-	-	-	-
4,000	4	-	-	-	-	-
840,758	6	18	8	272	149	11
3,343,364	9	28	106	893	495	103
50,251	3	-	-	-	-	-
36,968	3	1	-	-	-	-
2,084,931	6	47	111	1,004	570	148
50,574	4	1	-	-	-	-
223,499	10	3	8	106	51	17
1,937,570	9	13	243	1,192	445	358
112,067	4	1	-	-	-	-
164,044	4	1	-	-	-	-
109,826	5	2	-	-	-	-
99,154	6	5	-	-	-	-
446,527	9	6	3	60	24	17
127,330	4	3	-	-	-	-
130,090	1	2	7	217	90	19
102,663	5	5	16	180	82	22
104,712	5	2	20	474	198	28
90,382	4	2	29	198	57	16
25,964	4	1	-	-	-	-
104,143	5	3	-	69	36	4
34,178	4	1	-	-	-	-
26,742	6	1	6	90	35	1
104,062	4	1	-	-	-	-
22,869	8	3	11	63	19	6

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

224,347	7	1	-	-	-	-
24,877	4	1	-	15	2	2
20,845	5	-	-	-	-	-
17,352	1	1	-	-	-	-
45,168	3	1	3	57	17	4
39,694	1	1	-	-	-	-
22,596	3	1	-	-	-	-
29,955	5	1	-	-	-	-
20,298	4	1	-	-	-	-
103,670	7	1	-	-	-	-
37,253	6	2	-	-	-	-
18,897	4	-	-	-	-	-
36,986	4	2	2	26	16	1
31,039	4	1	-	-	-	-
21,112	4	-	-	-	-	-
7,462	6	1	-	20	4	3
13,013	3	-	-	-	-	-
15,234	5	-	-	-	-	-
26,282	8	-	-	-	-	-
27,052	4	1	-	-	-	-
18,717	4	1	-	-	-	-
4,286	8	2	-	38	4	3
20,744	7	1	-	30	4	2
18,128	6	1	-	-	-	-
3,221	10	1	-	12	2	3
20,611	4	1	4	25	11	2
11,811	7	1	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

11,879	4	-	-	-	-	-	-
2,429	8	-	-	-	-	-	-
5,013	7	1	-	20	9	2	-
12,304	7	1	-	18	1	-	-
12,288	5	-	-	-	-	-	-
6,682	6	-	-	-	-	-	-
27,245	4	1	-	-	-	-	-
6,475	5	1	-	28	-	-	1
10,684	4	1	-	-	-	-	-
3,309	7	1	-	-	-	-	-
8,679	7	1	-	-	-	-	-
8,981	7	1	-	-	-	-	-
195,348	5	4	35	686	284	-	77
350,518	8	8	-	23	2	-	2
56,310	8	2	-	27	1	-	-
235,908	4	1	-	-	-	-	-
13,918	10	1	-	-	-	-	-
1,218,452	3	30	17	408	207	-	29
49,455	2	1	8	140	55	-	13
792,582	6	32	52	1,344	701	-	112
950,181	4	14	118	1,800	1,019	-	177
242,634	3	1	5	310	180	-	42
18,883	8	1	-	-	-	-	-
166,614	4	2	-	-	-	-	-
405,905	4	11	1	156	79	-	11
13,295	3	-	-	-	-	-	-
27,259	10	1	-	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

71,385	4	1	-	-	-	-
59,749	2	2	9	164	108	15
350,611	3	6	17	469	201	69
371,574	5	6	16	17	11	7
44,161	6	2	-	-	-	-
91,083	3	-	-	-	-	-
269,956	4	7	-	-	-	-
30,444	5	1	-	-	-	-
95,380	4	2	-	-	-	-
154,291	4	-	-	-	-	-
590,925	6	17	15	261	156	30
896,764	9	13	42	830	305	102
151,366	9	1	7	192	82	22
46,518	7	2	-	9	5	1
57,781	4	2	-	-	-	-
31,567	3	3	-	-	-	-
21,935	5	1	5	19	7	3
19,942	4	1	-	-	-	-
9,187	7	1	-	-	-	-
98,266	5	2	-	-	-	-
19,964	7	1	-	-	-	-
31,191	4	1	-	-	-	-
31,175	6	2	4	81	16	9
32,251	4	1	-	-	-	-
75,027	4	3	-	-	-	-
13,938	4	1	-	-	-	-
53,652	7	1	4	45	18	6

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

15,113	5	-	-	-	-	-
71,604	6	3	-	17	-	2
25,083	8	1	-	-	-	-
33,370	5	1	2	31	3	2
19,660	7	2	-	-	-	-
14,134	7	1	-	-	-	-
22,391	3	1	-	-	-	-
8,239	4	-	-	-	-	-
20,667	7	1	-	7	2	3
20,822	5	-	-	-	-	-
7,020	7	1	-	-	-	-
4,377	4	1	-	29	8	2
2,667	7	1	-	-	-	-
17,987	9	2	-	2	1	3
1,892	6	-	-	-	-	-
317,272	7	8	-	216	103	44
4,410,824	9	64	115	1,413	763	104
117,327	5	2	-	-	-	-
58,930	4	1	11	315	92	16
423,908	6	8	25	475	247	31
1,380,645	4	10	-	-	-	-
206,229	1	2	-	-	-	-
98,976	8	2	-	-	-	-
1,666,753	9	19	6	171	55	15
11,327	1	1	-	-	-	-
108,718	3	3	-	-	-	-
648,360	6	22	11	333	178	12

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

86,934	4	2	15	207	134	25
42,542	7	1	8	136	37	10
2,171,603	9	29	20	915	637	114
36,644	3	-	-	-	-	-
49,599	4	1	8	102	29	12
6,237	3	-	-	-	-	-
49,090	5	2	3	23	7	-
313,888	4	5	-	40	36	-
155,782	5	2	11	207	95	22
106,420	3	4	22	164	50	47
30,772	3	-	-	-	-	-
447,138	9	6	8	34	4	9
94,016	4	2	-	50	43	6
36,804	5	2	-	-	-	-
50,112	5	2	11	133	19	6
208,911	4	6	18	536	384	52
51,736	4	1	-	-	-	-
86,976	6	1	-	-	-	-
17,948	6	1	-	46	3	2
61,833	2	1	-	-	-	-
49,045	4	1	-	-	-	-
29,533	4	1	-	23	9	2
93,152	4	2	-	-	-	-
64,249	5	3	4	83	20	12
187,888	3	2	-	-	-	-
37,320	4	1	-	-	-	-
13,632	8	1	-	24	1	2

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

17,824	5	1	-	-	-	-
25,300	1	1	-	-	-	-
179,146	5	2	8	148	62	14
69,907	8	1	3	44	9	5
13,640	8	1	7	25	2	12
13,422	4	-	-	-	-	-
28,616	4	-	-	-	-	-
13,341	6	1	2	20	8	3
23,974	6	-	-	-	-	-
89,147	5	2	-	-	-	-
28,575	4	-	-	-	-	-
29,897	1	1	-	-	-	-
13,565	5	1	-	19	1	3
10,919	3	1	-	-	-	-
25,121	4	1	-	-	-	-
10,897	6	1	-	-	-	-
28,601	5	2	4	50	16	10
20,138	4	1	-	-	-	-
40,769	5	1	5	36	6	15
19,479	5	-	-	-	-	-
4,833	8	-	-	-	-	-
4,131	4	-	-	-	-	-
25,643	3	2	-	-	-	-
15,591	6	-	-	-	-	-
7,279	3	-	-	-	-	-
42,454	6	1	-	21	3	-
11,578	7	1	3	30	8	3

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

12,311	4	-	-	-	-	-
10,447	8	1	-	25	-	2
8,188	4	-	-	-	-	-
15,430	4	1	-	37	6	3
7,037	5	-	-	-	-	-
14,587	4	1	-	-	-	-
7,336	7	1	-	-	-	-
290,494	5	3	11	136	17	10
167,529	8	4	-	-	-	-
146,917	5	3	3	32	12	5
450,189	3	3	-	-	-	-
426,718	4	6	29	706	531	112
65,346	4	3	-	-	-	-
39,639	4	1	-	-	-	-
811,880	10	10	7	180	53	36
31,980	4	1	-	-	-	-
226,758	6	7	-	16	-	1
206,650	4	9	8	348	207	33
3,185,968	9	32	180	1,449	708	231
547,538	4	7	35	633	329	59
37,924	6	1	-	-	-	-
259,666	9	4	8	162	95	51
122,083	1	4	7	192	124	12
1,436,888	4	15	84	1,169	695	43
597,695	10	4	-	-	-	-
70,562	5	1	5	80	18	7
104,722	4	5	9	235	125	8

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

180,454	3	6	6	380	122	13
134,313	3	4	8	-	-	-
403,072	5	8	-	241	181	-
109,864	2	4	9	71	26	18
382,378	5	5	-	138	77	-
550,210	5	7	14	389	272	48
43,877	6	2	6	149	33	8
35,989	7	1	-	-	-	-
179,349	4	4	-	21	11	1
351,713	8	5	-	-	-	-
218,022	4	4	-	66	42	-
244,076	3	7	34	181	108	34
323,780	4	12	53	1,296	916	93
40,693	3	2	-	-	-	-
35,185	7	1	-	-	-	-
114,277	4	3	7	220	140	16
204,826	5	2	-	-	-	-
39,135	4	1	-	-	-	-
12,738	5	-	-	-	-	-
31,729	10	1	-	-	-	-
51,554	5	3	6	25	10	6
859,064	6	18	-	182	85	-
200,482	4	3	-	-	-	-
37,620	5	2	3	22	5	4
41,890	4	1	-	-	-	-
55,414	9	3	10	211	87	12
32,208	5	2	1	206	145	5

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

48,271	5	1	20	118	30	11
18,328	6	1	5	49	36	6
41,182	5	3	2	40	1	3
18,778	4	1	-	-	-	-
20,029	7	1	-	-	-	-
55,601	4	1	-	-	-	-
21,012	4	-	-	-	-	-
28,494	5	1	-	5	2	1
38,082	3	-	-	-	-	-
23,023	4	1	-	-	-	-
13,772	7	2	1	30	10	3
16,384	3	-	-	-	-	-
25,825	4	1	-	-	-	-
32,661	5	2	-	35	16	10
17,821	4	1	-	19	6	2
19,404	4	1	9	72	11	3
22,612	4	1	-	-	-	-
27,520	4	1	-	-	-	-
88,690	4	1	-	-	-	-
27,410	4	1	-	-	-	-
179,436	6	2	-	-	-	-
41,619	6	2	3	28	13	2
8,768	8	2	-	-	-	-
5,587	8	1	-	-	-	-
19,252	4	1	-	-	-	-
37,489	4	1	-	-	-	-
10,020	8	2	2	15	2	2

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

27,046	3	1	-	-	-	-
33,830	6	2	-	19	9	-
28,606	4	1	5	153	29	5
17,556	7	2	-	-	-	-
22,671	4	1	-	-	-	-
16,226	4	1	-	-	-	-
22,980	6	1	-	-	-	-
12,715	4	1	-	-	-	-
5,619	6	1	-	-	-	-
10,340	4	1	-	-	-	-
10,438	6	2	-	35	11	3
20,383	5	-	-	-	-	-
13,987	4	1	-	-	-	-
21,199	7	2	-	18	2	3
4,664	7	1	-	-	-	-
25,095	7	1	-	17	1	-
26,346	7	1	-	-	-	-
13,995	5	1	-	28	4	9
4,514	9	1	-	-	-	-
7,584	6	-	-	-	-	-
12,287	6	1	4	26	7	5
14,874	6	1	-	12	3	1
12,968	4	-	-	-	-	-
5,776	6	-	-	-	-	-
2,210	3	-	-	-	-	-
6,579	8	1	-	7	1	-
1,127	10	-	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

5,844	5	-	-	-	-	-
5,877	6	1	-	-	-	-
5,506	7	1	-	17	3	3
17,128	10	1	-	-	-	-
98,971	10	2	4	81	44	15
1,092,305	4	9	-	77	64	-
332,330	4	4	40	590	487	67
533,670	4	4	-	80	42	-
321,128	4	4	-	-	-	-
32,113	10	1	-	-	-	-
289,195	4	9	-	-	-	-
467,832	4	3	4	64	27	6
1,986,049	6	29	6	357	198	23
209,983	5	3	-	-	-	-
99,920	3	1	39	773	494	101
57,686	7	1	-	-	-	-
184,459	7	2	2	97	51	4
77,516	10	3	4	30	12	4
45,815	7	2	-	16	16	-
542,364	5	9	16	432	237	55
46,222	3	1	-	-	-	-
66,516	5	2	-	25	10	3
95,273	8	2	-	-	-	-
975,280	4	15	4	48	27	8
193,048	5	5	37	221	133	14
40,540	3	-	-	-	-	-
513,607	7	14	39	667	260	29

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

207,269	4	5	9	118	54	8
1,150,215	9	9	7	428	77	37
75,448	5	2	-	-	-	-
90,064	2	1	-	-	-	-
120,422	6	4	28	359	153	15
79,828	4	2	-	-	-	-
221,091	4	1	-	-	-	-
74,615	5	1	-	-	-	-
82,126	3	2	-	-	-	-
274,118	4	2	12	309	213	17
70,741	4	2	-	50	34	-
58,672	1	1	-	-	-	-
80,695	2	1	-	-	-	-
1,005,146	6	26	2	100	45	5
254,261	4	1	21	335	159	24
180,974	5	4	52	741	426	31
21,198	6	1	2	10	2	2
752,660	9	10	33	471	101	30
202,675	4	1	-	-	-	-
98,682	4	1	13	351	222	22
222,631	6	7	-	-	-	-
597,555	7	24	2	115	69	7
94,324	6	5	7	311	168	41
292,502	4	5	-	20	16	-
46,430	2	2	-	20	4	-
85,202	4	2	21	88	20	45
83,572	6	-	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

105,424	4	2	-	-	-	-
353,813	5	2	-	-	-	-
44,785	3	1	3	132	52	22
56,097	3	-	-	-	-	-
39,921	4	1	3	12	5	3
55,286	1	3	-	60	37	8
84,501	3	1	-	-	-	-
33,277	3	-	-	-	-	-
220,408	9	2	-	-	-	-
29,650	4	-	-	-	-	-
38,684	3	2	-	16	1	-
86,184	3	1	-	-	-	-
22,610	10	1	-	-	-	-
34,586	5	1	10	25	15	9
31,095	8	1	-	41	13	4
26,170	5	1	-	-	-	-
50,972	5	1	9	89	50	10
37,300	2	1	-	25	9	4
100,657	6	3	-	-	-	-
34,810	4	1	3	104	66	14
24,841	2	1	-	12	6	-
20,046	6	1	-	-	-	-
45,804	5	1	3	21	13	8
41,755	3	3	13	325	186	29
22,107	10	2	2	13	4	4
15,196	10	1	-	-	-	-
65,263	3	1	7	164	42	5

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

16,867	4	1	-	-	-	-
40,545	5	-	-	-	-	-
61,537	9	1	-	-	-	-
28,537	7	3	-	25	2	-
43,592	6	1	-	-	-	-
31,480	5	1	-	-	-	-
29,423	7	-	-	-	-	-
37,660	4	1	-	-	-	-
33,190	4	1	-	25	15	3
38,520	4	1	-	-	-	-
36,748	4	2	3	33	9	4
9,310	7	1	-	-	-	-
21,221	3	1	11	134	14	-
15,420	3	1	-	123	123	-
45,346	9	1	-	-	-	-
16,351	5	-	-	-	-	-
18,389	6	1	-	-	-	-
25,220	4	2	-	-	-	-
28,360	6	1	-	-	-	-
14,275	4	-	-	-	-	-
7,136	3	1	5	23	8	3
20,690	5	1	3	64	3	12
18,556	8	-	-	-	-	-
13,844	4	-	-	-	-	-
27,081	5	-	-	-	-	-
6,659	4	1	-	25	8	1
8,940	7	1	4	35	6	4

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

14,306	6	2	-	-	-	-
19,807	4	-	-	-	-	-
20,764	5	1	-	-	-	-
11,938	3	-	-	-	-	-
14,987	4	-	-	-	-	-
13,840	7	2	-	-	-	-
11,640	10	1	-	-	-	-
14,462	4	1	-	-	-	-
5,970	7	-	-	-	-	-
11,573	4	-	-	-	-	-
9,864	6	1	-	8	3	-
28,355	4	2	-	22	6	2
2,356	7	-	-	-	-	-
4,715	7	1	-	20	4	1
4,966	7	1	2	25	4	2
11,930	5	1	-	-	-	-
3,828	8	-	-	-	-	-
11,372	10	1	-	13	7	3
5,899	7	1	-	-	-	-
7,958	6	-	-	-	-	-
7,252	3	-	-	-	-	-
3,821	8	-	-	-	-	-
18,188	6	-	-	-	-	-
6,033	7	-	-	-	-	-
6,488	7	1	-	-	-	-
3,532	7	1	1	8	-	-
5,134	7	1	-	18	2	2

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

2,533	7	1	-	-	-	-
1,234	6	-	-	-	-	-
1,282	8	-	-	-	-	-
7,303	7	2	2	21	2	1
2,660	7	1	-	-	-	-
2,516	7	1	-	15	7	-
167,207	9	4	-	144	2	5
85,219	4	2	30	256	164	14
177,499	7	5	-	-	-	-
179,914	4	3	-	30	27	-
514,631	10	10	41	732	394	26
113,664	3	4	-	-	-	-
379,099	4	6	-	-	-	-
708,009	4	5	-	-	-	-
344,147	4	6	-	-	-	-
217,522	6	6	-	60	56	2
64,000	6	1	-	-	-	-
1,540,975	9	17	9	251	221	18
63,968	5	4	5	68	27	12
108,558	6	4	48	730	409	60
127,335	10	2	4	94	40	9
83,209	5	1	17	324	159	19
178,626	3	4	-	-	-	-
73,703	7	2	10	98	34	2
147,929	4	2	-	-	-	-
121,099	5	3	-	-	-	-
77,145	2	1	5	99	49	16

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

205,950	4	3	-	-	-	-
53,677	4	1	5	40	14	4
481,857	10	4	-	72	70	-
166,436	4	1	-	-	-	-
284,010	9	7	-	16	10	-
37,349	3	1	-	-	-	-
83,442	4	2	-	-	-	-
67,427	5	1	-	-	-	-
64,623	4	1	-	-	-	-
12,147	3	-	-	-	-	-
150,056	6	3	11	194	103	24
25,413	5	-	-	-	-	-
356,495	4	4	-	-	-	-
222,846	4	1	44	564	250	20
67,420	4	1	-	36	10	6
549,815	9	9	-	-	-	-
65,767	5	1	-	-	-	-
76,456	6	-	-	-	-	-
178,435	4	3	-	-	-	-
76,796	7	2	-	-	-	-
123,707	6	5	-	22	14	-
23,884	5	-	-	-	-	-
103,066	5	3	2	15	3	1
175,769	5	2	41	215	72	27
31,166	5	3	4	35	12	4
850,967	9	9	52	561	191	76
55,700	4	2	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

69,410	4	-	-	-	-	-	-
28,383	4	1	-	-	-	-	-
34,223	5	1	-	-	-	-	-
92,387	4	1	-	-	-	-	-
55,551	6	1	-	-	-	-	-
52,014	7	1	-	-	-	-	-
230,514	5	2	-	-	-	-	-
24,949	6	1	-	-	-	-	-
54,762	4	2	2	145	62	3	
26,940	3	1	-	-	-	-	-
53,920	4	-	-	-	-	-	-
47,240	4	1	16	465	186	36	
54,402	3	1	-	-	-	-	-
232,173	5	3	-	32	8	-	
67,846	3	2	-	-	-	-	-
24,032	6	1	-	-	-	-	-
81,069	4	-	-	-	-	-	-
71,375	4	2	-	-	-	-	-
76,840	2	1	14	-	-	-	-
48,956	4	1	3	50	30	3	
48,779	1	2	3	39	10	3	
128,622	6	2	-	-	-	-	-
53,054	4	1	-	-	-	-	-
144,447	6	1	5	85	51	11	
17,139	6	-	-	-	-	-	-
46,248	5	4	-	-	-	-	-
17,650	8	1	3	25	14	5	

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

16,683	8	1	5	49	11	8
46,139	3	-	-	-	-	-
135,693	5	2	-	-	-	-
23,551	10	-	-	-	-	-
20,952	5	1	10	88	7	4
42,057	5	2	-	-	-	-
33,415	4	3	-	16	10	-
85,832	4	1	2	58	27	14
28,385	5	1	5	25	10	5
40,959	5	1	-	-	-	-
33,976	5	1	3	89	31	10
36,506	3	1	-	-	-	-
62,249	4	3	-	-	-	-
39,330	5	1	-	-	-	-
32,461	4	-	-	-	-	-
29,206	7	1	-	-	-	-
45,313	5	2	-	-	-	-
91,984	6	2	-	-	-	-
21,416	5	1	2	23	10	2
35,761	5	1	-	-	-	-
50,224	6	1	3	24	9	3
54,450	6	1	-	-	-	-
33,683	4	1	-	-	-	-
20,187	6	1	-	-	-	-
17,377	5	1	-	-	-	-
42,733	4	1	-	-	-	-
72,679	6	2	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

46,511	9	1	-	25	6	3
40,011	5	-	-	-	-	-
57,840	4	1	-	-	-	-
23,660	4	1	-	-	-	-
31,833	4	1	-	25	8	2
28,971	4	1	-	-	-	-
40,997	5	-	-	-	-	-
8,414	7	1	-	19	3	-
16,927	5	-	-	-	-	-
28,666	5	1	-	-	-	-
48,518	4	1	-	-	-	-
10,769	3	-	-	-	-	-
17,787	3	1	-	-	-	-
22,482	6	-	-	-	-	-
25,131	6	-	-	-	-	-
26,533	4	1	-	16	6	2
16,193	7	1	4	25	6	4
10,217	5	-	-	-	-	-
22,000	7	1	-	-	-	-
26,617	5	1	-	-	-	-
14,312	5	-	-	-	-	-
14,523	3	-	-	-	-	-
21,122	4	1	-	-	-	-
22,935	5	1	-	-	-	-
17,634	10	1	-	16	2	18
12,277	4	1	-	-	-	-
16,898	4	-	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

10,667	8	2	-	14	5	1
7,450	8	1	-	16	3	1
6,085	8	1	-	25	24	1
7,451	7	-	-	-	-	-
11,161	6	1	-	25	-	4
8,758	4	-	-	-	-	-
25,631	7	1	-	-	-	-
13,264	5	1	-	-	-	-
8,996	7	1	4	25	7	1
12,306	4	-	-	-	-	-
4,250	10	-	-	-	-	-
4,118	6	1	-	25	2	2
13,593	6	1	-	21	4	1
18,794	4	-	-	-	-	-
11,693	10	-	-	-	-	-
6,709	5	-	-	-	-	-
12,339	6	-	-	-	-	-
1,392	8	-	-	-	-	-
8,058	7	1	-	20	3	4
5,802	7	1	-	-	-	-
21,098	9	2	-	-	-	-
5,546	8	-	-	-	-	-
12,045	8	-	-	-	-	-
6,060	5	-	-	-	-	-
4,434	2	-	-	-	-	-
10,352	6	-	-	-	-	-
17,471	9	1	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

3,038	7	-	-	-	-	-
5,858	8	-	-	-	-	-
1,388	6	-	-	-	-	-
1,516	6	-	-	-	-	-
566,719	6	14	-	190	103	-
151,096	1	6	2	25	4	5
994,400	9	13	8	165	72	6
109,430	5	3	3	45	31	8
61,497	4	2	-	-	-	-
366,519	4	5	-	7	7	-
180,621	5	4	45	307	140	20
87,092	6	4	-	-	-	-
107,386	5	4	-	16	14	-
65,691	5	1	-	-	-	-
162,805	3	3	17	243	97	26
291,538	10	9	37	582	293	72
446,610	9	8	-	-	-	-
119,089	4	1	-	-	-	-
111,755	2	3	30	339	121	25
75,457	3	1	-	-	-	-
172,828	5	2	-	-	-	-
256,359	8	3	-	40	10	-
98,985	3	2	6	144	60	6
532,331	5	14	49	937	402	84
259,201	5	2	5	52	21	16
42,639	7	2	-	-	-	-
32,835	6	1	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

269,805	10	2	-	-	-	-
117,898	2	1	-	-	-	-
78,753	7	3	11	306	93	28
6,474	3	-	-	-	-	-
33,308	5	1	33	238	93	10
58,057	6	1	8	192	25	4
160,647	4	-	-	-	-	-
27,346	6	1	6	68	20	7
209,550	9	4	30	250	72	9
26,625	5	1	-	-	-	-
94,073	3	1	-	-	-	-
69,087	4	2	-	-	-	-
33,033	6	1	-	-	-	-
65,936	5	2	19	536	336	8
157,413	4	3	-	-	-	-
130,441	3	2	-	-	-	-
49,565	6	1	-	-	-	-
58,140	1	2	18	97	40	11
230,221	6	11	-	30	22	1
180,005	7	7	-	-	-	-
89,786	1	5	-	23	4	1
61,022	1	1	-	-	-	-
61,157	5	1	1	42	12	9
169,401	4	1	-	-	-	-
121,421	6	2	-	-	-	-
48,627	5	1	10	84	15	8
36,803	5	1	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

30,100	4	1	5	204	89	9
62,190	4	1	-	-	-	-
48,675	6	2	18	123	47	19
34,711	7	-	-	-	-	-
207,346	3	4	7	187	76	4
110,683	3	4	-	-	-	-
38,779	3	2	-	-	-	-
61,043	5	2	-	-	-	-
22,628	3	-	-	-	-	-
59,830	6	2	1	80	34	12
58,799	5	2	-	-	-	-
47,823	2	1	5	87	25	11
124,806	6	4	-	-	-	-
60,833	3	3	-	-	-	-
51,653	5	1	-	-	-	-
25,349	6	1	-	-	-	-
41,107	6	1	-	-	-	-
18,504	7	1	-	-	-	-
26,158	8	1	-	-	-	-
67,653	10	1	12	176	54	17
11,250	8	1	-	14	2	3
104,954	7	2	4	21	7	3
32,120	7	1	-	-	-	-
24,790	4	-	-	-	-	-
42,565	5	1	-	-	-	-
38,012	3	1	-	-	-	-
33,701	6	1	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

15,673	6	2	-	14	2	-
73,657	6	-	-	-	-	-
55,808	9	1	-	14	1	-
25,337	5	1	-	25	1	3
20,891	6	1	-	-	-	-
39,006	6	1	-	-	-	-
66,994	4	1	5	76	35	7
45,507	4	1	-	-	-	-
10,787	5	1	-	-	-	-
28,020	4	1	-	-	-	-
18,486	4	1	-	-	-	-
62,342	7	2	7	190	58	13
24,851	5	1	-	-	-	-
28,529	3	2	-	-	-	-
21,366	5	1	-	19	5	3
11,534	7	-	-	-	-	-
23,537	6	1	5	35	11	1
19,102	5	1	-	-	-	-
40,599	5	1	15	107	79	10
36,249	4	1	-	-	-	-
21,067	4	1	1	50	15	3
34,074	5	1	-	-	-	-
16,750	4	1	-	30	6	13
13,765	8	1	-	11	4	1
23,519	6	2	4	32	9	4
34,120	3	1	-	-	-	-
17,296	7	-	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

14,505	4	1	-	50	9	1
11,758	4	-	-	-	-	-
34,709	5	2	-	-	-	-
26,032	4	1	-	45	37	-
39,507	4	1	2	38	10	3
23,141	5	1	-	-	-	-
37,543	4	-	-	-	-	-
9,410	4	-	-	-	-	-
17,408	4	-	-	-	-	-
12,670	4	-	-	-	-	-
42,276	5	1	14	78	7	7
7,885	8	1	2	18	7	6
10,836	4	1	5	34	14	2
17,276	4	-	-	-	-	-
7,717	4	1	-	-	-	-
7,097	7	1	-	17	2	-
9,855	7	-	-	-	-	-
8,484	6	1	-	30	5	6
21,847	5	1	1	31	4	4
12,457	6	1	-	-	-	-
8,276	5	-	-	-	-	-
24,250	4	1	11	42	15	3
6,955	3	-	-	-	-	-
10,718	4	1	-	-	-	-
14,643	4	1	-	-	-	-
96,036	5	1	-	-	-	-
21,515	6	-	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

53,126	6	-	-	-	-	-	-
21,058	5	-	-	-	-	-	-
20,478	5	1	-	25	8	3	
14,539	7	-	-	-	-	-	-
24,277	7	2	-	21	5	1	
8,263	4	1	-	-	-	-	-
7,879	4	-	-	-	-	-	-
6,900	6	-	-	-	-	-	-
5,080	8	1	-	-	-	-	-
6,980	8	2	1	30	4	1	
3,355	6	-	-	-	-	-	-
11,555	8	1	-	25	7	12	
3,603	7	1	-	-	-	-	-
6,544	7	1	-	10	4	1	
16,249	7	1	-	18	6	1	
5,248	6	-	-	-	-	-	-
3,308	5	1	-	-	-	-	-
8,729	6	1	-	-	-	-	-
10,714	8	1	-	-	-	-	-
7,090	1	-	-	-	-	-	-
3,475	7	1	-	16	5	-	
9,242	4	1	-	-	-	-	-
11,059	8	3	1	67	24	5	
1,708	10	-	-	-	-	-	-
5,064	3	-	-	-	-	-	-
1,608	4	-	-	-	-	-	-
27,610	5	1	-	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

132,064	6	7	26	426	285	37
118,189	6	3	10	60	23	9
82,040	6	2	-	-	-	-
79,115	8	5	4	306	144	12
596,849	4	11	21	570	276	61
435,594	9	4	13	283	110	30
355,642	6	8	5	119	59	14
160,137	8	4	33	416	197	13
76,931	5	2	-	-	-	-
134,585	5	3	-	22	-	2
465,289	4	7	-	-	-	-
499,942	9	8	19	100	12	11
84,203	3	2	-	-	-	-
364,286	4	8	-	165	104	-
108,987	10	1	-	-	-	-
162,124	6	3	-	-	-	-
190,865	4	4	-	-	-	-
97,892	4	1	-	-	-	-
359,977	4	6	-	31	12	6
172,578	6	3	-	-	-	-
94,340	4	3	-	16	6	-
106,727	4	1	-	-	-	-
416,075	10	4	-	-	-	-
131,349	4	2	-	-	-	-
107,679	1	2	-	-	-	-
85,234	10	1	-	6	6	3
67,056	5	3	13	106	25	13

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

163,694	6	1	3	76	44	6
77,296	4	2	-	-	-	-
16,700	4	-	-	-	-	-
115,456	5	2	-	-	-	-
28,015	8	1	-	-	-	-
539,630	4	9	-	-	-	-
20,825	10	1	-	-	-	-
45,851	4	1	-	-	-	-
139,417	9	3	10	187	15	17
79,344	5	2	6	76	26	5
274,765	9	3	-	-	-	-
67,554	3	4	-	-	-	-
96,174	4	2	-	-	-	-
274,255	9	4	-	-	-	-
48,892	5	1	8	24	7	5
205,466	5	1	-	-	-	-
212,128	9	2	-	-	-	-
26,244	5	1	-	-	-	-
56,682	3	-	-	-	-	-
62,075	4	1	-	-	-	-
97,645	4	2	-	-	-	-
52,775	8	1	-	-	-	-
76,493	1	1	-	-	-	-
36,895	5	1	22	144	91	22
93,224	3	6	-	-	-	-
425,423	5	3	-	-	-	-
171,361	6	1	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

124,937	4	2	10	109	9	9
18,378	7	-	-	-	-	-
96,493	6	2	-	164	92	15
42,132	10	3	-	23	7	3
75,930	5	2	4	150	88	40
48,176	3	1	-	-	-	-
85,129	5	1	4	49	12	2
46,357	4	1	-	-	-	-
25,339	7	1	-	-	-	-
21,774	4	1	-	-	-	-
39,138	7	1	2	116	68	6
43,265	6	1	-	-	-	-
8,802	3	-	-	-	-	-
51,056	7	-	-	-	-	-
35,872	6	1	-	-	-	-
24,922	3	2	-	-	-	-
44,889	7	2	-	-	-	-
57,358	5	2	10	61	15	13
58,504	5	2	8	99	37	12
28,715	4	-	-	-	-	-
56,530	4	1	-	-	-	-
93,533	7	2	-	-	-	-
17,366	6	-	-	-	-	-
19,779	3	-	-	-	-	-
16,736	8	1	-	-	-	-
30,302	1	1	-	26	13	6
13,932	3	1	-	25	7	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

35,634	1	-	-	-	-	-
38,165	5	3	2	23	7	8
36,354	6	1	-	-	-	-
48,021	8	1	-	-	-	-
39,022	5	2	10	53	18	17
18,807	5	1	-	31	12	4
36,629	5	1	-	-	-	-
19,816	6	1	-	-	-	-
19,477	4	1	-	-	-	-
22,039	4	1	-	-	-	-
23,864	10	1	-	-	-	-
30,267	4	1	-	-	-	-
27,811	6	1	-	-	-	-
24,578	6	1	-	-	-	-
66,470	4	1	-	-	-	-
21,217	6	2	-	40	13	2
24,880	4	1	-	-	-	-
14,836	3	-	-	-	-	-
20,917	8	2	-	-	-	-
9,265	5	-	-	-	-	-
34,909	7	4	-	64	14	2
40,770	4	-	-	-	-	-
29,636	3	-	-	-	-	-
20,470	7	1	-	-	-	-
26,505	10	1	-	-	-	-
15,249	7	2	2	51	7	7
21,741	5	1	-	30	-	4

