

The Danger In Our Backyards: The Threat of Chemical Facilities to Millions

Every day millions of people live and work in the shadow of high risk chemical plants that store and use poison gases with the potential to kill or injure thousands of workers and community residents.

Recent data from the Congressional Research Service (CRS) shows there are 12,440 facilities nationwide that possess large quantities of chemicals that put people at risk. Of these facilities, 89 put more than a million people at risk of a chemical disaster. Across the country, there are also 384 facilities that put more than 100,000 people at risk and 2,043 that put more than 10,000 people at risk.

According to the data, just in New Jersey alone, 5 chemical plants each threaten the safety of more than 1 million people. In Texas, there are 33. There are 8 and 11 in California and Illinois, respectively.

The CRS data, issued in November 2012, provides an update on the number of high-risk chemical facilities required to submit risk management plans under the Environmental Protection Agency's chemical disaster program. The data reveal that the total number of facilities has increased in recent years and may continue to grow without federal action.

Since the 1984 Bhopal disaster in India and more recently since the September 11, 2001 terrorist attacks a consensus has emerged about the magnitude of these risks. In 2003 the U.S. Naval Research Laboratory estimated that a release from one rail car of chlorine gas in a densely populated area could kill or injure 100,000 people in the first 30 minutes following the release. In 2004 the Homeland Security Council estimated the magnitude of an attack on a poison gas chemical facility would kill 17,500 people, seriously injure 10,000 more people, and send an additional 100,000 people to the hospital.

The people who live in communities surrounding these facilities are at greater risk than anyone except the workers in the plant in the event of a catastrophic release of a poison gas. Historically, these at-risk communities are more likely to be low-communities and communities of color. These risks represent a major environmental injustice that has persisted for almost three decades following the worst industrial accident in history at Union Carbide's facility in Bhopal. That disaster killed an estimated 20,000 people.

This document highlights key examples of facilities that risk the lives of people residing in low-income communities and communities of color. The communities immediately surrounding these facilities have higher percentages of Hispanic and/or Black residents than the state and national averages. In most cases the percentage is significantly higher. For most of these communities, the per capita income is also significantly lower than the average per capita income of the United States and state where the facility is located. For more on demographic information see: <http://epamap14.epa.gov/ejmap/entry.html>

The facilities highlighted in this report and major cities near them include:

- New Orleans, LA – Carrollton Water Purification Plant
- Detroit, MI - Detroit WWTP-Chlorination/Dechlorination Facility
- Albuquerque, NM - DPC Industries, Inc
- Edgemoor, DE - DuPont Edgemoor Facility
- Hampton, GA (outside Atlanta) – KIK Georgia LLC
- Los Angeles, CA – KIK SoCal Inc.
- New York City & Newark, NJ – Kuehne Chemical Co.
- Paulsboro, NJ – Paulsboro Refining Co.
- Chicago, IL – Pelron
- Seattle, WA – Pioneer Americas Tacoma Bleach Plant
- Houston, TX – South Houston Wastewater Treatment Plant
- Philadelphia, PA – Trainer Refinery

The Obama administration is currently considering new policies to prevent chemical disasters. They have received numerous recommendations from former EPA Administrator Christine Todd Whitman, the EPA's National Environmental Justice Advisory Council and petitions from more than 50 organizations such as unions, environment justice groups, public health organizations and over 60,000 people from across the U.S. urging the President and the EPA to use their authority to prevent chemical disasters.

Below are examples of letters and a petition as well as the President's 2008 campaign promise to prevent chemical catastrophes:

- On August 9, 2012, the CEOs of a dozen major unions, public health and environmental groups urged the President and the EPA to use the CAA authority to protect communities at risk with the safest available chemical processes best suited for each facility:
<https://www.documentcloud.org/documents/408899-ceos-ltr-to-obama-on-chem-security-8-10-12.html>
- On July 25, 2012, over 50 organizations petitioned the EPA providing a blue-print of how and why the agency can take preventive action under the "Bhopal Amendment" to the Clean Air Act:
<https://www.documentcloud.org/documents/404584-petition-to-epa-to-prevent-chem-disasters-filed.html>
- On May 16, 2012, in a coalition letter to President Obama, major unions, public health and environmental groups urged the President and the EPA to use the Clean Air Act authority to protect communities at risk with the safest available chemical processes best suited for each facility:
<https://www.documentcloud.org/documents/357316-coalition-letter-obama-chemical-disaster.html>
- On April 3, 2012, Gov. Whitman sent EPA's Lisa Jackson a letter urging her to use the Clean Air Act authority as she tried in 2002. <https://www.documentcloud.org/documents/331659-ct-whitman-letter-to-lisa-jackson-april-2012.html>
- On March 14, 2012, the EPA's National Environmental Justice Advisory Council (NEJAC) wrote Lisa Jackson urging the use of the Clean Air Act to prevent chemical disasters:
<http://www.documentcloud.org/documents/332041-nejac-letter.html>
- 2008: Obama committed to issuing new rules requiring the use of safer chemical processes, where feasible, to prevent a disaster from a chemical release triggered by terrorism or other catastrophe in his 2008 platform, Change We Can Believe In, excerpted here:
<http://www.documentcloud.org/documents/332454-obama-2008-camp-platform-excerpt-on-chem-security.html>

CRS state-by-state updates 2009-2012 and comparison of increases of high-risk facilities:

- November 2012 CRS: <https://www.documentcloud.org/documents/557127-crs-rmp-update-11-16-12.html>
- April 2011 CRS: <https://www.documentcloud.org/documents/557129-crs-update-of-us-rmps-state-by-state-4-12-11.html>
- December 2009 CRS: <https://www.documentcloud.org/documents/557128-crs-update-2009.html>
- Comparison of 2009-2012 CRS updates: <https://www.documentcloud.org/documents/557120-jan-2013-memo-on-crs-review-of-rmp-data-trends.html>

More information about the facilities in this report and other high-risk facilities can be found at:

- <http://epamap14.epa.gov/ejmap/entry.html>
- RTKNET.org/db/rmp
- <http://usactions.greenpeace.org/chemicals/map/>

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Carrollton Water Purification Plant New Orleans, Louisiana

At least 11 facilities endanger residents in the New Orleans area, including three refineries that use hydrofluoric acid, two water treatment plants that use chlorine, and five chemical manufacturers that use a variety of dangerous chemicals.

One key facility is the Carrollton Water Purification Plant, which uses chlorine to treat drinking water. The bulk use and storage of chlorine at this facility puts nearly 900,000 people at risk within 9.9 miles in the event of an accidental release.

This facility has reported plans to convert from using chlorine to a much safer process using liquid bleach. It is unclear whether the conversion is complete.

Figure 1: Carrollton Water Purification Plant, New Orleans, LA

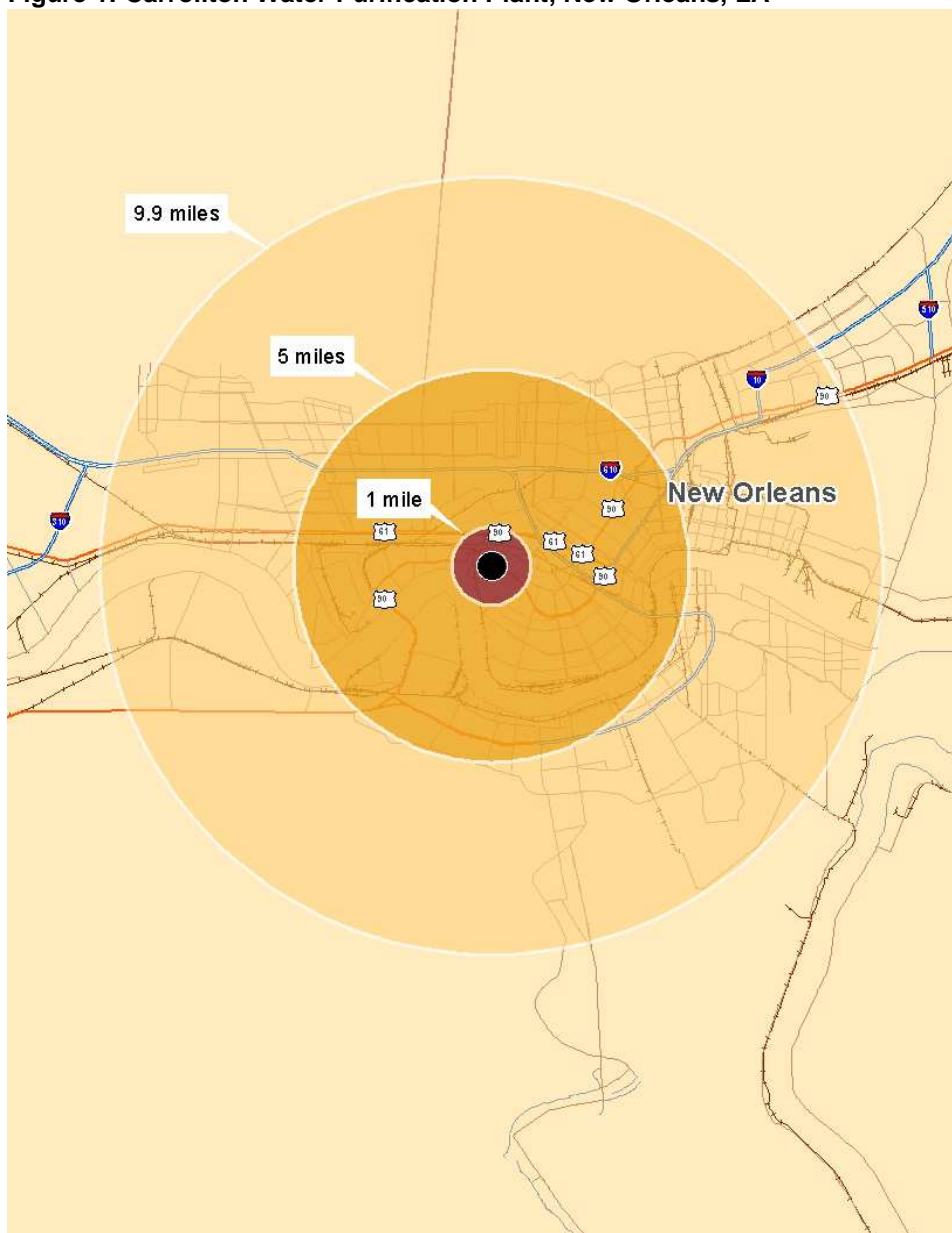
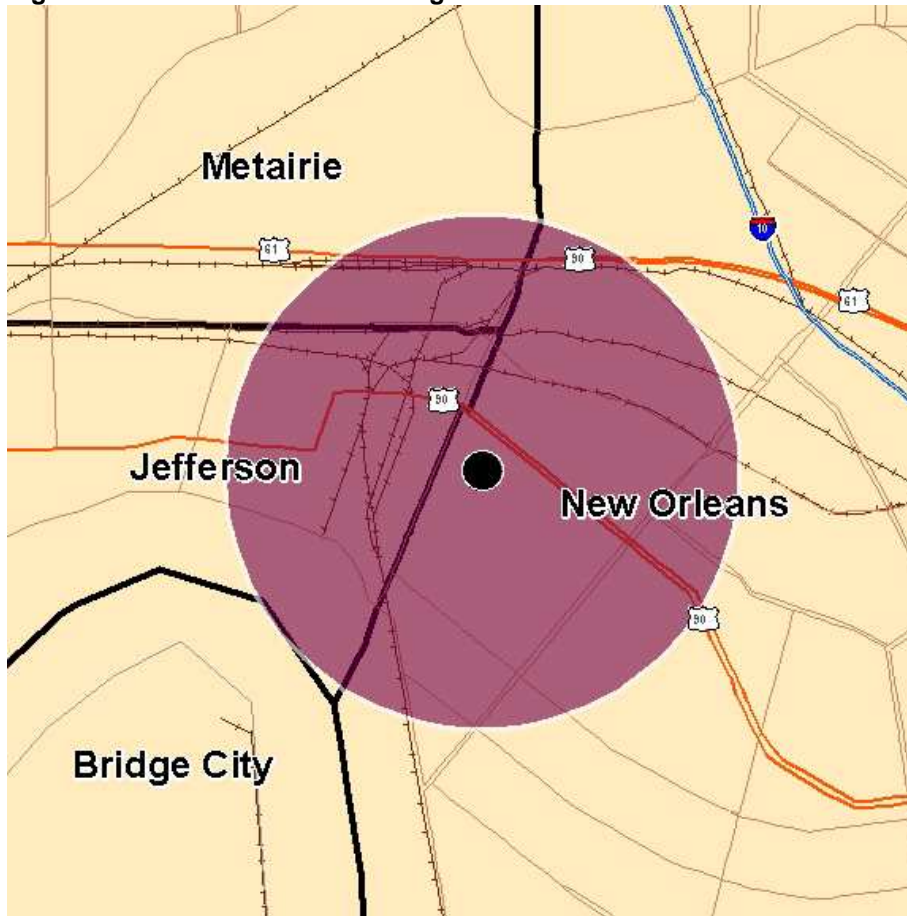


Table 1: Race and Income Levels near Carrollton Water Purification Plant

Distance from facility	% Black	\$ Per Capita Income
1-mile	57.0%	\$ 23,939
5-mile	32.9%	\$ 29,575
9.9-mile	39.7%	\$25,676
Louisiana	32.0%	\$23,853
USA	13.1%	\$27,915

Figure 2: 1-mile radius surrounding Carrollton Water Purification Plant



Detroit WWTP-Chlorination/Dechlorination Facility
Detroit, Michigan

The Detroit Wastewater Treatment Plant-Chlorination/Dechlorination Facility uses sulfur dioxide and chlorine gas to treat wastewater. The bulk use and storage of sulfur dioxide at this facility puts 2.1 million people within 16 miles at risk in the event of an accidental release.

Figure 1: Detroit WWTP-Chlorination/Dechlorination Facility, Detroit, MI

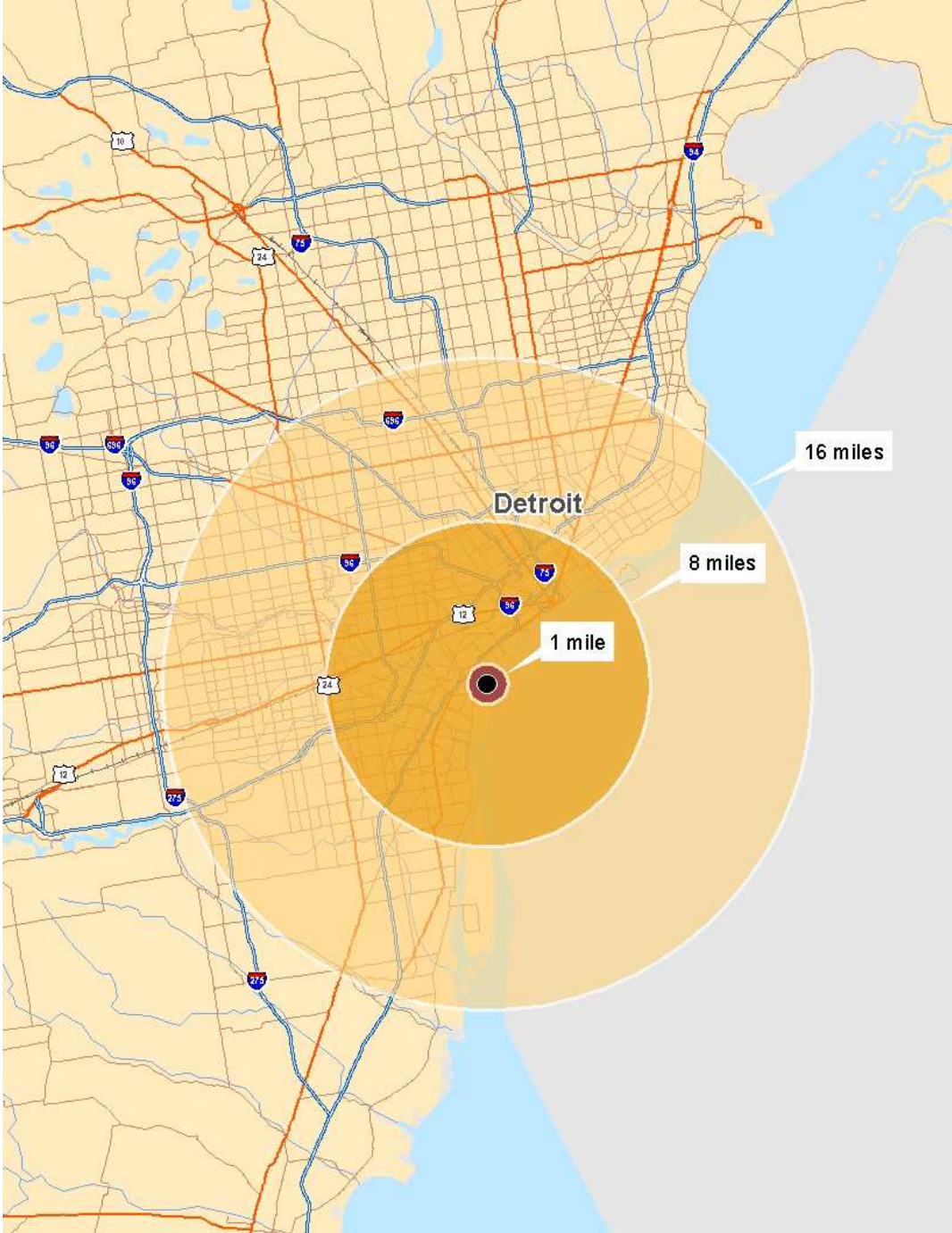
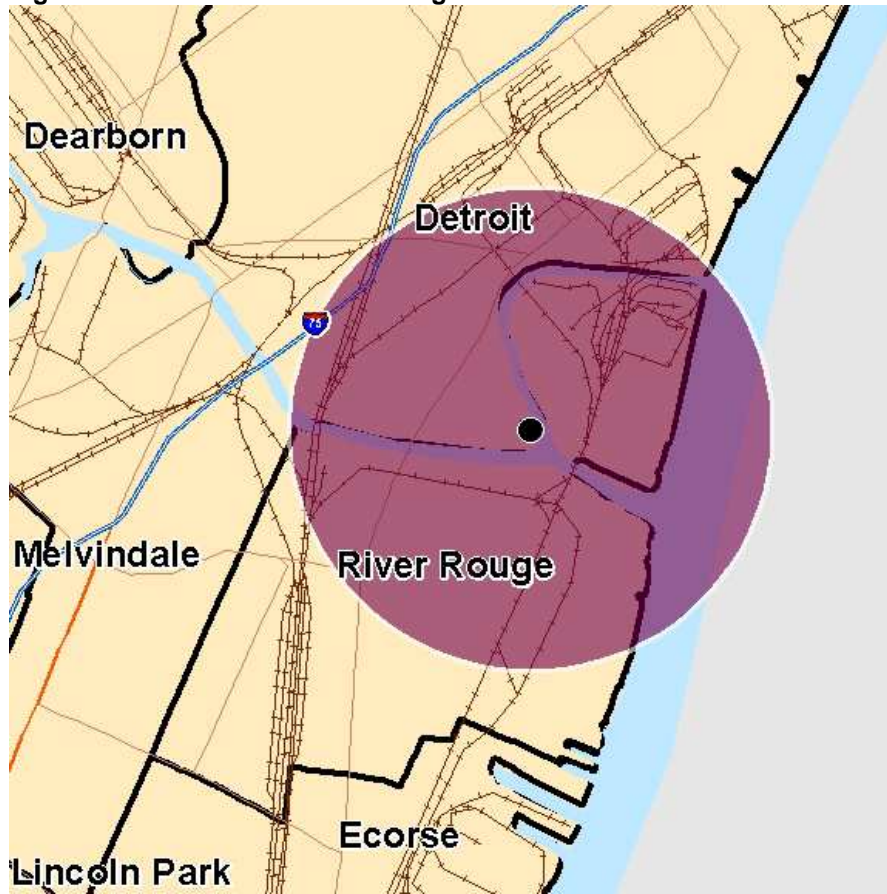


Table 1: Race and Income Levels near Detroit WWTP

Distance from facility	% Hispanic	% Black	\$ Per Capita Income
1-mile	25.9%	25.9%	\$12,447
8-mile	12.2%	37.3%	\$17,201
16-mile	5.3%	42.2%	\$20,193
Michigan	4.5%	14.3%	\$25,482
USA	16.7%	13.1%	\$27,915

Figure 2: 1-mile radius surrounding Detroit WWTP



DPC Industries, Inc.
Albuquerque, New Mexico

DPC Industries, Inc. in Albuquerque uses bulk shipments of chlorine to produce liquid bleach. It also repackages and distributes chlorine in smaller containers. The bulk use and storage of chlorine at this facility puts 550,000 people at risk within 14 miles in the event of an accidental release.