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

46,403	5	3	-	-	-	-
14,740	6	-	-	-	-	-
24,192	10	1	-	-	-	-
16,939	3	-	-	-	-	-
18,743	6	1	2	12	4	5
43,226	5	1	-	-	-	-
35,286	6	2	-	20	14	2
14,190	6	-	-	-	-	-
13,188	8	1	4	25	11	4
8,729	7	1	-	-	-	-
30,785	3	1	-	-	-	-
17,318	7	1	-	-	-	-
16,868	7	1	-	25	8	3
29,189	3	-	-	-	-	-
12,190	3	-	-	-	-	-
15,479	5	1	4	25	3	7
13,033	6	1	-	-	-	-
13,775	3	-	-	-	-	-
86,323	6	3	-	12	7	3
16,106	4	-	-	-	-	-
10,231	6	1	-	26	4	2
9,338	8	2	-	39	4	1
30,119	6	-	-	-	-	-
10,014	8	-	-	-	-	-
26,989	4	1	-	-	-	-
14,041	8	1	-	-	-	-
25,540	5	-	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

41,239	6	2	4	79	11	8
6,150	7	1	4	25	12	5
43,247	6	2	-	-	-	-
27,107	4	1	-	-	-	-
14,952	7	1	-	-	-	-
15,601	5	1	-	-	-	-
6,054	7	-	-	-	-	-
38,072	9	2	-	-	-	-
18,975	7	1	-	8	4	-
17,603	7	-	-	-	-	-
18,432	8	1	-	-	-	-
14,328	4	-	-	-	-	-
13,139	5	-	-	-	-	-
9,750	7	-	-	-	-	-
8,253	6	1	-	-	-	-
14,310	4	-	-	-	-	-
4,280	10	-	-	-	-	-
37,830	5	2	-	16	3	1
8,446	7	-	-	-	-	-
2,213	8	-	-	-	-	-
22,883	7	1	-	-	-	-
6,055	7	1	-	-	-	-
26,092	4	1	-	-	-	-
10,721	4	1	-	20	9	2
6,451	4	-	-	-	-	-
4,321	5	-	-	-	-	-
11,289	6	1	-	23	11	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

7,682	7	-	-	-	-	-
6,495	8	1	2	17	2	-
5,521	7	1	-	21	2	1
7,997	7	1	-	25	4	4
13,561	4	-	-	-	-	-
8,843	6	1	-	17	6	2
4,081	8	1	-	20	-	1
5,673	5	2	-	22	4	1
21,645	5	1	-	-	-	-
3,957	8	1	-	8	2	2
5,830	3	-	-	-	-	-
6,411	4	-	-	-	-	-
11,161	4	1	-	6	5	-
14,520	4	-	-	-	-	-
6,336	7	1	-	-	-	-
11,702	6	-	-	-	-	-
2,036	8	-	-	-	-	-
9,541	8	2	-	-	-	-
15,816	6	1	-	-	-	-
3,968	3	1	-	-	-	-
2,153	6	1	-	-	-	-
4,426	10	-	-	-	-	-
4,326	6	-	-	-	-	-
2,040	7	-	-	-	-	-
6,005	6	-	-	-	-	-
5,837	6	1	-	14	1	1
2,005	7	2	-	14	2	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

5,610	8	1	-	-	-	-
1,952	8	-	-	-	-	-
9,390	5	1	-	-	-	-
1,866	8	1	-	-	-	-
6,578	6	-	-	-	-	-
200,983	9	6	13	363	198	49
980,080	9	16	93	1,114	535	89
171,700	8	1	-	-	-	-
272,608	6	4	-	-	-	-
36,501	4	1	-	-	-	-
865,939	6	9	70	1,081	609	58
136,373	9	5	-	8	3	2
185,287	4	4	-	-	-	-
191,996	10	2	-	-	-	-
39,771	1	1	-	-	-	-
254,607	6	3	-	-	-	-
199,754	5	8	64	708	227	33
50,885	5	1	5	178	74	23
236,961	6	9	92	565	297	34
56,195	3	1	1	25	9	4
132,328	5	2	5	80	27	9
102,912	4	1	20	312	145	52
69,524	4	1	-	-	-	-
187,365	5	3	12	133	65	25
35,857	5	1	6	33	6	6
171,020	5	5	23	149	75	36
286,419	10	3	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

67,744	8	2	-	-	-	-
158,652	4	2	3	200	160	18
393,149	9	4	-	-	-	-
78,747	3	1	-	-	-	-
102,106	8	3	-	-	-	-
78,727	6	2	-	-	-	-
128,607	4	4	-	-	-	-
29,100	5	1	1	44	23	5
32,607	3	1	5	140	39	12
30,233	8	2	4	88	12	8
68,362	6	3	-	-	-	-
148,373	6	3	-	40	36	-
66,692	7	3	-	-	-	-
107,002	10	2	-	-	-	-
28,203	4	1	-	-	-	-
99,696	9	2	4	40	10	9
54,401	7	2	15	392	97	20
50,031	6	1	-	-	-	-
161,505	10	4	-	32	10	7
82,029	4	1	-	-	-	-
64,689	6	3	-	43	-	-
50,953	3	-	-	-	-	-
64,389	10	3	-	127	95	15
45,358	5	1	-	-	-	-
76,482	4	3	-	16	10	-
48,467	9	1	4	23	9	4
49,437	6	1	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

21,764	5	-	-	-	-	-	-
35,232	8	1	2	47	13	4	
73,952	3	3	6	54	9	2	
47,079	4	1	-	-	-	-	
34,342	1	1	-	-	-	-	
43,734	4	1	-	-	-	-	
121,436	7	1	9	233	54	5	
58,485	6	1	-	-	-	-	
24,528	5	1	-	-	-	-	
64,135	5	2	-	-	-	-	
231,993	9	5	-	44	30	-	
87,847	5	3	7	61	20	4	
35,774	4	1	-	-	-	-	
28,754	3	1	-	-	-	-	
23,365	5	-	-	-	-	-	
20,049	6	1	4	54	17	4	
29,808	4	1	9	84	25	11	
30,472	3	2	-	-	-	-	
44,176	4	1	-	-	-	-	
19,278	7	-	-	-	-	-	
25,832	4	-	-	-	-	-	
147,381	5	2	-	-	-	-	
30,757	5	1	-	49	10	3	
59,866	5	1	-	-	-	-	
110,356	4	3	-	-	-	-	
58,533	10	3	5	109	41	15	
29,036	6	2	-	11	3	2	

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

39,583	4	2	-	-	-	-
45,325	6	1	1	129	50	14
40,763	3	1	-	-	-	-
54,012	4	1	-	-	-	-
32,358	4	1	-	-	-	-
79,604	10	2	-	25	10	3
56,031	4	1	-	-	-	-
31,666	3	-	-	-	-	-
19,794	8	1	4	25	9	4
22,068	4	1	5	45	7	3
25,391	4	1	-	-	-	-
32,594	7	2	-	-	-	-
43,327	4	1	-	-	-	-
12,110	6	1	4	25	1	2
14,029	4	1	-	-	-	-
20,388	4	1	-	-	-	-
34,220	5	2	-	24	3	2
36,033	5	-	-	-	-	-
38,754	5	1	-	-	-	-
33,839	3	1	-	-	-	-
136,349	5	3	-	-	-	-
65,507	10	1	7	68	17	2
32,993	5	2	1	25	8	3
22,663	4	-	-	-	-	-
39,109	7	-	-	-	-	-
34,117	4	1	-	-	-	-
50,921	6	1	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

26,718	3	1	-	-	-	-
50,310	6	1	-	-	-	-
29,989	6	1	-	10	2	2
6,843	8	-	-	-	-	-
25,629	5	2	3	25	7	3
57,835	5	1	15	41	8	13
26,099	4	-	-	-	-	-
11,139	4	-	-	-	-	-
11,964	7	1	-	-	-	-
14,910	3	1	-	-	-	-
47,542	6	2	-	-	-	-
34,055	7	2	-	-	-	-
8,068	5	1	-	12	4	2
13,401	7	-	-	-	-	-
32,957	4	1	-	-	-	-
10,362	5	-	-	-	-	-
12,037	7	1	-	-	-	-
23,541	3	-	-	-	-	-
8,915	4	1	-	48	4	2
45,641	6	-	-	-	-	-
6,947	8	1	2	18	2	2
41,260	6	-	-	-	-	-
14,653	7	-	-	-	-	-
13,714	7	-	-	-	-	-
16,184	4	1	-	-	-	-
12,084	4	-	-	-	-	-
26,314	4	1	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

17,844	5	1	-	16	4	2
30,725	10	1	6	49	6	10
12,166	6	-	-	-	-	-
17,888	7	1	-	-	-	-
13,006	8	2	-	-	-	-
10,982	6	1	-	-	-	-
20,015	7	2	-	-	-	-
17,912	2	1	-	26	11	5
14,340	4	-	-	-	-	-
13,280	3	-	-	-	-	-
14,165	7	2	-	-	-	-
16,396	5	1	-	15	1	2
33,407	7	2	4	50	28	6
29,094	3	-	-	20	17	16
38,335	6	4	-	70	20	6
16,239	8	-	-	-	-	-
18,760	5	1	-	-	-	-
40,796	5	1	-	19	14	2
16,665	5	1	-	-	-	-
36,929	5	1	-	-	-	-
13,758	5	1	-	-	-	-
5,676	5	-	-	-	-	-
8,313	7	-	-	-	-	-
68,305	6	1	-	-	-	-
50,159	5	1	-	-	-	-
19,454	4	1	-	24	10	-
16,320	7	1	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

9,131	8	2	2	30	19	2
20,184	4	1	3	68	3	4
16,862	3	1	-	-	-	-
14,523	3	1	-	-	-	-
16,433	4	1	2	14	7	3
34,920	6	2	-	13	8	-
19,874	7	1	-	-	-	-
9,547	7	1	-	-	-	-
6,809	4	-	-	-	-	-
21,303	7	1	-	-	-	-
2,388	8	1	-	24	15	-
8,515	4	-	-	-	-	-
10,783	3	1	-	-	-	-
11,950	7	2	-	14	1	1
12,668	6	-	-	-	-	-
16,630	5	1	-	38	-	2
7,987	6	1	-	12	6	-
6,997	3	-	-	-	-	-
5,058	5	-	-	-	-	-
7,805	6	-	-	-	-	-
7,380	8	2	-	25	9	-
15,174	5	1	-	18	6	3
19,964	8	1	5	34	8	7
7,042	3	-	-	-	-	-
5,171	7	1	-	12	6	-
2,806	7	-	-	-	-	-
10,542	8	1	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

4,989	5	2	-	68	4	-
19,808	6	1	-	-	-	-
2,249	6	-	-	-	-	-
13,586	4	1	-	7	5	-
7,644	6	1	-	-	-	-
2,283	8	1	-	-	-	-
2,313	8	-	-	-	-	-
2,236	8	1	-	-	-	-
2,585	8	2	-	-	-	-
13,747	8	2	-	-	-	-
4,894	6	1	-	15	5	1
5,519	5	1	-	-	-	-
7,720	6	1	-	19	3	1
23,428	10	1	-	-	-	-
2,374	8	1	-	33	21	-
4,472	4	-	-	-	-	-
13,724	4	-	-	-	-	-
2,801	8	-	-	-	-	-
7,709	8	1	-	-	-	-
5,527	7	1	-	-	-	-
2,430	8	1	-	25	19	-
2,608	7	-	-	-	-	-
2,629	7	-	-	-	-	-
4,794	6	1	-	-	-	-
2,612	7	1	-	-	-	-
6,968	6	1	-	49	9	-
4,954	8	-	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

2,330	8	1	-	14	1	-
10,143	4	1	-	25	16	-
2,407	8	1	-	4	1	-
4,771	4	-	-	-	-	-
11,321	7	2	-	25	7	1
2,836	6	1	-	-	-	-
4,462	6	-	-	-	-	-
6,740	7	1	-	12	6	-
2,374	8	-	-	-	-	-
5,430	7	1	-	-	-	-
72,133	9	3	-	-	-	-
232,274	4	2	-	-	-	-
153,207	8	5	106	528	241	54
197,683	4	3	-	102	78	-
362,265	6	7	14	137	70	18
272,061	3	7	-	-	-	-
259,103	4	5	-	47	43	-
46,140	8	1	-	-	-	-
136,744	4	3	-	-	-	-
64,889	5	3	63	206	37	23
49,208	6	1	-	-	-	-
127,068	8	2	-	-	-	-
291,923	7	7	-	100	71	-
157,668	4	6	-	-	-	-
157,672	9	2	99	358	136	103
34,993	8	1	46	123	41	20
50,815	4	1	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

92,101	10	1	1	158	108	23
118,791	8	2	-	-	-	-
246,365	7	5	39	664	377	48
60,537	6	1	-	-	-	-
167,995	5	3	-	-	-	-
104,534	5	4	-	30	3	6
87,393	10	1	-	-	-	-
42,647	7	1	-	-	-	-
64,569	4	1	-	-	-	-
126,770	9	4	-	76	18	7
43,545	5	1	-	53	13	15
92,368	4	2	-	-	-	-
78,374	4	1	5	169	79	8
131,730	3	3	-	-	-	-
17,150	4	1	-	-	-	-
98,105	7	2	12	185	103	12
43,051	8	2	-	-	-	-
127,939	2	3	6	38	12	9
35,350	8	2	5	62	19	7
50,293	2	2	13	156	33	14
66,523	5	1	-	-	-	-
102,985	7	1	-	-	-	-
52,460	9	1	-	-	-	-
42,446	6	1	-	-	-	-
26,907	1	1	-	-	-	-
82,299	6	1	-	-	-	-
40,434	5	1	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

60,669	4	1	-	-	-	-
25,549	4	1	-	-	-	-
90,690	4	1	-	-	-	-
19,790	8	1	7	41	10	6
96,807	9	3	-	-	-	-
35,845	4	3	-	135	51	13
50,592	1	2	3	30	7	7
60,913	6	3	6	106	42	26
43,602	5	-	-	-	-	-
20,468	4	1	-	25	6	1
61,893	5	1	-	-	-	-
23,347	3	1	-	-	-	-
133,991	6	7	9	57	41	16
23,341	5	1	-	24	-	2
46,051	5	3	-	-	-	-
48,860	6	4	-	52	18	-
43,018	3	2	-	-	-	-
6,422	10	-	-	-	-	-
33,466	5	1	-	-	-	-
83,770	4	1	-	-	-	-
55,207	5	2	-	-	-	-
21,741	6	1	-	-	-	-
79,388	3	2	-	-	-	-
25,741	8	2	-	-	-	-
57,618	1	2	-	-	-	-
34,066	3	1	-	-	-	-
57,078	4	1	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

54,950	8	2	-	-	-	-
138,371	6	2	-	26	15	-
15,096	5	1	-	-	-	-
38,247	6	3	-	-	-	-
20,299	8	2	3	42	6	2
36,925	4	1	7	222	97	14
62,162	4	1	-	-	-	-
58,812	5	3	-	25	8	-
21,792	7	2	8	134	28	3
23,957	7	1	-	-	-	-
25,111	5	2	-	16	2	1
56,019	6	-	-	-	-	-
28,710	7	1	15	207	78	15
38,463	5	1	-	-	-	-
35,268	4	1	-	-	-	-
19,101	6	1	6	24	1	3
39,304	10	1	-	-	-	-
21,539	8	1	-	-	-	-
17,153	7	1	1	24	5	4
24,943	7	1	-	25	8	35
19,596	6	2	-	-	-	-
29,503	4	1	-	-	-	-
38,701	5	1	-	16	2	6
37,678	6	1	4	205	64	32
18,998	4	-	-	-	-	-
36,242	4	2	-	-	-	-
10,726	7	1	-	25	7	2

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

23,606	6	1	-	-	-	-
41,179	6	1	-	41	7	3
28,875	6	1	-	-	-	-
49,980	6	1	-	26	6	2
43,144	1	1	-	-	-	-
11,481	8	1	-	-	-	-
28,719	6	-	-	-	-	-
15,000	4	1	-	-	-	-
19,434	8	2	4	68	8	9
48,305	4	1	3	67	36	18
10,206	4	1	-	-	-	-
18,381	7	1	2	25	7	1
9,108	7	-	-	-	-	-
24,763	7	1	-	-	-	-
21,696	6	1	-	26	2	3
45,602	9	1	-	-	-	-
27,847	4	1	-	-	-	-
52,592	6	3	-	25	12	4
26,111	7	3	-	33	10	2
12,086	3	-	-	-	-	-
21,579	4	-	-	-	-	-
45,131	5	1	-	-	-	-
26,447	2	1	4	50	10	7
14,717	5	-	-	-	-	-
12,383	4	-	-	-	-	-
24,582	5	2	-	-	-	-
14,307	4	-	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

22,752	3	-	-	-	-	-
6,254	7	-	-	-	-	-
49,791	10	2	-	-	-	-
14,529	4	-	-	-	-	-
52,377	10	-	-	-	-	-
20,110	6	2	-	-	-	-
10,673	6	-	-	-	-	-
15,596	5	-	-	-	-	-
20,269	8	1	17	58	15	5
103,551	5	1	19	165	29	4
18,029	6	1	6	30	5	5
23,963	6	1	-	-	-	-
25,776	4	1	-	-	-	-
11,706	4	-	-	-	-	-
47,291	6	1	-	-	-	-
8,746	3	1	-	12	-	-
16,291	5	1	-	25	6	2
31,129	6	1	-	-	-	-
14,604	5	-	-	-	-	-
14,147	5	1	-	-	-	-
18,223	3	1	-	-	-	-
21,534	3	-	-	-	-	-
14,354	5	-	-	-	-	-
16,134	7	1	-	-	-	-
17,270	6	-	-	-	-	-
23,169	6	1	-	-	-	-
9,475	9	1	2	25	6	5

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

17,069	7	1	2	25	10	6
12,456	5	-	-	-	-	-
14,876	4	-	-	-	-	-
10,808	5	-	-	-	-	-
8,897	6	1	-	21	3	1
23,771	5	1	1	11	5	7
6,111	8	-	-	-	-	-
9,795	5	2	-	22	5	1
47,364	10	1	-	-	-	-
19,432	7	1	-	12	5	2
8,985	6	-	-	-	-	-
36,240	5	1	-	-	-	-
18,691	5	1	-	-	-	-
14,612	5	1	-	14	-	3
12,169	7	-	-	-	-	-
10,456	6	1	-	-	-	-
15,525	8	1	-	20	-	3
53,889	9	2	2	32	9	15
15,941	7	-	-	-	-	-
15,765	5	1	-	25	4	2
9,423	7	1	-	25	7	1
41,537	4	1	-	-	-	-
16,535	3	1	-	-	-	-
10,913	8	1	1	25	6	6
21,951	3	1	-	25	17	5
13,125	5	-	-	-	-	-
23,145	4	-	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

13,057	8	1	-	-	-	-
14,971	8	1	-	-	-	-
22,824	6	-	-	-	-	-
9,531	7	1	-	25	17	-
10,712	7	1	-	-	-	-
11,534	5	-	-	-	-	-
10,949	6	1	-	20	2	-
3,076	8	1	-	16	-	-
9,047	5	1	2	15	3	1
14,080	5	1	-	25	3	5
5,972	8	1	-	20	2	1
18,256	4	-	-	-	-	-
3,262	8	1	1	11	-	-
6,250	1	-	-	-	-	-
17,607	7	-	-	-	-	-
11,924	5	1	3	20	3	3
11,323	4	-	-	-	-	-
7,768	10	1	2	10	1	-
14,245	4	2	-	24	3	-
7,507	3	-	-	-	-	-
6,758	8	1	-	-	-	-
5,765	4	-	-	-	-	-
15,126	4	-	-	-	-	-
6,123	6	1	-	-	-	-
10,569	7	1	-	-	-	-
10,225	7	1	-	14	5	-
11,212	6	-	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

3,653	6	1	-	-	-	-
2,935	8	1	-	11	4	-
34,371	5	1	13	80	12	3
3,739	8	-	-	-	-	-
3,999	5	-	-	-	-	-
10,124	7	1	-	-	-	-
3,216	8	1	-	-	-	-
9,764	8	1	-	-	-	-
10,283	8	1	-	-	-	-
3,910	5	1	-	25	4	1
3,578	6	-	-	-	-	-
6,889	8	1	-	20	12	2
3,870	8	-	-	-	-	-
13,158	6	1	-	-	-	-
6,120	4	-	-	-	-	-
3,825	6	1	-	15	2	-
14,940	4	2	-	25	7	2
5,753	6	1	-	18	4	4
3,797	6	1	-	10	3	-
2,869	8	1	-	-	-	-
11,924	10	-	-	-	-	-
3,295	8	1	-	14	3	3
5,779	6	1	-	-	-	-
219,564	10	4	-	-	-	-
76,737	10	2	3	83	35	21
12,902	3	-	-	-	-	-
92,573	5	1	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

118,230	5	2	-	-	-	-
120,636	7	1	-	-	-	-
116,854	10	3	13	130	28	28
180,040	9	6	12	242	78	25
190,678	9	3	10	227	59	33
76,806	5	3	-	30	7	2
110,283	10	3	2	25	4	2
107,610	10	1	-	-	-	-
122,492	3	5	-	-	-	-
89,694	5	4	-	15	5	3
78,041	9	1	24	445	126	46
55,852	7	1	-	-	-	-
86,983	7	-	-	-	-	-
68,700	8	3	2	174	93	7
60,949	3	-	-	-	-	-
32,587	6	1	-	-	-	-
81,643	8	2	-	-	-	-
54,973	3	-	-	-	-	-
43,058	5	2	-	-	-	-
57,900	6	2	-	-	-	-
26,846	6	1	-	-	-	-
73,901	10	2	6	113	36	9
42,555	5	-	-	-	-	-
75,502	5	2	11	181	83	33
86,183	5	1	-	-	-	-
22,983	5	-	-	-	-	-
54,811	1	3	2	33	6	2

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

17,753	5	1	-	-	-	-
85,063	3	2	-	-	-	-
55,922	5	1	-	-	-	-
69,611	6	2	-	29	5	8
71,948	4	2	15	121	36	22
24,842	3	1	-	-	-	-
35,470	5	2	-	-	-	-
66,893	6	-	-	-	-	-
56,351	4	1	-	-	-	-
35,438	8	1	-	-	-	-
15,042	5	-	-	-	-	-
40,878	4	1	-	-	-	-
59,131	3	3	-	-	-	-
58,402	4	2	42	340	159	42
58,266	7	4	-	-	-	-
27,109	4	1	-	-	-	-
11,736	4	1	-	15	3	3
61,971	4	1	-	-	-	-
28,999	1	1	-	40	11	9
38,601	8	1	-	-	-	-
32,703	6	1	-	-	-	-
21,709	6	1	-	-	-	-
66,765	7	2	2	48	11	4
21,938	5	1	-	-	-	-
34,208	5	1	8	81	24	6
39,764	10	2	-	-	-	-
43,208	5	1	-	81	6	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

28,047	9	1	-	47	16	1
79,074	5	2	-	-	-	-
20,358	7	-	-	-	-	-
27,072	4	-	-	-	-	-
9,193	4	-	-	-	-	-
15,434	5	-	-	-	-	-
47,192	6	1	-	-	-	-
18,045	6	2	3	48	10	3
26,461	10	1	-	-	-	-
36,277	7	1	7	49	24	4
45,164	5	3	-	-	-	-
26,787	10	1	5	25	10	8
22,036	10	2	-	10	2	3
24,644	4	1	-	-	-	-
45,129	6	2	-	-	-	-
45,467	4	1	-	25	4	-
28,223	6	2	-	15	3	1
39,966	5	1	-	-	-	-
51,128	5	1	1	58	12	3
25,383	5	2	-	-	-	-
31,304	4	1	-	-	-	-
20,528	7	2	-	71	17	6
36,810	6	1	-	-	-	-
4,555	8	1	-	21	2	3
30,250	8	2	-	25	12	2
18,906	4	1	-	-	-	-
22,813	10	1	-	18	10	6

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

11,041	10	2	-	6	-	-
22,304	7	1	-	-	-	-
13,376	8	1	3	25	3	5
16,489	5	1	-	25	8	1
20,327	5	-	-	-	-	-
28,925	5	1	-	22	5	5
33,169	5	1	-	-	-	-
29,519	5	1	-	-	-	-
11,881	8	2	2	14	4	2
39,019	7	2	4	89	38	4
29,979	5	1	-	-	-	-
31,756	4	1	-	-	-	-
26,159	7	-	-	-	-	-
16,558	4	1	-	-	-	-
45,260	10	2	-	-	-	-
27,004	4	-	-	-	-	-
16,622	3	1	-	-	-	-
35,636	5	1	5	37	13	4
12,630	7	-	-	-	-	-
29,439	10	-	-	-	-	-
18,217	4	-	-	-	-	-
53,745	5	1	-	-	-	-
18,691	6	1	-	-	-	-
8,026	3	-	-	-	-	-
13,044	5	1	-	20	3	-
14,668	6	1	-	-	-	-
14,847	6	1	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

15,650	6	1	-	25	3	3
40,574	6	2	3	42	16	4
10,737	4	1	-	25	9	-
15,763	5	1	8	48	5	2
33,452	5	1	6	44	3	6
28,206	5	1	-	-	-	-
33,044	4	1	-	-	-	-
18,804	9	3	-	19	8	2
13,790	5	-	-	-	-	-
11,881	5	-	-	-	-	-
13,168	10	-	-	-	-	-
12,726	4	1	-	-	-	-
45,108	5	3	15	78	5	1
8,743	7	1	-	25	2	2
23,078	7	-	-	-	-	-
30,623	8	2	-	-	-	-
24,415	3	1	-	-	-	-
27,724	5	1	-	-	-	-
14,503	8	1	2	16	6	2
23,906	5	2	-	65	23	11
16,024	3	2	-	-	-	-
39,383	9	1	-	-	-	-
13,534	6	1	-	25	7	2
8,414	3	1	-	-	-	-
34,215	4	1	-	-	-	-
17,335	6	1	-	36	1	1
4,190	7	1	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

15,769	5	1	-	19	1	4
20,348	5	1	-	-	-	-
16,844	3	1	2	25	7	6
18,339	3	-	-	-	-	-
12,097	8	-	-	-	-	-
16,513	10	2	-	25	-	-
18,322	6	1	-	52	5	3
12,159	6	-	-	-	-	-
4,248	5	1	-	-	-	-
20,154	7	2	-	-	-	-
8,769	7	-	-	-	-	-
21,229	6	1	-	-	-	-
17,284	6	-	-	-	-	-
32,384	5	1	-	-	-	-
34,786	3	1	-	-	-	-
26,748	3	1	-	-	-	-
8,732	4	-	-	-	-	-
13,338	8	2	-	17	3	-
4,658	5	-	-	-	-	-
15,249	5	1	-	25	-	2
6,050	7	-	-	-	-	-
8,163	5	1	-	25	6	4
5,506	7	1	-	-	-	-
21,535	6	2	-	-	-	-
12,690	7	2	1	43	14	4
34,210	7	2	-	-	-	-
15,270	3	1	4	56	10	3

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

4,165	8	-	-	-	-	-	-
13,257	4	-	-	-	-	-	-
9,345	5	2	-	24	2	2	2
8,419	7	1	-	15	1	-	-
12,086	4	-	-	-	-	-	-
9,395	7	1	-	-	-	-	-
12,437	7	1	-	-	-	-	-
4,358	8	1	-	-	-	-	-
8,074	6	-	-	-	-	-	-
10,177	7	1	-	15	3	4	4
8,810	5	2	-	-	-	-	-
10,518	7	-	-	-	-	-	-
4,472	7	2	-	10	2	-	-
15,795	3	-	-	-	-	-	-
4,404	7	-	-	-	-	-	-
5,816	8	-	-	-	-	-	-
6,283	5	1	-	25	1	2	2
17,778	4	1	-	-	-	-	-
5,317	7	1	-	25	3	3	3
27,086	5	1	2	29	8	5	5
19,688	4	-	-	-	-	-	-
10,541	7	-	-	-	-	-	-
13,253	5	1	-	20	10	1	1
5,761	7	1	-	-	-	-	-
6,628	7	1	-	-	-	-	-
9,483	9	-	-	-	-	-	-
10,134	6	1	-	25	3	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

6,658	5	2	-	9	4	1
4,897	7	1	-	-	-	-
17,769	6	2	-	25	3	1
6,191	7	-	-	-	-	-
10,137	7	-	-	-	-	-
5,230	4	-	-	-	-	-
15,063	7	-	-	-	-	-
5,460	3	-	-	-	-	-
5,112	8	1	-	12	2	-
18,918	5	1	-	24	13	5
4,686	7	1	-	20	-	2
4,337	8	1	-	10	4	-
6,336	8	2	-	39	17	3
13,280	7	1	-	-	-	-
4,492	3	-	-	-	-	-
10,710	4	-	-	-	-	-
22,996	7	1	-	-	-	-
4,651	8	1	-	-	-	-
12,410	5	-	-	-	-	-
10,766	6	-	-	-	-	-
5,327	10	-	-	-	-	-
4,421	4	-	-	-	-	-
5,754	6	-	-	-	-	-
4,276	6	1	-	-	-	-
4,802	5	-	-	-	-	-
4,059	10	1	-	16	7	4
6,490	6	-	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

5,349	6	-	-	-	-	-
10,740	10	2	-	50	31	-
5,237	8	1	-	-	-	-
6,071	3	-	-	-	-	-
6,121	8	-	-	-	-	-
5,427	5	-	-	-	-	-
4,178	7	1	-	-	-	-
10,234	6	2	-	10	3	-
6,556	5	-	-	-	-	-
6,021	5	1	-	10	2	-
5,904	8	-	-	-	-	-
6,221	7	1	-	-	-	-
6,401	7	1	-	-	-	-
379,611	10	6	-	-	-	-
87,138	10	1	-	-	-	-
231,256	9	4	17	240	189	21
135,428	5	3	38	306	166	21
87,606	9	3	4	135	40	28
111,729	8	4	-	32	5	-
55,945	4	1	-	-	-	-
127,753	6	6	-	-	-	-
21,623	4	1	-	12	4	3
41,619	6	1	-	-	-	-
40,968	3	2	-	-	-	-
52,405	6	3	-	-	-	-
40,076	7	2	-	-	-	-
36,459	6	2	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

46,847	5	2	-	-	-	-
21,646	6	1	-	-	-	-
74,254	3	3	-	-	-	-
40,134	10	1	-	-	-	-
37,480	6	1	5	86	37	12
64,525	6	1	-	-	-	-
51,266	3	1	-	-	-	-
49,388	10	2	2	41	22	9
15,600	5	1	2	25	10	4
35,873	5	2	3	30	10	3
31,749	7	-	-	-	-	-
28,592	7	1	2	115	51	14
15,146	7	1	-	-	-	-
43,598	5	3	3	25	8	6
21,627	9	-	-	-	-	-
35,886	7	2	-	-	-	-
37,517	5	1	6	79	21	6
29,163	3	1	3	55	17	4
53,140	4	1	-	-	-	-
13,665	5	-	-	-	-	-
35,285	4	2	-	-	-	-
67,111	1	4	7	92	47	18
64,382	9	2	3	25	9	4
40,855	3	2	-	16	6	9
28,823	3	1	-	-	-	-
9,813	8	-	-	-	-	-
43,641	3	2	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

15,951	7	1	-	-	-	-
36,219	5	2	-	-	-	-
30,169	3	1	-	-	-	-
27,828	9	1	-	-	-	-
43,172	8	1	5	25	15	7
22,386	4	1	-	-	-	-
43,724	9	2	-	-	-	-
70,942	5	1	-	-	-	-
16,866	6	1	-	-	-	-
8,647	10	1	-	-	-	-
24,583	4	1	1	99	58	8
54,539	9	1	5	90	31	12
10,008	10	1	-	18	7	11
46,236	10	3	2	35	9	3
14,089	3	1	-	-	-	-
14,432	4	1	-	-	-	-
37,353	4	-	-	-	-	-
27,591	6	2	-	180	119	-
15,153	7	1	-	-	-	-
65,818	5	2	-	92	82	-
12,442	4	-	-	-	-	-
17,673	3	-	-	-	-	-
43,892	5	1	-	-	-	-
17,560	4	-	-	-	-	-
31,589	1	3	4	25	8	9
14,908	7	1	-	23	7	1
19,556	6	1	2	14	7	4

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

14,705	7	1	-	24	9	1
20,901	6	1	-	15	4	2
28,067	5	1	-	-	-	-
13,345	10	1	-	-	-	-
11,113	8	1	-	-	-	-
66,781	6	2	4	81	39	8
33,680	7	2	-	-	-	-
7,961	10	1	-	-	-	-
6,907	5	1	-	19	3	-
15,028	5	1	-	9	1	1
6,958	7	1	-	29	2	-
48,177	6	2	-	-	-	-
19,815	6	-	-	-	-	-
10,161	10	1	-	25	4	3
11,049	4	1	-	-	-	-
63,406	6	1	-	-	-	-
26,139	5	1	-	28	16	4
16,332	5	1	-	-	-	-
7,291	6	1	-	-	-	-
22,203	3	2	-	-	-	-
21,737	6	2	-	-	-	-
12,164	8	1	7	79	3	2
7,166	4	-	-	-	-	-
34,844	5	1	2	49	19	11
10,589	6	1	-	25	2	1
16,347	8	1	-	-	-	-
8,484	4	-	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