Figure 1: DPC Industries, Inc, Albuquerque, NM

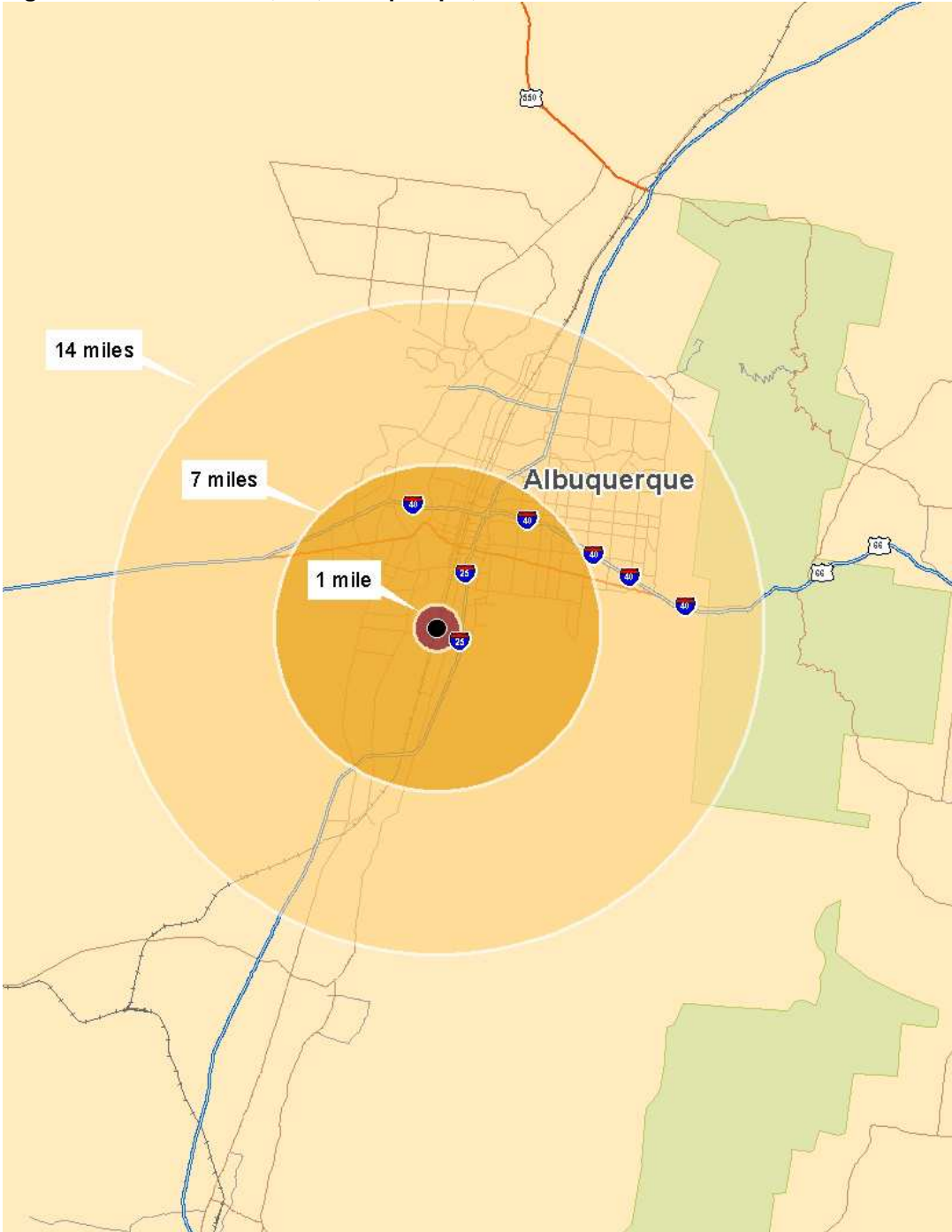
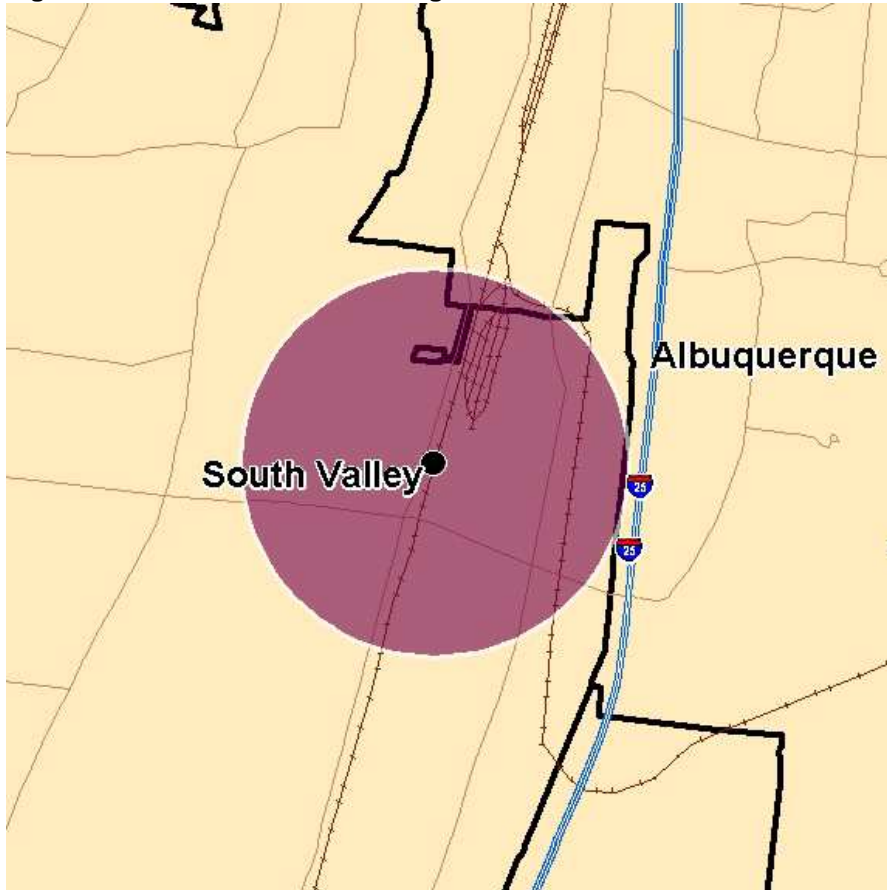


Table 1: Race and Income Levels near DPC Industries

Distance from facility	% Hispanic	\$ Per Capita Income
1-mile	80.3%	\$12,913
7-mile	64.2%	\$19,215
14-mile	48.7%	\$25,446
New Mexico	46.7%	\$23,537
USA	16.7%	\$27,915

Figure 2: 1-mile radius surrounding DPC Industries



DuPont Edgemoor Facility Edgemoor, Delaware

There are 11 dangerous facilities along the Interstate I95 corridor between Wilmington and Philadelphia. Seven of these facilities put more than 1 million people at risk; the other four each put more than 200,000 people at risk in the event of a dangerous chemical release.

One such facility is DuPont's Facility in Edgemoor, which uses chlorine to produce titanium dioxide, a pigment used to make paper, paints and plastic opaque or white. The bulk use and storage of chlorine at this facility puts 660,000 people at risk within 13.2 miles.

Figure 1: DuPont Edgemoor Facility, Edgemoor, DE

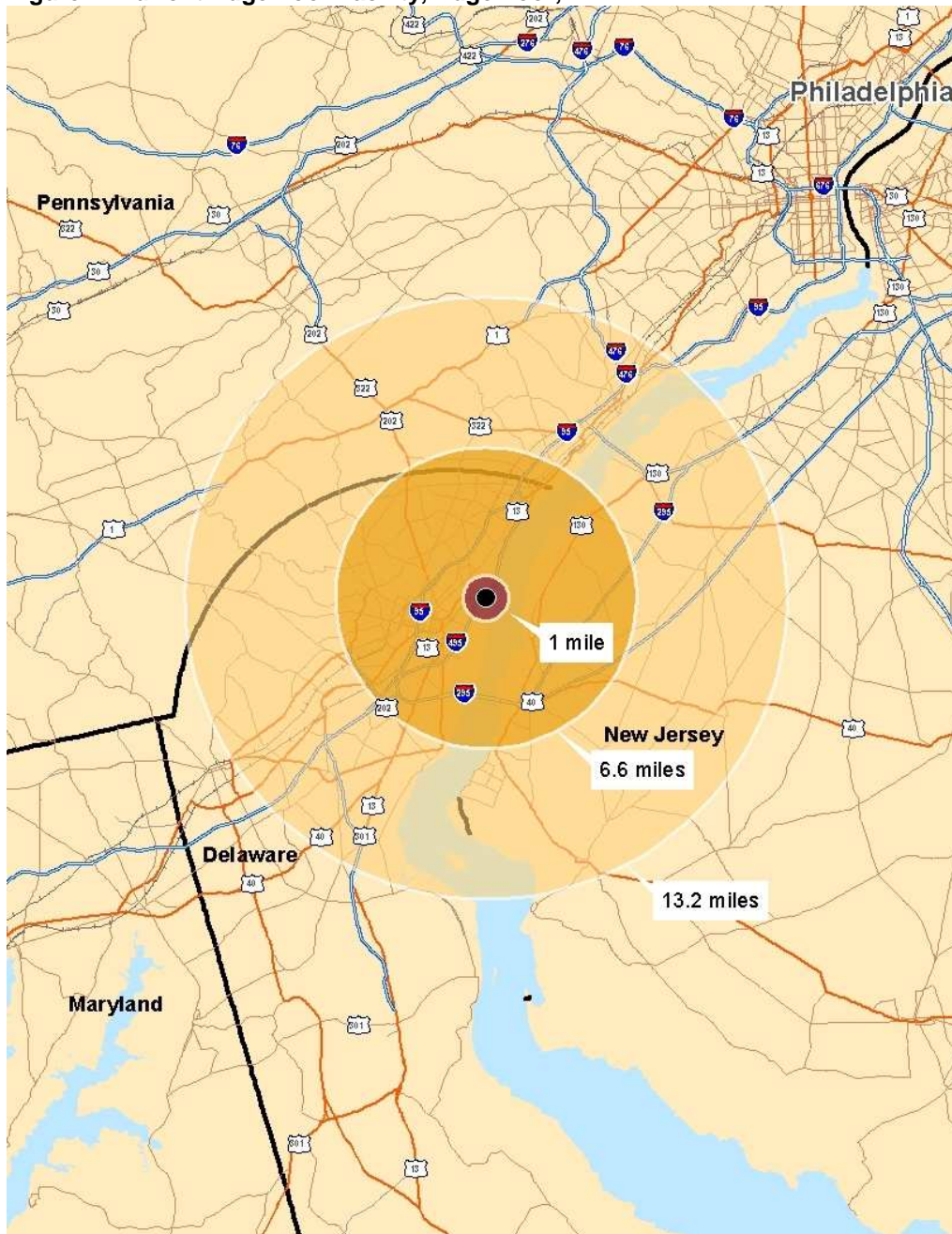
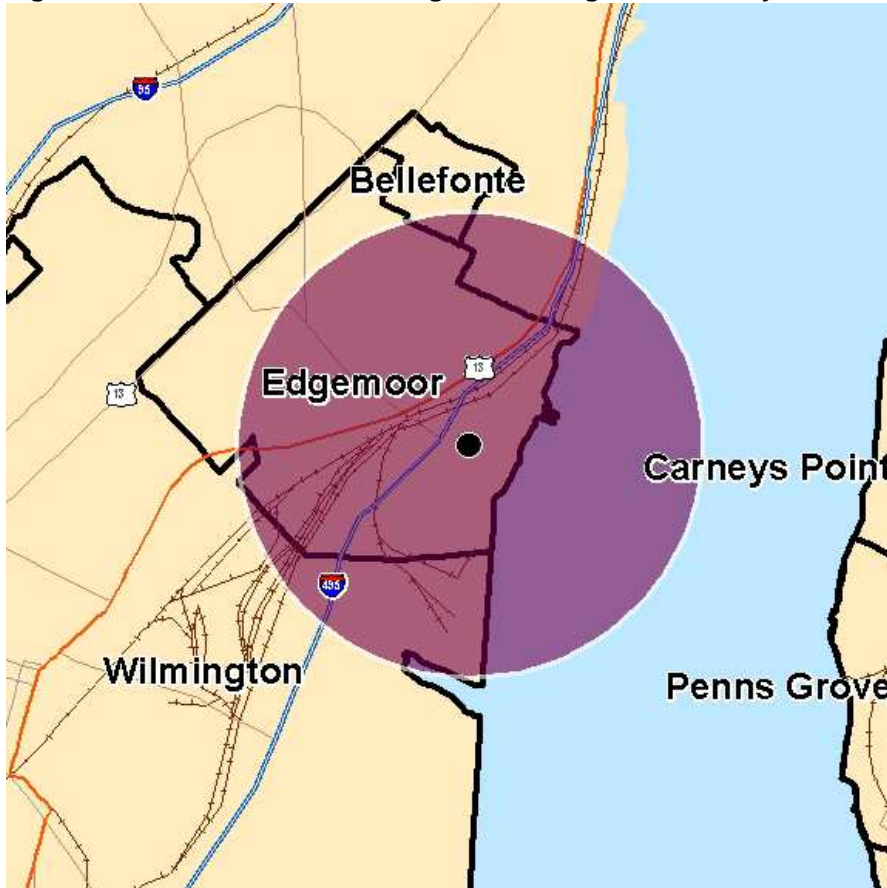


Table 1: Race and Income Levels near DuPont Edgemoor Facility

Distance from facility	% Black	\$ Per Capita Income
1-mile	35.9%	\$26,837
6.6-mile	29.0%	\$30,033
13.2-mile	22.6%	\$32,372
Delaware	21.9%	\$29,659
USA	13.1%	\$27,915

Figure 2: 1-mile radius surrounding DuPont Edgemoor Facility



KIK Georgia, LLC
Hampton, Georgia

KIK Georgia, located 25 miles south of Atlanta in Hampton, uses shipments of chlorine to produce liquid bleach. The bulk use and storage of chlorine at the facility puts 370,000 people at risk within 14 miles in the event of an accidental release.

Figure 1: KIK Georgia, Hampton, GA

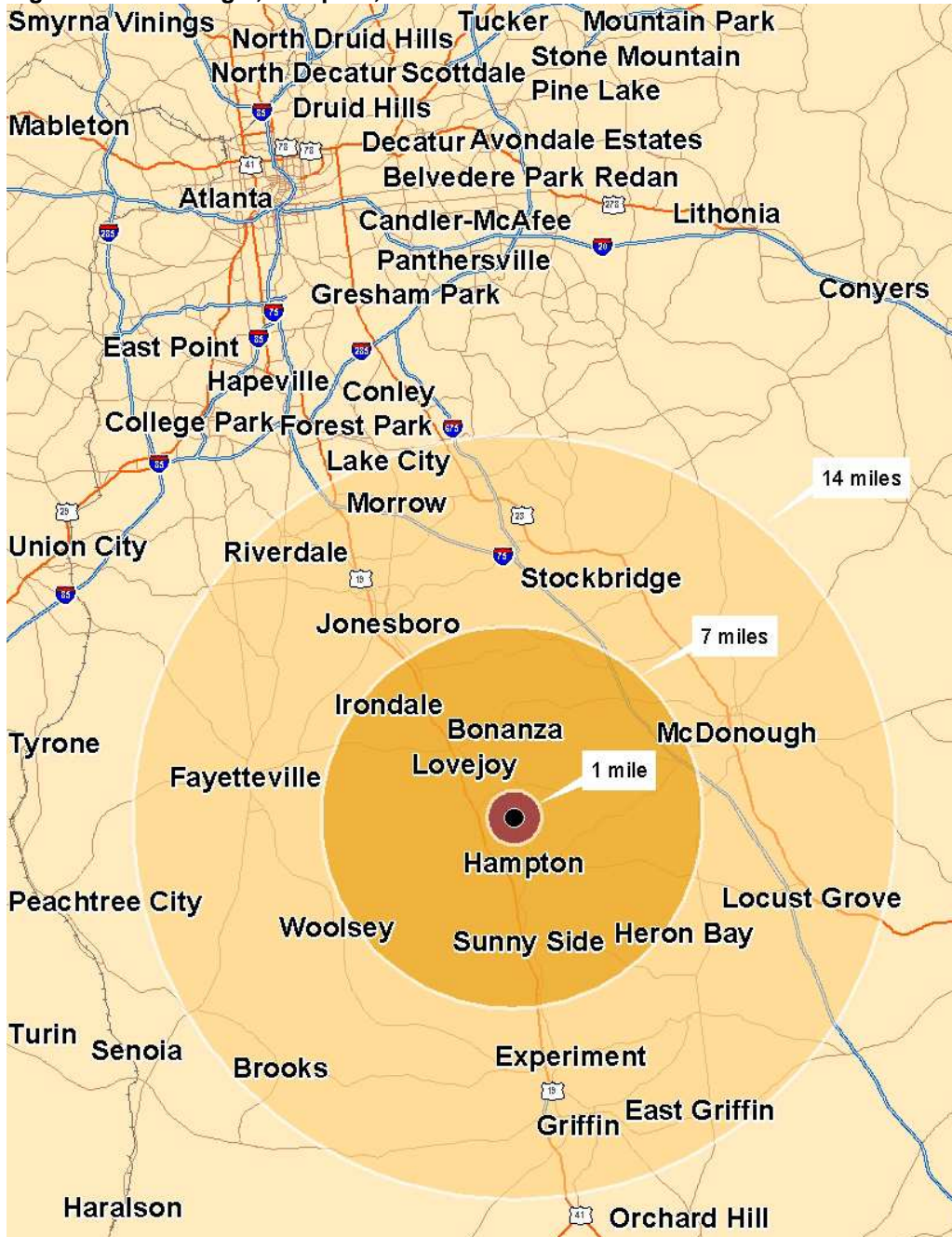
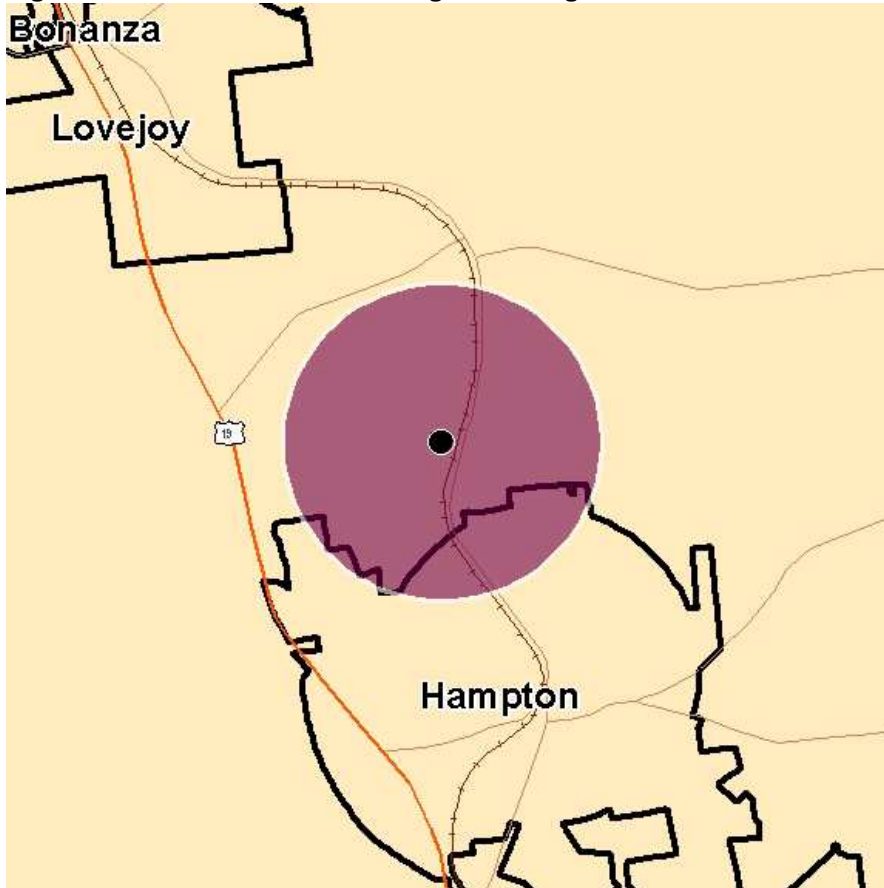


Table 1: Race and Income Levels near KIK Georgia

Distance from facility	% Black	\$ Per Capita Income
1-mile	40.7%	\$17,600
7-mile	46.8%	\$24,330
14-mile	47.7%	\$23,291
Georgia	31.0%	\$25,383
USA	13.1%	\$27,915

Figure 2: 1-mile radius surrounding KIK Georgia



KIK SoCal Inc.
Los Angeles, California

There are over a dozen high-risk facilities located in the southeast region of Los Angeles. Each of these facilities puts at least 100,000 people at risk in the event of an accidental release of a toxic chemical, and four of them put more than 1 million people at risk. The facilities house a range of hazardous substances, including chlorine, sulfur dioxide, ammonia and hydrofluoric acid.

One of these facilities is KIK SoCal Inc., in Santa Fe Springs, which uses chlorine to produce liquid bleach. The bulk use and storage of chlorine at this facility puts 4.9 million people at risk within 14 miles in the event of an accidental release.