44,727	10	1	-	-	-	-
8,665	7	2	-	-	-	-
9,404	8	1	-	-	-	-
24,263	5	1	-	20	2	1
40,822	6	1	-	-	-	-
12,359	7	1	2	25	6	2
14,301	8	2	-	18	6	7
6,842	7	-	-	-	-	-
16,806	6	1	-	-	-	-
15,150	5	1	-	-	-	-
37,964	5	2	6	127	27	6
7,182	6	1	-	-	-	-
11,983	6	-	-	-	-	-
7,063	7	1	-	2	2	-
10,155	7	2	-	28	6	1
15,878	5	2	3	17	2	1
11,626	3	1	-	-	-	-
31,490	1	2	-	25	10	3
24,440	9	1	-	-	-	-
10,212	7	-	-	-	-	-
7,142	7	2	-	-	-	-
23,792	6	-	-	-	-	-
18,717	7	2	-	-	-	-
17,144	6	-	-	-	-	-
23,785	3	-	-	-	-	-
9,403	7	1	-	-	-	-
23,106	5	-	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

9,433	6	1	-	14	4	3
8,326	6	-	-	-	-	-
26,804	6	1	7	57	20	5
28,281	5	2	-	-	-	-
13,746	6	-	-	-	-	-
7,176	10	1	-	-	-	-
10,880	4	-	-	-	-	-
10,772	7	1	-	-	-	-
21,899	4	1	-	-	-	-
12,188	7	1	-	25	4	3
10,030	4	-	-	-	-	-
13,994	6	-	-	-	-	-
17,810	6	1	-	-	-	-
7,649	10	1	-	13	1	4
16,762	7	-	-	-	-	-
25,336	7	-	-	-	-	-
8,832	4	-	-	-	-	-
11,179	6	1	-	24	6	-
11,549	5	1	-	25	5	2
6,918	10	-	-	-	-	-
14,178	5	2	-	-	-	-
8,591	6	1	-	-	-	-
13,397	5	1	-	-	-	-
13,838	6	1	-	-	-	-
13,345	4	1	-	-	-	-
9,378	7	1	-	-	-	-
10,968	6	1	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

12,269	6	1	1	25	15	2
18,216	10	1	-	-	-	-
29,442	5	2	-	-	-	-
35,218	7	2	4	20	4	5
12,098	6	1	-	12	4	5
9,534	8	1	-	10	3	-
8,145	6	1	-	25	4	2
16,164	4	1	-	-	-	-
12,820	6	1	-	-	-	-
7,531	6	-	-	-	-	-
13,953	6	1	-	25	10	-
10,308	6	1	2	25	7	2
7,453	7	-	-	-	-	-
16,722	6	-	-	-	-	-
15,985	7	2	-	-	-	-
7,081	10	1	-	-	-	-
15,611	5	1	-	25	4	-
9,017	7	1	-	-	-	-
20,599	3	-	-	-	-	-
13,602	10	1	-	-	-	-
13,773	5	2	-	-	-	-
15,631	3	-	-	-	-	-
8,924	6	-	-	-	-	-
15,571	4	1	3	45	16	3
15,888	4	1	-	-	-	-
17,761	4	1	-	-	-	-
16,800	1	2	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

18,578	5	-	-	-	-	-
14,422	6	1	-	-	-	-
12,930	7	1	3	59	20	4
14,309	8	1	-	-	-	-
10,003	7	1	-	-	-	-
7,060	10	1	7	18	1	3
12,175	6	-	-	-	-	-
12,760	3	1	-	25	11	-
12,440	5	1	-	-	-	-
16,482	3	1	-	-	-	-
8,397	6	1	-	25	5	2
10,319	6	1	-	-	-	-
14,751	6	1	-	-	-	-
15,902	5	1	4	25	8	2
16,811	6	-	-	-	-	-
16,481	6	-	-	-	-	-
7,114	6	-	-	-	-	-
7,329	10	1	-	-	-	-
16,207	5	1	2	29	15	6
8,320	5	1	-	15	7	2
15,761	7	1	-	25	13	1
9,721	3	-	-	-	-	-
8,021	7	1	-	-	-	-
17,903	4	-	-	-	-	-
9,267	6	1	2	25	13	4
9,719	7	1	-	25	3	-
7,790	7	1	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

9,699	7	1	-	15	2	-
10,178	7	2	1	25	12	3
13,336	7	-	-	-	-	-
15,695	6	1	-	-	-	-
8,716	7	1	-	-	-	-
44,732	7	1	-	-	-	-
7,254	3	1	-	18	2	3
11,948	10	1	-	20	2	1
14,198	4	1	-	-	-	-
73,055	5	3	-	-	-	-
20,222	6	2	-	-	-	-
2,508	7	-	-	-	-	-
23,867	10	1	-	-	-	-
5,420	7	2	-	-	-	-
29,324	8	2	6	25	-	8
28,294	8	2	-	-	-	-
63,916	9	2	-	-	-	-
20,105	4	1	-	-	-	-
21,763	4	-	-	-	-	-
25,473	7	1	-	-	-	-
20,786	3	-	-	-	-	-
30,785	5	2	-	50	9	3
32,201	7	1	-	-	-	-
39,498	3	2	1	108	28	2
1,818	7	1	-	25	20	1
2,611	10	1	-	-	-	-
1,560	7	1	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

2,840	7	2	-	12	2	-
6,841	7	1	-	12	6	-
5,239	7	1	-	25	3	2
1,903	8	-	-	-	-	-
8,037	8	2	-	-	-	-
919	8	-	-	-	-	-
2,514	8	-	-	-	-	-
8,267	8	1	-	13	2	1
2,303	8	1	-	-	-	-
9,253	7	1	3	25	3	1
3,839	6	1	-	14	4	-
2,962	6	1	-	13	1	1
7,878	7	1	-	-	-	-
12,444	7	1	-	25	3	2
5,201	9	1	-	1	1	3
4,795	6	-	-	-	-	-
7,634	10	-	-	-	-	-
88	9	-	-	-	-	-
2,059	10	-	-	-	-	-
749	6	-	-	-	-	-
2,664	6	1	-	-	-	-
5,277	6	-	-	-	-	-
5,039	7	1	-	-	-	-
6,666	9	1	-	-	-	-
4,029	9	-	-	-	-	-
2,987	9	-	-	-	-	-
7,879	10	1	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

30,802	9	1	-	-	-	-
8,777	9	2	-	4	1	-
1,399	8	-	-	-	-	-
15,392	5	1	-	-	-	-
762	8	-	-	-	-	-
2,074	8	-	-	-	-	-
2,474	10	-	-	-	-	-
2,151	10	-	-	-	-	-
7,032	6	1	-	20	-	1
11,097	5	1	-	-	-	-
7,033	4	-	-	-	-	-
17,360	5	1	-	-	-	-
2,503	10	1	-	-	-	-
8,758	10	2	-	-	-	-
3,861	10	-	-	-	-	-
5,740	5	-	-	-	-	-
35,713	7	1	-	-	-	-
9,509	7	-	-	-	-	-
730	7	-	-	-	-	-
8,566	8	1	2	25	5	1
9,097	5	1	-	14	1	-
11,117	5	1	-	-	-	-
4,919	8	1	-	6	-	-
2,450	8	-	-	-	-	-
1,349	8	-	-	-	-	-
6,054	6	-	-	-	-	-
4,921	6	-	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

9,226	10	1	-	19	2	3
2,464	8	-	-	-	-	-
980	8	-	-	-	-	-
1,308	4	-	-	-	-	-
2,995	4	-	-	-	-	-
3,028	6	-	-	-	-	-
7,310	7	1	-	25	1	1
8,786	6	-	-	-	-	-
3,582	6	1	-	-	-	-
3,741	6	1	-	-	-	-
3,370	6	-	-	-	-	-
1,522	6	-	-	-	-	-
2,139	6	-	-	-	-	-
2,895	6	1	-	14	-	10
1,311	6	-	-	-	-	-
9,164	10	2	-	13	4	-
8,632	3	-	-	-	-	-
9,722	7	1	-	-	-	-
17,505	4	1	3	25	3	2
442	6	-	-	-	-	-
12,535	9	1	-	54	18	1
9,063	8	1	-	-	-	-
679	8	-	-	-	-	-
4,292	3	1	-	25	6	2
13,335	6	1	-	15	9	1
5,520	6	1	-	20	12	-
3,875	8	1	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

4,903	8	1	-	-	-	-
1,187	7	-	-	-	-	-
11,127	6	1	-	-	-	-
9,485	6	2	-	17	4	-
1,876	8	1	-	12	1	1
1,503	7	-	-	-	-	-
2,632	7	1	-	-	-	-
13,122	7	-	-	-	-	-
4,506	6	-	-	-	-	-
12,326	6	1	-	25	6	1
8,200	8	1	-	14	6	1
10,658	5	1	-	-	-	-
3,671	6	2	-	14	-	2
11,720	6	1	-	25	6	3
749	7	-	-	-	-	-
916	7	-	-	-	-	-
492	7	-	-	-	-	-
2,929	7	1	-	-	-	-
2,690	8	-	-	-	-	-
4,240	6	-	-	-	-	-
6,967	8	1	-	12	4	2
1,716	8	-	-	-	-	-
4,362	6	1	-	-	-	-
648	6	-	-	-	-	-
1,362	6	1	-	20	5	-
3,253	6	-	-	-	-	-
5,813	6	1	-	25	10	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

476	7	-	-	-	-	-	-
1,987	7	-	-	-	-	-	-
618	7	-	-	-	-	-	-
2,135	4	-	-	-	-	-	-
7,147	8	1	-	12	1	-	-
1,781	6	-	-	-	-	-	-
3,767	6	-	-	-	-	-	-
1,928	6	-	-	-	-	-	-
3,499	6	-	-	-	-	-	-
3,758	6	1	-	-	-	-	-
823	6	-	-	-	-	-	-
25,571	7	1	-	-	-	-	-
2,247	10	1	-	25	21	-	-
6,968	8	1	-	-	-	-	-
11,844	8	1	2	16	4	2	-
6,162	8	1	-	3	-	-	-
4,488	10	1	-	11	3	4	-
6,050	10	1	1	18	6	5	-
13,726	10	1	-	-	-	-	-
3,922	6	1	-	-	-	-	-
8,406	3	-	-	-	-	-	-
7,569	7	-	-	-	-	-	-
38,359	7	1	-	-	-	-	-
1,769	8	-	-	-	-	-	-
1,034	8	-	-	-	-	-	-
6,580	8	2	-	32	18	2	-
11,798	7	1	-	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

3,378	8	1	-	-	-	-
4,316	8	1	-	25	14	1
6,196	7	1	-	18	5	2
3,023	7	1	-	14	5	-
9,016	6	1	-	-	-	-
2,105	7	1	-	-	-	-
1,918	8	1	-	18	10	-
928	8	-	-	-	-	-
2,742	8	1	-	-	-	-
5,882	8	-	-	-	-	-
13,373	7	-	-	-	-	-
12,796	10	1	-	-	-	-
5,229	8	1	-	25	3	3
3,947	7	-	-	-	-	-
4,757	7	1	-	-	-	-
4,599	7	-	-	-	-	-
7,289	5	1	-	-	-	-
4,926	5	-	-	-	-	-
7,027	6	1	-	17	3	-
26,409	4	1	3	120	68	6
14,523	3	1	-	-	-	-
8,645	7	1	-	-	-	-
2,252	6	-	-	-	-	-
1,377	8	-	-	-	-	-
2,207	8	1	-	6	1	-
1,894	10	-	-	-	-	-
826	9	-	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

20,412	5	1	-	-	-	-
3,977	7	1	-	20	2	1
1,770	7	1	-	14	2	1
3,424	8	1	-	-	-	-
6,549	4	1	-	-	-	-
6,293	3	-	-	-	-	-
3,710	8	1	-	25	22	-
2,003	9	-	-	-	-	-
1,587	10	-	-	-	-	-
3,656	6	1	-	-	-	-
8,991	5	-	-	-	-	-
9,017	7	-	-	-	-	-
1,825	7	-	-	-	-	-
1,897	7	1	-	-	-	-
4,195	7	1	1	46	4	5
7,890	7	1	-	-	-	-
4,968	7	1	-	-	-	-
9,914	7	1	-	-	-	-
3,641	7	-	-	-	-	-
3,376	8	-	-	-	-	-
12,362	4	-	-	-	-	-
5,082	4	-	-	-	-	-
3,401	7	1	-	11	2	-
5,745	8	2	-	-	-	-
1,952	8	-	-	-	-	-
152	6	-	-	-	-	-
2,204	6	1	-	8	3	2

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

3,478	6	-	-	-	-	-	-
2,232	8	1	-	10	1	-	-
4,062	8	-	-	-	-	-	-
1,903	8	-	-	-	-	-	-
10,222	8	-	-	-	-	-	-
19,268	5	1	-	-	-	-	-
27,689	5	2	-	-	-	-	-
9,598	7	1	-	-	-	-	-
5,795	5	1	-	-	-	-	-
1,366	10	-	-	-	-	-	-
8,726	8	1	-	-	-	-	-
3,307	8	-	-	-	-	-	-
6,993	7	1	-	25	3	-	-
3,645	7	1	-	-	-	-	-
2,920	8	1	-	25	14	-	-
2,294	8	1	-	-	-	-	-
15,441	7	1	-	25	8	6	-
3,829	8	1	-	20	1	-	-
1,238	8	1	-	-	-	-	-
2,793	7	1	-	21	9	-	-
3,093	7	1	-	-	-	-	-
6,907	7	1	-	25	5	3	-
2,492	7	1	-	-	-	-	-
26,569	4	2	5	85	11	3	-
1,445	8	-	-	-	-	-	-
8,929	7	1	-	25	8	2	-
8,285	3	1	-	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

3,952	6	1	-	25	3	1
4,212	8	2	-	30	10	2
1,955	7	1	-	-	-	-
2,508	7	1	-	-	-	-
2,871	7	1	-	-	-	-
8,189	7	-	-	-	-	-
805	7	-	-	-	-	-
16,006	10	1	2	15	6	2
6,962	8	-	-	-	-	-
2,192	8	1	-	20	3	-
277	6	-	-	-	-	-
1,200	6	-	-	-	-	-
8,664	7	-	-	-	-	-
6,562	7	2	-	25	8	2
21,332	5	1	-	-	-	-
3,758	5	1	-	-	-	-
7,711	7	1	2	25	7	2
2,844	7	1	-	18	-	-
1,515	6	1	-	14	2	1
1,383	8	1	-	-	-	-
2,042	8	-	-	-	-	-
5,478	8	1	-	-	-	-
7,177	4	-	-	-	-	-
7,937	7	1	-	-	-	-
7,508	4	-	-	-	-	-
4,212	5	-	-	-	-	-
1,748	7	1	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

6,411	8	1	-	-	-	-
6,392	5	-	-	-	-	-
852	10	-	-	-	-	-
5,190	7	1	-	6	2	1
9,753	5	1	-	-	-	-
1,227	7	1	-	15	6	-
2,113	5	-	-	-	-	-
8,680	8	1	-	-	-	-
1,675	8	1	-	-	-	-
726	6	-	-	-	-	-
8,303	10	-	-	-	-	-
7,671	10	1	-	34	5	6
1,249	8	-	-	-	-	-
1,747	8	1	-	-	-	-
7,437	8	1	2	25	2	2
2,922	8	-	-	-	-	-
6,807	8	1	-	-	-	-
513	8	-	-	-	-	-
4,074	8	1	-	6	1	1
810	7	-	-	-	-	-
3,468	8	1	-	-	-	-
682	7	-	-	-	-	-
660	7	-	-	-	-	-
2,973	7	1	1	21	1	1
720	7	-	-	-	-	-
5,000	10	1	-	-	-	-
9,872	10	1	-	-	-	3

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

465	7	-	-	-	-	-
3,515	10	-	-	-	-	-
5,723	10	-	-	-	-	-
877	10	-	-	-	-	-
1,148	10	-	-	-	-	-
604	10	-	-	-	-	-
5,393	5	1	-	-	-	-
11,586	8	1	4	52	30	11
1,268	8	1	-	-	-	-
1,087	8	1	-	-	-	-
1,360	7	1	-	24	2	-
6,948	6	-	-	-	-	-

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

Remaining Ventilator Capacity (DefHC)	Ventilator Capacity (DefHC)	Days to Failure - Bed Capacity (DefHC)	ICU Beds Available (% HHS)	Ventilator Available (% HHS)	Hospital Beds Available (% HHS)
3	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
8	-	-	0.00%	0.00%	0.00%
3	-	-	No Data	No Data	No Data
(3)	-	-	No Data	No Data	No Data
10	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
(5)	295	-	No Data	No Data	No Data
2	-	-	No Data	No Data	No Data
0	462	-	No Data	No Data	No Data
(6)	154	-	No Data	No Data	No Data
228	-	-	No Data	No Data	No Data
0	84	-	No Data	No Data	No Data
7	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
9	-	-	0.00%	0.00%	0.00%
(3)	-	-	No Data	No Data	No Data
(115)	52	-	No Data	No Data	No Data
(6)	513	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
(17)	82	-	No Data	No Data	No Data
(134)	28	-	No Data	No Data	No Data
7	1	-	No Data	100.00%	58.33%
(3)	-	-	0.00%	0.00%	0.00%

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	-	-	No Data	No Data	No Data
(5)	3	-	No Data	No Data	No Data
4	-	-	0.00%	0.00%	0.00%
1	5	-	0.00%	100.00%	56.00%
166	116	-	No Data	No Data	No Data
0	418	-	No Data	No Data	No Data
(8)	-	-	No Data	No Data	No Data
39	82	-	No Data	No Data	No Data
780	69	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
36	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
251	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
21	2	-	No Data	100.00%	40.00%
339	77	-	No Data	No Data	No Data
4	-	-	No Data	No Data	No Data
3	-	-	0.00%	0.00%	0.00%
6	-	-	0.00%	0.00%	0.00%
307	12	-	No Data	No Data	No Data
(4)	-	-	No Data	No Data	No Data
(6)	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
8	-	-	0.00%	0.00%	0.00%
3	7	-	0.00%	100.00%	61.11%
(7)	10	-	No Data	No Data	No Data
4	-	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

(2)	28	-	No Data	No Data	No Data
(3)	-	-	No Data	No Data	No Data
6	-	-	62.50%	100.00%	57.84%
9	-	-	No Data	No Data	No Data
34	-	-	No Data	No Data	No Data
3	5	-	No Data	No Data	No Data
1	-	-	No Data	No Data	No Data
(8)	44	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
41	-	-	No Data	No Data	No Data
(6)	-	-	No Data	No Data	No Data
(2)	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
167	55	-	52.63%	80.35%	45.19%
624	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
29	-	-	0.00%	0.00%	0.00%
46	80	-	No Data	No Data	No Data
(53)	18	-	No Data	No Data	No Data
(29)	-	-	No Data	No Data	No Data
2	2	-	No Data	No Data	No Data
(16)	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
175	-	-	No Data	No Data	No Data
(9)	-	-	0.00%	0.00%	0.00%

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

21	-	-	No Data	No Data	No Data
262	133	-	No Data	No Data	No Data
8	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
3	-	-	No Data	No Data	No Data
197	32	-	No Data	No Data	No Data
151	41	-	No Data	No Data	No Data
1	1	-	No Data	No Data	No Data
7	-	-	No Data	No Data	No Data
(1)	-	8	0.00%	0.00%	0.00%
(29)	-	-	No Data	No Data	No Data
11	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
25	-	-	No Data	No Data	No Data
1	-	-	No Data	No Data	No Data
5	-	-	No Data	No Data	No Data
(4)	-	2	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
55	-	-	No Data	No Data	No Data
63	-	-	No Data	No Data	No Data
766	67	-	No Data	No Data	No Data
3140	880	-	No Data	No Data	No Data
(20)	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
(2)	-	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

294	-	-	No Data	No Data	No Data
140	42	-	No Data	No Data	No Data
0	2	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
312	20	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
(3)	39	-	No Data	No Data	No Data
(1)	-	-	No Data	No Data	No Data
12	20	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
4	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
47	-	-	No Data	No Data	No Data
26	11	-	25.00%	100.00%	53.33%
234	27	-	No Data	No Data	No Data
15	7	-	No Data	No Data	No Data
9	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
5	1	-	No Data	100.00%	85.29%
3	-	-	No Data	No Data	No Data
103	31	-	No Data	No Data	No Data
83	-	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	119	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
5	5	-	No Data	100.00%	77.50%
3	-	-	No Data	No Data	No Data
43	51	-	No Data	No Data	No Data
(8)	-	-	No Data	No Data	No Data
7	-	-	No Data	No Data	No Data
404	86	-	No Data	No Data	No Data
104	24	-	No Data	No Data	No Data
8	3	-	No Data	No Data	No Data
4	-	-	No Data	No Data	No Data
2	-	-	No Data	No Data	No Data
(2)	1	-	No Data	No Data	No Data
63	-	-	No Data	No Data	No Data
34	49	-	No Data	No Data	No Data
215	-	-	No Data	No Data	No Data
581	12	-	No Data	No Data	No Data
5	2	-	No Data	No Data	No Data
1	3	-	100.00%	100.00%	94.44%
2	3	-	No Data	No Data	No Data
370	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
8	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
2	-	-	No Data	No Data	No Data
3	1	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

10	11	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
3	-	-	0.00%	0.00%	0.00%
5	1	-	No Data	No Data	No Data
24	5	-	No Data	0.00%	6.67%
334	36	-	No Data	No Data	No Data
1	-	-	0.00%	0.00%	0.00%
1	-	-	No Data	No Data	84.00%
5	-	-	No Data	No Data	No Data
2	2	-	No Data	No Data	No Data
10	22	-	80.00%	100.00%	51.67%
119	-	-	No Data	No Data	No Data
5	-	-	No Data	No Data	No Data
3	19	-	No Data	No Data	No Data
2	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
(1)	-	5	No Data	No Data	No Data
7	-	-	0.00%	0.00%	0.00%
3	-	-	No Data	No Data	No Data
32	6	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
10	-	-	No Data	No Data	No Data
9	-	-	0.00%	0.00%	0.00%
264	40	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

(4)	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
7	-	-	No Data	No Data	No Data
3	-	-	0.00%	0.00%	0.00%
90	52	-	No Data	No Data	No Data
8	-	-	No Data	No Data	No Data
183	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
8	-	-	No Data	No Data	No Data
7	-	-	No Data	No Data	No Data
45	2	-	No Data	No Data	No Data
31	42	-	50.00%	70.73%	25.76%
1	1	-	No Data	No Data	No Data
318	37	-	No Data	No Data	No Data
68	27	-	No Data	No Data	No Data
103	62	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
157	23	-	30.43%	78.26%	62.00%
2	11	-	No Data	No Data	No Data
150	20	-	No Data	No Data	No Data
10	-	-	No Data	No Data	No Data
2	-	-	No Data	No Data	No Data
1	-	-	0.00%	0.00%	0.00%
1	-	-	0.00%	0.00%	0.00%
3	4	-	No Data	100.00%	88.00%
301	146	-	36.46%	54.35%	50.16%
13	-	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

33	-	-	No Data	No Data	No Data
281	10	-	No Data	No Data	No Data
3	5	-	66.67%	100.00%	84.62%
0	-	-	No Data	No Data	No Data
3	6	-	No Data	No Data	No Data
32	-	-	No Data	No Data	No Data
16	54	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
4	-	-	No Data	No Data	No Data
32	59	-	No Data	No Data	No Data
6	-	-	0.00%	0.00%	0.00%
1047	112	-	No Data	No Data	No Data
19	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
16	21	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
1	4	-	No Data	No Data	No Data
12	-	-	No Data	No Data	No Data
(6)	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
1	-	-	No Data	No Data	No Data
(11)	-	-	No Data	No Data	No Data
(2)	-	-	No Data	No Data	No Data
21	-	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	-	-	No Data	No Data	No Data
83	68	-	No Data	No Data	No Data
6	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
4	-	-	No Data	No Data	No Data
(8)	-	-	No Data	No Data	No Data
13	32	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
14	-	-	No Data	No Data	No Data
1	3	-	No Data	No Data	No Data
31	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
24	-	-	0.00%	0.00%	0.00%
123	-	-	No Data	No Data	35.42%
844	279	-	No Data	No Data	No Data
11	-	-	No Data	No Data	No Data
222	130	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
145	-	-	No Data	No Data	No Data
91	134	-	No Data	No Data	No Data
2	-	-	0.00%	0.00%	0.00%
3	-	-	0.00%	0.00%	0.00%
31	12	-	No Data	No Data	No Data
12	-	-	No Data	No Data	No Data
89	15	-	No Data	No Data	No Data
6	-	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

13	14	-	No Data	No Data	No Data
73	33	-	No Data	No Data	No Data
0	9	-	No Data	No Data	No Data
2	2	-	No Data	No Data	No Data
(2)	2	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
346	-	-	No Data	No Data	No Data
81	17	-	No Data	No Data	No Data
5	8	-	No Data	No Data	No Data
79	129	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
3	1	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
2	-	-	No Data	No Data	No Data
234	23	-	No Data	No Data	No Data
(8)	-	-	No Data	No Data	No Data
(5)	-	-	No Data	No Data	No Data
14	17	-	No Data	No Data	No Data
2	-	-	No Data	No Data	No Data
47	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
33	37	-	No Data	No Data	No Data
2	-	-	No Data	No Data	No Data
440	-	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

161	31	-	No Data	No Data	No Data
0	3	-	No Data	No Data	No Data
0	6	-	No Data	No Data	No Data
(4)	-	-	No Data	No Data	No Data
43	-	-	No Data	No Data	No Data
2	1	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
6	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
9	-	-	No Data	No Data	No Data
4	12	-	No Data	No Data	No Data
6	-	-	No Data	No Data	No Data
50	8	-	0.00%	62.50%	36.36%
0	-	-	No Data	No Data	No Data
37	-	-	No Data	No Data	No Data
5	-	-	No Data	No Data	No Data
4	-	-	No Data	No Data	No Data
5	14	-	No Data	No Data	No Data
8	2	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
69	90	-	No Data	No Data	No Data
4	5	-	No Data	No Data	No Data
93	-	-	No Data	No Data	No Data
33	-	-	No Data	No Data	No Data
1	-	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

3	10	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
(1)	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
207	126	-	42.99%	49.22%	53.68%
1	24	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
23	21	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
6	5	-	No Data	No Data	No Data
11	-	-	No Data	No Data	No Data
4	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
39	-	-	No Data	No Data	No Data
193	182	-	No Data	No Data	No Data
605	55	-	No Data	No Data	No Data
10	-	-	No Data	No Data	No Data
29	-	-	No Data	No Data	No Data
6	23	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
4	-	-	No Data	No Data	No Data
(4)	-	-	No Data	No Data	No Data
9	4	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

1	2	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
2	-	-	No Data	No Data	No Data
1	-	-	No Data	No Data	No Data
1	1	-	100.00%	100.00%	84.44%
2	-	-	No Data	No Data	No Data
313	26	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
779	19	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
10	-	-	No Data	No Data	No Data
4	-	-	No Data	No Data	No Data
149	24	-	No Data	No Data	No Data
11	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
8	32	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
1	-	-	0.00%	0.00%	0.00%
4	6	-	No Data	No Data	No Data
19	31	-	No Data	No Data	No Data
358	81	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
10	-	-	No Data	No Data	No Data
3	2	-	No Data	No Data	No Data
66	26	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
4	13	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
2	-	-	No Data	No Data	No Data
2	-	-	No Data	No Data	No Data
52	9	-	40.00%	100.00%	84.93%
54	6	-	75.00%	100.00%	75.41%
8	-	-	No Data	No Data	No Data
45	83	-	No Data	No Data	No Data
18	32	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	5	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	93.33%
2	-	-	No Data	No Data	No Data
14	-	-	No Data	No Data	No Data
3	1	-	No Data	No Data	No Data
180	99	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
615	160	-	No Data	No Data	No Data
31	20	-	No Data	No Data	No Data
30	-	-	No Data	No Data	No Data
31	-	-	No Data	No Data	No Data
5	-	-	No Data	No Data	No Data
2	-	-	No Data	No Data	No Data
5	-	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

4	8	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
243	2	-	No Data	No Data	No Data
8	-	-	No Data	No Data	No Data
9	-	-	No Data	No Data	No Data
4	10	-	No Data	No Data	No Data
25	-	-	No Data	No Data	No Data
4	3	-	No Data	No Data	No Data
7	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
3	-	-	0.00%	0.00%	0.00%
7	11	-	No Data	No Data	No Data
21	-	-	No Data	No Data	No Data
558	76	-	63.77%	67.11%	35.69%
251	-	-	No Data	No Data	No Data
136	-	-	No Data	No Data	No Data
89	-	-	No Data	No Data	No Data
291	268	-	No Data	No Data	No Data
35	-	-	0.00%	0.00%	0.00%
3	3	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	4	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
6	-	-	0.00%	0.00%	0.00%
2	-	-	No Data	No Data	No Data
2	2	-	No Data	100.00%	68.42%

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

6	7	-	No Data	No Data	No Data
2	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
1	-	-	No Data	No Data	90.00%
2	-	-	0.00%	0.00%	0.00%
3	3	-	No Data	No Data	No Data
4	-	-	No Data	No Data	No Data
26	88	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
31	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
30	29	-	64.00%	91.43%	19.30%
684	-	-	No Data	No Data	No Data
48	-	-	No Data	No Data	100.00%
0	-	-	No Data	No Data	No Data
54	-	-	No Data	No Data	No Data
6	2	-	No Data	No Data	No Data
2	5	-	100.00%	100.00%	100.00%
2	-	-	No Data	No Data	No Data
18	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
305	270	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
733	37	-	No Data	No Data	No Data
12	-	-	No Data	No Data	No Data
92	66	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

3	-	-	0.00%	0.00%	0.00%
8	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
10	-	-	No Data	No Data	No Data
13	31	-	No Data	No Data	No Data
7	-	-	No Data	No Data	No Data
32	-	-	No Data	No Data	No Data
113	-	-	No Data	No Data	No Data
5	-	-	No Data	No Data	No Data
23	-	-	0.00%	0.00%	0.00%
7	5	-	83.33%	80.00%	92.50%
61	98	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
48	17	-	No Data	No Data	No Data
25	9	-	25.00%	88.89%	80.18%
6	-	-	No Data	No Data	No Data
1	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
8	-	-	No Data	No Data	No Data
22	-	-	No Data	No Data	No Data
2	-	-	No Data	No Data	No Data
2	3	-	No Data	No Data	No Data
10	-	-	No Data	No Data	No Data
(1)	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
3	5	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

2	-	-	No Data	No Data	No Data
200	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
3	-	-	0.00%	0.00%	0.00%
2344	1,580	-	39.36%	60.39%	38.74%
63	32	-	No Data	No Data	No Data
11	22	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
271	1	-	No Data	No Data	No Data
5	-	-	No Data	No Data	No Data
6	13	-	92.00%	100.00%	80.00%
18	-	-	No Data	No Data	No Data
(1)	-	-	No Data	No Data	No Data
6	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
4	2	-	0.00%	0.00%	50.00%
2	-	-	No Data	No Data	No Data
2	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
2	-	-	No Data	No Data	93.75%
2	1	-	No Data	100.00%	50.00%
0	-	-	No Data	No Data	No Data
24	-	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

10	20	-	No Data	No Data	No Data
434	29	-	No Data	No Data	No Data
180	1	-	No Data	No Data	No Data
92	48	-	61.00%	56.82%	47.56%
6	-	-	No Data	No Data	No Data
134	1	-	No Data	No Data	No Data
5	-	-	No Data	No Data	No Data
14	13	-	No Data	No Data	No Data
2	9	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
7	17	-	No Data	No Data	No Data
19	-	-	0.00%	0.00%	0.00%
4	4	-	No Data	75.00%	28.00%
3	1	-	No Data	No Data	No Data
57	-	-	No Data	No Data	No Data
5	-	-	No Data	No Data	No Data
5	-	-	No Data	No Data	91.67%
7	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
1	3	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
15	-	-	No Data	No Data	No Data
357	97	-	54.72%	59.79%	51.97%
32	-	-	0.00%	0.00%	0.00%

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

3	-	-	No Data	No Data	No Data
224	86	-	No Data	No Data	No Data
5	-	-	No Data	No Data	No Data
7	-	-	No Data	No Data	No Data
25	15	-	No Data	No Data	No Data
(1)	-	-	No Data	No Data	No Data
11	-	-	No Data	No Data	No Data
160	77	-	No Data	No Data	No Data
24	-	-	No Data	No Data	No Data
60	-	-	No Data	No Data	No Data
3	-	-	0.00%	0.00%	0.00%
35	-	-	0.00%	0.00%	0.00%
31	26	-	No Data	No Data	No Data
22	-	-	No Data	No Data	No Data
14	-	-	No Data	No Data	No Data
10	27	-	No Data	No Data	No Data
18	3	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
(11)	-	-	No Data	No Data	No Data
32	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
2	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
1	-	-	0.00%	0.00%	0.00%
3	3	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

606	190	-	No Data	No Data	No Data
2	4	-	100.00%	100.00%	88.00%
13	-	-	No Data	No Data	No Data
99	89	-	No Data	No Data	No Data
2	-	-	0.00%	0.00%	0.00%
216	8	-	No Data	No Data	No Data
15	10	-	No Data	No Data	No Data
102	12	-	No Data	No Data	No Data
7	-	-	No Data	No Data	No Data
91	-	-	No Data	No Data	No Data
6	-	-	No Data	No Data	No Data
19	-	-	No Data	No Data	No Data
(4)	-	-	No Data	No Data	No Data
8	-	-	No Data	No Data	No Data
5	8	-	No Data	No Data	No Data
10	-	-	No Data	No Data	No Data
2	-	-	No Data	No Data	No Data
11	5	-	No Data	No Data	No Data
9	-	-	No Data	No Data	No Data
5	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
1	2	-	No Data	No Data	No Data
(1)	-	-	No Data	No Data	No Data
3	7	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
3	1	-	No Data	100.00%	73.68%
0	-	-	No Data	No Data	No Data

2	-	-	No Data	No Data	No Data
53	-	-	No Data	No Data	No Data
222	25	-	No Data	No Data	No Data
236	-	-	No Data	No Data	No Data
413	161	-	No Data	No Data	No Data
12	15	-	No Data	No Data	No Data
35	-	-	No Data	No Data	No Data
22	28	-	No Data	No Data	No Data
338	31	-	74.60%	70.97%	52.12%
217	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
2	2	-	No Data	No Data	No Data
18	-	-	No Data	No Data	No Data
3	7	-	No Data	No Data	No Data
56	4	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
29	-	-	No Data	No Data	No Data
2	-	-	No Data	No Data	No Data
4	22	-	No Data	No Data	No Data
2	-	-	No Data	No Data	No Data
6	20	-	No Data	No Data	No Data
6	-	-	No Data	No Data	No Data
(1)	5	-	16.67%	60.00%	59.32%
43	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
299	168	-	No Data	No Data	No Data
5	8	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

6	3	-	No Data	No Data	No Data
513	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
3	1	-	No Data	100.00%	71.43%
7	-	-	No Data	No Data	No Data
2	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
3	-	-	0.00%	0.00%	0.00%
2	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
3	-	-	0.00%	0.00%	0.00%
7	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
102	-	-	No Data	No Data	No Data
24	-	-	No Data	No Data	No Data
63	33	-	65.48%	81.08%	65.91%
3	-	-	0.00%	0.00%	0.00%
1	1	-	No Data	No Data	No Data
5	-	-	No Data	No Data	No Data
2	-	-	No Data	No Data	No Data
5	-	-	No Data	No Data	No Data
11	3	-	No Data	No Data	No Data
7	7	-	No Data	No Data	No Data
2	-	-	No Data	No Data	No Data
10	-	-	No Data	No Data	No Data
13	-	-	No Data	No Data	No Data
19	-	-	0.00%	0.00%	0.00%

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
6	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
2	2	-	No Data	No Data	No Data
2	-	-	No Data	No Data	88.24%
0	-	-	No Data	No Data	No Data
2	-	-	0.00%	0.00%	0.00%
7	-	-	0.00%	0.00%	0.00%
1	-	-	0.00%	0.00%	0.00%
3	1	-	No Data	100.00%	92.31%
0	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
621	1	-	No Data	100.00%	53.85%
88	-	-	No Data	No Data	No Data
31	28	-	No Data	No Data	No Data
1	6	-	No Data	No Data	No Data
142	-	-	No Data	No Data	No Data
6	25	-	No Data	No Data	No Data
2	-	-	No Data	No Data	No Data
895	361	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
(3)	-	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

14	-	-	No Data	No Data	No Data
6	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
207	63	-	No Data	No Data	No Data
0	3	-	No Data	100.00%	66.67%
415	-	-	No Data	No Data	No Data
39	-	-	No Data	No Data	No Data
28	-	-	No Data	No Data	No Data
54	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
6	12	-	No Data	No Data	No Data
19	-	-	No Data	No Data	No Data
147	-	-	No Data	No Data	No Data
280	105	-	45.39%	63.81%	50.39%
4	-	-	No Data	No Data	No Data
4	13	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
6	-	-	No Data	No Data	76.92%
4	3	-	100.00%	100.00%	88.10%
7	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
2	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
(2)	-	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

84	42	-	No Data	No Data	No Data
994	-	-	No Data	No Data	No Data
(1)	14	-	No Data	No Data	No Data
509	6	-	83.33%	100.00%	78.91%
74	-	-	No Data	No Data	No Data
9	-	-	No Data	No Data	No Data
32	12	-	No Data	No Data	No Data
12	1	-	No Data	No Data	No Data
(3)	-	-	No Data	No Data	No Data
80	-	-	No Data	No Data	No Data
676	78	-	33.74%	56.41%	27.72%
7	-	-	No Data	No Data	No Data
(3)	-	-	0.00%	0.00%	0.00%
3	2	-	No Data	No Data	No Data
0	213	-	No Data	No Data	No Data
27	3	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
(1)	-	-	No Data	No Data	No Data
135	7	-	No Data	No Data	No Data
1	-	-	0.00%	0.00%	0.00%
(6)	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
5	2	-	No Data	No Data	No Data
10	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
25	11	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

1	-	-	0.00%	0.00%	0.00%
3	-	-	No Data	No Data	No Data
12	-	-	No Data	No Data	No Data
1	-	-	0.00%	0.00%	0.00%
0	2	-	No Data	100.00%	84.62%
(2)	-	3	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
153	-	-	No Data	No Data	No Data
478	47	-	No Data	No Data	No Data
96	57	-	No Data	No Data	No Data
342	53	-	57.89%	79.25%	59.72%
8	-	-	No Data	No Data	No Data
159	10	-	No Data	50.00%	46.67%
128	23	-	No Data	No Data	No Data
301	171	-	No Data	No Data	No Data
6	23	-	No Data	No Data	No Data
12	9	-	No Data	No Data	No Data
325	18	-	No Data	No Data	No Data
10	-	-	No Data	No Data	No Data
87	-	-	No Data	No Data	No Data
36	-	-	No Data	No Data	No Data
27	-	-	No Data	No Data	No Data
3	4	-	No Data	No Data	No Data
46	-	-	No Data	No Data	No Data
23	20	-	No Data	No Data	No Data
96	31	-	No Data	No Data	No Data
4	6	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

20	4	-	No Data	No Data	No Data
3	4	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
1	1	-	No Data	No Data	No Data
6	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
10	4	-	No Data	No Data	No Data
4	-	-	No Data	No Data	No Data
137	-	-	No Data	No Data	No Data
25	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
6	-	-	No Data	No Data	No Data
3	3	-	No Data	No Data	No Data
3	-	-	0.00%	0.00%	0.00%
8	4	-	No Data	No Data	No Data
6	1	-	No Data	No Data	No Data
4	-	-	No Data	No Data	No Data
2	-	-	No Data	No Data	No Data
3	-	-	100.00%	No Data	100.00%
3	13	-	No Data	No Data	No Data
4	-	-	No Data	No Data	No Data
11	-	-	No Data	No Data	No Data
2	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	-	-	No Data	No Data	No Data
0	1	-	No Data	No Data	No Data
3	-	-	0.00%	0.00%	0.00%
271	-	-	No Data	No Data	No Data
23	20	-	No Data	No Data	No Data
59	42	-	62.12%	78.57%	52.01%
75	122	-	41.27%	71.31%	43.56%
21	40	-	No Data	No Data	No Data
36	2	-	No Data	No Data	No Data
5	18	-	55.56%	100.00%	46.15%
173	29	-	67.86%	89.66%	79.91%
26	-	-	No Data	No Data	No Data
108	-	-	No Data	No Data	No Data
471	-	-	No Data	No Data	No Data
215	96	-	100.00%	69.79%	33.23%
9	-	-	No Data	No Data	No Data
6	-	-	0.00%	0.00%	0.00%
56	45	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
58	34	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
4	-	-	No Data	No Data	No Data
67	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
113	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
12	6	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

2	-	-	No Data	No Data	No Data
8	7	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
2	-	-	No Data	No Data	No Data
6	6	-	No Data	No Data	No Data
8	-	-	No Data	No Data	No Data
2	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
6	-	-	No Data	No Data	No Data
4	-	-	No Data	No Data	No Data
1	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
2	2	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
3	2	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
5	-	-	No Data	No Data	No Data
5	-	-	No Data	No Data	No Data
195	16	-	No Data	No Data	No Data
330	96	-	39.31%	63.64%	49.07%
7	-	-	No Data	No Data	No Data
20	-	-	No Data	No Data	No Data
147	46	-	19.05%	68.09%	43.92%
33	18	-	No Data	No Data	No Data
129	19	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data





(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

16	-	-	No Data	No Data	No Data
19	-	-	No Data	No Data	No Data
14	64	-	No Data	No Data	No Data
153	120	-	No Data	No Data	No Data
852	177	-	31.25%	61.58%	45.63%
31	-	-	No Data	No Data	No Data
26	57	-	No Data	No Data	No Data
115	-	-	0.00%	0.00%	0.00%
74	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
34	-	-	No Data	No Data	No Data
85	1	-	No Data	No Data	No Data
(2)	2	-	No Data	No Data	No Data
22	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
400	-	-	No Data	No Data	No Data
6	-	-	No Data	No Data	No Data
1	-	-	No Data	No Data	No Data
48	-	-	No Data	No Data	No Data
200	-	-	No Data	No Data	No Data
3	2	-	No Data	No Data	No Data
41	10	-	No Data	No Data	No Data
161	61	-	57.58%	67.21%	60.54%
23	22	-	No Data	No Data	No Data
26	3	-	No Data	No Data	No Data
13	14	-	No Data	No Data	No Data
25	-	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	-	-	No Data	No Data	No Data
59	2	-	No Data	100.00%	90.91%
0	-	-	No Data	No Data	No Data
6	-	-	0.00%	0.00%	0.00%
14	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
23	58	-	15.00%	82.76%	58.90%
9	23	-	No Data	No Data	No Data
(3)	2	-	100.00%	100.00%	38.89%
4	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
3	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
14	-	-	No Data	No Data	No Data
13	-	-	No Data	No Data	No Data
17	-	-	51.16%	95.35%	7.14%
428	53	-	46.84%	58.49%	34.89%
1	-	-	No Data	No Data	No Data
10	-	-	No Data	No Data	No Data
53	44	-	41.18%	54.55%	42.81%
481	6	-	No Data	100.00%	44.21%
160	-	-	No Data	No Data	0.00%
3	-	-	No Data	No Data	No Data
4	-	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

2054	603	-		38.22%		69.82%	38.12%
46	-	-		No Data		No Data	No Data
4	15	-		No Data		No Data	No Data
36	6	-		No Data		No Data	No Data
2	1	-		No Data		No Data	No Data
52	8	-		No Data		No Data	No Data
87	-	-		No Data		No Data	No Data
0	-	-		No Data		No Data	No Data
29	24	-		No Data		No Data	No Data
227	26	-		No Data		No Data	No Data
205	206	-		No Data		No Data	No Data
(1)	-	-		No Data		No Data	No Data
279	-	-		0.00%		0.00%	0.00%
7	-	-		No Data		No Data	No Data
134	-	-		No Data		No Data	No Data
12	-	-		No Data		No Data	No Data
4	-	-		No Data		No Data	No Data
89	-	-		No Data		No Data	No Data
14	-	-		No Data		No Data	No Data
61	2	-		No Data		No Data	No Data
9	7	-		No Data		No Data	No Data
156	94	-		40.91%		80.85%	42.74%
8	10	-		No Data		No Data	No Data
3	-	-		No Data		No Data	No Data
18	-	-		No Data		No Data	No Data
6	-	-		No Data		No Data	No Data
9	9	-		No Data		No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

7	2	-	No Data	No Data	No Data
5	7	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
3	2	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
2	4	-	No Data	No Data	No Data
7	2	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
4	-	-	No Data	No Data	No Data
3	1	-	No Data	100.00%	8.00%
0	-	-	0.00%	0.00%	0.00%
1	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
2	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	1	-	No Data	100.00%	100.00%
1	21	-	No Data	No Data	No Data
133	85	-	32.43%	66.27%	36.77%
20	6	-	No Data	No Data	No Data
22	-	-	No Data	No Data	No Data
5	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
34	17	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

41	-	-	No Data	No Data	No Data
3	5	-	No Data	No Data	No Data
11	14	-	No Data	No Data	No Data
10	17	-	No Data	No Data	No Data
408	45	-	47.62%	86.67%	61.12%
11	7	-	No Data	No Data	No Data
15	14	-	43.75%	71.43%	45.45%
0	-	-	No Data	No Data	No Data
0	169	-	No Data	No Data	No Data
257	165	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
5	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
40	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
10	1	-	No Data	No Data	No Data
5	3	-	No Data	No Data	No Data
77	-	-	No Data	No Data	No Data
23	-	-	No Data	No Data	No Data
6	7	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
13	10	-	No Data	No Data	No Data
6	-	-	No Data	No Data	No Data
12	-	-	No Data	No Data	No Data
10	-	-	No Data	No Data	No Data
45	-	-	No Data	No Data	No Data
25	-	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	-	-	No Data	No Data	No Data
8	4	-	No Data	No Data	No Data
1	2	-	No Data	No Data	No Data
0	62	-	No Data	No Data	No Data
5	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
6	-	-	No Data	No Data	No Data
7	2	-	No Data	No Data	No Data
6	-	-	0.00%	0.00%	0.00%
25	-	-	No Data	No Data	No Data
1	-	-	No Data	No Data	No Data
5	-	-	No Data	No Data	No Data
(1)	-	-	0.00%	0.00%	0.00%
3	-	-	No Data	No Data	No Data
3	4	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
2	2	-	No Data	No Data	No Data
1	-	-	0.00%	0.00%	0.00%
6	-	-	No Data	No Data	No Data
7	1	-	No Data	100.00%	96.88%
0	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	100.00%
3	2	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
387	16	-	33.33%	78.26%	46.71%
837	151	-	42.97%	68.87%	42.11%
0	-	-	No Data	No Data	No Data
10	-	-	No Data	No Data	No Data
767	199	-	No Data	No Data	No Data
15	-	-	No Data	No Data	No Data
38	17	-	44.44%	100.00%	51.89%
449	388	-	75.55%	92.01%	61.24%
18	-	-	No Data	No Data	No Data
(6)	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
42	-	-	No Data	No Data	No Data
66	19	-	50.00%	89.47%	60.00%
98	-	-	No Data	No Data	No Data
11	22	-	No Data	No Data	No Data
36	22	-	No Data	No Data	No Data
30	36	-	No Data	No Data	No Data
14	18	-	No Data	No Data	No Data
4	-	-	No Data	No Data	No Data
26	19	-	No Data	No Data	No Data
7	-	-	No Data	No Data	No Data
7	2	-	No Data	No Data	No Data
32	-	-	No Data	No Data	No Data
12	6	-	90.91%	100.00%	76.19%

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

20	-	-	No Data	No Data	No Data
2	2	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
6	4	-	No Data	No Data	No Data
2	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
6	-	-	No Data	No Data	No Data
6	-	-	No Data	No Data	No Data
10	-	-	No Data	No Data	No Data
5	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
11	2	-	No Data	No Data	No Data
10	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
2	3	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
3	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
7	3	-	No Data	100.00%	86.84%
3	2	-	No Data	No Data	No Data
4	-	-	0.00%	0.00%	0.00%
0	3	-	No Data	100.00%	83.33%
6	2	-	No Data	No Data	No Data
2	-	-	0.00%	0.00%	0.00%

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
2	2	-	No Data	100.00%	55.00%
3	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
1	1	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
2	-	-	0.00%	0.00%	0.00%
3	-	-	0.00%	0.00%	0.00%
3	-	-	0.00%	0.00%	0.00%
86	86	-	No Data	No Data	No Data
38	2	-	No Data	100.00%	91.30%
11	-	-	No Data	No Data	92.59%
4	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
835	40	-	No Data	No Data	No Data
3	15	-	No Data	No Data	No Data
664	158	-	43.48%	73.42%	48.21%
559	254	-	No Data	No Data	No Data
0	57	-	No Data	No Data	No Data
6	-	-	0.00%	0.00%	0.00%
28	-	-	No Data	No Data	No Data
419	17	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
3	-	-	0.00%	0.00%	0.00%

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

10	-	-	No Data	No Data	No Data
25	21	-	No Data	No Data	No Data
74	76	-	No Data	No Data	No Data
121	12	-	No Data	No Data	No Data
12	-	-	0.00%	0.00%	0.00%
8	-	-	No Data	No Data	No Data
422	-	-	No Data	No Data	No Data
17	-	-	No Data	No Data	No Data
17	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
196	33	-	40.00%	90.91%	41.00%
173	114	-	56.76%	89.47%	63.25%
21	26	-	31.82%	84.62%	57.29%
7	1	-	No Data	No Data	No Data
8	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
3	3	-	No Data	No Data	No Data
1	-	-	No Data	No Data	No Data
2	-	-	No Data	No Data	No Data
10	-	-	No Data	No Data	No Data
2	-	-	0.00%	0.00%	0.00%
2	-	-	No Data	No Data	No Data
7	10	-	40.00%	90.00%	74.07%
6	-	-	No Data	No Data	No Data
11	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
5	6	-	25.00%	100.00%	55.56%

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	-	-	No Data	No Data	No Data
15	2	-	No Data	100.00%	100.00%
2	-	-	0.00%	0.00%	0.00%
2	2	-	No Data	No Data	No Data
7	-	-	No Data	No Data	No Data
3	-	-	0.00%	0.00%	0.00%
44	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
3	3	-	No Data	100.00%	71.43%
0	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
2	2	-	No Data	No Data	No Data
4	-	-	0.00%	0.00%	0.00%
3	3	-	0.00%	100.00%	50.00%
0	-	-	0.00%	0.00%	0.00%
153	86	-	No Data	63.08%	46.12%
1082	153	-	57.00%	67.97%	45.01%
3	-	-	No Data	No Data	No Data
17	18	-	No Data	No Data	No Data
91	39	-	67.27%	76.92%	44.63%
805	-	-	No Data	No Data	No Data
17	-	-	No Data	No Data	No Data
24	-	-	No Data	No Data	No Data
324	20	-	40.00%	75.00%	67.84%
2	-	-	No Data	No Data	No Data
8	-	-	No Data	No Data	No Data
432	18	-	37.04%	66.67%	45.35%

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

18	27	-	No Data	No Data	No Data
7	11	-	No Data	No Data	No Data
649	160	-	33.33%	75.63%	31.32%
0	-	-	No Data	No Data	No Data
4	13	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
6	-	-	No Data	No Data	No Data
20	-	-	No Data	No Data	No Data
16	27	-	No Data	No Data	No Data
151	48	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
28	9	-	100.00%	100.00%	82.35%
21	20	-	No Data	No Data	No Data
10	-	-	No Data	No Data	No Data
16	6	-	No Data	No Data	No Data
76	80	-	No Data	No Data	No Data
9	-	-	No Data	No Data	No Data
(2)	-	4	0.00%	0.00%	0.00%
1	2	-	No Data	No Data	No Data
2	-	-	No Data	No Data	No Data
2	-	-	No Data	No Data	No Data
2	2	-	No Data	No Data	No Data
22	-	-	No Data	No Data	No Data
14	12	-	No Data	No Data	No Data
41	-	-	No Data	No Data	No Data
14	-	-	No Data	No Data	No Data
2	2	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

(1)	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
12	14	-	No Data	No Data	No Data
2	5	-	75.00%	100.00%	79.55%
4	12	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
5	3	-	50.00%	100.00%	65.00%
0	-	-	No Data	No Data	No Data
49	-	-	No Data	No Data	No Data
(1)	-	-	No Data	No Data	No Data
4	-	-	No Data	No Data	No Data
3	3	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
1	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
8	10	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
2	15	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
4	-	-	No Data	No Data	85.71%
3	3	-	100.00%	100.00%	73.33%

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	-	-	No Data	No Data	No Data
3	2	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
6	3	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
2	-	-	No Data	No Data	No Data
0	-	-	No Data	100.00%	84.62%
20	10	-	No Data	No Data	No Data
7	-	-	0.00%	0.00%	0.00%
11	5	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
116	136	-	No Data	No Data	No Data
28	-	-	No Data	No Data	No Data
8	-	-	No Data	No Data	No Data
618	40	-	28.00%	90.00%	70.56%
4	-	-	No Data	No Data	No Data
75	1	-	No Data	100.00%	100.00%
58	42	-	No Data	No Data	No Data
778	326	-	54.05%	71.79%	49.21%
304	81	-	No Data	No Data	No Data
11	-	-	0.00%	0.00%	0.00%
39	54	-	71.43%	96.30%	47.53%
22	14	-	No Data	No Data	No Data
647	99	-	No Data	No Data	No Data
81	-	-	0.00%	0.00%	0.00%
6	8	-	No Data	No Data	No Data
70	15	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

292	20	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
81	-	-	No Data	No Data	No Data
25	18	-	No Data	No Data	No Data
93	-	-	No Data	No Data	No Data
212	72	-	No Data	No Data	No Data
13	11	-	42.86%	72.73%	77.85%
23	-	-	0.00%	0.00%	0.00%
14	1	-	No Data	No Data	No Data
34	-	-	0.00%	0.00%	0.00%
53	-	-	No Data	No Data	No Data
0	42	-	No Data	No Data	No Data
463	277	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
18	-	-	0.00%	0.00%	0.00%
20	22	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
9	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
6	-	-	0.00%	0.00%	0.00%
11	6	-	No Data	No Data	No Data
170	-	-	No Data	No Data	53.30%
43	-	-	No Data	No Data	No Data
9	4	-	No Data	No Data	No Data
15	-	-	No Data	No Data	No Data
0	15	-	41.67%	80.00%	58.77%
5	7	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

9	11	-	No Data	No Data	No Data
4	6	-	No Data	No Data	No Data
10	3	-	No Data	No Data	No Data
5	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
4	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
(1)	1	-	No Data	100.00%	60.00%
0	-	-	No Data	No Data	No Data
8	-	-	No Data	No Data	No Data
5	3	-	100.00%	100.00%	70.00%
0	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
6	10	-	No Data	No Data	No Data
1	2	-	No Data	No Data	No Data
4	3	-	No Data	No Data	No Data
8	-	-	No Data	No Data	No Data
4	-	-	No Data	No Data	No Data
4	-	-	No Data	No Data	No Data
5	-	-	No Data	No Data	No Data
10	-	-	0.00%	0.00%	0.00%
43	2	-	100.00%	100.00%	57.14%
2	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
9	-	-	No Data	No Data	No Data
7	-	-	No Data	No Data	No Data
5	2	-	100.00%	100.00%	86.67%

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

6	-	-	No Data	No Data	No Data
4	-	-	No Data	No Data	52.63%
7	5	-	No Data	No Data	No Data
6	-	-	No Data	No Data	No Data
5	-	-	No Data	No Data	No Data
7	-	-	No Data	No Data	No Data
8	-	-	0.00%	0.00%	0.00%
3	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
3	-	-	No Data	No Data	No Data
3	3	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
1	-	-	No Data	No Data	No Data
3	3	-	No Data	No Data	No Data
3	-	-	0.00%	0.00%	0.00%
3	-	-	No Data	No Data	82.35%
3	-	-	0.00%	0.00%	0.00%
3	9	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
4	5	-	No Data	No Data	No Data
3	1	-	No Data	100.00%	75.00%
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	85.71%
0	-	-	0.00%	0.00%	0.00%

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	-	-	No Data	No Data	No Data
3	-	-	0.00%	0.00%	0.00%
3	3	-	No Data	100.00%	82.35%
1	-	-	No Data	No Data	No Data
0	16	-	53.85%	100.00%	55.56%
488	-	-	No Data	No Data	No Data
43	87	-	No Data	No Data	No Data
175	-	-	No Data	No Data	No Data
69	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
62	-	-	No Data	No Data	No Data
147	10	-	No Data	No Data	No Data
1200	40	-	66.67%	62.50%	44.82%
34	-	-	No Data	No Data	No Data
0	122	-	No Data	No Data	No Data
2	-	-	No Data	No Data	No Data
10	7	-	37.50%	71.43%	55.67%
9	4	-	No Data	No Data	No Data
16	-	-	No Data	No Data	No Data
127	61	-	No Data	No Data	No Data
9	-	-	No Data	No Data	No Data
32	3	-	No Data	No Data	No Data
82	-	-	No Data	No Data	No Data
291	18	-	No Data	No Data	No Data
39	19	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
267	41	-	11.50%	70.73%	65.07%

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

44	9	-	No Data	No Data	No Data
149	39	-	27.78%	97.44%	78.50%
14	-	-	No Data	No Data	No Data
5	-	-	No Data	No Data	No Data
29	24	-	64.44%	66.67%	62.40%
12	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
68	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
13	25	-	No Data	No Data	No Data
20	-	-	No Data	No Data	No Data
13	-	-	No Data	No Data	No Data
13	-	-	No Data	No Data	No Data
240	6	-	50.00%	83.33%	55.00%
46	36	-	No Data	No Data	No Data
240	51	-	No Data	No Data	No Data
3	2	-	100.00%	100.00%	60.00%
74	41	-	66.00%	73.17%	78.56%
29	-	-	No Data	No Data	No Data
52	29	-	No Data	No Data	No Data
84	-	-	0.00%	0.00%	0.00%
280	12	-	50.00%	58.33%	40.00%
68	50	-	21.88%	88.00%	45.02%
32	-	-	No Data	No Data	No Data
7	-	-	No Data	No Data	No Data
46	72	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

44	-	-	No Data	No Data	No Data
87	-	-	No Data	No Data	No Data
11	25	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
4	3	-	No Data	No Data	No Data
6	8	-	No Data	No Data	No Data
11	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
8	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
11	-	-	No Data	No Data	No Data
11	-	-	No Data	No Data	No Data
2	-	-	No Data	No Data	No Data
1	9	-	No Data	No Data	No Data
3	5	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
7	10	-	No Data	No Data	No Data
3	4	-	No Data	No Data	No Data
5	-	-	No Data	No Data	No Data
6	14	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
6	-	-	No Data	No Data	No Data
5	8	-	No Data	No Data	No Data
34	45	-	No Data	No Data	No Data
2	4	-	100.00%	100.00%	76.92%
2	-	-	0.00%	0.00%	0.00%
12	6	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

3	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
7	-	-	0.00%	0.00%	0.00%
17	-	-	No Data	No Data	92.00%
(1)	-	-	0.00%	0.00%	0.00%
3	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
5	-	-	No Data	No Data	No Data
3	3	-	No Data	No Data	No Data
6	-	-	No Data	No Data	No Data
15	5	-	No Data	No Data	No Data
3	-	-	0.00%	0.00%	0.00%
13	-	-	No Data	No Data	No Data
39	-	-	No Data	No Data	No Data
1	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
2	-	-	0.00%	0.00%	0.00%
3	-	-	No Data	No Data	No Data
1	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
0	3	-	No Data	No Data	No Data
3	12	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
3	1	-	No Data	No Data	No Data
3	4	-	100.00%	100.00%	82.86%

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

6	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
5	-	-	No Data	100.00%	88.00%
1	-	-	0.00%	0.00%	0.00%
4	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
3	2	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	1	-	No Data	100.00%	90.00%
3	2	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
3	3	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
2	-	-	0.00%	0.00%	0.00%
0	-	-	100.00%	No Data	100.00%
2	2	-	No Data	100.00%	100.00%

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	1	-	100.00%	100.00%	90.48%
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	60.00%
16	5	-	No Data	100.00%	99.31%
4	28	-	No Data	No Data	No Data
34	-	-	0.00%	0.00%	0.00%
60	-	-	No Data	No Data	No Data
143	28	-	No Data	No Data	No Data
31	-	-	No Data	No Data	No Data
287	-	-	No Data	No Data	No Data
132	-	-	No Data	No Data	No Data
100	-	-	No Data	No Data	No Data
57	8	-	No Data	25.00%	10.00%
9	-	-	No Data	No Data	No Data
511	40	-	56.25%	45.00%	11.95%
13	12	-	No Data	No Data	No Data
74	71	-	No Data	No Data	No Data
14	13	-	47.06%	84.62%	53.19%
25	24	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
9	4	-	44.44%	80.00%	67.35%
33	-	-	No Data	No Data	No Data
40	-	-	No Data	No Data	No Data
14	17	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

16	-	-	No Data	No Data	No Data
2	4	-	No Data	No Data	No Data
97	-	-	33.33%	75.00%	8.28%
15	-	-	No Data	No Data	No Data
60	-	-	No Data	No Data	37.50%
5	-	-	No Data	No Data	No Data
8	-	-	No Data	No Data	No Data
25	-	-	0.00%	0.00%	0.00%
38	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
26	31	-	61.11%	77.42%	46.91%
0	-	-	No Data	No Data	No Data
188	-	-	No Data	No Data	No Data
53	39	-	No Data	No Data	No Data
6	6	-	No Data	No Data	No Data
97	-	-	0.00%	0.00%	0.00%
78	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
28	-	-	No Data	No Data	No Data
22	-	-	No Data	No Data	No Data
58	-	-	No Data	No Data	36.36%
0	-	-	No Data	No Data	No Data
13	1	-	No Data	No Data	No Data
10	30	-	No Data	No Data	No Data
9	4	-	No Data	No Data	No Data
185	84	-	72.22%	90.48%	65.95%
23	-	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
4	-	-	No Data	No Data	No Data
38	-	-	No Data	No Data	No Data
8	-	-	0.00%	0.00%	0.00%
(1)	-	-	No Data	No Data	No Data
74	-	-	No Data	No Data	No Data
4	-	-	0.00%	0.00%	0.00%
22	6	-	No Data	No Data	No Data
2	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
39	41	-	No Data	No Data	No Data
12	-	-	No Data	No Data	No Data
16	-	-	No Data	No Data	No Data
(2)	-	-	No Data	No Data	No Data
8	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
29	-	-	No Data	No Data	No Data
53	-	-	No Data	No Data	No Data
5	4	-	No Data	No Data	No Data
6	3	-	No Data	No Data	No Data
6	-	-	0.00%	0.00%	0.00%
3	-	-	No Data	No Data	No Data
2	12	-	50.00%	91.67%	50.59%
0	-	-	0.00%	0.00%	0.00%
9	-	-	No Data	No Data	No Data
5	6	-	50.00%	100.00%	36.00%

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

6	8	-	66.67%	87.50%	71.43%
0	-	-	No Data	No Data	No Data
5	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
16	4	-	No Data	No Data	No Data
6	-	-	No Data	No Data	No Data
7	-	-	No Data	No Data	No Data
7	14	-	No Data	No Data	No Data
3	5	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
7	11	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
9	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
7	-	-	No Data	No Data	No Data
12	-	-	0.00%	0.00%	0.00%
3	2	-	No Data	No Data	No Data
4	-	-	No Data	No Data	No Data
3	3	-	75.00%	100.00%	75.00%
6	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
8	-	-	0.00%	0.00%	0.00%
3	-	-	No Data	No Data	No Data
9	-	-	No Data	No Data	No Data
14	-	-	0.00%	0.00%	0.00%

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

3	3	-	No Data	100.00%	76.00%
16	-	-	No Data	No Data	No Data
5	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
3	2	-	No Data	No Data	No Data
1	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
3	1	-	No Data	0.00%	84.21%
0	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
1	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
2	2	-	No Data	No Data	No Data
3	4	-	100.00%	100.00%	76.00%
0	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
7	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
(1)	-	-	No Data	No Data	No Data
1	18	-	No Data	100.00%	87.50%
8	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

2	1	-	No Data	No Data	No Data
2	1	-	No Data	No Data	No Data
3	1	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
4	4	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
4	-	-	0.00%	0.00%	0.00%
1	-	-	No Data	No Data	No Data
3	1	-	100.00%	100.00%	72.00%
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	2	-	No Data	100.00%	92.00%
3	1	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
0	4	-	No Data	100.00%	85.00%
3	-	-	0.00%	0.00%	0.00%
5	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
185	-	-	No Data	No Data	45.79%
42	5	-	No Data	No Data	No Data
460	6	-	100.00%	100.00%	59.39%
10	8	-	No Data	No Data	No Data
1	-	-	No Data	No Data	No Data
111	-	-	No Data	No Data	No Data
178	21	-	No Data	No Data	No Data
42	-	-	0.00%	0.00%	0.00%
53	-	-	No Data	No Data	No Data
20	-	-	No Data	No Data	No Data
47	26	-	No Data	No Data	No Data
0	77	-	55.38%	93.51%	49.31%
115	-	-	0.00%	0.00%	0.00%
49	-	-	No Data	No Data	No Data
16	25	-	No Data	No Data	No Data
4	-	-	No Data	No Data	No Data
62	-	-	No Data	No Data	No Data
115	-	-	No Data	No Data	75.00%
19	8	-	No Data	No Data	No Data
298	105	-	No Data	No Data	No Data
31	16	-	No Data	No Data	No Data
54	-	-	No Data	No Data	No Data
5	-	-	0.00%	0.00%	0.00%

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

45	-	-	0.00%	0.00%	0.00%
5	-	-	No Data	No Data	No Data
42	38	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
16	16	-	No Data	No Data	No Data
10	5	-	80.00%	80.00%	86.98%
57	-	-	No Data	No Data	No Data
5	7	-	100.00%	100.00%	66.18%
75	10	-	75.00%	90.00%	71.20%
3	-	-	No Data	No Data	No Data
(1)	-	-	No Data	No Data	No Data
15	-	-	No Data	No Data	No Data
6	-	-	No Data	No Data	No Data
31	12	-	No Data	No Data	No Data
38	-	-	No Data	No Data	No Data
27	-	-	No Data	No Data	No Data
8	-	-	0.00%	0.00%	0.00%
15	11	-	No Data	No Data	No Data
341	1	-	No Data	No Data	No Data
282	-	-	No Data	No Data	No Data
81	1	-	No Data	No Data	No Data
9	-	-	No Data	No Data	No Data
5	9	-	No Data	No Data	No Data
32	-	-	No Data	No Data	No Data
16	-	-	No Data	No Data	No Data
6	9	-	No Data	No Data	No Data
4	-	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

17	14	-	No Data	No Data	No Data
2	-	-	No Data	No Data	No Data
22	20	-	57.69%	95.00%	62.60%
0	-	-	No Data	No Data	No Data
58	8	-	No Data	No Data	No Data
60	-	-	No Data	No Data	No Data
7	-	-	No Data	No Data	No Data
12	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
9	12	-	No Data	No Data	No Data
7	-	-	No Data	No Data	No Data
12	11	-	No Data	No Data	No Data
24	-	-	No Data	No Data	No Data
43	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
7	-	-	0.00%	0.00%	0.00%
2	-	-	0.00%	0.00%	0.00%
3	-	-	No Data	No Data	No Data
3	-	-	0.00%	0.00%	0.00%
20	18	-	73.33%	94.44%	66.48%
2	3	-	No Data	100.00%	85.71%
5	3	-	100.00%	100.00%	66.67%
6	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
29	-	-	No Data	No Data	No Data
6	-	-	No Data	No Data	No Data
6	-	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