Figure 1: KIK SoCal Inc., Santa Fe Springs, CA

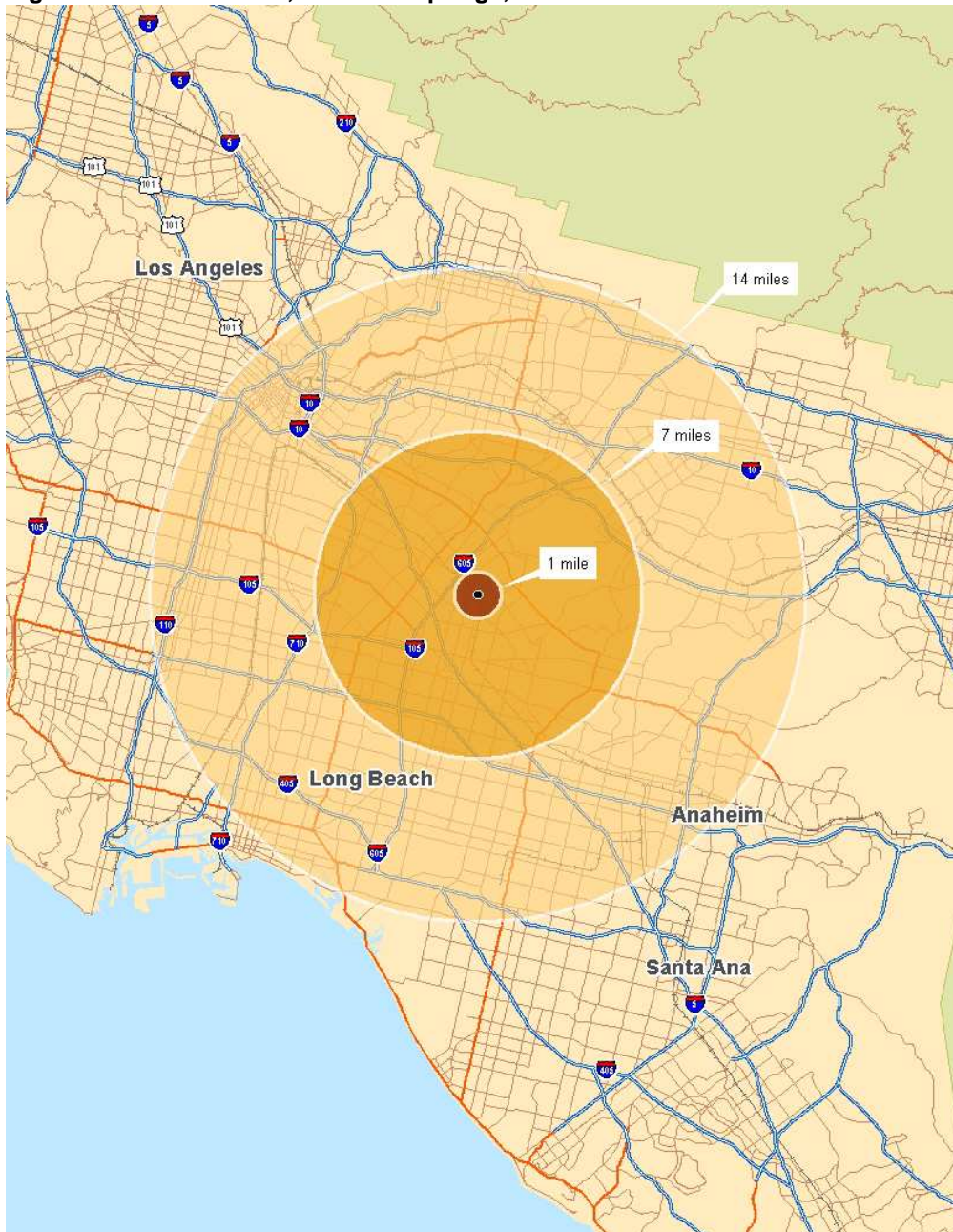
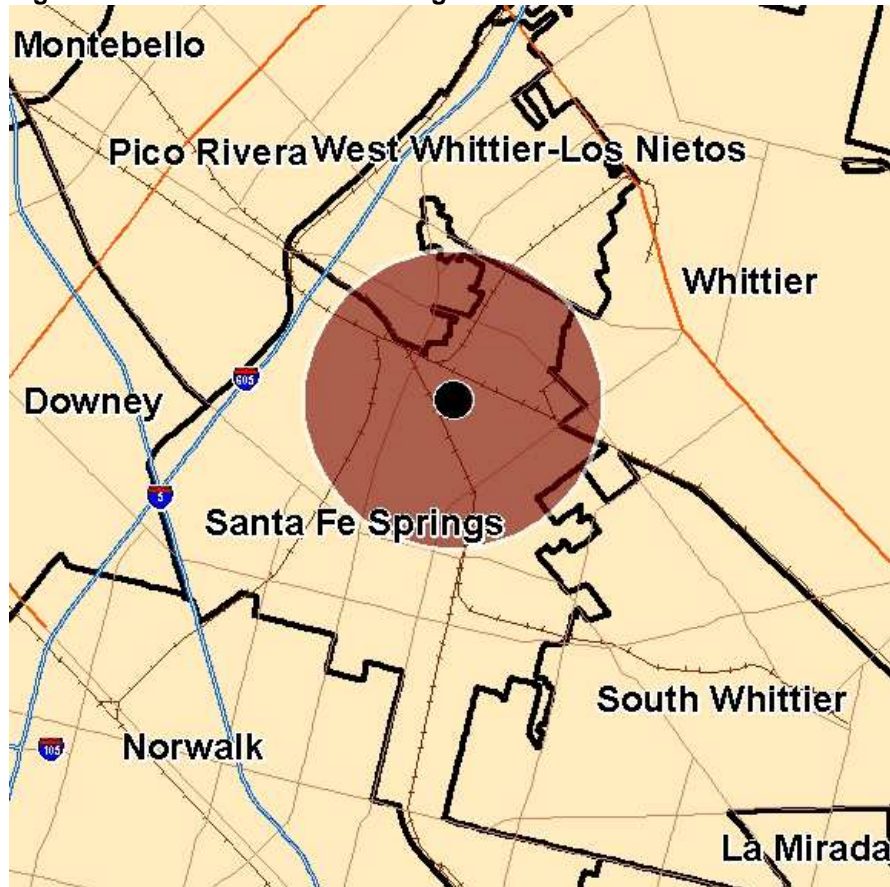


Table 1: Race and Income Levels near KIK SoCal Inc.

Distance from facility	% Hispanic	\$ Per Capita Income
1-mile	91.4%	\$16,318
7-mile	69.1%	\$19,596
14-mile	58.9%	\$19,161
California	38.1%	\$29,634
USA	16.7%	\$27,915

Figure 2: 1-mile radius surrounding Carrollton KIK SoCal Inc.



Kuehne Chemical Co.
New York City and Newark, New Jersey

Kuehne Chemical in South Kearny, N.J. uses chlorine to produce liquid bleach. It also repackages and distributes chlorine in smaller containers. The bulk use and storage of chlorine at this facility puts 12 million people at risk within 14 miles in the event of an accidental release. This facility puts more people at risk than any other facility in the United States.

Figure 1: Kuehne Chemical Co., South Kearny, NJ

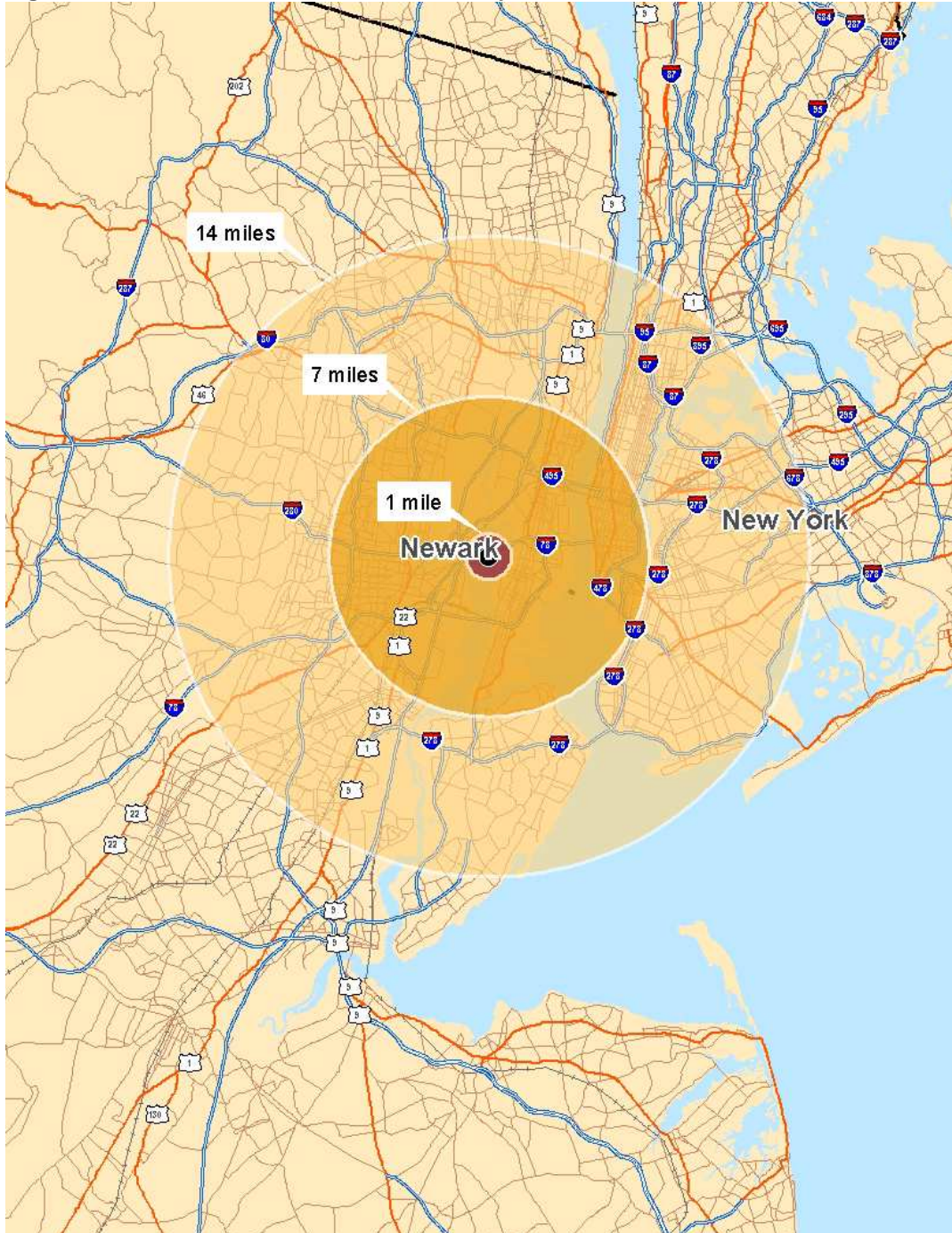
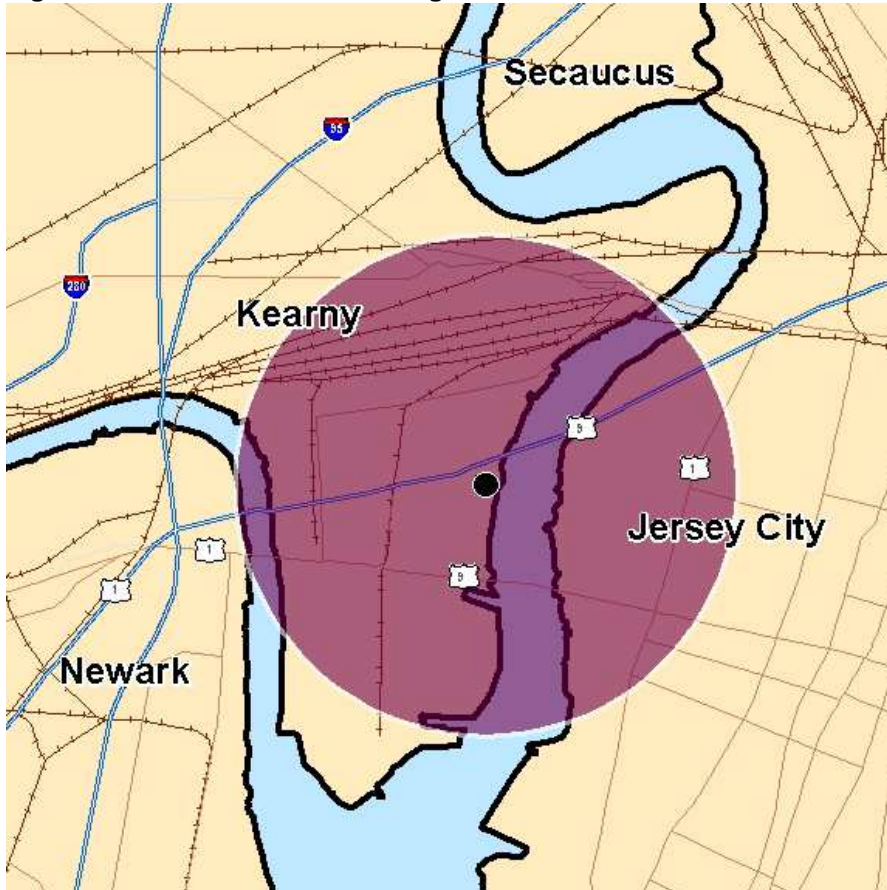


Table 1: Race and Income Levels near Kuehne Chemical Co.

Distance from facility	% Hispanic	% Black	\$ Per Capita Income
1-mile	36.4%	48.0%	\$30,686
7-mile	28.0%	19.7%	\$37,804
14-mile	30.5%	22.9%	\$28,952
New Jersey	18.1%	14.6%	\$35,678
USA	16.7%	13.1%	\$27,915

Figure 2: 1-mile radius surrounding Kuehne Chemical Co.



Paulsboro Refining Company
Paulsboro, New Jersey

Paulsboro Refining Company in Paulsboro, N.J. uses hydrofluoric acid to refine crude oil into gasoline. The use and storage of hydrofluoric acid puts more than 3 million people at risk within 19 miles of the facility in the event of an accidental release.

Figure 1: Paulsboro Refining Company, Paulsboro, NJ

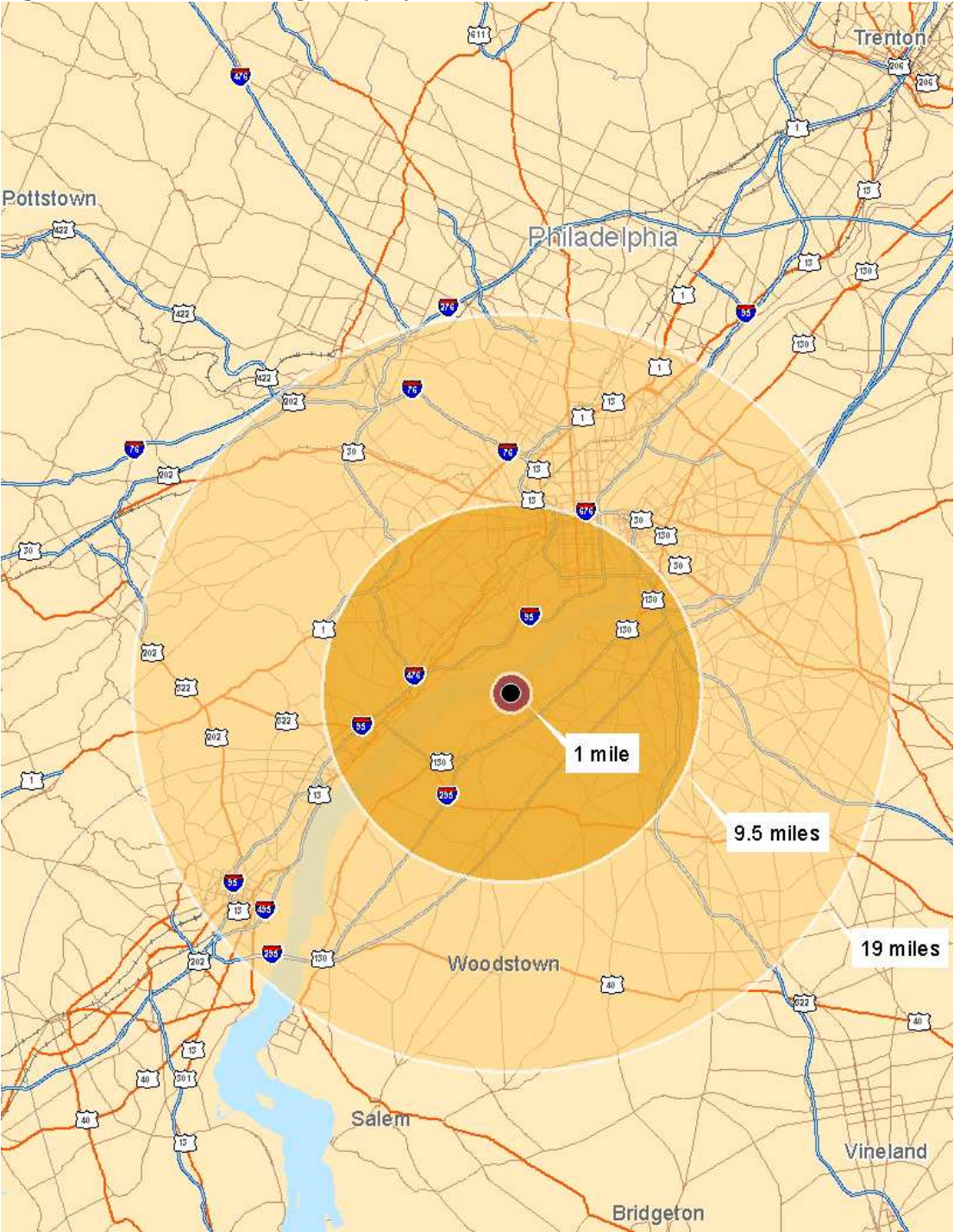
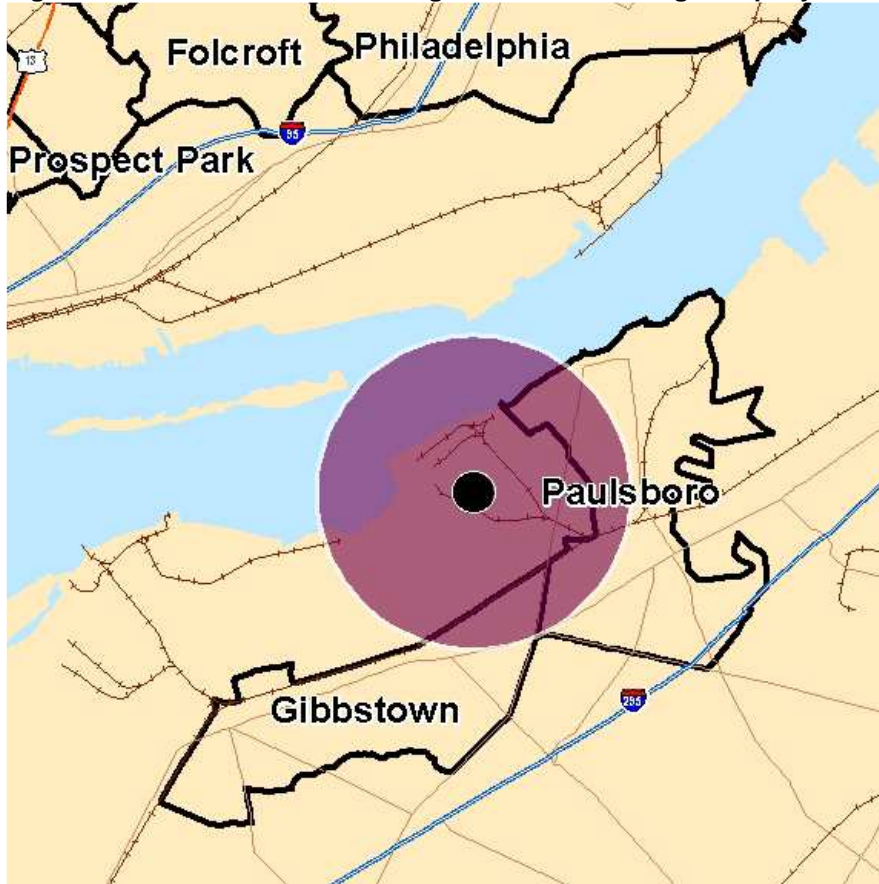


Table 1: Race and Income Levels near Paulsboro Refining Company

Distance from facility	% Black	\$ Per Capita Income
1-mile	25.4%	\$19,089
9.5-mile	34.3%	\$24,576
19-mile	30.0%	\$27,493
New Jersey	14.6%	\$35,678
USA	13.1%	\$27,915

Figure 2: 1-mile radius surrounding Paulsboro Refining Company



Pelron
Chicago, IL

There are a dozen high-risk facilities in the Chicago area that each put more than 100,000 people at risk in the event of an accidental chemical release. Seven of them put more than 1 million people at risk. One facility of these, Pelron in Lyons, Illinois, uses ethylene oxide to produce intermediate chemicals for urethane products, such as foam mattresses, carpet padding, automotive seats and insulation. The use and storage of ethylene oxide puts more than 1.6 million people at risk within 8.7 miles of the facility.