4	-	-	No Data	No Data	85.71%
0	-	-	No Data	No Data	No Data
1	-	-	No Data	No Data	92.86%
3	3	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
7	-	-	0.00%	0.00%	0.00%
7	7	-	No Data	No Data	No Data
7	-	-	No Data	No Data	No Data
2	-	-	No Data	No Data	No Data
7	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
19	14	-	55.56%	92.86%	70.53%
3	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
2	3	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
6	2	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
8	11	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
8	3	-	No Data	No Data	No Data
4	-	-	No Data	No Data	No Data
2	13	-	No Data	No Data	No Data
1	1	-	No Data	100.00%	63.64%
7	4	-	100.00%	100.00%	71.88%
10	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

3	1	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
8	2	-	No Data	No Data	No Data
5	4	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
6	7	-	No Data	No Data	No Data
0	6	-	100.00%	100.00%	83.33%
6	2	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	88.24%
0	-	-	No Data	No Data	No Data
7	6	-	No Data	100.00%	83.33%
3	4	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
6	3	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
9	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
(1)	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
3	3	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
11	1	-	No Data	100.00%	76.19%
3	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
2	-	-	0.00%	0.00%	0.00%
8	1	-	100.00%	100.00%	93.33%
0	-	-	0.00%	0.00%	0.00%
3	12	-	No Data	100.00%	72.00%
2	-	-	0.00%	0.00%	0.00%
1	1	-	No Data	100.00%	60.00%
3	1	-	No Data	100.00%	88.89%
0	-	-	0.00%	0.00%	0.00%
2	-	-	No Data	No Data	No Data
7	-	-	0.00%	0.00%	0.00%
1	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	75.00%
3	-	-	No Data	No Data	No Data
13	5	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

19	53	-	No Data	No Data	No Data
54	9	-	83.33%	100.00%	61.67%
5	-	-	No Data	No Data	No Data
19	18	-	7.14%	55.56%	54.58%
298	71	-	No Data	No Data	No Data
40	32	-	54.17%	93.75%	63.60%
118	15	-	40.00%	93.33%	48.74%
47	29	-	No Data	No Data	No Data
(2)	-	-	No Data	No Data	No Data
47	2	-	No Data	No Data	No Data
277	-	-	No Data	No Data	No Data
69	17	-	73.91%	64.71%	89.00%
8	-	-	No Data	No Data	No Data
342	-	-	No Data	No Data	No Data
19	-	-	75.00%	100.00%	6.78%
39	-	-	0.00%	0.00%	0.00%
65	-	-	No Data	No Data	No Data
14	-	-	No Data	No Data	No Data
122	8	-	No Data	No Data	No Data
96	-	-	0.00%	0.00%	0.00%
41	-	-	No Data	No Data	No Data
27	-	-	No Data	No Data	No Data
57	-	-	0.00%	0.00%	0.00%
4	-	-	No Data	No Data	No Data
30	-	-	No Data	No Data	No Data
2	3	-	No Data	100.00%	0.00%
26	13	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

5	7	-	55.56%	85.71%	52.63%
33	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
11	-	-	No Data	No Data	No Data
7	-	-	No Data	No Data	No Data
126	-	-	No Data	No Data	No Data
2	-	-	0.00%	0.00%	0.00%
1	-	-	No Data	No Data	No Data
49	17	-	100.00%	100.00%	91.98%
15	7	-	No Data	No Data	No Data
15	-	-	0.00%	0.00%	0.00%
5	-	-	No Data	No Data	No Data
16	-	-	No Data	No Data	No Data
17	-	-	0.00%	0.00%	0.00%
8	6	-	No Data	No Data	No Data
14	-	-	No Data	No Data	No Data
44	-	-	0.00%	0.00%	0.00%
3	-	-	No Data	No Data	No Data
14	-	-	No Data	No Data	No Data
8	-	-	No Data	No Data	No Data
60	-	-	No Data	No Data	No Data
6	-	-	0.00%	0.00%	0.00%
29	-	-	No Data	No Data	No Data
34	22	-	No Data	No Data	No Data
107	-	-	No Data	No Data	No Data
8	-	-	No Data	No Data	No Data
39	-	-	0.00%	0.00%	0.00%

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

19	9	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
10	18	-	0.00%	83.33%	43.90%
10	3	-	No Data	100.00%	65.22%
26	43	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
1	2	-	No Data	No Data	No Data
11	-	-	No Data	No Data	No Data
10	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
10	10	-	No Data	No Data	No Data
7	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
5	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
1	-	-	No Data	No Data	No Data
8	13	-	No Data	No Data	No Data
21	13	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
5	-	-	No Data	No Data	No Data
28	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
3	6	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	-	-	No Data	No Data	No Data
15	8	-	No Data	No Data	No Data
3	-	-	0.00%	0.00%	0.00%
2	-	-	0.00%	0.00%	0.00%
8	17	-	No Data	No Data	No Data
3	4	-	No Data	No Data	No Data
5	-	-	No Data	No Data	No Data
3	-	-	0.00%	0.00%	0.00%
2	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
6	-	-	0.00%	0.00%	0.00%
12	-	-	No Data	No Data	No Data
4	-	-	0.00%	0.00%	0.00%
6	-	-	0.00%	0.00%	0.00%
6	-	-	No Data	No Data	No Data
11	2	-	No Data	100.00%	67.50%
2	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
6	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
15	2	-	No Data	100.00%	81.25%
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
3	-	-	0.00%	0.00%	0.00%
17	-	-	0.00%	0.00%	0.00%
4	7	-	100.00%	100.00%	82.35%
4	4	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

7	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
3	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
3	5	-	100.00%	100.00%	66.67%
7	-	-	No Data	No Data	No Data
1	2	-	No Data	100.00%	25.00%
0	-	-	0.00%	0.00%	0.00%
3	4	-	100.00%	100.00%	56.00%
3	-	-	0.00%	0.00%	0.00%
8	-	-	No Data	No Data	No Data
3	-	-	0.00%	0.00%	0.00%
2	3	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
6	7	-	No Data	No Data	No Data
3	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
7	3	-	No Data	100.00%	41.67%
0	-	-	No Data	No Data	No Data
8	2	-	No Data	100.00%	84.62%
5	1	-	No Data	100.00%	89.74%
8	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
5	-	-	No Data	No Data	No Data
3	-	-	No Data	100.00%	100.00%
0	-	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

7	8	-	No Data	No Data	No Data
3	5	-	66.67%	100.00%	52.00%
9	-	-	0.00%	0.00%	0.00%
3	-	-	No Data	No Data	No Data
3	-	-	0.00%	0.00%	0.00%
3	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
8	-	-	0.00%	0.00%	0.00%
4	-	-	No Data	No Data	50.00%
0	-	-	No Data	No Data	No Data
4	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
4	1	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
3	-	-	0.00%	0.00%	0.00%
3	-	-	0.00%	0.00%	0.00%
18	-	-	No Data	No Data	No Data
9	2	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
4	1	-	No Data	0.00%	52.17%

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	-	-	0.00%	0.00%	0.00%
3	-	-	No Data	No Data	No Data
3	1	-	No Data	100.00%	90.48%
2	4	-	No Data	100.00%	84.00%
0	-	-	No Data	No Data	No Data
2	2	-	No Data	100.00%	76.47%
3	1	-	No Data	No Data	No Data
7	1	-	No Data	100.00%	81.82%
3	-	-	No Data	No Data	No Data
0	2	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
3	2	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
3	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
7	-	-	No Data	No Data	No Data
3	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
3	1	-	No Data	100.00%	92.86%
0	-	-	No Data	No Data	85.71%

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

2	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
17	56	-	58.33%	82.14%	40.50%
137	116	-	65.44%	81.03%	53.59%
34	-	-	0.00%	0.00%	0.00%
59	-	-	0.00%	0.00%	0.00%
2	-	-	No Data	No Data	No Data
458	86	-	54.55%	67.06%	41.44%
19	2	-	No Data	100.00%	62.50%
73	-	-	No Data	No Data	No Data
34	-	-	0.00%	0.00%	0.00%
7	-	-	No Data	No Data	No Data
88	-	-	0.00%	0.00%	0.00%
269	45	-	No Data	No Data	No Data
14	23	-	No Data	No Data	No Data
88	42	-	71.85%	80.95%	46.90%
2	4	-	No Data	No Data	No Data
10	9	-	No Data	No Data	No Data
76	56	-	No Data	No Data	No Data
4	-	-	No Data	No Data	No Data
66	32	-	No Data	No Data	No Data
9	6	-	No Data	No Data	No Data
60	43	-	No Data	No Data	No Data
75	-	-	0.00%	0.00%	0.00%

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

80	-	-	No Data	No Data	No Data
48	26	-	No Data	No Data	No Data
62	-	-	0.00%	0.00%	0.00%
5	-	-	No Data	No Data	No Data
19	-	-	No Data	No Data	No Data
52	-	-	No Data	No Data	No Data
111	-	-	No Data	No Data	No Data
5	5	-	No Data	No Data	No Data
8	15	-	No Data	No Data	No Data
12	8	-	No Data	No Data	No Data
38	-	-	0.00%	0.00%	0.00%
50	-	-	No Data	No Data	5.00%
6	-	-	No Data	No Data	No Data
9	-	-	0.00%	0.00%	0.00%
2	-	-	No Data	No Data	No Data
5	9	-	66.67%	100.00%	75.00%
20	21	-	83.33%	95.24%	75.00%
6	-	-	0.00%	0.00%	0.00%
83	11	-	No Data	No Data	No Data
11	-	-	No Data	No Data	No Data
23	-	-	No Data	No Data	100.00%
0	-	-	No Data	No Data	No Data
14	15	-	88.89%	100.00%	25.20%
5	-	-	No Data	No Data	No Data
21	-	-	No Data	No Data	No Data
3	4	-	100.00%	100.00%	60.87%
6	-	-	0.00%	0.00%	0.00%

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	-	-	No Data	No Data	No Data
9	4	-	100.00%	100.00%	72.34%
23	2	-	No Data	No Data	No Data
6	-	-	No Data	No Data	No Data
4	-	-	No Data	No Data	No Data
4	-	-	No Data	No Data	No Data
7	6	-	45.83%	83.33%	71.67%
9	-	-	0.00%	0.00%	0.00%
7	-	-	No Data	No Data	No Data
13	-	-	No Data	No Data	No Data
52	-	-	No Data	No Data	25.00%
13	4	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
5	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
6	4	-	66.67%	100.00%	68.52%
13	11	-	No Data	No Data	No Data
2	-	-	No Data	No Data	No Data
8	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
19	-	-	No Data	No Data	No Data
9	3	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
1	-	-	No Data	No Data	No Data
0	15	-	62.50%	100.00%	65.14%
7	2	-	No Data	100.00%	45.45%

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

9	-	-	No Data	No Data	No Data
6	14	-	No Data	No Data	No Data
4	-	-	No Data	No Data	No Data
5	-	-	No Data	No Data	No Data
11	-	-	No Data	No Data	No Data
5	3	-	No Data	100.00%	60.00%
3	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
3	4	-	No Data	No Data	No Data
5	3	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
6	-	-	0.00%	0.00%	0.00%
8	-	-	No Data	No Data	No Data
3	2	-	100.00%	100.00%	96.00%
3	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
2	2	-	No Data	100.00%	66.67%
0	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
9	-	-	No Data	No Data	No Data
5	3	-	70.00%	100.00%	77.94%
8	4	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
5	-	-	No Data	No Data	No Data
3	-	-	0.00%	0.00%	0.00%

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

3	-	-	No Data	No Data	No Data
6	-	-	0.00%	0.00%	0.00%
6	2	-	No Data	100.00%	80.00%
0	-	-	0.00%	0.00%	0.00%
7	3	-	75.00%	100.00%	72.00%
5	13	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
(1)	-	-	No Data	No Data	No Data
10	-	-	No Data	No Data	No Data
10	-	-	0.00%	0.00%	0.00%
11	-	-	No Data	No Data	No Data
1	2	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
6	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
8	2	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	2	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
6	-	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

2	2	-	No Data	No Data	No Data
7	10	-	100.00%	100.00%	79.59%
0	-	-	0.00%	0.00%	0.00%
3	-	-	No Data	No Data	No Data
5	-	-	0.00%	0.00%	0.00%
4	-	-	No Data	No Data	No Data
8	-	-	0.00%	0.00%	0.00%
3	5	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
3	-	-	0.00%	0.00%	0.00%
2	2	-	No Data	No Data	No Data
6	6	-	No Data	No Data	No Data
16	16	-	No Data	No Data	No Data
14	6	-	No Data	100.00%	71.43%
0	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
4	2	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
6	-	-	No Data	No Data	No Data
3	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
40	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
8	-	-	No Data	No Data	No Data
8	-	-	0.00%	0.00%	0.00%

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

3	2	-	No Data	No Data	No Data
2	4	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
7	3	-	No Data	No Data	No Data
6	-	-	No Data	No Data	46.15%
3	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
2	-	-	0.00%	0.00%	0.00%
3	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
3	1	-	No Data	100.00%	92.86%
0	-	-	0.00%	0.00%	0.00%
6	2	-	No Data	No Data	No Data
6	-	-	No Data	No Data	50.00%
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
7	-	-	No Data	No Data	64.00%
3	3	-	No Data	No Data	No Data
3	7	-	85.71%	100.00%	65.71%
0	-	-	No Data	No Data	No Data
2	-	-	No Data	No Data	50.00%
0	-	-	0.00%	0.00%	0.00%
3	-	-	No Data	No Data	No Data






(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

6	-	-	No Data	No Data	No Data
6	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
(1)	-	-	No Data	No Data	No Data
3	-	-	0.00%	0.00%	0.00%
2	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
7	-	-	No Data	No Data	No Data
7	-	-	No Data	No Data	No Data
2	1	-	No Data	100.00%	66.67%
1	-	-	No Data	No Data	No Data
2	1	-	No Data	100.00%	84.21%
3	-	-	0.00%	0.00%	0.00%
4	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
3	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
3	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
3	-	-	0.00%	0.00%	0.00%
3	-	-	0.00%	0.00%	0.00%
10	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

1	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	1	-	No Data	100.00%	33.33%
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	50.00%
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
7	-	-	0.00%	0.00%	0.00%
124	-	-	No Data	No Data	No Data
31	68	-	77.61%	84.51%	54.73%
5	-	-	No Data	No Data	No Data
275	27	-	70.00%	66.67%	45.99%
74	-	-	No Data	No Data	No Data
363	-	-	No Data	No Data	No Data
16	-	-	No Data	No Data	No Data
24	-	-	No Data	No Data	No Data
15	23	-	No Data	No Data	No Data
6	-	-	0.00%	0.00%	0.00%
19	-	-	0.00%	0.00%	0.00%
259	-	-	No Data	No Data	No Data
88	-	-	No Data	No Data	No Data
47	128	-	61.39%	79.69%	57.26%
11	21	-	No Data	No Data	No Data
6	-	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

11	28	-		25.00%		89.29%	31.65%
29	-	-		No Data		No Data	No Data
47	66	-		48.75%		72.73%	43.07%
12	-	-		0.00%		0.00%	0.00%
19	-	-		No Data		No Data	No Data
49	9	-		No Data		No Data	No Data
10	-	-		0.00%		0.00%	0.00%
9	-	-		No Data		No Data	No Data
17	-	-		No Data		No Data	No Data
18	7	-		No Data		100.00%	80.26%
2	16	-		No Data		No Data	No Data
7	-	-		No Data		No Data	No Data
20	10	-		No Data		No Data	No Data
13	-	-		No Data		No Data	No Data
3	-	-		No Data		No Data	No Data
16	13	-		No Data		No Data	No Data
13	-	-		0.00%		0.00%	0.00%
24	9	-		No Data		No Data	No Data
6	7	-		No Data		No Data	No Data
12	16	-		No Data		No Data	No Data
12	-	-		No Data		No Data	No Data
11	-	-		0.00%		0.00%	0.00%
6	-	-		0.00%		0.00%	0.00%
4	-	-		0.00%		0.00%	0.00%
4	-	-		No Data		No Data	No Data
8	-	-		0.00%		0.00%	0.00%
8	-	-		No Data		No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

10	-	-	No Data	No Data	No Data
6	-	-	No Data	No Data	No Data
32	-	-	No Data	No Data	No Data
7	6	-	87.50%	100.00%	78.05%
2	-	-	0.00%	0.00%	0.00%
18	14	-	No Data	No Data	No Data
7	7	-	No Data	No Data	No Data
34	26	-	42.86%	96.15%	65.09%
0	-	-	No Data	No Data	No Data
3	1	-	No Data	No Data	No Data
12	-	-	No Data	No Data	No Data
1	-	-	No Data	No Data	No Data
63	22	-	61.54%	77.27%	26.32%
3	2	-	No Data	No Data	No Data
6	-	-	No Data	No Data	No Data
5	-	-	No Data	No Data	No Data
5	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
20	-	-	No Data	No Data	No Data
8	-	-	No Data	No Data	No Data
7	-	-	No Data	No Data	No Data
8	-	-	0.00%	0.00%	0.00%
16	-	-	No Data	No Data	No Data
2	-	-	0.00%	0.00%	0.00%
6	-	-	No Data	No Data	No Data
7	-	-	No Data	No Data	No Data
12	-	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

9	-	-	0.00%	0.00%	0.00%
21	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
27	-	-	0.00%	0.00%	0.00%
0	2	-	100.00%	100.00%	85.71%
25	16	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
7	-	-	No Data	No Data	No Data
8	3	-	57.14%	100.00%	79.10%
0	-	-	No Data	No Data	No Data
6	1	-	No Data	100.00%	87.50%
0	-	-	No Data	No Data	No Data
35	19	-	65.22%	78.95%	59.90%
3	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
6	3	-	100.00%	100.00%	95.83%
2	-	-	0.00%	0.00%	0.00%
3	-	-	0.00%	0.00%	0.00%
8	4	-	66.67%	100.00%	70.83%
3	35	-	No Data	No Data	No Data
8	-	-	0.00%	0.00%	0.00%
5	-	-	No Data	No Data	No Data
2	6	-	No Data	No Data	No Data
10	33	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
49	-	-	No Data	No Data	No Data
0	2	-	No Data	100.00%	72.00%

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

8	-	-	No Data	No Data	No Data
7	3	-	No Data	100.00%	82.93%
7	-	-	0.00%	0.00%	0.00%
2	2	-	No Data	100.00%	76.92%
3	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
2	-	-	No Data	No Data	No Data
6	9	-	100.00%	100.00%	92.65%
5	20	-	No Data	No Data	No Data
7	-	-	No Data	No Data	No Data
3	1	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
7	-	-	No Data	No Data	No Data
3	3	-	No Data	100.00%	92.31%
3	-	-	0.00%	0.00%	0.00%
6	-	-	No Data	No Data	No Data
9	4	-	No Data	100.00%	52.00%
10	2	-	No Data	100.00%	60.61%
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
5	7	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
1	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
9	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
6	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
6	5	-	81.82%	100.00%	86.21%
19	5	-	No Data	No Data	No Data
6	5	-	No Data	No Data	No Data
5	-	-	0.00%	0.00%	0.00%
8	-	-	No Data	No Data	No Data
7	-	-	No Data	No Data	No Data
3	-	-	0.00%	0.00%	0.00%
3	-	-	No Data	No Data	No Data
3	2	-	No Data	No Data	No Data
10	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
7	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
9	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
3	5	-	100.00%	100.00%	76.00%

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

3	6	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	1	-	No Data	100.00%	85.71%
3	7	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
7	1	-	No Data	No Data	No Data
6	-	-	0.00%	0.00%	0.00%
3	2	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
6	-	-	No Data	No Data	No Data
2	-	-	No Data	No Data	No Data
2	3	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
3	-	-	0.00%	0.00%	0.00%
2	3	-	No Data	100.00%	100.00%
6	16	-	66.67%	93.75%	71.88%
0	-	-	0.00%	0.00%	0.00%
3	2	-	No Data	No Data	No Data
3	1	-	No Data	100.00%	76.00%
6	-	-	No Data	No Data	No Data
1	-	-	No Data	No Data	No Data
3	6	-	No Data	No Data	No Data
2	5	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

3	-	-	0.00%	0.00%	0.00%
6	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	32.00%
3	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	90.00%
3	-	-	No Data	No Data	No Data
2	1	-	100.00%	100.00%	80.00%
3	5	-	No Data	No Data	No Data
2	1	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	100.00%	No Data	100.00%
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	3	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
1	-	-	100.00%	No Data	90.00%
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
3	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
3	-	-	0.00%	0.00%	0.00%
3	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

4	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	63.64%
7	3	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
2	-	-	0.00%	0.00%	0.00%
7	-	-	0.00%	0.00%	0.00%
0	1	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
2	2	-	No Data	100.00%	40.00%
0	-	-	No Data	No Data	No Data
7	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
1	-	-	No Data	No Data	80.00%
29	2	-	No Data	No Data	No Data
2	4	-	No Data	100.00%	77.78%
0	-	-	No Data	No Data	70.00%
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
1	3	-	No Data	No Data	No Data
3	-	-	0.00%	0.00%	0.00%
25	-	-	0.00%	0.00%	0.00%
23	21	-	40.00%	100.00%	56.63%
0	-	-	No Data	No Data	No Data
15	-	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

51	-	-	No Data	No Data	No Data
102	-	-	0.00%	0.00%	0.00%
82	29	-	81.25%	96.55%	78.46%
83	29	-	13.64%	82.76%	66.12%
27	34	-	75.00%	97.06%	76.65%
13	2	-	No Data	No Data	No Data
35	2	-	100.00%	100.00%	68.75%
0	-	-	0.00%	0.00%	0.00%
39	-	-	No Data	No Data	No Data
10	3	-	No Data	No Data	No Data
16	53	-	100.00%	86.79%	71.69%
18	-	-	No Data	No Data	No Data
9	-	-	No Data	No Data	No Data
6	8	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
7	-	-	0.00%	0.00%	0.00%
72	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
6	-	-	No Data	No Data	No Data
19	-	-	0.00%	0.00%	0.00%
6	-	-	0.00%	0.00%	0.00%
17	12	-	60.00%	75.00%	67.26%
3	-	-	No Data	No Data	No Data
11	38	-	No Data	No Data	No Data
16	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
13	2	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	-	-	No Data	No Data	No Data
15	-	-	No Data	No Data	No Data
10	-	-	No Data	No Data	No Data
11	8	-	No Data	100.00%	72.41%
25	22	-	No Data	No Data	No Data
5	-	-	No Data	No Data	No Data
34	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
7	-	-	No Data	No Data	No Data
3	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
6	-	-	No Data	No Data	No Data
31	-	-	No Data	No Data	No Data
75	54	-	No Data	No Data	No Data
3	-	-	0.00%	0.00%	0.00%
3	-	-	No Data	No Data	No Data
3	3	-	No Data	No Data	No Data
11	-	-	No Data	No Data	No Data
1	9	-	No Data	No Data	No Data
2	-	-	No Data	No Data	No Data
6	-	-	0.00%	0.00%	0.00%
4	-	-	0.00%	0.00%	0.00%
15	4	-	50.00%	100.00%	75.00%
1	-	-	No Data	No Data	No Data
10	6	-	No Data	No Data	No Data
6	-	-	0.00%	0.00%	0.00%
3	-	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

2	1	-	No Data	100.00%	65.96%
16	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
4	-	-	0.00%	0.00%	0.00%
6	3	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
7	5	-	50.00%	80.00%	51.02%
13	-	-	No Data	No Data	No Data
3	10	-	62.50%	80.00%	60.00%
5	3	-	No Data	100.00%	80.00%
3	-	-	No Data	No Data	No Data
6	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
7	1	-	No Data	No Data	No Data
12	-	-	No Data	No Data	No Data
7	3	-	No Data	No Data	No Data
5	-	-	No Data	No Data	No Data
5	-	-	No Data	No Data	No Data
21	6	-	0.00%	100.00%	76.06%
13	-	-	0.00%	0.00%	0.00%
3	3	-	No Data	100.00%	95.00%
7	2	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
2	6	-	No Data	100.00%	44.44%

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

2	-	-	No Data	No Data	No Data
7	-	-	0.00%	0.00%	0.00%
3	5	-	No Data	No Data	No Data
3	1	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
3	5	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
3	2	-	100.00%	100.00%	71.43%
16	6	-	58.33%	66.67%	69.66%
14	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
4	-	-	No Data	No Data	No Data
6	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
2	-	-	No Data	No Data	No Data
3	4	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
3	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
6	-	-	0.00%	0.00%	0.00%
3	-	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

3	3	-	No Data	100.00%	84.00%
6	4	-	16.67%	100.00%	45.24%
2	-	-	No Data	No Data	No Data
8	2	-	No Data	No Data	No Data
4	6	-	No Data	No Data	No Data
7	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
6	2	-	No Data	100.00%	84.21%
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
1	-	-	No Data	No Data	No Data
10	1	-	No Data	No Data	No Data
0	2	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
3	-	-	No Data	No Data	No Data
2	-	-	No Data	No Data	No Data
3	2	-	100.00%	100.00%	68.75%
10	11	-	No Data	No Data	No Data
5	-	-	No Data	No Data	No Data
5	-	-	0.00%	0.00%	0.00%
3	2	-	No Data	100.00%	76.00%
0	-	-	No Data	No Data	No Data
2	-	-	No Data	No Data	No Data
6	1	-	No Data	100.00%	97.22%
0	-	-	0.00%	0.00%	0.00%

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

2	4	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
2	6	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
6	-	-	No Data	No Data	No Data
6	3	-	No Data	100.00%	86.54%
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
8	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
3	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
5	-	-	No Data	No Data	No Data
13	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
9	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
3	2	-	No Data	100.00%	100.00%
0	-	-	No Data	No Data	No Data
0	4	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
8	-	-	No Data	No Data	No Data
7	4	-	100.00%	100.00%	67.44%
5	-	-	0.00%	0.00%	0.00%
4	3	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
5	2	-	No Data	No Data	No Data
3	-	-	No Data	No Data	93.33%
0	-	-	No Data	No Data	No Data
1	-	-	0.00%	0.00%	0.00%
2	-	-	No Data	No Data	No Data
2	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
3	4	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
5	-	-	No Data	No Data	80.00%
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
3	2	-	No Data	No Data	No Data
(1)	-	-	No Data	No Data	No Data
3	3	-	No Data	100.00%	80.00%
4	5	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
2	1	-	No Data	No Data	No Data
3	-	-	0.00%	0.00%	0.00%
3	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
3	-	-	No Data	No Data	88.00%

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

2	1	-	No Data	No Data	No Data
3	-	-	0.00%	0.00%	0.00%
13	1	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
3	5	-	No Data	No Data	No Data
2	2	-	No Data	100.00%	100.00%
2	-	-	No Data	No Data	No Data
5	3	-	No Data	100.00%	51.28%
1	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
4	-	-	0.00%	0.00%	0.00%
3	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
2	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
3	4	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	-	-	0.00%	0.00%	0.00%
8	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
4	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	60.00%
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
90	-	-	0.00%	0.00%	0.00%
20	-	-	0.00%	0.00%	0.00%
39	24	-	54.84%	79.17%	20.00%
39	33	-	No Data	No Data	No Data
13	28	-	33.33%	100.00%	70.37%
127	-	-	No Data	No Data	84.38%
10	-	-	No Data	No Data	No Data
79	-	-	0.00%	0.00%	0.00%
5	3	-	No Data	No Data	No Data
16	-	-	No Data	No Data	No Data
9	-	-	No Data	No Data	No Data
11	-	-	0.00%	0.00%	0.00%
15	-	-	No Data	No Data	No Data
7	-	-	0.00%	0.00%	0.00%

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

14	-	-	No Data	No Data	No Data
3	-	-	0.00%	0.00%	0.00%
15	-	-	No Data	No Data	No Data
2	-	-	No Data	No Data	No Data
27	13	-	No Data	No Data	No Data
7	-	-	0.00%	0.00%	0.00%
7	-	-	No Data	No Data	No Data
6	11	-	10.00%	90.91%	26.83%
2	4	-	No Data	No Data	No Data
10	3	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	18	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
8	6	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
6	-	-	0.00%	0.00%	0.00%
5	6	-	No Data	No Data	No Data
(1)	4	-	No Data	No Data	No Data
4	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
7	-	-	No Data	No Data	No Data
22	18	-	No Data	No Data	No Data
3	5	-	75.00%	80.00%	64.00%
23	9	-	No Data	No Data	No Data
17	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
7	-	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

4	-	-	0.00%	0.00%	0.00%
10	-	-	No Data	No Data	No Data
2	-	-	No Data	No Data	No Data
4	-	-	0.00%	0.00%	0.00%
3	7	-	No Data	No Data	No Data
5	-	-	No Data	No Data	No Data
5	-	-	0.00%	0.00%	0.00%
12	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
10	9	-	No Data	No Data	No Data
1	12	-	83.33%	100.00%	65.56%
0	11	-	No Data	100.00%	61.11%
6	3	-	40.00%	100.00%	74.29%
2	-	-	No Data	No Data	No Data
2	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
7	-	-	No Data	No Data	33.89%
3	-	-	No Data	No Data	No Data
10	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
8	9	-	No Data	No Data	No Data
3	1	-	No Data	100.00%	69.57%
2	4	-	50.00%	100.00%	50.00%

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

3	1	-	No Data	No Data	No Data
3	2	-	No Data	100.00%	73.33%
2	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
10	9	-	30.00%	88.89%	40.74%
134	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
2	1	-	No Data	100.00%	88.89%
3	-	-	No Data	No Data	93.10%
16	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
2	3	-	No Data	100.00%	96.00%
3	-	-	No Data	No Data	No Data
8	-	-	0.00%	0.00%	0.00%
0	4	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
6	-	-	0.00%	0.00%	0.00%
3	2	-	100.00%	100.00%	96.20%
0	-	-	No Data	No Data	No Data
3	11	-	No Data	No Data	No Data
3	1	-	No Data	100.00%	92.00%
6	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

3	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
2	-	-	No Data	No Data	No Data
3	1	-	No Data	No Data	No Data
7	-	-	0.00%	0.00%	0.00%
3	2	-	50.00%	100.00%	84.00%
8	7	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
3	-	-	0.00%	0.00%	0.00%
3	-	-	No Data	No Data	No Data
6	6	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
3	-	-	No Data	No Data	0.00%
0	1	-	No Data	100.00%	78.57%
6	1	-	No Data	No Data	No Data
2	-	-	No Data	No Data	No Data
6	3	-	No Data	No Data	No Data
3	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
6	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
5	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
6	-	-	No Data	No Data	No Data
3	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

1	3	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
11	5	-	70.00%	100.00%	61.40%
3	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
1	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
3	-	-	0.00%	0.00%	0.00%
(1)	-	-	No Data	No Data	No Data
3	3	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
3	-	-	0.00%	0.00%	0.00%
3	4	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	75.00%
3	2	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
3	-	-	0.00%	0.00%	0.00%
2	-	-	No Data	No Data	No Data
6	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	2	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
8	-	-	No Data	No Data	No Data
1	5	-	100.00%	100.00%	80.00%
3	5	-	No Data	100.00%	66.67%
1	-	-	No Data	No Data	No Data
3	2	-	No Data	100.00%	84.00%
2	-	-	No Data	No Data	No Data
8	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
3	-	-	No Data	No Data	56.00%
3	2	-	100.00%	100.00%	88.00%
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
3	-	-	0.00%	0.00%	0.00%
3	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
5	6	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
2	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	-	-	No Data	No Data	No Data
2	-	-	0.00%	0.00%	0.00%
3	4	-	75.00%	100.00%	66.10%
8	-	-	0.00%	0.00%	0.00%
8	-	-	0.00%	0.00%	0.00%
3	3	-	100.00%	100.00%	87.50%
0	-	-	No Data	No Data	No Data
3	-	-	No Data	No Data	No Data
2	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	2	-	No Data	100.00%	80.00%
3	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	2	-	No Data	No Data	No Data
28	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	6	-	No Data	No Data	No Data
0	2	-	No Data	No Data	No Data
0	1	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
0	4	-	100.00%	100.00%	48.00%
0	-	-	No Data	No Data	88.00%
0	-	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	-	-	No Data	No Data	86.67%
0	3	-	100.00%	100.00%	44.00%
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
19	-	-	No Data	No Data	No Data
0	3	-	No Data	No Data	No Data
0	1	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
22	-	-	No Data	No Data	No Data
5	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
2	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
6	8	-	100.00%	100.00%	100.00%
1	-	-	0.00%	0.00%	0.00%
8	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	3	-	No Data	No Data	No Data
7	-	-	No Data	No Data	No Data
5	3	-	No Data	No Data	No Data
0	1	-	No Data	100.00%	20.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	-	-	No Data	No Data	83.33%
0	-	-	No Data	No Data	33.33%
0	2	-	No Data	100.00%	88.00%
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	1	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	1	-	100.00%	100.00%	80.00%
0	-	-	No Data	No Data	78.57%
0	1	-	No Data	100.00%	92.31%
1	-	-	0.00%	0.00%	0.00%
0	2	-	No Data	100.00%	88.00%
0	3	-	No Data	100.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	-	-	0.00%	0.00%	0.00%
0	1	-	No Data	100.00%	75.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	1	-	No Data	100.00%	100.00%
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	100.00%
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	3	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	1	-	No Data	100.00%	96.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	10	-	No Data	100.00%	100.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	69.23%
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	2	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	1	-	No Data	100.00%	66.67%
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	2	-	No Data	No Data	No Data
0	1	-	No Data	100.00%	33.33%
0	-	-	No Data	No Data	50.00%
0	-	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	76.47%
0	1	-	No Data	100.00%	91.67%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	1	-	No Data	100.00%	64.00%
0	1	-	No Data	100.00%	50.00%
0	-	-	No Data	No Data	No Data
0	2	-	No Data	100.00%	100.00%
0	3	-	No Data	100.00%	76.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	2	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	2	-	No Data	0.00%	60.00%