Figure 1: Pelron, Lyons, IL

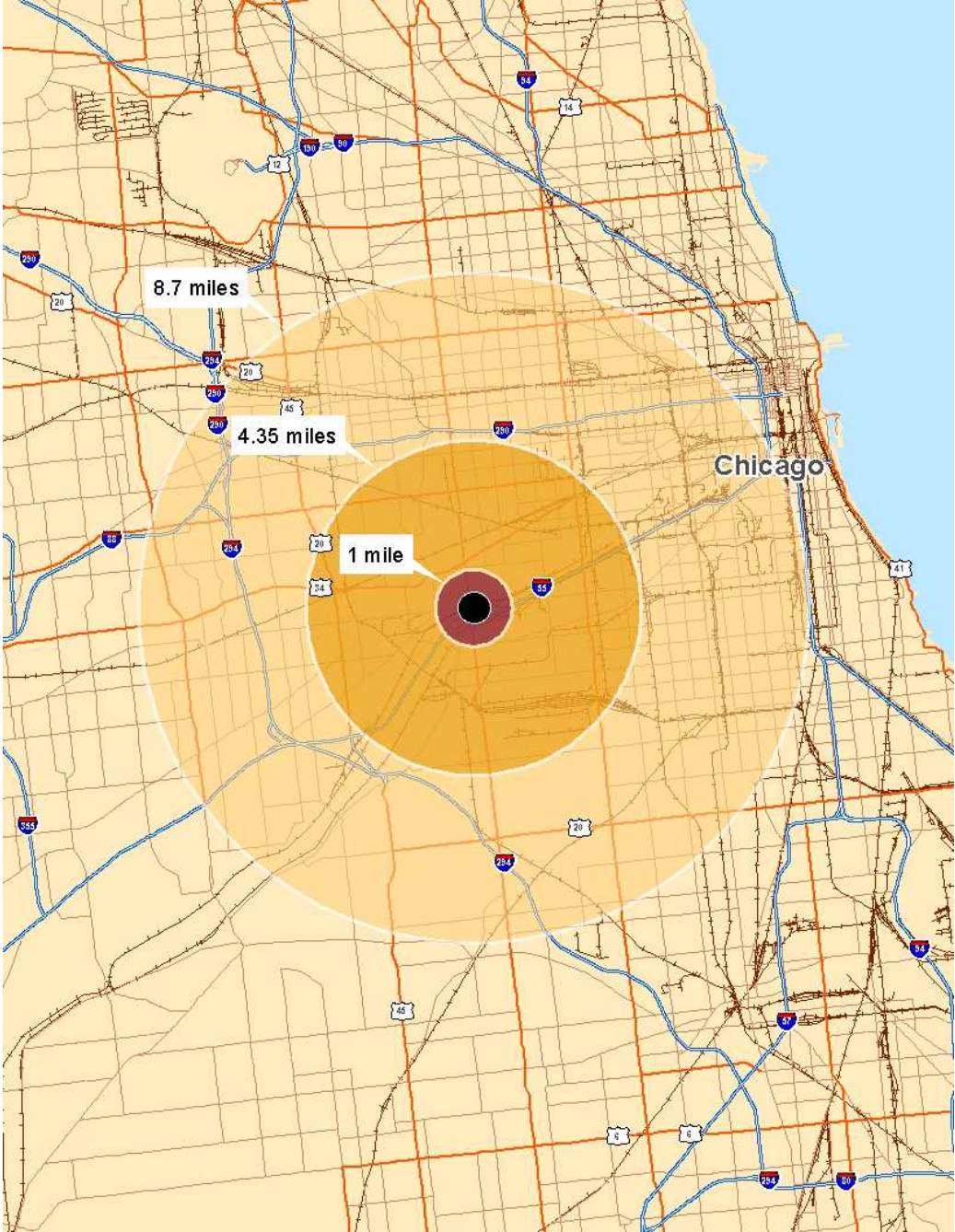


Table 1: Race and Income Levels near Pelron

Distance from facility	% Hispanic	\$ Per Capita Income
1-mile	41.4%	\$20,708
4.35-mile	53.0%	\$21,056
8.7-mile	39.3%	\$20,749
Illinois	16.2%	\$29,376
USA	16.7%	\$27,915

Figure 2: 1-mile radius surrounding Pelron



**Pioneer Americas LLC Tacoma Bleach Plant
Seattle, WA**

Pioneer Americas LLC Tacoma Bleach Plant, located near Seattle, uses bulk shipments of chlorine to produce liquid bleach. It also repackages and distributes chlorine in smaller containers. The bulk use and storage of chlorine at the facility puts over 900,000 people at risk within 14 miles in the event of an accidental release.

Figure 1: Pioneer Americas LLC Tacoma Bleach Plant, Tacoma, WA

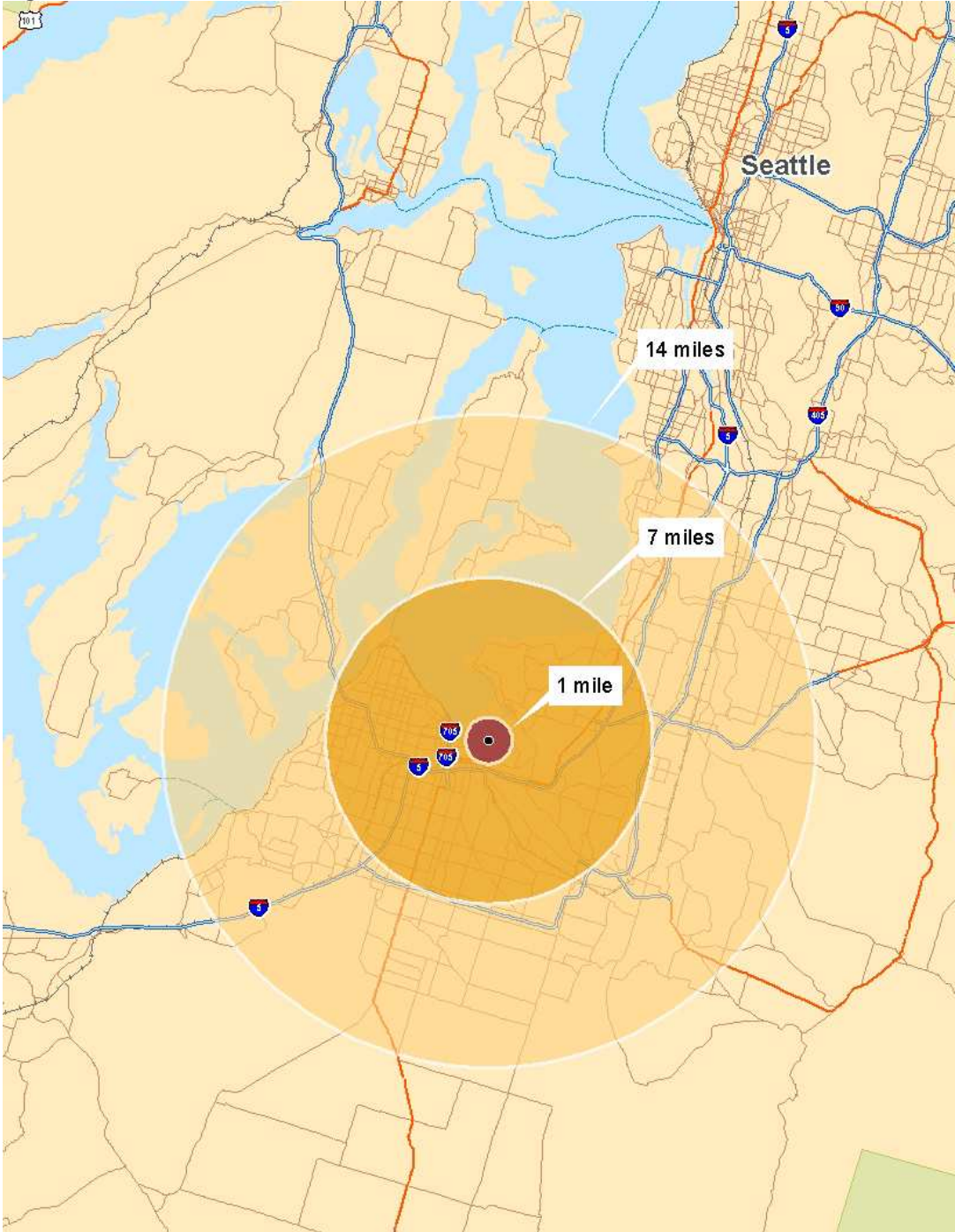
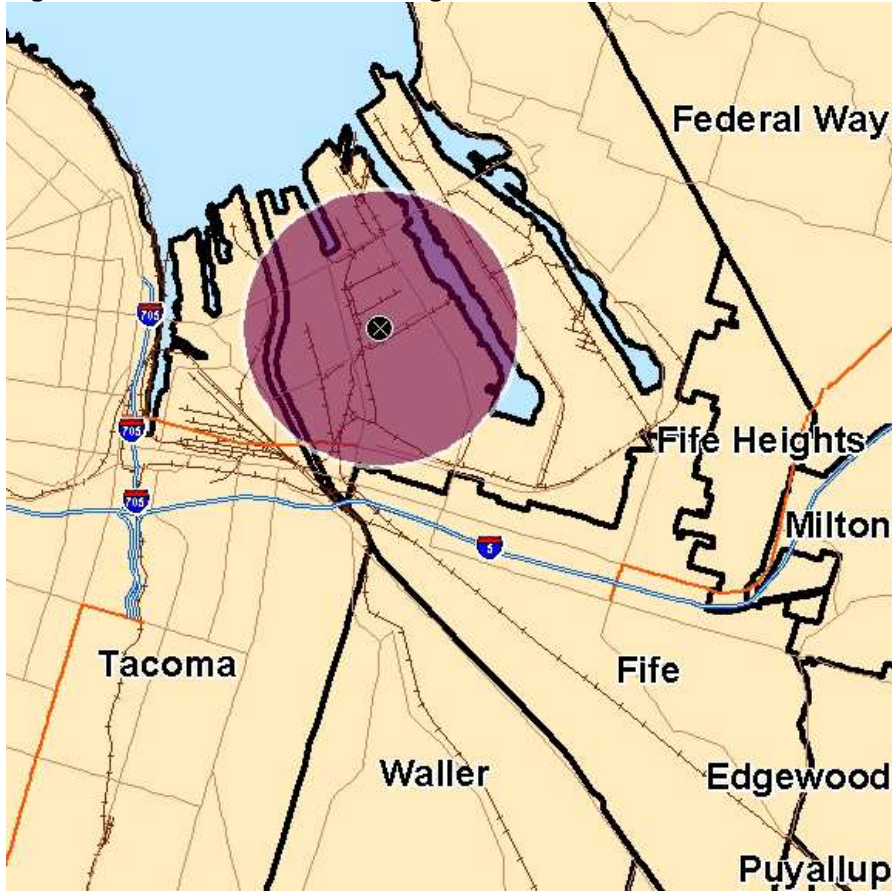


Table 1: Race and Income Levels near Pioneer Americas LLC Tacoma Bleach Plant

Distance from facility	% Hispanic	\$ Per Capita Income
1-mile	30.0%	\$35,908
7-mile	12.0%	\$26,100
14-mile	12.1%	\$27,119
Washington	11.6%	\$30,481
USA	16.7%	\$27,915

Figure 2: 1-mile radius surrounding Pioneer Americas LLC Tacoma Bleach Plant



South Houston Wastewater Treatment Plant South Houston, Texas

The Houston area has over 40 high risk facilities, including more than 20 that put at least a million people at risk, and another 20 that put at least 100,000 people at risk in the event of an accidental chemical release.

South Houston Wastewater Treatment Plant is one of these facilities. The plant uses sulfur dioxide and chlorine gas to treat wastewater and puts 140,000 people within 3.1 miles at risk of harm.