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	2	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	4	-	No Data	100.00%	72.73%
0	5	-	100.00%	100.00%	72.22%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	2	-	No Data	100.00%	46.88%
0	-	-	0.00%	0.00%	0.00%

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	-	-	No Data	No Data	No Data
0	1	-	No Data	No Data	No Data
0	2	-	No Data	100.00%	72.22%
0	-	-	No Data	No Data	64.29%
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	38.89%
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
3	3	-	No Data	100.00%	96.00%
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	82.35%
0	9	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	-	-	No Data	No Data	No Data
0	1	-	No Data	100.00%	95.00%
0	1	-	No Data	100.00%	85.71%
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	5	-	100.00%	100.00%	95.65%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	72.73%
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	2	-	No Data	100.00%	75.00%

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	88.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	6	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	57.14%
0	-	-	0.00%	0.00%	0.00%
0	3	-	No Data	100.00%	80.00%
0	-	-	0.00%	0.00%	0.00%
0	3	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	2	-	No Data	100.00%	68.00%
0	-	-	No Data	No Data	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	1	-	No Data	100.00%	88.00%
0	2	-	No Data	100.00%	66.67%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	2	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
0	2	-	No Data	100.00%	76.00%
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	2	-	100.00%	100.00%	72.00%
0	-	-	No Data	No Data	100.00%
0	1	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	1	-	No Data	100.00%	100.00%
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	57.14%
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	6	-	No Data	100.00%	85.29%
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	2	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	1	-	No Data	No Data	No Data
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	1	-	100.00%	100.00%	95.24%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	3	-	No Data	100.00%	No Data

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	0.00%	0.00%	0.00%
0	-	-	No Data	No Data	No Data
0	11	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	No Data
0	-	-	No Data	No Data	91.67%
0	-	-	0.00%	0.00%	0.00%

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

N95 Available (HHS)	Surgical Masks Available (HHS)	Medicare Beneficiary (emPOWER)	Power Dependent Devices (emPOWER)
No Data	No Data	1,523	121
No Data	No Data	2,109	183
0	0	2,922	157
0	0	3,671	182
No Data	No Data	2,400	218
No Data	No Data	51,640	1,522
No Data	No Data	13,389	949
No Data	No Data	7,512	531
No Data	No Data	156,546	3,841
No Data	No Data	10,072	646
No Data	No Data	190,476	4,685
No Data	No Data	241,476	6,309
No Data	No Data	74,713	1,971
No Data	No Data	80,885	2,055
0	0	2,157	214
No Data	No Data	2,163	100
0	0	3,706	210
No Data	No Data	1,546	77
No Data	No Data	78,628	2,097
No Data	No Data	263,744	7,730
No Data	No Data	325,761	7,415
No Data	No Data	59,295	2,097
No Data	No Data	71,400	2,228
988	338	3,863	269
0	0	4,628	189

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	2,098	132
No Data	No Data	2,255	143
0	0	9,861	692
3916	16514	2,242	144
No Data	No Data	104,122	2,720
No Data	No Data	337,973	9,128
No Data	No Data	7,724	340
No Data	No Data	150,837	3,697
No Data	No Data	95,993	3,383
No Data	No Data	3,676	199
No Data	No Data	17,401	936
No Data	No Data	1,332	72
No Data	No Data	58,273	2,117
No Data	No Data	1,886	85
50840	3520	9,143	728
No Data	No Data	118,646	3,423
No Data	No Data	8,015	393
0	0	1,433	71
0	0	2,498	112
No Data	No Data	81,603	3,625
No Data	No Data	6,066	319
No Data	No Data	4,201	259
No Data	No Data	253,757	5,945
0	0	4,741	468
2650	14892	4,011	407
No Data	No Data	5,884	358
No Data	No Data	5,430	375

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	15,709	944
No Data	No Data	141,406	3,363
59	78	4,028	220
No Data	No Data	8,417	412
No Data	No Data	59,895	1,855
No Data	No Data	144,374	4,188
No Data	No Data	4,274	195
No Data	No Data	143,409	5,295
No Data	No Data	3,532	170
No Data	No Data	78,921	2,012
No Data	No Data	46,068	1,286
0	0	1,182	95
No Data	No Data	2,465	181
57815	509646	33,157	1,308
No Data	No Data	106,293	2,895
No Data	No Data	4,021	210
No Data	No Data	8,333	378
0	0	17,763	912
No Data	No Data	69,639	2,628
No Data	No Data	101,193	3,031
No Data	No Data	55,483	1,719
No Data	No Data	4,645	283
No Data	No Data	17,236	458
No Data	No Data	1,706	103
No Data	No Data	6,119	366
No Data	No Data	116,517	3,466
0	0	5,420	455

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	24,857	1,096
No Data	No Data	311,159	13,499
0	0	2,444	212
No Data	No Data	2,061	138
0	0	2,214	352
No Data	No Data	2,012	75
No Data	No Data	241,975	6,415
No Data	No Data	149,484	4,296
No Data	No Data	4,239	339
No Data	No Data	21,288	853
0	0	5,733	532
No Data	No Data	115,943	3,119
No Data	No Data	8,405	474
No Data	No Data	9,515	334
No Data	No Data	5,895	298
No Data	No Data	4,248	187
No Data	No Data	4,636	390
No Data	No Data	8,212	300
No Data	No Data	2,013	224
No Data	No Data	575	29
No Data	No Data	94,087	4,124
No Data	No Data	31,631	1,536
No Data	No Data	233,732	10,637
No Data	No Data	717,410	25,445
No Data	No Data	109,593	2,872
No Data	No Data	2,898	117
No Data	No Data	3,331	245

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	64,345	2,078
No Data	No Data	87,823	3,400
No Data	No Data	1,793	101
No Data	No Data	1,360	134
No Data	No Data	3,437	186
No Data	No Data	142,444	5,325
No Data	No Data	1,858	127
No Data	No Data	36,956	1,415
No Data	No Data	5,309	315
No Data	No Data	4,181	306
No Data	No Data	9,553	522
No Data	No Data	2,419	154
0	0	840	80
0	0	5,572	322
No Data	No Data	469	18
No Data	No Data	68,362	2,447
59641	12067	10,596	824
No Data	No Data	101,062	3,788
No Data	No Data	6,019	384
No Data	No Data	9,854	596
No Data	No Data	2,135	112
No Data	No Data	2,817	147
No Data	No Data	14,321	609
2200	100	5,696	275
No Data	No Data	3,269	112
No Data	No Data	111,765	3,978
No Data	No Data	67,601	3,521

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	77,645	2,130
No Data	No Data	2,515	136
No Data	No Data	1,303	110
25748	13900	22,005	2,114
No Data	No Data	2,143	67
No Data	No Data	78,685	2,958
No Data	No Data	26,637	777
No Data	No Data	31,178	1,605
No Data	No Data	157,906	4,938
No Data	No Data	79,708	2,874
No Data	No Data	16,730	778
No Data	No Data	8,116	450
No Data	No Data	3,135	159
No Data	No Data	4,846	193
No Data	No Data	4,242	172
No Data	No Data	165,406	6,867
0	0	46,043	2,120
No Data	No Data	135,590	7,250
No Data	No Data	4,141	329
2800	2050	1,887	196
No Data	No Data	4,230	325
No Data	No Data	17,339	1,230
No Data	No Data	4,479	150
0	0	6,278	457
No Data	No Data	2,243	153
No Data	No Data	5,299	268
No Data	No Data	2,207	111

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	10,156	649
No Data	No Data	1,714	89
0	0	11,861	651
No Data	No Data	2,764	134
580	6950	46,129	4,536
No Data	No Data	226,643	8,623
0	0	8,334	351
311	8219	1,993	118
No Data	No Data	5,131	284
No Data	No Data	809	78
10460	5250	19,235	1,842
No Data	No Data	106,479	3,452
No Data	No Data	26,681	1,478
No Data	No Data	5,841	400
No Data	No Data	1,268	72
No Data	No Data	346	35
No Data	No Data	39,203	1,527
0	0	4,711	253
No Data	No Data	3,242	213
No Data	No Data	7,220	362
No Data	No Data	14,647	312
0	0	1,229	81
No Data	No Data	22,728	930
0	0	5,077	220
No Data	No Data	147,867	4,953
0	0	527	37
0	0	853	80

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	23,585	662
No Data	No Data	4,284	305
No Data	No Data	4,598	369
0	0	11,272	659
No Data	No Data	46,390	1,197
No Data	No Data	8,264	400
No Data	No Data	121,626	4,595
No Data	No Data	11,561	423
No Data	No Data	7,423	321
No Data	No Data	29,624	939
No Data	No Data	16,708	866
20114	88503	39,936	1,738
No Data	No Data	4,675	294
No Data	No Data	49,133	2,386
No Data	No Data	15,011	906
No Data	No Data	26,834	1,544
No Data	No Data	1,362	66
3680	5000	22,834	1,264
No Data	No Data	8,025	539
No Data	No Data	137,642	2,920
No Data	No Data	7,592	544
No Data	No Data	2,623	144
0	0	1,882	123
0	0	3,760	340
192	2065	595	49
195500	167146	76,124	7,542
No Data	No Data	6,907	423

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	46,529	2,542
No Data	No Data	69,438	2,539
5858	20092	6,065	308
No Data	No Data	3,048	111
No Data	No Data	4,617	222
No Data	No Data	47,714	2,081
No Data	No Data	19,949	430
No Data	No Data	2,950	133
No Data	No Data	2,269	156
No Data	No Data	1,991	161
No Data	No Data	6,121	240
No Data	No Data	17,767	772
0	0	3,325	357
No Data	No Data	445,616	16,759
No Data	No Data	33,904	1,610
No Data	No Data	5,750	295
No Data	No Data	3,304	218
No Data	No Data	23,163	965
0	0	5,023	288
No Data	No Data	8,835	377
No Data	No Data	10,362	661
No Data	No Data	27,112	1,397
No Data	No Data	5,289	260
No Data	No Data	7,126	498
No Data	No Data	71,724	1,502
No Data	No Data	6,479	401
No Data	No Data	14,331	891

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	2,938	311
No Data	No Data	23,830	1,337
No Data	No Data	4,450	306
No Data	No Data	2,324	156
No Data	No Data	41,382	1,316
No Data	No Data	35,063	1,041
No Data	No Data	33,095	884
No Data	No Data	3,917	276
No Data	No Data	13,365	616
No Data	No Data	7,163	545
No Data	No Data	10,621	628
No Data	No Data	3,637	212
No Data	No Data	3,898	356
0	0	6,787	313
600	13302	80,803	8,474
No Data	No Data	90,648	3,858
No Data	No Data	6,867	460
No Data	No Data	88,005	4,609
No Data	No Data	4,308	165
No Data	No Data	51,241	2,016
No Data	No Data	52,098	1,930
0	0	8,208	253
0	0	9,753	482
No Data	No Data	20,775	1,242
No Data	No Data	8,185	631
No Data	No Data	53,194	2,594
No Data	No Data	8,725	586

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	10,017	427
No Data	No Data	93,521	3,665
No Data	No Data	42,676	1,800
No Data	No Data	6,185	362
No Data	No Data	8,228	575
No Data	No Data	1,576	63
No Data	No Data	179,700	7,724
No Data	No Data	137,669	4,788
No Data	No Data	3,270	225
No Data	No Data	89,752	5,006
No Data	No Data	3,824	221
No Data	No Data	4,620	455
No Data	No Data	3,335	174
No Data	No Data	1,077	65
No Data	No Data	3,424	208
No Data	No Data	144,819	4,512
No Data	No Data	38,491	1,187
No Data	No Data	20,292	757
No Data	No Data	8,871	510
No Data	No Data	2,782	154
No Data	No Data	9,148	353
No Data	No Data	4,008	240
No Data	No Data	2,358	141
No Data	No Data	67	22
No Data	No Data	9,646	499
No Data	No Data	6,567	322
No Data	No Data	123,637	2,757

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	43,469	3,039
No Data	No Data	9,867	402
No Data	No Data	96,264	3,321
No Data	No Data	17,061	551
No Data	No Data	13,686	670
No Data	No Data	3,279	212
No Data	No Data	3,628	207
No Data	No Data	383	35
No Data	No Data	3,947	152
No Data	No Data	1,642	117
No Data	No Data	25,996	1,075
No Data	No Data	9,261	375
No Data	No Data	4,902	350
10858	33624	17,069	1,414
No Data	No Data	8,816	527
No Data	No Data	25,764	899
No Data	No Data	8,677	639
No Data	No Data	14,658	681
No Data	No Data	4,219	275
No Data	No Data	2,137	132
No Data	No Data	1,414	130
0	0	227	26
No Data	No Data	103,939	3,897
No Data	No Data	4,051	167
No Data	No Data	67,193	2,279
No Data	No Data	20,274	1,276
No Data	No Data	32,321	1,074

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	2,908	196
No Data	No Data	2,386	167
No Data	No Data	8,084	580
No Data	No Data	1,874	112
No Data	No Data	272	28
No Data	No Data	31,238	889
35039	489961	57,234	7,363
No Data	No Data	14,202	588
No Data	No Data	4,189	263
No Data	No Data	31,046	1,663
No Data	No Data	5,002	298
No Data	No Data	4,027	215
No Data	No Data	8,874	491
No Data	No Data	3,936	162
0	0	902	98
0	0	1,365	78
No Data	No Data	845	42
No Data	No Data	32,579	1,575
No Data	No Data	92,188	3,672
No Data	No Data	145,600	5,586
No Data	No Data	80,848	2,520
No Data	No Data	27,789	2,021
No Data	No Data	6,965	660
No Data	No Data	743	45
No Data	No Data	7,120	658
No Data	No Data	1,276	78
No Data	No Data	5,348	305

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	5,429	469
No Data	No Data	4,884	162
No Data	No Data	8,106	600
No Data	No Data	5,973	363
5000	1000	5,203	608
No Data	No Data	10,176	472
No Data	No Data	22,799	873
No Data	No Data	6,917	414
No Data	No Data	192,112	6,396
No Data	No Data	13,094	647
No Data	No Data	13,744	693
No Data	No Data	7,177	518
No Data	No Data	18,103	513
No Data	No Data	20,126	1,162
No Data	No Data	1,824	102
No Data	No Data	22,094	1,423
No Data	No Data	3,897	229
No Data	No Data	2,913	136
No Data	No Data	2,565	166
0	0	895	111
No Data	No Data	13,834	677
No Data	No Data	39,609	1,487
No Data	No Data	78,424	3,997
No Data	No Data	10,436	583
No Data	No Data	14,518	867
No Data	No Data	4,408	226
No Data	No Data	26,161	1,105

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	11,016	631
No Data	No Data	5,069	271
No Data	No Data	12,356	826
No Data	No Data	2,897	197
No Data	No Data	7,185	440
No Data	No Data	5,611	178
8725	11625	8,010	825
31667	113052	115,481	3,744
No Data	No Data	17,553	1,171
No Data	No Data	17,312	1,102
No Data	No Data	7,592	594
No Data	No Data	10,161	207
No Data	No Data	24,854	884
No Data	No Data	763	60
93	38	2,771	163
No Data	No Data	1,573	82
No Data	No Data	2,271	160
No Data	No Data	1,751	107
No Data	No Data	73,467	2,782
No Data	No Data	13,842	767
No Data	No Data	139,894	6,405
No Data	No Data	29,462	1,156
No Data	No Data	12,667	943
No Data	No Data	40,190	1,166
No Data	No Data	6,522	500
No Data	No Data	5,383	415
No Data	No Data	5,637	424

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	6,858	466
No Data	No Data	4,954	222
No Data	No Data	51,718	1,775
No Data	No Data	6,237	250
No Data	No Data	4,571	276
No Data	No Data	9,897	474
No Data	No Data	14,559	785
No Data	No Data	2,662	195
0	0	7,982	438
No Data	No Data	5,269	226
0	0	3,103	179
No Data	No Data	8,790	430
No Data	No Data	16,548	800
20477	188116	287,573	6,923
No Data	No Data	78,670	4,852
No Data	No Data	53,804	1,837
No Data	No Data	84,192	2,469
No Data	No Data	94,105	3,108
0	0	27,923	2,299
No Data	No Data	7,256	356
No Data	No Data	29,431	1,070
No Data	No Data	9,479	599
No Data	No Data	6,306	312
No Data	No Data	3,149	139
0	0	3,382	237
No Data	No Data	7,624	586
2655	700	1,417	169

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	2,128	129
0	0	4,082	314
No Data	No Data	1,879	96
1000	2000	513	28
0	0	2,749	249
No Data	No Data	1,378	66
No Data	No Data	27,668	633
No Data	No Data	20,551	1,290
No Data	No Data	5,245	168
No Data	No Data	59,473	1,660
No Data	No Data	9,332	379
127524	173144	29,748	1,049
No Data	No Data	134,008	4,521
1272	11074	7,598	260
No Data	No Data	2,226	117
No Data	No Data	33,163	1,601
No Data	No Data	6,675	449
1260	2550	2,392	221
No Data	No Data	15,340	779
No Data	No Data	21,990	1,765
No Data	No Data	4,743	203
No Data	No Data	2,923	189
No Data	No Data	104,083	4,484
No Data	No Data	7,753	331
No Data	No Data	302,623	9,868
No Data	No Data	26,524	1,538
No Data	No Data	70,643	2,086

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	0	3,301	306
No Data	No Data	15,512	878
No Data	No Data	5,423	411
No Data	No Data	4,128	295
No Data	No Data	28,207	1,226
No Data	No Data	24,153	1,527
No Data	No Data	12,121	551
No Data	No Data	14,408	921
No Data	No Data	4,212	256
No Data	No Data	10,231	470
0	0	17,100	1,278
4020	17250	3,763	311
No Data	No Data	28,535	830
No Data	No Data	7,020	377
No Data	No Data	33,115	1,400
1280	0	11,084	619
No Data	No Data	8,653	402
No Data	No Data	3,975	230
No Data	No Data	5,640	235
No Data	No Data	4,501	264
No Data	No Data	38,180	2,019
No Data	No Data	16,751	661
No Data	No Data	5,528	451
No Data	No Data	14,506	1,039
0	0	929	225
No Data	No Data	2,674	200
No Data	No Data	7,657	447

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	4,575	244
No Data	No Data	9,886	453
No Data	No Data	3,102	188
0	0	616	19
0	0	1,335	108
0	0	258	48
0	0	907	84
1703343	4734793	1,340,517	35,490
No Data	No Data	23,968	1,482
No Data	No Data	13,470	762
No Data	No Data	2,698	137
No Data	No Data	9,813	425
No Data	No Data	42,383	1,473
No Data	No Data	10,216	584
3467	3700	10,582	1,601
No Data	No Data	10,501	595
No Data	No Data	5,132	251
No Data	No Data	4,119	325
No Data	No Data	1,247	63
600	800	4,255	373
No Data	No Data	12,879	734
0	0	2,660	119
No Data	No Data	550	56
1172	5675	1,592	98
2020	5350	924	168
No Data	No Data	7,847	543
No Data	No Data	10,059	653

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	14,710	1,209
No Data	No Data	47,963	2,152
No Data	No Data	42,312	1,329
37375	11975	104,193	12,443
No Data	No Data	4,885	236
No Data	No Data	29,319	1,599
No Data	No Data	22,771	1,151
No Data	No Data	9,162	544
No Data	No Data	8,147	409
No Data	No Data	13,723	606
No Data	No Data	21,113	1,106
0	0	10,652	1,073
850	250	5,824	366
No Data	No Data	2,679	150
No Data	No Data	54,036	2,261
No Data	No Data	6,134	424
801	1306	2,484	189
No Data	No Data	10,439	867
No Data	No Data	1,891	171
No Data	No Data	2,426	188
No Data	No Data	6,105	263
No Data	No Data	2,185	56
No Data	No Data	1,319	59
0	0	746	52
No Data	No Data	31,590	1,495
2782	18950	123,995	11,132
0	0	15,330	1,413

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	93,925	3,728
No Data	No Data	59,356	2,193
No Data	No Data	20,426	1,354
No Data	No Data	10,374	576
No Data	No Data	45,670	2,217
No Data	No Data	51,644	1,753
No Data	No Data	32,747	1,425
No Data	No Data	51,090	2,022
No Data	No Data	33,094	938
No Data	No Data	32,904	1,749
0	0	3,373	276
0	0	7,971	622
No Data	No Data	21,633	1,131
No Data	No Data	19,334	1,142
No Data	No Data	18,722	1,192
No Data	No Data	7,040	375
No Data	No Data	7,756	506
0	0	1,012	99
No Data	No Data	19,285	1,111
No Data	No Data	15,918	815
No Data	No Data	9,543	484
No Data	No Data	2,710	184
No Data	No Data	2,786	142
No Data	No Data	3,828	229
0	0	1,183	55
0	0	2,214	110
No Data	No Data	2,953	193

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	171,264	8,159
1966	1400	9,940	506
No Data	No Data	12,608	872
No Data	No Data	35,640	1,547
0	0	3,866	259
No Data	No Data	25,968	1,319
No Data	No Data	14,586	1,037
No Data	No Data	40,378	1,713
No Data	No Data	7,213	413
No Data	No Data	18,374	819
No Data	No Data	13,457	879
No Data	No Data	15,011	645
No Data	No Data	10,094	924
No Data	No Data	14,147	614
No Data	No Data	11,072	426
No Data	No Data	4,089	190
No Data	No Data	5,957	516
No Data	No Data	4,566	333
No Data	No Data	6,351	465
No Data	No Data	6,067	341
No Data	No Data	1,654	107
No Data	No Data	3,797	259
No Data	No Data	3,970	227
No Data	No Data	1,748	112
No Data	No Data	6,517	261
3379	1240	1,331	67
No Data	No Data	140	11

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	8,798	552
No Data	No Data	48,739	2,487
No Data	No Data	88,166	3,933
No Data	No Data	146,187	4,790
No Data	No Data	308,511	8,586
No Data	No Data	35,640	1,662
No Data	No Data	87,941	3,483
No Data	No Data	20,892	1,028
2678	15427	80,457	5,809
No Data	No Data	32,484	1,425
No Data	No Data	15,605	780
No Data	No Data	5,247	301
No Data	No Data	14,054	849
No Data	No Data	11,687	747
No Data	No Data	44,599	1,895
No Data	No Data	3,654	183
No Data	No Data	13,829	369
No Data	No Data	5,244	355
No Data	No Data	12,952	636
No Data	No Data	4,187	343
No Data	No Data	16,746	854
No Data	No Data	5,359	217
190	0	8,613	519
0	0	10,411	553
No Data	No Data	3,493	173
No Data	No Data	39,368	1,779
No Data	No Data	12,668	661

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	9,520	584
No Data	No Data	32,985	1,455
No Data	No Data	3,869	386
20	2430	2,090	142
No Data	No Data	32,926	1,562
0	0	2,033	174
No Data	No Data	1,402	113
0	0	2,221	133
No Data	No Data	4,571	246
No Data	No Data	1,980	192
0	0	2,683	136
No Data	No Data	9,681	553
No Data	No Data	20,571	1,198
No Data	No Data	54,895	2,383
No Data	No Data	29,161	1,373
53255	380650	45,441	3,573
0	0	22,225	584
No Data	No Data	6,946	310
No Data	No Data	7,412	425
No Data	No Data	6,773	385
No Data	No Data	10,286	718
No Data	No Data	3,835	244
No Data	No Data	8,211	355
No Data	No Data	12,594	759
No Data	No Data	9,570	860
No Data	No Data	11,916	700
0	0	27,101	718

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	6,772	294
No Data	No Data	3,338	218
No Data	No Data	3,308	140
No Data	No Data	3,440	381
No Data	No Data	5,780	285
No Data	No Data	1,625	86
372	2400	1,101	55
No Data	No Data	3,358	169
0	0	770	72
0	0	3,204	110
0	0	1,833	100
1290	4340	317	26
No Data	No Data	3,268	200
No Data	No Data	17,752	846
No Data	No Data	17,873	407
3805	5451	324,839	17,547
No Data	No Data	60,002	1,740
No Data	No Data	36,173	1,570
No Data	No Data	12,010	902
No Data	No Data	65,527	2,613
No Data	No Data	11,387	411
No Data	No Data	42,865	1,652
No Data	No Data	236,943	10,919
No Data	No Data	10,550	541
No Data	No Data	16,673	1,010
No Data	No Data	2,521	146
No Data	No Data	5,992	439

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	19,458	695
No Data	No Data	40,941	1,836
No Data	No Data	7,403	357
No Data	No Data	36,717	1,325
670	4250	1,181	96
No Data	No Data	24,286	953
No Data	No Data	5,412	271
No Data	No Data	7,011	273
No Data	No Data	24,464	1,391
No Data	No Data	5,285	204
No Data	No Data	23,069	1,050
No Data	No Data	29,797	1,136
No Data	No Data	25,676	1,241
50492	1797631	54,430	2,240
No Data	No Data	5,102	369
No Data	No Data	17,976	885
No Data	No Data	5,891	347
3410	5539	7,711	428
1000	850	2,565	164
No Data	No Data	3,051	223
No Data	No Data	4,689	240
0	0	1,529	137
No Data	No Data	7,652	403
0	0	730	48
No Data	No Data	4,404	445
0	0	1,535	127
No Data	No Data	4,480	193

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	37,597	2,306
No Data	No Data	139,982	8,111
No Data	No Data	16,153	609
10780	18550	129,868	2,826
No Data	No Data	40,086	2,035
No Data	No Data	5,072	221
No Data	No Data	28,565	1,548
No Data	No Data	5,298	300
No Data	No Data	14,575	515
No Data	No Data	38,419	1,720
35345	116350	43,338	2,961
No Data	No Data	21,332	866
0	0	10,743	509
No Data	No Data	5,501	242
No Data	No Data	29,352	1,199
No Data	No Data	9,051	501
No Data	No Data	5,044	320
No Data	No Data	73,128	2,072
No Data	No Data	32,382	866
0	0	4,929	266
No Data	No Data	17,400	801
No Data	No Data	2,132	126
No Data	No Data	8,405	407
No Data	No Data	6,234	276
No Data	No Data	5,273	233
No Data	No Data	6,612	402
No Data	No Data	3,100	212

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	0	2,038	111
No Data	No Data	1,362	102
No Data	No Data	5,847	297
0	0	1,537	117
274	250	529	25
0	0	3,507	244
0	0	242	23
No Data	No Data	45,389	2,252
No Data	No Data	181,404	5,722
No Data	No Data	42,064	1,977
651	2303	348,072	14,369
No Data	No Data	25,282	1,514
3018	118	51,300	4,532
No Data	No Data	42,755	2,051
No Data	No Data	138,626	5,900
No Data	No Data	14,640	853
No Data	No Data	13,436	697
No Data	No Data	34,358	1,439
No Data	No Data	16,448	824
No Data	No Data	57,204	1,972
No Data	No Data	18,426	1,631
No Data	No Data	22,248	1,522
No Data	No Data	4,951	265
No Data	No Data	47,236	2,551
No Data	No Data	7,140	380
No Data	No Data	9,826	664
No Data	No Data	3,849	239

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	14,963	817
No Data	No Data	8,056	439
No Data	No Data	20,306	1,185
No Data	No Data	2,329	102
0	0	6,805	284
No Data	No Data	6,315	229
No Data	No Data	10,748	401
No Data	No Data	7,641	368
No Data	No Data	96,767	2,506
No Data	No Data	32,372	1,520
No Data	No Data	5,201	219
No Data	No Data	5,019	307
No Data	No Data	8,371	455
No Data	No Data	2,622	205
No Data	No Data	17,837	692
No Data	No Data	3,308	210
0	0	1,360	114
No Data	No Data	2,947	187
No Data	No Data	1,486	111
No Data	No Data	6,338	416
No Data	No Data	4,871	331
0	5	1,061	46
No Data	No Data	4,149	297
No Data	No Data	3,403	273
No Data	No Data	7,290	361
0	0	818	91
No Data	No Data	2,370	143

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	3,470	151
No Data	No Data	1,066	88
0	0	2,260	124
No Data	No Data	130,257	4,893
No Data	No Data	43,938	1,775
9339	9150	60,981	2,760
86424	202133	57,480	3,332
No Data	No Data	22,040	1,504
No Data	No Data	31,208	1,400
9378	71250	8,699	1,063
23860	75500	110,009	2,533
No Data	No Data	22,659	1,238
No Data	No Data	100,123	3,358
No Data	No Data	61,795	2,503
36118	182068	138,854	5,106
No Data	No Data	9,108	478
0	0	8,853	1,152
No Data	No Data	60,247	3,300
No Data	No Data	7,866	307
No Data	No Data	26,330	1,583
No Data	No Data	5,403	455
No Data	No Data	17,973	1,053
No Data	No Data	22,098	837
No Data	No Data	2,155	145
No Data	No Data	12,090	534
No Data	No Data	11,316	504
No Data	No Data	22,024	1,042

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	4,395	195
No Data	No Data	4,989	394
No Data	No Data	4,676	246
No Data	No Data	6,875	359
No Data	No Data	3,669	273
No Data	No Data	4,023	236
No Data	No Data	16,695	955
No Data	No Data	1,612	117
No Data	No Data	5,060	240
No Data	No Data	3,219	280
No Data	No Data	4,149	325
0	0	3,447	244
No Data	No Data	3,688	258
No Data	No Data	2,538	142
No Data	No Data	2,163	134
No Data	No Data	4,349	222
0	0	939	123
No Data	No Data	11,686	777
No Data	No Data	15,452	714
No Data	No Data	186,053	6,438
73137	93082	80,641	3,463
No Data	No Data	7,335	296
No Data	No Data	18,281	1,111
13405	65468	76,754	3,789
No Data	No Data	24,699	1,440
No Data	No Data	52,854	1,994
No Data	No Data	4,579	197

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	8,910	593
No Data	No Data	25,175	1,496
No Data	No Data	28,634	1,110
No Data	No Data	96,377	4,421
67111	1861230	297,162	11,299
No Data	No Data	31,897	1,578
No Data	No Data	18,731	1,119
0	0	16,437	556
0	0	42,858	4,179
No Data	No Data	1,928	83
No Data	No Data	29,656	1,333
No Data	No Data	86,566	3,606
No Data	No Data	16,262	793
No Data	No Data	33,027	1,564
No Data	No Data	4,963	323
No Data	No Data	127,306	5,673
No Data	No Data	9,151	446
No Data	No Data	10,258	649
No Data	No Data	65,427	2,236
No Data	No Data	23,962	663
No Data	No Data	4,165	169
No Data	No Data	21,842	1,301
24611	129289	38,554	1,905
No Data	No Data	33,206	1,464
No Data	No Data	15,217	776
No Data	No Data	7,071	423
No Data	No Data	9,418	686

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	5,239	383
3550	100	48,065	1,819
No Data	No Data	10,781	324
0	0	3,862	123
No Data	No Data	8,778	471
No Data	No Data	10,291	652
27881	105216	16,613	609
No Data	No Data	31,411	1,559
1780	2500	12,993	758
No Data	No Data	1,969	150
No Data	No Data	1,507	119
No Data	No Data	1,218	63
0	0	2,210	158
0	0	366	45
0	0	194	33
No Data	No Data	1,429	97
No Data	No Data	51,024	1,199
No Data	No Data	19,854	811
1219	36309	43,321	1,390
8838	52270	116,051	9,967
No Data	No Data	11,038	621
No Data	No Data	18,744	843
14182	22730	29,786	790
1279	12809	121,533	3,972
50	200	101,823	12,282
No Data	No Data	19,967	980
No Data	No Data	19,831	1,035

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

323778	278633	500,143	17,147
No Data	No Data	18,321	1,021
No Data	No Data	14,719	500
No Data	No Data	53,905	2,341
No Data	No Data	9,134	684
No Data	No Data	30,856	1,379
No Data	No Data	19,197	1,167
No Data	No Data	15,085	599
No Data	No Data	12,358	570
No Data	No Data	14,251	668
No Data	No Data	69,654	3,511
No Data	No Data	10,037	446
0	0	114,602	5,925
No Data	No Data	11,629	649
No Data	No Data	54,896	2,123
No Data	No Data	9,828	544
No Data	No Data	21,545	1,116
No Data	No Data	25,164	1,486
No Data	No Data	22,305	932
No Data	No Data	51,878	2,378
No Data	No Data	9,418	590
44024	48669	83,098	2,516
No Data	No Data	10,185	675
No Data	No Data	4,639	338
No Data	No Data	22,349	1,040
No Data	No Data	4,045	242
No Data	No Data	9,142	355

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	6,622	410
No Data	No Data	11,425	493
No Data	No Data	8,903	572
No Data	No Data	6,670	424
No Data	No Data	5,999	269
No Data	No Data	3,676	278
No Data	No Data	2,830	219
No Data	No Data	3,566	235
No Data	No Data	1,703	123
No Data	No Data	4,090	293
0	0	1,059	162
No Data	No Data	1,792	114
No Data	No Data	2,250	109
630	1540	821	83
0	0	395	41
0	0	880	81
No Data	No Data	464	33
No Data	No Data	1,395	120
0	0	442	36
350	195	688	75
No Data	No Data	15,038	772
36720	43375	40,096	1,786
No Data	No Data	9,895	624
No Data	No Data	30,205	1,078
No Data	No Data	20,249	1,616
No Data	No Data	3,541	146
No Data	No Data	17,433	934

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	67,009	2,614
No Data	No Data	8,306	493
No Data	No Data	19,832	1,282
No Data	No Data	15,219	749
51570	86175	216,340	9,221
No Data	No Data	12,985	662
232	374	10,759	813
No Data	No Data	7,137	299
No Data	No Data	7,988	228
No Data	No Data	100,850	5,124
No Data	No Data	3,658	191
No Data	No Data	8,899	582
No Data	No Data	4,364	223
No Data	No Data	25,257	1,227
No Data	No Data	6,024	375
No Data	No Data	17,070	923
No Data	No Data	8,218	496
No Data	No Data	44,749	1,409
No Data	No Data	19,964	677
No Data	No Data	5,588	295
No Data	No Data	6,544	356
No Data	No Data	22,867	1,285
No Data	No Data	10,593	611
No Data	No Data	10,467	693
No Data	No Data	19,808	889
No Data	No Data	21,897	1,161
No Data	No Data	39,949	1,906

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	1,397	63
No Data	No Data	6,224	322
No Data	No Data	5,498	326
No Data	No Data	3,711	149
No Data	No Data	15,874	1,312
No Data	No Data	2,673	180
No Data	No Data	4,977	293
No Data	No Data	4,580	353
0	0	3,876	138
No Data	No Data	14,833	851
No Data	No Data	7,019	383
No Data	No Data	9,078	284
0	0	7,047	473
No Data	No Data	2,100	134
No Data	No Data	1,955	107
No Data	No Data	8,056	492
No Data	No Data	4,761	256
0	0	898	34
No Data	No Data	4,850	242
9306	3587	2,324	118
No Data	No Data	5,928	160
No Data	No Data	3,112	152
No Data	No Data	1,266	93
11080	900	808	72
No Data	No Data	3,275	139
No Data	No Data	1,218	107
No Data	No Data	1,451	125

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	1,420	123
No Data	No Data	1,908	147
No Data	No Data	159	11
2273	24200	121,683	6,461
11881	164318	474,228	12,317
No Data	No Data	8,404	261
No Data	No Data	10,459	361
No Data	No Data	243,644	10,644
No Data	No Data	13,762	732
1878	3636	36,403	2,116
219622	594458	238,036	5,716
No Data	No Data	35,409	1,244
No Data	No Data	15,011	898
No Data	No Data	24,357	1,170
No Data	No Data	31,930	1,801
10900	3150	70,630	1,595
No Data	No Data	17,298	668
No Data	No Data	22,609	741
No Data	No Data	22,052	1,388
No Data	No Data	22,825	1,225
No Data	No Data	18,837	1,323
No Data	No Data	8,002	579
No Data	No Data	15,726	634
No Data	No Data	7,705	551
No Data	No Data	5,141	480
No Data	No Data	16,705	988
3680	7020	4,527	194

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	36,837	1,995
No Data	No Data	5,209	264
No Data	No Data	4,805	245
No Data	No Data	4,598	118
No Data	No Data	10,172	615
No Data	No Data	10,073	423
No Data	No Data	5,302	272
No Data	No Data	5,356	323
No Data	No Data	3,439	188
No Data	No Data	23,166	1,202
No Data	No Data	7,636	407
No Data	No Data	2,979	236
No Data	No Data	9,263	674
No Data	No Data	7,074	440
No Data	No Data	4,702	216
No Data	No Data	1,445	95
No Data	No Data	2,757	144
No Data	No Data	2,207	93
0	0	3,122	380
No Data	No Data	6,766	248
No Data	No Data	4,261	286
2164	5242	997	91
No Data	No Data	4,169	198
0	0	1,972	101
2060	5675	759	31
No Data	No Data	6,177	240
0	0	2,170	90

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	1,758	118
0	0	530	34
200	1500	1,201	108
No Data	No Data	2,544	117
No Data	No Data	2,622	134
No Data	No Data	1,506	129
No Data	No Data	4,293	292
No Data	No Data	1,456	110
No Data	No Data	559	30
0	0	816	68
0	0	2,191	147
0	0	2,149	147
No Data	No Data	38,757	1,902
200	500	57,432	4,318
2438	8100	10,352	1,184
No Data	No Data	31,601	1,405
0	0	2,277	79
No Data	No Data	236,747	13,739
No Data	No Data	12,465	689
7945	53578	123,425	5,914
No Data	No Data	153,530	7,076
No Data	No Data	35,958	1,783
0	0	3,445	172
No Data	No Data	29,429	1,877
No Data	No Data	66,397	1,944
No Data	No Data	3,019	151
0	0	4,322	357

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	14,040	836
No Data	No Data	13,009	773
No Data	No Data	86,230	5,551
No Data	No Data	85,632	4,477
0	0	10,088	667
No Data	No Data	21,470	1,461
No Data	No Data	42,980	1,794
No Data	No Data	7,076	276
No Data	No Data	22,467	1,013
No Data	No Data	23,586	880
1354	2440	80,931	3,481
67545	116325	108,865	5,543
1014	16100	15,889	915
No Data	No Data	10,139	458
No Data	No Data	10,359	542
No Data	No Data	11,607	573
No Data	No Data	4,932	248
No Data	No Data	3,760	247
No Data	No Data	2,317	107
No Data	No Data	22,195	948
0	0	4,490	297
No Data	No Data	8,031	602
156	0	8,493	518
No Data	No Data	7,445	416
No Data	No Data	16,036	379
No Data	No Data	3,164	130
8480	3500	7,481	450

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	3,222	253
395	450	14,818	962
0	0	6,167	814
No Data	No Data	7,194	394
No Data	No Data	4,531	229
0	0	3,163	177
No Data	No Data	4,998	163
No Data	No Data	2,035	168
1200	14200	3,633	191
No Data	No Data	3,196	143
No Data	No Data	1,850	123
No Data	No Data	1,073	80
0	0	547	67
1000	500	4,475	365
0	0	394	23
3150	73369	45,580	2,020
23244	309904	650,060	26,016
No Data	No Data	19,482	965
No Data	No Data	11,447	708
6044	48878	60,202	1,845
No Data	No Data	179,703	6,776
No Data	No Data	47,282	1,427
No Data	No Data	17,761	2,446
32000	55000	214,928	5,803
No Data	No Data	1,810	33
No Data	No Data	17,442	511
2476	37075	110,991	5,670

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	19,687	825
No Data	No Data	7,881	417
63178	71593	270,537	12,105
No Data	No Data	9,818	386
No Data	No Data	6,281	401
No Data	No Data	1,983	132
No Data	No Data	10,562	485
No Data	No Data	61,216	3,291
No Data	No Data	26,036	1,292
No Data	No Data	12,488	808
No Data	No Data	5,207	264
28800	47207	73,084	3,057
No Data	No Data	20,545	1,062
No Data	No Data	8,248	420
No Data	No Data	11,690	813
No Data	No Data	31,233	1,179
No Data	No Data	13,399	813
0	0	14,623	611
No Data	No Data	4,023	353
No Data	No Data	13,248	702
No Data	No Data	12,362	904
No Data	No Data	6,017	419
No Data	No Data	15,656	674
No Data	No Data	12,763	528
No Data	No Data	40,119	2,180
No Data	No Data	7,666	656
No Data	No Data	955	73

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	4,492	295
No Data	No Data	4,829	187
No Data	No Data	34,268	1,461
2840	2780	7,063	950
No Data	No Data	2,429	336
No Data	No Data	3,691	172
No Data	No Data	3,296	169
815	374	3,214	253
No Data	No Data	5,506	642
No Data	No Data	19,271	592
No Data	No Data	4,171	347
No Data	No Data	7,422	380
No Data	No Data	3,653	228
No Data	No Data	2,847	138
No Data	No Data	5,129	325
No Data	No Data	2,453	167
No Data	No Data	6,538	401
No Data	No Data	4,404	323
No Data	No Data	11,626	516
No Data	No Data	4,050	240
0	0	1,155	125
No Data	No Data	797	43
No Data	No Data	8,830	434
0	0	2,972	351
No Data	No Data	1,801	121
0	0	4,864	192
3987	16221	2,813	167

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	2,147	145
No Data	No Data	1,828	123
No Data	No Data	1,793	77
No Data	No Data	3,758	148
No Data	No Data	1,632	110
No Data	No Data	2,680	201
415	450	1,049	80
No Data	No Data	50,542	2,004
0	0	35,775	5,389
No Data	No Data	19,501	823
No Data	No Data	68,562	3,089
No Data	No Data	137,280	4,381
No Data	No Data	15,637	1,051
No Data	No Data	8,104	385
13717	57585	114,616	4,330
No Data	No Data	8,644	487
400	400	21,521	797
No Data	No Data	38,538	2,326
95450	209894	468,551	11,563
No Data	No Data	142,207	6,211
0	0	8,729	460
5553	48550	53,860	1,139
No Data	No Data	29,087	1,164
No Data	No Data	225,307	9,231
0	0	83,141	2,893
No Data	No Data	9,651	600
No Data	No Data	22,078	1,253

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	44,119	3,290
No Data	No Data	23,174	1,028
No Data	No Data	82,490	2,348
No Data	No Data	23,261	872
No Data	No Data	61,777	3,370
No Data	No Data	83,425	2,733
802	16900	8,922	662
0	0	7,755	1,143
No Data	No Data	34,182	1,498
0	0	36,263	3,372
No Data	No Data	50,957	2,380
No Data	No Data	30,342	1,653
No Data	No Data	44,672	2,577
No Data	No Data	14,631	1,330
0	0	7,317	465
No Data	No Data	26,674	1,812
No Data	No Data	29,252	1,093
No Data	No Data	7,474	601
No Data	No Data	4,895	228
0	0	12,327	310
No Data	No Data	11,083	470
749	21494	86,215	3,313
No Data	No Data	40,320	2,015
No Data	No Data	10,144	838
No Data	No Data	9,054	712
5500	1000	13,026	1,451
No Data	No Data	6,568	512

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	10,872	736
No Data	No Data	3,344	310
No Data	No Data	10,113	594
No Data	No Data	4,010	331
No Data	No Data	4,258	147
No Data	No Data	9,861	612
No Data	No Data	3,078	140
4020	650	4,352	156
No Data	No Data	3,664	158
No Data	No Data	5,766	348
4952	19031	2,945	167
No Data	No Data	3,709	237
No Data	No Data	5,334	532
No Data	No Data	7,965	544
No Data	No Data	4,172	412
No Data	No Data	3,942	294
No Data	No Data	4,572	239
No Data	No Data	4,428	211
No Data	No Data	16,005	999
No Data	No Data	6,778	356
0	0	26,863	1,221
160	115	7,945	293
No Data	No Data	2,258	201
No Data	No Data	1,392	74
No Data	No Data	3,703	338
No Data	No Data	6,948	365
1499	1573	1,784	194

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	6,909	377
0	0	5,269	360
No Data	No Data	5,599	453
No Data	No Data	4,262	213
No Data	No Data	6,086	371
No Data	No Data	3,328	226
0	0	3,380	236
No Data	No Data	3,088	227
0	0	129	22
No Data	No Data	1,227	104
No Data	No Data	2,566	162
No Data	No Data	4,550	103
No Data	No Data	2,555	195
No Data	No Data	4,319	244
0	0	1,268	106
2800	6350	4,653	202
0	0	5,188	288
No Data	No Data	2,847	149
0	0	1,196	105
0	0	1,385	49
No Data	No Data	1,911	112
720	2750	2,765	119
No Data	No Data	2,052	133
0	0	1,179	93
No Data	No Data	745	62
100	5400	1,018	69
0	0	225	23

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	1,255	65
0	0	990	73
775	5413	1,399	74
0	0	5,594	130
18920	8650	10,555	258
No Data	No Data	144,149	4,891
No Data	No Data	51,106	2,617
No Data	No Data	95,964	4,388
No Data	No Data	73,501	2,635
0	0	4,685	84
No Data	No Data	47,347	1,800
No Data	No Data	68,405	3,046
6293	15500	269,948	9,742
No Data	No Data	27,386	1,241
No Data	No Data	20,329	1,213
No Data	No Data	9,265	565
7508	2799	23,847	979
No Data	No Data	13,447	673
No Data	No Data	12,098	704
No Data	No Data	79,210	2,590
No Data	No Data	10,906	619
No Data	No Data	14,670	543
No Data	No Data	16,110	581
No Data	No Data	230,088	8,495
No Data	No Data	23,263	1,238
No Data	No Data	7,277	422
6300	22600	82,169	4,624

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	39,876	1,836
52337	169005	176,081	5,437
No Data	No Data	17,014	881
No Data	No Data	20,846	965
19187	160898	17,633	1,036
No Data	No Data	17,715	1,163
No Data	No Data	29,729	1,202
No Data	No Data	19,034	938
No Data	No Data	18,577	828
No Data	No Data	44,532	1,786
No Data	No Data	15,865	739
No Data	No Data	15,688	754
No Data	No Data	18,018	1,059
4900	3750	98,216	3,311
No Data	No Data	54,926	1,812
No Data	No Data	35,674	1,714
604	13899	3,850	295
34450	16450	100,102	3,438
No Data	No Data	26,974	1,323
No Data	No Data	24,275	917
0	0	30,011	1,044
745	12110	89,288	2,994
7445	87550	17,754	1,365
No Data	No Data	40,856	1,715
No Data	No Data	9,461	649
No Data	No Data	17,537	1,173
0	0	15,741	715

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	32,241	2,297
No Data	No Data	51,328	1,915
No Data	No Data	8,323	528
No Data	No Data	12,920	979
No Data	No Data	6,865	492
No Data	No Data	14,452	527
No Data	No Data	18,796	1,245
No Data	No Data	7,426	355
0	0	29,156	996
No Data	No Data	6,285	347
No Data	No Data	7,715	537
No Data	No Data	22,238	1,278
No Data	No Data	6,013	307
No Data	No Data	7,818	293
No Data	No Data	5,757	256
No Data	No Data	5,717	392
No Data	No Data	8,693	460
No Data	No Data	8,109	437
No Data	No Data	13,995	539
No Data	No Data	7,553	424
No Data	No Data	5,645	239
No Data	No Data	5,016	359
No Data	No Data	8,977	497
No Data	No Data	10,688	835
388	9839	5,815	278
0	0	2,862	273
No Data	No Data	14,474	782

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	4,895	299
No Data	No Data	5,600	233
0	0	7,895	213
880	850	6,326	283
0	0	8,187	641
No Data	No Data	6,006	389
No Data	No Data	6,793	722
No Data	No Data	9,282	635
No Data	No Data	6,957	397
No Data	No Data	9,205	394
No Data	No Data	8,290	443
0	0	2,067	212
No Data	No Data	6,801	804
No Data	No Data	3,612	182
0	0	15,324	1,199
No Data	No Data	4,330	398
0	0	4,065	149
No Data	No Data	5,745	363
0	0	5,713	245
No Data	No Data	3,071	151
No Data	No Data	3,783	180
No Data	No Data	4,197	342
0	0	3,142	406
No Data	No Data	3,890	211
No Data	No Data	4,553	267
No Data	No Data	1,696	131
4695	9108	1,826	63

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	0	3,962	248
No Data	No Data	3,670	186
No Data	No Data	4,391	289
No Data	No Data	3,482	206
No Data	No Data	3,189	243
2891	25167	3,207	166
0	0	1,423	103
No Data	No Data	3,139	171
0	0	585	26
No Data	No Data	2,398	111
No Data	No Data	1,340	105
No Data	No Data	4,538	275
0	0	557	44
738	4274	1,384	106
No Data	No Data	885	85
No Data	No Data	2,964	221
0	0	1,042	157
No Data	No Data	1,984	106
0	0	1,208	171
No Data	No Data	2,425	168
No Data	No Data	1,437	77
0	0	568	66
No Data	No Data	3,419	247
0	0	1,050	67
0	0	1,699	79
1500	1000	721	47
475	725	972	63

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	0	520	43
0	0	326	23
0	0	327	39
1461	4835	892	69
0	0	712	55
4320	1400	550	46
740	3250	27,157	583
No Data	No Data	17,842	854
0	0	36,041	1,542
No Data	No Data	29,079	1,305
No Data	No Data	99,539	4,430
No Data	No Data	25,641	1,604
No Data	No Data	72,942	3,539
No Data	No Data	150,808	6,666
No Data	No Data	99,317	4,019
1514	8900	39,609	2,988
No Data	No Data	12,296	1,002
13505	59112	229,549	9,129
No Data	No Data	14,191	849
No Data	No Data	15,401	1,257
10965	13550	29,544	1,495
No Data	No Data	17,092	894
No Data	No Data	26,854	1,230
1740	19804	7,654	376
No Data	No Data	56,484	2,420
No Data	No Data	26,720	1,508
No Data	No Data	15,356	960

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	23,722	1,251
No Data	No Data	8,318	382
10714	35051	81,923	3,224
No Data	No Data	32,742	1,775
0	0	60,712	1,846
No Data	No Data	7,956	387
No Data	No Data	18,354	1,164
0	0	10,953	473
No Data	No Data	16,255	1,599
No Data	No Data	3,967	97
30216	44570	37,328	3,155
No Data	No Data	6,979	378
No Data	No Data	105,194	4,776
No Data	No Data	42,806	2,482
No Data	No Data	9,531	589
0	0	80,693	2,962
No Data	No Data	16,250	1,316
0	0	14,455	1,401
No Data	No Data	32,417	1,952
No Data	No Data	14,610	766
750	950	27,357	1,563
No Data	No Data	9,733	627
No Data	No Data	19,899	691
No Data	No Data	29,675	1,506
No Data	No Data	9,011	431
86664	310724	138,407	3,963
No Data	No Data	12,460	921

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	16,447	1,225
No Data	No Data	9,467	647
No Data	No Data	7,550	367
No Data	No Data	21,074	1,140
0	0	8,584	568
No Data	No Data	6,676	504
No Data	No Data	48,698	2,227
0	0	4,117	294
No Data	No Data	12,911	789
No Data	No Data	6,656	335
No Data	No Data	8,697	648
No Data	No Data	11,854	941
No Data	No Data	14,175	1,345
No Data	No Data	33,425	1,480
No Data	No Data	8,793	292
No Data	No Data	5,104	338
No Data	No Data	12,112	830
No Data	No Data	13,246	575
No Data	No Data	17,087	1,115
No Data	No Data	10,232	625
No Data	No Data	14,977	502
0	0	20,943	1,165
No Data	No Data	16,978	890
357	1925	19,235	959
0	0	2,731	260
No Data	No Data	8,956	454
200	825	3,234	141

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

6011	34743	2,728	487
No Data	No Data	10,006	471
No Data	No Data	26,559	811
0	0	5,077	398
No Data	No Data	6,116	596
No Data	No Data	9,140	569
No Data	No Data	6,538	565
No Data	No Data	21,150	899
No Data	No Data	5,859	435
No Data	No Data	8,184	437
No Data	No Data	7,273	447
No Data	No Data	8,052	732
No Data	No Data	15,704	709
No Data	No Data	5,088	252
No Data	No Data	5,755	325
No Data	No Data	7,084	567
No Data	No Data	11,109	630
0	0	14,282	739
No Data	No Data	4,059	317
No Data	No Data	6,868	442
6401	6325	7,810	285
No Data	No Data	7,915	468
No Data	No Data	6,328	414
0	0	3,721	150
No Data	No Data	3,751	140
No Data	No Data	9,810	528
0	0	14,036	1,036

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

460	1500	9,018	282
No Data	No Data	8,086	390
No Data	No Data	9,083	595
No Data	No Data	6,125	429
No Data	No Data	5,376	450
No Data	No Data	4,217	160
No Data	No Data	8,598	515
558	1150	2,078	163
No Data	No Data	3,204	224
No Data	No Data	5,594	412
No Data	No Data	7,408	498
No Data	No Data	3,678	156
No Data	No Data	4,140	175
No Data	No Data	3,970	220
0	0	5,681	245
No Data	No Data	5,398	372
1061	1050	3,077	171
No Data	No Data	2,318	136
No Data	No Data	4,114	238
No Data	No Data	6,263	266
No Data	No Data	4,121	200
No Data	No Data	3,393	116
No Data	No Data	4,033	307
No Data	No Data	4,983	306
775	5700	4,408	266
No Data	No Data	3,195	241
No Data	No Data	4,775	404

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	2,411	146
No Data	No Data	1,534	141
No Data	No Data	1,348	99
No Data	No Data	1,640	180
No Data	No Data	1,692	104
No Data	No Data	1,891	99
0	0	5,157	410
No Data	No Data	2,823	195
721	19930	1,974	134
No Data	No Data	4,260	370
No Data	No Data	1,254	60
1124	700	906	115
No Data	No Data	4,029	373
No Data	No Data	2,986	206
0	0	1,942	122
No Data	No Data	1,561	116
0	0	3,375	264
No Data	No Data	222	11
487	2067	1,692	95
0	0	1,222	63
0	0	5,287	254
0	0	1,158	58
0	0	1,485	152
No Data	No Data	1,525	131
No Data	No Data	1,489	106
No Data	No Data	2,563	167
0	0	4,162	212

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	0	723	79
0	0	790	123
0	0	158	11
0	0	366	31
641	10976	75,409	2,643
No Data	No Data	34,574	1,780
21410	18653	127,539	5,127
No Data	No Data	22,295	1,094
No Data	No Data	7,275	342
No Data	No Data	60,775	2,465
No Data	No Data	34,187	1,598
0	0	16,595	942
No Data	No Data	20,336	1,508
No Data	No Data	14,034	1,175
No Data	No Data	23,123	1,264
11977	81025	34,105	1,161
0	0	71,353	2,623
No Data	No Data	25,922	1,583
No Data	No Data	19,159	1,040
No Data	No Data	10,828	598
No Data	No Data	25,515	1,216
533	50	33,307	3,689
No Data	No Data	13,060	1,113
No Data	No Data	103,370	5,764
No Data	No Data	42,651	1,305
No Data	No Data	9,164	666
0	0	9,100	889

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	0	51,165	1,854
No Data	No Data	23,781	1,530
No Data	No Data	15,162	889
No Data	No Data	1,485	85
No Data	No Data	9,218	326
1575	2210	10,270	667
No Data	No Data	25,948	1,049
66	1650	8,097	967
2047	5150	63,193	3,569
No Data	No Data	6,814	382
No Data	No Data	20,253	885
No Data	No Data	17,681	1,752
No Data	No Data	4,693	277
No Data	No Data	14,955	1,093
No Data	No Data	51,071	1,560
No Data	No Data	34,327	2,983
0	0	9,480	548
No Data	No Data	13,002	426
No Data	No Data	43,995	2,174
No Data	No Data	25,474	1,222
No Data	No Data	19,338	684
No Data	No Data	17,190	672
No Data	No Data	10,673	561
No Data	No Data	34,037	1,245
No Data	No Data	20,323	1,295
No Data	No Data	8,482	537
No Data	No Data	7,255	288

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	6,659	559
No Data	No Data	8,166	424
29145	39541	7,774	460
No Data	No Data	6,382	333
No Data	No Data	46,808	3,326
No Data	No Data	27,224	1,567
No Data	No Data	8,556	563
No Data	No Data	12,438	645
No Data	No Data	7,297	381
No Data	No Data	10,518	400
No Data	No Data	11,177	522
No Data	No Data	8,532	575
No Data	No Data	18,017	993
No Data	No Data	14,056	884
No Data	No Data	10,011	508
0	0	6,863	207
0	0	8,335	531
No Data	No Data	3,621	361
0	0	6,287	838
12584	82350	16,212	1,353
310	350	3,316	568
449	5687	17,973	965
0	0	7,382	493
No Data	No Data	5,847	447
No Data	No Data	8,388	291
No Data	No Data	10,368	1,104
No Data	No Data	6,969	525

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

575	1120	2,094	118
No Data	No Data	12,658	855
3170	4318	13,532	1,393
No Data	No Data	8,139	565
No Data	No Data	4,620	306
0	0	8,991	1,045
No Data	No Data	13,141	699
No Data	No Data	11,232	732
No Data	No Data	3,316	188
No Data	No Data	7,740	648
No Data	No Data	4,342	306
24400	40550	13,208	670
No Data	No Data	5,757	421
No Data	No Data	3,576	206
No Data	No Data	6,087	227
No Data	No Data	2,970	218
No Data	No Data	5,170	378
No Data	No Data	3,827	208
No Data	No Data	8,896	536
No Data	No Data	7,416	646
No Data	No Data	4,785	269
No Data	No Data	7,260	339
No Data	No Data	3,428	363
655	10050	3,650	364
4746	12994	4,799	303
No Data	No Data	9,058	480
No Data	No Data	3,238	330

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	3,141	189
No Data	No Data	2,155	205
No Data	No Data	6,691	340
No Data	No Data	5,936	368
No Data	No Data	8,813	486
No Data	No Data	4,879	182
No Data	No Data	8,778	628
No Data	No Data	3,799	159
No Data	No Data	3,534	460
No Data	No Data	3,435	165
No Data	No Data	9,754	484
1342	8510	1,794	140
No Data	No Data	2,047	101
No Data	No Data	3,092	229
No Data	No Data	1,456	127
840	4500	1,829	125
No Data	No Data	2,064	236
1660	1500	2,357	128
No Data	No Data	4,141	243
No Data	No Data	3,782	371
No Data	No Data	2,200	172
No Data	No Data	5,188	322
No Data	No Data	1,802	147
No Data	No Data	2,648	197
No Data	No Data	3,766	210
No Data	No Data	14,623	558
0	0	3,417	139

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	0	3,993	171
No Data	No Data	5,102	211
No Data	No Data	3,929	193
No Data	No Data	3,647	162
329	291	3,381	215
No Data	No Data	2,023	137
No Data	No Data	1,033	50
No Data	No Data	1,856	149
0	0	1,106	231
218	6476	1,482	64
0	0	550	55
1400	1900	1,542	259
0	0	1,059	91
2025	2550	1,187	96
450	635	2,922	152
0	0	920	32
No Data	No Data	942	66
0	0	2,085	139
No Data	No Data	2,592	175
No Data	No Data	1,831	69
350	210	910	76
No Data	No Data	2,529	229
No Data	No Data	1,580	86
0	0	490	55
No Data	No Data	1,101	75
No Data	No Data	456	22
No Data	No Data	9,260	359

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	24,273	1,590
2367	16980	20,749	1,354
0	0	11,244	721
9120	57750	13,419	1,804
No Data	No Data	146,911	6,519
643	374	58,318	1,437
8263	5125	47,251	1,888
No Data	No Data	29,264	1,750
No Data	No Data	15,094	1,293
No Data	No Data	28,574	1,911
No Data	No Data	83,909	4,758
14520	46000	98,267	2,869
No Data	No Data	20,841	1,433
No Data	No Data	69,302	3,675
385	21858	25,101	1,297
0	0	18,133	1,059
No Data	No Data	55,449	2,835
No Data	No Data	22,817	1,582
No Data	No Data	105,995	4,759
0	0	16,591	697
No Data	No Data	20,275	984
No Data	No Data	21,098	1,573
0	0	77,335	2,775
No Data	No Data	28,706	1,933
No Data	No Data	23,091	1,051
5240	3700	16,753	684
No Data	No Data	13,462	942

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

4920	65950	22,399	889
No Data	No Data	9,343	496
No Data	No Data	3,731	302
No Data	No Data	23,569	563
No Data	No Data	5,363	235
No Data	No Data	123,356	6,072
0	0	3,638	286
No Data	No Data	9,573	707
14420	21850	27,029	734
No Data	No Data	14,526	723
0	0	33,935	1,374
No Data	No Data	15,055	1,242
No Data	No Data	16,602	985
0	0	48,844	1,038
No Data	No Data	10,271	687
No Data	No Data	38,701	1,909
0	0	34,111	1,082
No Data	No Data	7,311	334
No Data	No Data	11,041	847
No Data	No Data	14,075	736
No Data	No Data	23,585	1,272
0	0	7,773	1,020
No Data	No Data	17,018	638
No Data	No Data	7,668	562
No Data	No Data	19,414	1,734
No Data	No Data	63,993	2,106
0	0	30,136	1,795

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	27,369	1,470
No Data	No Data	4,905	349
6500	11500	15,326	906
1450	20100	10,180	498
No Data	No Data	13,002	561
No Data	No Data	11,960	686
No Data	No Data	14,781	565
No Data	No Data	11,742	835
No Data	No Data	4,363	368
No Data	No Data	5,054	460
No Data	No Data	8,944	499
0	0	9,833	563
No Data	No Data	2,727	191
No Data	No Data	8,616	340
0	0	7,987	371
No Data	No Data	9,105	493
No Data	No Data	8,127	552
No Data	No Data	13,285	490
No Data	No Data	14,869	746
No Data	No Data	4,020	286
No Data	No Data	14,604	1,326
0	0	18,370	969
No Data	No Data	6,164	555
No Data	No Data	3,511	135
No Data	No Data	3,900	213
No Data	No Data	7,058	315
No Data	No Data	3,553	241

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	8,893	227
No Data	No Data	8,350	369
0	0	8,115	618
0	0	11,681	1,643
No Data	No Data	8,923	781
No Data	No Data	4,284	321
No Data	No Data	7,474	484
0	0	2,641	94
No Data	No Data	4,949	296
No Data	No Data	4,706	615
0	0	3,702	340
No Data	No Data	7,299	502
0	0	6,011	363
0	0	4,823	427
No Data	No Data	8,225	474
4071	17934	4,675	202
No Data	No Data	5,049	302
No Data	No Data	5,086	198
No Data	No Data	4,516	231
No Data	No Data	4,213	215
2635	20405	5,697	197
No Data	No Data	10,448	580
No Data	No Data	5,927	565
0	0	4,525	333
0	0	5,957	234
1629	10287	3,801	231
No Data	No Data	4,311	309

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	9,997	441
0	0	3,959	270
0	0	6,179	370
No Data	No Data	3,222	124
1260	17825	2,861	283
No Data	No Data	7,865	439
14	20	7,045	488
0	0	1,906	78
150	950	2,173	378
0	0	2,154	126
No Data	No Data	6,580	594
0	0	3,080	169
No Data	No Data	4,227	228
No Data	No Data	5,111	178
No Data	No Data	2,419	99
No Data	No Data	3,520	281
0	0	3,053	197
No Data	No Data	3,093	200
1500	1500	15,160	899
No Data	No Data	3,767	308
328437	73806	2,452	168
926	13070	1,637	122
0	0	7,775	613
0	0	1,936	355
No Data	No Data	6,141	329
2891	25167	1,910	95
No Data	No Data	4,701	207

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	7,756	676
655	4725	1,519	94
0	0	7,137	328
No Data	No Data	7,227	623
0	0	3,157	164
No Data	No Data	3,719	187
No Data	No Data	1,609	141
0	0	5,357	316
1064	1150	3,835	207
No Data	No Data	3,469	240
0	0	4,399	574
No Data	No Data	3,180	211
No Data	No Data	2,465	219
0	0	2,241	125
0	0	2,358	248
No Data	No Data	2,980	145
0	0	1,221	128
No Data	No Data	8,049	230
0	0	1,750	74
0	0	509	47
0	0	4,040	316
0	0	1,759	179
No Data	No Data	7,157	883
No Data	No Data	2,073	118
No Data	No Data	1,632	195
No Data	No Data	1,242	68
145	700	2,224	169

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	0	1,509	92
No Data	No Data	1,511	145
12306	1400	1,259	107
0	0	1,909	153
No Data	No Data	3,212	200
612	517	1,451	79
No Data	No Data	938	40
3500	5280	1,346	81
No Data	No Data	5,583	202
No Data	No Data	1,143	69
No Data	No Data	1,504	124
No Data	No Data	751	42
No Data	No Data	3,363	272
No Data	No Data	2,477	96
0	0	1,348	108
0	0	2,912	113
0	0	164	22
No Data	No Data	2,400	147
0	0	2,892	182
No Data	No Data	1,600	186
0	0	536	42
0	0	1,420	79
0	0	983	79
0	0	557	61
0	0	1,048	72
130	1400	1,197	66
1240	1835	465	46

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	0	945	150
No Data	No Data	286	11
No Data	No Data	2,054	134
No Data	No Data	492	46
0	0	818	80
28648	140385	40,244	881
74118	486975	158,401	3,722
0	0	37,085	2,321
0	0	37,827	2,349
No Data	No Data	8,641	309
39346	108236	99,865	2,759
1136	4175	27,024	1,068
No Data	No Data	35,156	2,026
0	0	36,385	1,772
No Data	No Data	11,010	323
0	0	41,124	1,922
No Data	No Data	44,016	1,810
No Data	No Data	9,307	585
27704	13888	32,560	2,162
No Data	No Data	12,968	655
No Data	No Data	27,925	1,370
No Data	No Data	23,167	977
No Data	No Data	16,562	636
No Data	No Data	34,490	991
No Data	No Data	10,357	466
No Data	No Data	30,967	916
0	0	55,851	1,911

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	9,395	401
No Data	No Data	33,880	1,947
0	0	80,066	2,697
No Data	No Data	17,609	864
No Data	No Data	23,359	1,092
No Data	No Data	16,398	1,287
No Data	No Data	29,578	2,610
No Data	No Data	7,883	426
No Data	No Data	8,490	905
No Data	No Data	6,822	430
0	0	14,535	759
612	3250	34,285	1,146
No Data	No Data	14,567	1,190
0	0	20,104	1,003
No Data	No Data	5,608	493
4318	20230	26,633	945
8355	15500	10,675	571
0	0	17,780	833
No Data	No Data	36,547	1,813
No Data	No Data	18,350	1,334
516	1360	11,208	1,073
No Data	No Data	10,195	713
5908	6359	19,126	1,009
No Data	No Data	10,183	601
No Data	No Data	16,419	1,176
17090	44550	14,163	1,142
0	0	7,073	679