Figure 1: South Houston Water Treatment Plant, South Houston TX

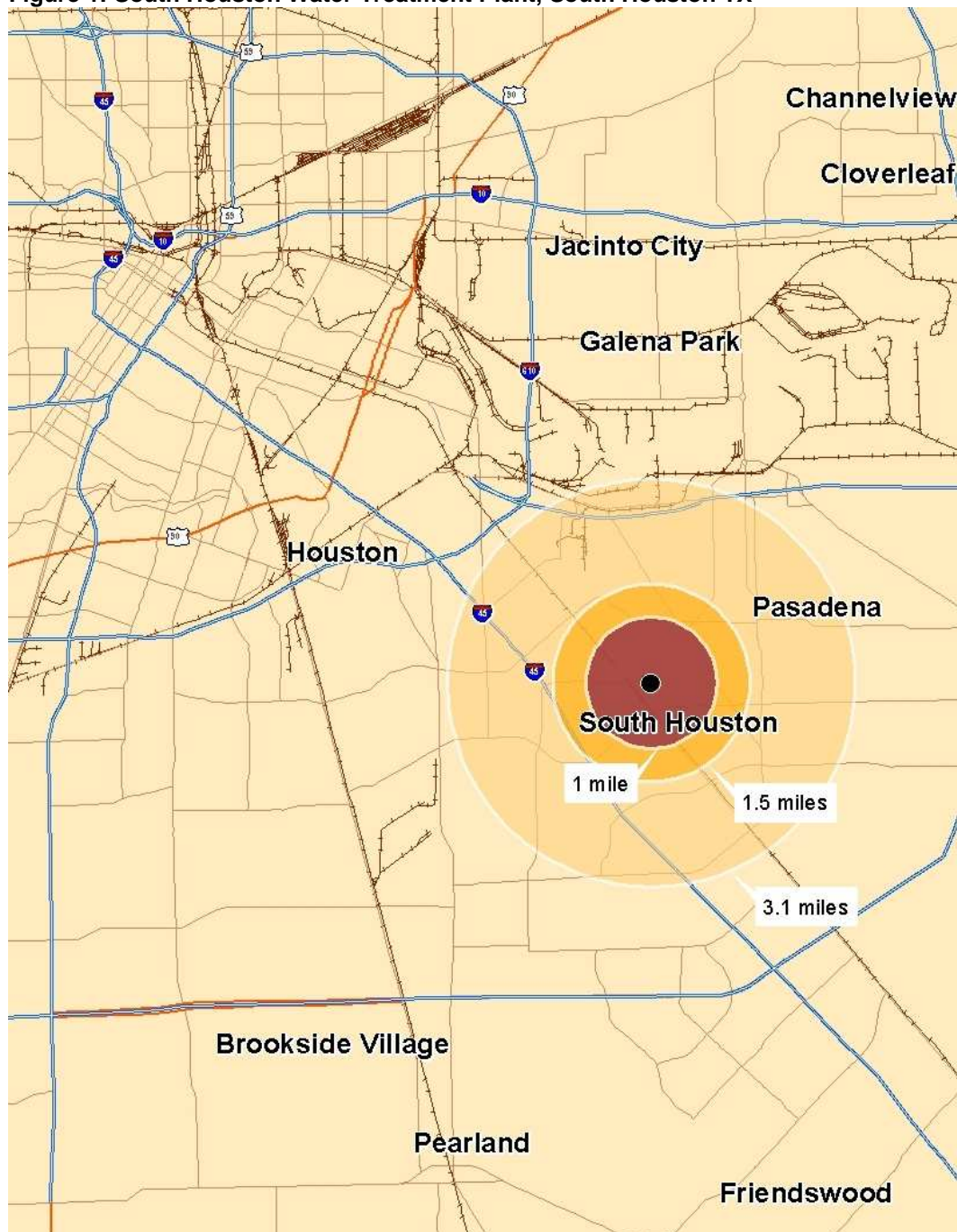
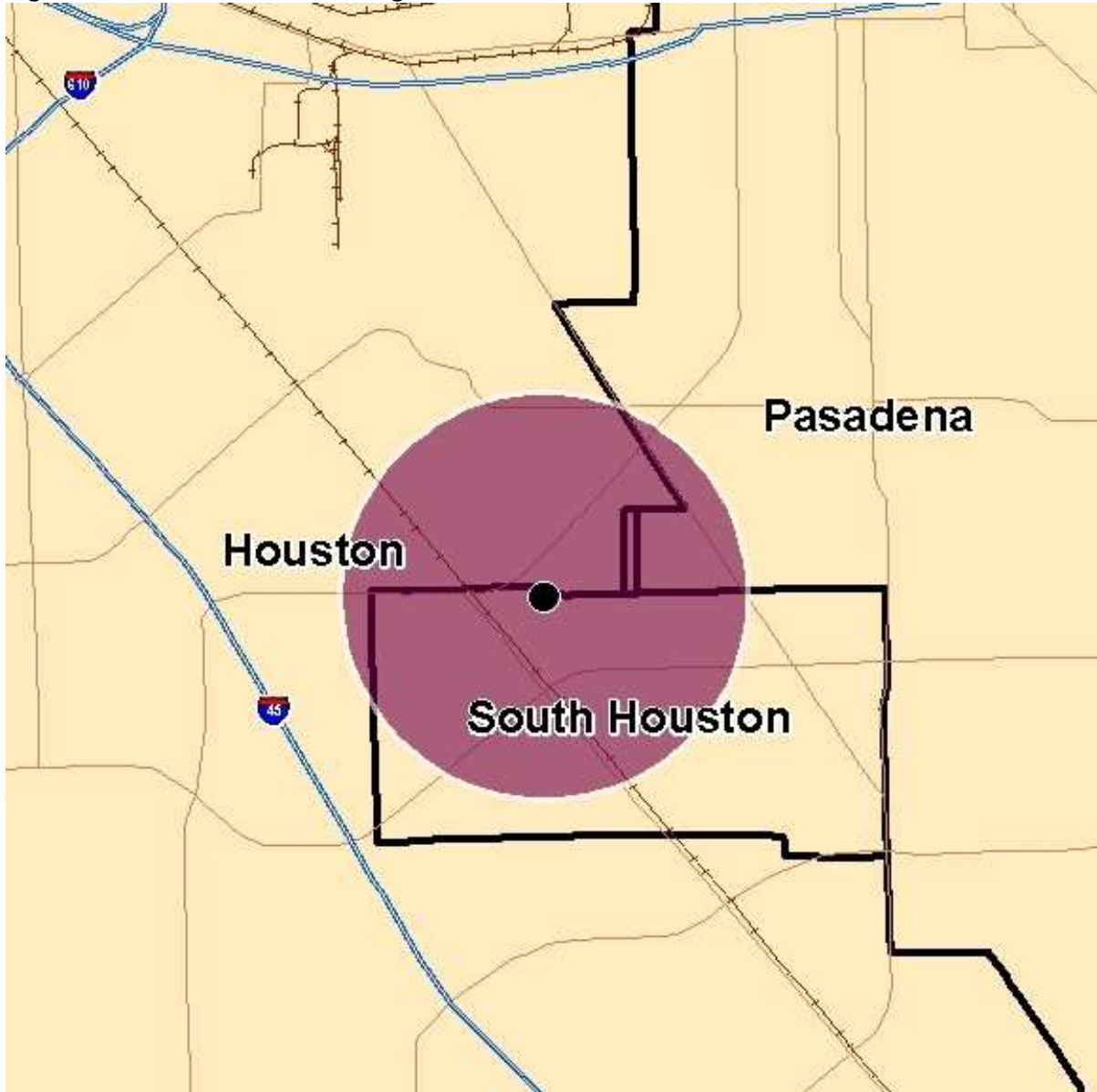


Table 1: Race and Income Levels near South Houston Water Treatment Plant

Distance from facility	% Hispanic	\$ Per Capita Income
1-mile	83.3%	\$16,344
1.5-mile	83.1%	\$14,654
3.1-mile	77.6%	\$14,363
Texas	38.1%	\$25,548
USA	16.7%	\$27,915

Figure 2: 1-mile radius surrounding South Houston Water Treatment Plant



Trainer Refinery

Trainer, PA

The Trainer Refinery in Pennsylvania uses hydrofluoric acid to refine crude oil into gasoline. The facility puts 2.4 million people within 19 miles at risk in the event of an accidental chemical release.

Figure 1: Trainer Refinery, Trainer, PA

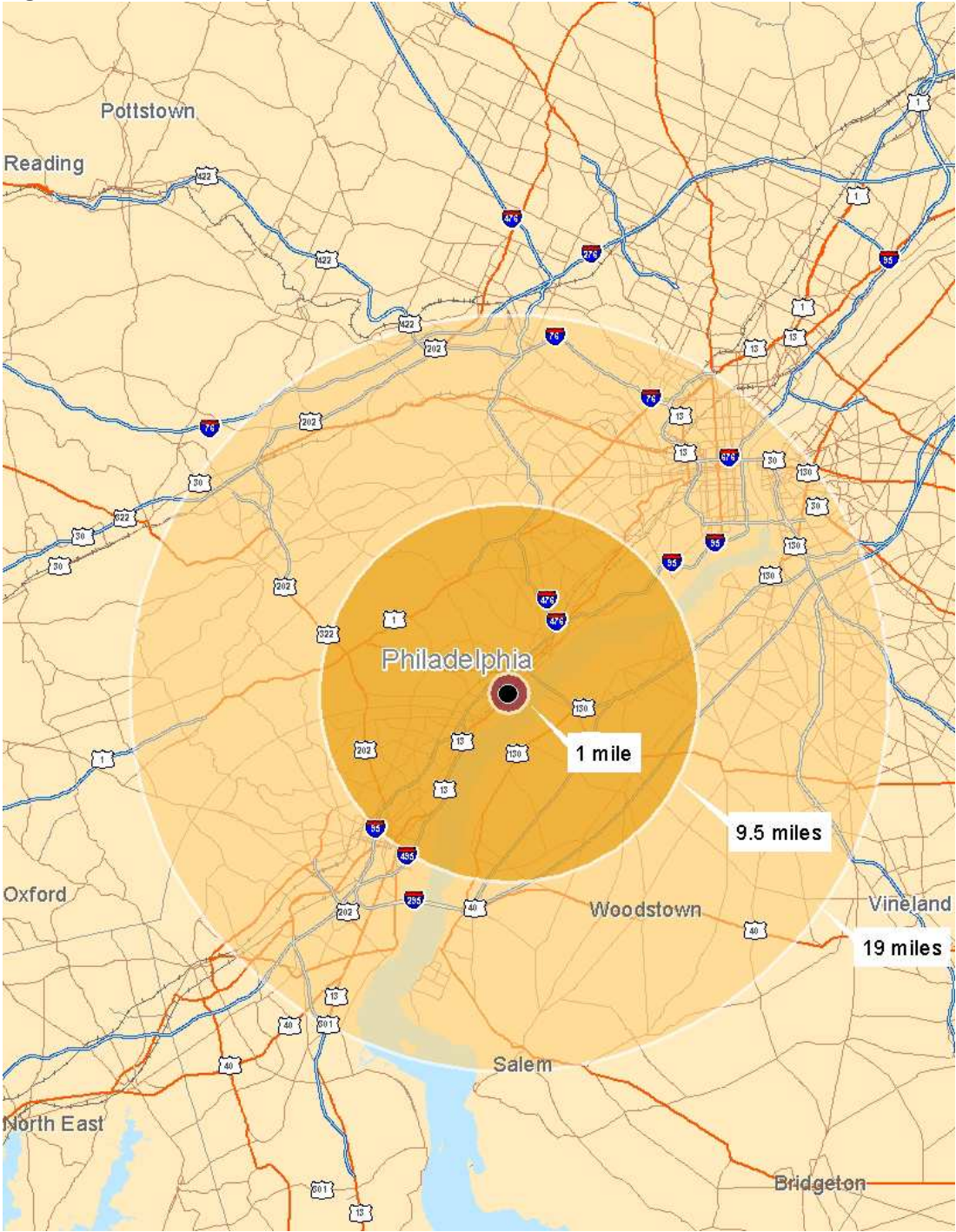


Table 1: Race and Income Levels near Trainer Refinery

Distance from facility	% Black	\$ Per Capita Income
1-mile	38.7%	\$15,572
9.5-mile	20.7%	\$31,359
19-mile	27.8%	\$29,600
Pennsylvania	11.3%	\$27,824
USA	13.1%	\$27,915

Figure 2: 1-mile radius surrounding Trainer Refinery