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	5,482	188
2956	6615	4,451	176
No Data	No Data	18,346	1,382
No Data	No Data	12,782	498
No Data	No Data	10,301	348
No Data	No Data	10,681	854
7279	11400	16,103	694
0	0	9,376	222
No Data	No Data	7,260	369
No Data	No Data	13,078	543
146	1240	78,216	5,724
No Data	No Data	17,737	680
No Data	No Data	9,980	871
No Data	No Data	8,056	790
No Data	No Data	6,584	313
0	0	5,092	384
No Data	No Data	5,620	418
No Data	No Data	8,244	897
No Data	No Data	9,162	769
No Data	No Data	6,581	426
No Data	No Data	7,375	544
No Data	No Data	17,312	582
No Data	No Data	9,456	714
No Data	No Data	13,563	1,157
No Data	No Data	20,593	1,350
7548	102655	11,081	378
300	1250	4,250	244

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	9,795	1,004
No Data	No Data	8,869	747
No Data	No Data	10,314	682
No Data	No Data	13,256	1,063
No Data	No Data	8,629	715
7918	12960	19,832	1,038
No Data	No Data	7,815	582
No Data	No Data	7,238	383
No Data	No Data	6,882	588
No Data	No Data	4,947	466
No Data	No Data	4,128	223
0	0	3,708	269
No Data	No Data	7,916	509
1155	2200	3,459	446
No Data	No Data	3,873	168
No Data	No Data	4,158	282
1160	4675	5,515	234
No Data	No Data	7,919	544
No Data	No Data	7,633	497
No Data	No Data	7,278	579
No Data	No Data	18,964	644
34896	24800	16,006	630
No Data	No Data	7,628	351
No Data	No Data	4,230	372
No Data	No Data	8,183	487
No Data	No Data	8,080	513
0	0	8,430	304

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	6,301	656
0	0	7,697	320
2728	11225	6,564	238
0	0	1,024	136
1632	229	4,866	243
No Data	No Data	6,487	396
No Data	No Data	4,856	220
No Data	No Data	3,754	215
No Data	No Data	2,680	121
No Data	No Data	1,916	130
0	0	9,832	451
No Data	No Data	7,937	350
No Data	No Data	2,646	132
No Data	No Data	3,191	257
No Data	No Data	5,975	415
No Data	No Data	3,961	219
No Data	No Data	3,169	258
No Data	No Data	5,735	646
No Data	No Data	1,899	188
0	0	13,036	371
No Data	No Data	1,677	147
No Data	No Data	7,570	447
0	0	3,074	337
No Data	No Data	2,418	153
No Data	No Data	4,556	404
No Data	No Data	2,413	216
No Data	No Data	6,601	396

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	4,604	365
1915	9353	5,925	512
0	0	1,697	58
No Data	No Data	3,712	206
0	0	2,271	293
No Data	No Data	2,537	143
0	0	4,159	329
No Data	No Data	4,359	280
No Data	No Data	2,947	143
No Data	No Data	4,333	423
0	0	3,630	254
No Data	No Data	3,350	196
No Data	No Data	6,728	267
No Data	No Data	8,112	641
538	1450	7,702	426
No Data	No Data	2,991	149
No Data	No Data	3,796	250
No Data	No Data	8,605	312
No Data	No Data	3,107	140
No Data	No Data	7,732	233
0	0	3,599	157
No Data	No Data	1,842	87
0	0	1,595	127
No Data	No Data	10,622	575
No Data	No Data	5,295	161
No Data	No Data	5,598	404
0	0	3,929	356

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	2,650	366
No Data	No Data	3,928	383
No Data	No Data	3,133	238
No Data	No Data	3,464	209
No Data	No Data	3,834	219
125	1350	6,440	462
0	0	3,304	208
0	0	2,035	159
No Data	No Data	1,230	80
0	0	3,979	235
No Data	No Data	572	84
No Data	No Data	1,695	173
No Data	No Data	4,535	131
220	500	2,837	215
0	0	2,942	199
No Data	No Data	3,455	180
1443	2233	2,015	143
No Data	No Data	2,075	116
No Data	No Data	1,372	80
No Data	No Data	2,174	164
5850	17650	1,765	101
No Data	No Data	3,769	308
1300	24900	2,953	474
No Data	No Data	1,585	122
2000	4300	1,389	68
0	0	803	66
No Data	No Data	2,488	192

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	1,465	97
0	0	3,905	222
0	0	549	51
No Data	No Data	1,838	135
0	0	1,516	95
No Data	No Data	435	33
No Data	No Data	535	22
No Data	No Data	547	36
No Data	No Data	851	48
No Data	No Data	1,613	124
650	765	1,080	104
No Data	No Data	803	70
1879	9442	996	67
0	0	4,033	126
No Data	No Data	598	46
No Data	No Data	1,119	170
No Data	No Data	1,421	84
0	0	530	35
0	0	1,806	203
0	0	1,401	103
No Data	No Data	412	63
0	0	529	64
0	0	541	72
0	0	588	23
0	0	651	63
No Data	No Data	583	33
0	0	1,666	181

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	506	59
No Data	No Data	2,601	405
No Data	No Data	643	24
No Data	No Data	1,189	94
1900	3500	2,800	179
0	0	527	52
No Data	No Data	1,085	76
265	3350	1,788	117
No Data	No Data	481	44
0	0	1,058	116
0	0	13,616	255
No Data	No Data	44,258	1,679
29209	78655	31,837	3,193
No Data	No Data	25,137	1,278
12812	63125	55,596	2,324
No Data	No Data	56,462	2,640
No Data	No Data	55,862	2,953
No Data	No Data	5,335	627
No Data	No Data	46,825	1,731
No Data	No Data	17,345	769
0	0	7,929	348
0	0	13,152	1,350
No Data	No Data	55,284	2,829
No Data	No Data	40,970	3,418
54913	25299	22,365	904
No Data	No Data	7,482	979
No Data	No Data	13,340	1,109

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

18495	21251	13,877	448
No Data	No Data	20,729	951
64287	89486	39,204	1,987
0	0	16,592	933
No Data	No Data	29,898	1,746
No Data	No Data	18,872	719
0	0	25,563	1,233
No Data	No Data	10,342	493
No Data	No Data	14,968	1,508
1300	4600	30,392	1,872
No Data	No Data	8,914	523
No Data	No Data	15,556	1,297
No Data	No Data	20,757	1,019
No Data	No Data	34,598	2,098
No Data	No Data	3,653	302
No Data	No Data	12,764	399
0	0	5,909	855
No Data	No Data	29,377	1,721
No Data	No Data	3,511	175
No Data	No Data	10,953	833
No Data	No Data	11,461	395
0	0	15,219	706
0	0	5,898	599
0	0	6,163	285
No Data	No Data	6,938	376
0	0	17,558	1,218
No Data	No Data	12,200	519

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	11,380	1,137
No Data	No Data	6,016	463
No Data	No Data	21,903	1,341
200	500	4,132	151
0	0	15,965	934
No Data	No Data	9,613	965
No Data	No Data	12,932	719
683	0	10,991	651
No Data	No Data	8,305	582
No Data	No Data	4,576	443
No Data	No Data	12,512	737
No Data	No Data	5,298	333
40	210	27,320	1,661
No Data	No Data	6,541	404
No Data	No Data	8,474	286
No Data	No Data	6,615	330
No Data	No Data	11,641	1,170
0	0	853	44
No Data	No Data	8,332	625
No Data	No Data	17,294	958
No Data	No Data	13,171	622
0	0	3,978	331
No Data	No Data	18,055	1,270
0	0	5,779	406
No Data	No Data	14,634	691
No Data	No Data	7,481	828
No Data	No Data	10,883	654

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	0	7,869	763
No Data	No Data	21,501	1,413
No Data	No Data	4,316	162
0	0	7,098	572
750	2500	3,259	490
No Data	No Data	8,276	621
No Data	No Data	11,693	569
No Data	No Data	14,514	565
1665	5810	6,310	392
No Data	No Data	5,118	428
4940	5950	6,259	241
No Data	No Data	11,949	693
5301	119950	4,806	372
No Data	No Data	6,330	276
No Data	No Data	8,394	673
1447	6985	1,958	170
0	0	3,044	290
0	0	3,978	597
8247	9763	4,899	180
No Data	No Data	4,552	380
0	0	5,154	271
No Data	No Data	6,761	452
No Data	No Data	9,204	651
No Data	No Data	7,913	855
No Data	No Data	1,307	70
No Data	No Data	11,039	1,385
810	4600	2,304	192

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	5,912	437
1125	600	9,109	732
0	0	5,983	412
166763	7196	9,893	796
No Data	No Data	9,897	402
No Data	No Data	2,500	167
0	0	4,401	284
No Data	No Data	4,173	305
7899	11670	3,623	364
No Data	No Data	11,142	550
No Data	No Data	2,376	266
No Data	No Data	4,124	149
0	0	2,073	148
No Data	No Data	5,159	521
960	1250	4,733	291
0	0	12,356	468
No Data	No Data	5,829	424
1100	2500	8,523	533
772	2450	5,356	398
No Data	No Data	2,236	154
No Data	No Data	3,334	323
No Data	No Data	8,817	368
No Data	No Data	5,391	282
No Data	No Data	2,869	160
No Data	No Data	2,795	326
No Data	No Data	3,921	162
No Data	No Data	3,103	201

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	3,072	183
No Data	No Data	1,499	141
No Data	No Data	5,557	373
No Data	No Data	2,785	187
0	0	11,426	582
0	0	5,744	158
No Data	No Data	2,540	230
No Data	No Data	3,644	253
2009	4890	4,217	702
No Data	No Data	12,649	379
No Data	No Data	4,081	257
0	0	6,128	558
No Data	No Data	6,376	496
No Data	No Data	3,313	261
0	0	5,906	381
No Data	No Data	1,870	172
No Data	No Data	4,070	179
0	0	4,702	196
No Data	No Data	2,859	193
No Data	No Data	3,616	166
No Data	No Data	5,544	507
No Data	No Data	6,500	641
No Data	No Data	1,906	131
0	0	3,694	242
0	0	5,214	272
0	0	5,380	296
4090	3800	1,741	373

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	3,338	165
No Data	No Data	3,048	218
No Data	No Data	5,677	421
No Data	No Data	2,113	149
1880	850	1,554	87
No Data	No Data	4,540	200
No Data	No Data	1,082	72
No Data	No Data	2,348	117
0	0	8,301	323
No Data	No Data	4,611	212
No Data	No Data	1,796	143
No Data	No Data	8,250	400
No Data	No Data	3,731	150
No Data	No Data	3,324	138
No Data	No Data	2,604	251
0	0	1,752	117
1200	5138	2,436	278
23833	14817	15,953	1,060
0	0	3,666	200
No Data	No Data	3,087	209
2755	3499	1,834	88
No Data	No Data	8,957	530
No Data	No Data	3,689	345
No Data	No Data	1,832	109
No Data	No Data	5,699	553
No Data	No Data	3,277	120
No Data	No Data	6,142	545

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	0	2,281	122
0	0	2,638	366
0	0	6,133	240
0	0	2,018	131
0	0	2,301	117
No Data	No Data	3,034	141
7560	226963	2,401	221
No Data	No Data	772	62
100	100	1,978	91
No Data	No Data	3,301	290
No Data	No Data	1,275	107
No Data	No Data	3,705	209
125	700	733	56
No Data	No Data	1,820	115
0	0	2,550	191
No Data	No Data	2,559	144
No Data	No Data	2,563	263
145	540	1,163	120
No Data	No Data	3,718	316
No Data	No Data	1,554	119
0	0	2,413	178
No Data	No Data	1,110	113
No Data	No Data	3,011	369
0	0	1,487	130
No Data	No Data	2,180	126
No Data	No Data	2,427	172
0	0	2,299	111

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	0	765	59
499	740	756	80
No Data	No Data	8,094	328
No Data	No Data	839	80
No Data	No Data	883	48
No Data	No Data	2,009	148
No Data	No Data	747	43
0	0	1,895	120
0	0	765	104
No Data	No Data	1,041	94
0	0	1,318	120
0	0	2,208	354
No Data	No Data	857	78
0	0	2,518	182
No Data	No Data	1,966	146
1000	1110	550	30
No Data	No Data	2,091	156
310	625	796	66
240	2100	786	70
No Data	No Data	934	66
0	0	1,753	80
No Data	No Data	862	62
0	0	1,127	87
0	0	53,270	2,380
6296	72185	25,620	876
No Data	No Data	8,531	518
No Data	No Data	22,875	837

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	21,567	640
0	0	25,475	1,835
3135	11260	17,842	1,881
7389	13100	46,627	2,996
11379	14776	41,482	1,770
No Data	No Data	16,376	1,090
881	13600	31,268	1,660
0	0	13,478	535
No Data	No Data	29,916	1,594
No Data	No Data	13,217	432
7550	31150	11,446	846
No Data	No Data	13,527	902
No Data	No Data	15,840	884
No Data	No Data	14,149	1,034
No Data	No Data	11,020	798
0	0	4,469	212
No Data	No Data	16,755	1,501
No Data	No Data	8,574	452
No Data	No Data	8,871	618
0	0	9,071	605
0	0	5,116	245
4076	66860	19,494	1,049
No Data	No Data	8,195	304
No Data	No Data	15,802	1,583
No Data	No Data	19,943	1,716
No Data	No Data	6,044	291
No Data	No Data	14,120	550

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	4,857	201
No Data	No Data	19,810	1,231
No Data	No Data	10,840	414
1640	9700	8,414	574
No Data	No Data	18,566	1,542
No Data	No Data	6,952	675
No Data	No Data	11,623	424
0	0	12,825	655
No Data	No Data	11,678	1,132
0	0	3,994	610
No Data	No Data	4,057	138
No Data	No Data	9,559	678
No Data	No Data	15,719	1,350
No Data	No Data	15,334	1,809
0	0	7,941	507
No Data	No Data	7,596	617
No Data	No Data	2,838	189
No Data	No Data	17,250	1,231
No Data	No Data	6,398	323
No Data	No Data	4,781	722
0	0	6,979	617
0	0	3,605	246
2594	23732	11,258	722
No Data	No Data	7,574	239
No Data	No Data	7,501	510
0	0	9,619	434
No Data	No Data	9,891	405

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

940	315	5,442	413
No Data	No Data	18,822	479
No Data	No Data	5,504	393
No Data	No Data	5,043	282
No Data	No Data	1,658	104
No Data	No Data	4,923	172
0	0	8,818	579
No Data	No Data	4,228	280
No Data	No Data	6,024	430
7023	12625	7,557	474
No Data	No Data	11,218	489
2882	17180	7,751	333
2280	13325	7,815	375
No Data	No Data	5,998	634
No Data	No Data	14,348	779
No Data	No Data	10,186	635
No Data	No Data	6,703	440
No Data	No Data	6,633	317
No Data	No Data	14,156	526
No Data	No Data	6,633	350
No Data	No Data	5,673	776
357	151	4,268	410
0	0	7,305	428
1673	4050	1,353	139
No Data	No Data	6,447	356
No Data	No Data	3,628	265
3095	6875	8,754	422

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	2,846	145
0	0	3,754	251
No Data	No Data	2,951	436
No Data	No Data	5,313	192
No Data	No Data	4,491	234
No Data	No Data	5,699	310
No Data	No Data	7,658	329
No Data	No Data	7,297	334
1100	7900	2,569	278
740	5050	7,035	584
No Data	No Data	6,768	574
No Data	No Data	8,565	798
0	0	4,907	296
No Data	No Data	3,265	325
No Data	No Data	10,878	673
No Data	No Data	6,412	613
No Data	No Data	4,325	256
No Data	No Data	5,755	227
0	0	1,708	121
0	0	3,980	400
No Data	No Data	5,230	714
No Data	No Data	10,375	690
0	0	4,952	246
No Data	No Data	1,392	139
No Data	No Data	2,979	227
0	0	3,555	320
No Data	No Data	3,818	378

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

395	4050	2,824	126
1124	5850	7,109	371
No Data	No Data	2,152	192
No Data	No Data	3,651	230
No Data	No Data	6,695	337
No Data	No Data	5,691	308
No Data	No Data	8,182	658
4187	12945	5,415	411
No Data	No Data	3,420	307
No Data	No Data	3,374	227
0	0	2,351	246
No Data	No Data	3,086	411
No Data	No Data	11,714	536
No Data	No Data	2,226	144
0	0	3,645	321
0	0	4,481	874
No Data	No Data	5,504	473
No Data	No Data	6,889	515
1940	4880	3,907	623
No Data	No Data	5,728	396
No Data	No Data	4,241	395
0	0	10,816	378
1750	2600	3,171	181
No Data	No Data	2,249	214
No Data	No Data	10,047	537
300	450	2,782	153
0	0	1,015	96

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	3,369	211
No Data	No Data	3,841	183
No Data	No Data	4,490	606
No Data	No Data	3,541	364
No Data	No Data	2,880	191
No Data	No Data	3,987	295
988	7150	4,518	294
No Data	No Data	2,872	179
No Data	No Data	1,112	94
0	0	4,673	289
No Data	No Data	1,551	151
0	0	5,224	249
0	0	3,267	156
No Data	No Data	6,694	532
No Data	No Data	8,409	897
No Data	No Data	7,603	958
No Data	No Data	1,035	67
No Data	No Data	1,683	163
No Data	No Data	749	34
6108	26430	3,447	241
No Data	No Data	1,592	161
No Data	No Data	1,843	106
0	0	1,310	133
No Data	No Data	4,508	408
1332	10200	2,932	172
0	0	7,562	371
No Data	No Data	4,170	396

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	496	55
No Data	No Data	2,865	327
No Data	No Data	2,286	127
1500	5000	2,184	150
No Data	No Data	2,514	208
0	0	2,355	188
No Data	No Data	3,203	188
No Data	No Data	362	44
No Data	No Data	1,898	167
No Data	No Data	2,950	297
No Data	No Data	2,072	104
0	0	2,662	117
100	500	1,097	137
No Data	No Data	3,576	291
0	0	1,126	85
No Data	No Data	1,296	116
No Data	No Data	1,562	96
No Data	No Data	5,168	440
710	785	1,382	141
No Data	No Data	5,781	252
No Data	No Data	3,628	308
No Data	No Data	2,557	245
No Data	No Data	3,058	273
0	0	1,187	160
0	0	1,424	127
0	0	1,176	71
1900	3000	2,009	164

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	1,686	94
0	0	953	69
No Data	No Data	3,805	329
0	0	1,567	97
No Data	No Data	1,849	138
No Data	No Data	1,027	66
0	0	3,042	150
No Data	No Data	3,830	255
No Data	No Data	1,001	61
No Data	No Data	4,997	199
260	400	1,093	156
No Data	No Data	957	70
9160	4800	1,066	191
0	0	2,648	172
No Data	No Data	1,413	110
No Data	No Data	1,698	77
0	0	4,330	301
No Data	No Data	1,282	94
No Data	No Data	2,657	199
0	0	2,160	149
0	0	794	99
No Data	No Data	898	78
0	0	1,069	100
0	0	656	58
No Data	No Data	1,137	86
No Data	No Data	1,168	70
No Data	No Data	1,759	165

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	0	1,249	101
No Data	No Data	3,109	185
No Data	No Data	1,176	71
No Data	No Data	1,783	122
0	0	858	123
No Data	No Data	1,373	59
0	0	892	68
20	2442	2,547	164
No Data	No Data	1,003	74
No Data	No Data	1,567	119
No Data	No Data	670	84
No Data	No Data	1,358	149
No Data	No Data	1,421	100
0	0	82,578	3,264
0	0	14,581	1,368
1000	10000	42,534	2,731
No Data	No Data	24,948	825
4290	16150	21,587	822
1254	3167	24,592	1,396
No Data	No Data	7,896	562
0	0	23,986	1,551
No Data	No Data	4,623	318
No Data	No Data	14,161	1,106
No Data	No Data	9,437	623
0	0	15,131	554
No Data	No Data	10,104	751
0	0	4,966	269

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	8,535	460
0	0	8,392	381
No Data	No Data	17,483	1,854
No Data	No Data	6,160	314
No Data	No Data	10,093	663
0	0	9,141	338
No Data	No Data	13,009	923
8525	2800	15,506	673
No Data	No Data	4,154	161
No Data	No Data	7,587	251
No Data	No Data	8,821	499
No Data	No Data	6,565	627
No Data	No Data	3,141	234
No Data	No Data	10,434	438
0	0	3,430	191
0	0	8,638	552
No Data	No Data	7,736	461
No Data	No Data	6,382	398
No Data	No Data	14,275	1,145
No Data	No Data	3,681	216
No Data	No Data	10,924	790
No Data	No Data	18,827	1,371
1845	53975	15,846	964
No Data	No Data	11,526	1,221
No Data	No Data	7,071	621
0	0	1,525	252
No Data	No Data	10,768	745

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	0	3,380	234
No Data	No Data	7,321	322
No Data	No Data	7,568	448
0	0	5,854	314
No Data	No Data	12,737	639
No Data	No Data	5,689	471
0	0	12,769	851
No Data	No Data	12,989	410
No Data	No Data	2,765	195
0	0	1,334	34
No Data	No Data	4,485	552
8840	22500	14,682	742
7000	10000	702	99
1700	4675	7,474	826
No Data	No Data	3,063	256
No Data	No Data	3,306	311
No Data	No Data	7,676	622
2320	500	6,346	773
No Data	No Data	3,757	300
No Data	No Data	10,870	745
No Data	No Data	2,908	350
No Data	No Data	5,105	338
No Data	No Data	3,924	202
No Data	No Data	3,574	309
No Data	No Data	9,362	436
1702	3060	3,503	165
1321	1550	5,784	424

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	3,973	270
2490	1350	1,876	121
No Data	No Data	5,194	475
0	0	1,493	70
No Data	No Data	2,889	209
13246	50818	11,464	1,124
0	0	5,701	268
No Data	No Data	2,509	250
No Data	No Data	1,552	124
3780	3055	2,658	117
500	500	1,411	92
0	0	9,960	832
0	0	5,367	327
318	500	2,885	200
No Data	No Data	2,404	188
0	0	13,099	964
No Data	No Data	6,974	321
No Data	No Data	3,535	269
0	0	1,226	88
No Data	No Data	4,795	463
0	0	5,482	416
3280	4845	2,346	276
No Data	No Data	1,569	161
No Data	No Data	8,034	507
380	500	3,268	179
No Data	No Data	2,761	263
No Data	No Data	2,082	188

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	11,628	552
0	0	2,089	183
No Data	No Data	2,217	232
No Data	No Data	5,847	230
0	0	7,807	299
4720	3450	2,845	212
No Data	No Data	1,775	105
No Data	No Data	1,469	132
0	0	3,614	280
No Data	No Data	2,997	167
No Data	No Data	10,394	401
No Data	No Data	1,798	131
0	0	1,962	88
1284	1750	1,492	64
981	3745	2,131	134
No Data	No Data	5,706	199
No Data	No Data	2,829	189
No Data	No Data	8,756	512
0	0	5,316	496
No Data	No Data	1,634	120
0	0	1,315	68
0	0	6,308	259
0	0	4,156	233
0	0	3,125	132
No Data	No Data	6,804	738
0	0	1,323	66
No Data	No Data	4,686	401

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	1,841	138
No Data	No Data	2,058	188
3151	550	8,027	255
No Data	No Data	5,210	314
0	0	2,493	110
0	0	2,078	167
No Data	No Data	1,644	107
0	0	2,282	301
No Data	No Data	5,974	761
No Data	No Data	3,044	302
No Data	No Data	2,529	227
0	0	2,934	205
0	0	3,974	301
No Data	No Data	1,894	158
No Data	No Data	4,099	287
No Data	No Data	4,241	321
No Data	No Data	1,366	104
240	1040	2,752	207
No Data	No Data	2,577	144
0	0	1,186	39
No Data	No Data	2,685	146
No Data	No Data	1,167	79
No Data	No Data	4,160	150
0	0	2,570	161
No Data	No Data	2,655	261
0	0	1,866	170
0	0	4,130	413

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	3,056	301
0	0	1,241	143
No Data	No Data	6,682	205
0	0	6,917	454
499	450	2,447	163
No Data	No Data	2,271	145
1014	3000	1,343	74
No Data	No Data	3,860	217
No Data	No Data	2,569	190
0	0	1,102	41
1327	11125	2,881	198
1480	950	1,791	66
No Data	No Data	1,604	88
No Data	No Data	4,658	403
0	0	3,006	193
No Data	No Data	2,335	126
No Data	No Data	3,680	349
No Data	No Data	1,675	80
No Data	No Data	5,146	489
No Data	No Data	3,745	219
No Data	No Data	5,022	224
No Data	No Data	3,420	328
No Data	No Data	2,222	160
No Data	No Data	3,836	353
No Data	No Data	3,285	327
No Data	No Data	4,971	524
No Data	No Data	4,908	265

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	4,536	141
0	0	2,151	110
6000	11000	3,546	196
0	0 No Data	No Data	
0	0	2,594	144
300	500	1,345	201
No Data	No Data	3,335	276
No Data	No Data	3,064	262
No Data	No Data	3,677	163
No Data	No Data	4,127	469
1000	1000	2,321	184
0	0	2,548	202
0	0	3,180	214
No Data	No Data	5,196	221
No Data	No Data	3,230	351
0	0	3,568	298
0	0	1,522	60
0	0	1,863	194
No Data	No Data	3,009	144
No Data	No Data	1,861	77
No Data	No Data	3,722	217
No Data	No Data	2,491	202
0	0	2,012	171
No Data	No Data	5,338	352
750	1650	2,020	109
110	1100	2,392	133
No Data	No Data	1,638	69

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

110	550	2,503	153
3880	26500	2,379	244
No Data	No Data	2,870	293
0	0	1,980	87
0	0	1,560	96
No Data	No Data	8,445	699
No Data	No Data	1,903	134
No Data	No Data	3,108	177
No Data	No Data	3,404	346
No Data	No Data	19,664	703
0	0	3,314	251
0	0	728	72
0	0	6,675	429
0	0	1,408	131
3810	14050	7,343	577
0	0	4,507	307
0	0	12,197	944
No Data	No Data	4,432	641
No Data	No Data	5,373	332
No Data	No Data	5,034	435
No Data	No Data	5,751	594
No Data	No Data	6,770	217
No Data	No Data	6,631	431
No Data	No Data	9,554	490
810	420	362	29
0	0	653	84
0	0	406	41

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

1450	1150	761	62
11	16	1,561	94
271	12300	1,305	86
No Data	No Data	398	44
No Data	No Data	1,622	109
No Data	No Data	82	11
No Data	No Data	642	39
No Data	No Data	1,758	81
700	0	685	58
0	20010	2,215	98
520	2750	811	46
885	1280	592	66
0	0	1,843	133
75	300	2,889	231
5000	1100	1,029	100
0	0	633	49
0	0	1,594	92
0	0	11	-
0	0	245	11
0	0	177	22
0	0	600	70
No Data	No Data	930	103
0	0	1,396	110
0	0	747	94
0	0	388	29
0	0	799	71
0	0	2,111	220

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	0	5,036	613
804	1100	2,149	241
0	0	307	45
No Data	No Data	4,643	186
0	0	158	32
0	0	508	99
0	0	560	11
0	0	456	44
1483	3790	1,664	97
No Data	No Data	2,687	117
No Data	No Data	1,572	164
No Data	No Data	4,006	317
0	0	503	11
No Data	No Data	2,772	150
No Data	No Data	1,926	146
No Data	No Data	1,347	70
No Data	No Data	8,099	599
No Data	No Data	2,706	182
0	0	76	11
No Data	No Data	2,283	348
No Data	No Data	2,573	127
No Data	No Data	3,664	216
0	500	1,475	85
No Data	No Data	570	67
No Data	No Data	337	44
0	0	1,394	53
0	0	1,270	54

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	2,599	165
0	0	411	53
0	0	223	31
No Data	No Data	152	33
No Data	No Data	653	25
0	0	735	67
2000	1000	1,659	146
0	0	1,243	109
0	0	941	58
0	0	398	25
0	0	830	56
0	0	291	22
0	0	635	39
715	1285	539	26
0	0	227	13
229	1050	1,303	66
No Data	No Data	2,579	260
0	0	2,376	214
No Data	No Data	5,298	390
0	0	52	11
5885	900	3,294	219
No Data	No Data	1,567	121
No Data	No Data	207	11
No Data	No Data	1,366	95
477	1226	2,772	219
81	500	1,143	91
No Data	No Data	837	52

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	1,078	73
0	0	136	11
0	0	2,124	134
1019	2300	2,001	125
1930	2350	359	60
0	0	355	47
0	0	719	81
No Data	No Data	3,972	341
0	0	1,271	142
844	3923	2,932	267
321	417	1,788	320
No Data	No Data	2,855	123
100	300	535	35
1680	8500	1,703	143
0	0	184	13
0	0	104	11
0	0	68	11
0	0	638	58
0	0	610	106
0	0	988	85
No Data	No Data	1,524	179
No Data	No Data	338	37
0	0	1,152	44
0	0	45	11
No Data	No Data	342	32
No Data	No Data	665	50
393	4535	1,278	104

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	0	105	22
0	0	559	34
0	0	92	11
No Data	No Data	443	41
No Data	No Data	1,855	112
0	0	499	55
0	0	865	46
0	0	504	27
0	0	658	18
0	0	714	30
0	0	238	24
No Data	No Data	5,608	427
No Data	No Data	692	39
No Data	No Data	1,465	162
No Data	No Data	3,934	197
No Data	No Data	1,422	133
3100	3200	939	131
4016	3100	1,354	270
0	0	2,186	273
0	0	931	48
No Data	No Data	1,015	96
0	0	1,927	142
0	0	7,549	531
No Data	No Data	391	36
No Data	No Data	241	15
3700	5892	1,136	172
0	0	2,762	202

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	749	59
No Data	No Data	1,573	104
540	1050	1,243	99
3000	2000	739	70
No Data	No Data	1,751	93
0	0	445	38
900	4950	494	29
0	0	220	22
No Data	No Data	132	22
0	0	922	123
No Data	No Data	2,933	229
No Data	No Data	3,587	280
2891	25167	1,020	46
No Data	No Data	869	100
No Data	No Data	1,198	142
No Data	No Data	880	107
No Data	No Data	2,017	81
No Data	No Data	998	75
120	500	1,061	83
No Data	No Data	6,976	873
No Data	No Data	4,311	529
No Data	No Data	1,972	100
0	0	610	22
No Data	No Data	360	33
No Data	No Data	685	48
0	0	491	22
0	0	247	33

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	3,775	143
120	30	842	92
960	1500	426	60
No Data	No Data	903	106
No Data	No Data	1,433	174
No Data	No Data	1,683	157
No Data	No Data	917	79
0	0	301	42
0	0	169	88
0	0	697	67
No Data	No Data	2,221	97
No Data	No Data	2,660	225
0	0	482	50
0	0	628	64
1650	1300	1,109	80
0	0	1,718	110
0	0	1,163	82
No Data	No Data	2,349	178
No Data	No Data	741	51
0	0	1,218	46
No Data	No Data	3,038	212
No Data	No Data	1,184	119
1651	3319	783	68
No Data	No Data	1,152	124
No Data	No Data	529	46
0	0	16	-
500	675	463	30

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	0	1,204	61
No Data	No Data	628	44
No Data	No Data	973	68
No Data	No Data	449	22
No Data	No Data	2,271	185
No Data	No Data	5,527	206
No Data	No Data	7,973	334
0	0	2,198	153
No Data	No Data	2,314	121
0	0	478	34
0	0	2,556	169
0	0	413	44
900	550	1,630	127
0	0	884	64
No Data	No Data	500	38
No Data	No Data	602	34
No Data	No Data	3,701	335
No Data	No Data	965	93
No Data	No Data	321	47
0	0	684	74
0	0	811	99
3800	3000	1,729	168
0	0	648	77
No Data	No Data	6,343	898
0	0	406	93
4897	4800	2,193	141
No Data	No Data	2,397	250

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

243	908	857	58
1350	4700	1,153	110
0	0	601	63
0	0	678	76
0	0	743	84
No Data	No Data	1,730	171
0	0	163	22
No Data	No Data	4,792	303
No Data	No Data	932	99
No Data	No Data	516	33
0	0	21	11
0	0	341	16
No Data	No Data	2,308	202
415	1700	1,331	132
No Data	No Data	5,283	265
No Data	No Data	1,099	60
1174	2125	1,400	153
0	0	648	62
No Data	No Data	371	25
0	0	319	55
0	0	311	40
0	0	1,228	105
No Data	No Data	1,995	306
0	0	2,052	161
No Data	No Data	1,056	110
No Data	No Data	986	75
0	0	475	41

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

No Data	No Data	1,584	109
No Data	No Data	1,365	96
0	0	127	25
39	935	1,303	126
No Data	No Data	1,712	105
4003	5850	270	28
No Data	No Data	676	49
No Data	No Data	1,836	110
No Data	No Data	327	23
0	0	171	22
0	0 No Data	No Data	
11700	3325	463	77
No Data	No Data	211	33
No Data	No Data	421	40
No Data	No Data	1,682	120
No Data	No Data	772	33
No Data	No Data	1,021	107
No Data	No Data	102	11
No Data	No Data	963	101
0	0	257	35
0	0	430	50
0	0	218	12
0	0	192	33
758	4160	763	73
0	0	221	22
0	0	396	44
3550	22835	442	56

(20200504 GeoSpark Risk Comparison - All Regions Table Only.xlsx)

0	0	91	11
0	0	132	33
0	0	176	44
0	0	120	22
0	0	160	11
0	0	93	11
No Data	No Data	1,640	70
No Data	No Data	2,471	175
No Data	No Data	273	56
No Data	No Data	348	22
3400	800	301	35
0	0	1,670	65