



# August 2023 Wildfires in Hawaii

Updated August 14, 2023

## Impacts of August Wildfires

Due to [dry](#) and windy conditions, several damaging [wildfires](#) spread on the Hawaiian islands of Maui and Hawaii starting on August 8, 2023 (**Figure 1**). On August 10, the affected areas received a [presidential declaration of major disaster](#) under the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act; P.L. 93-288, as amended). The wildfires have caused fatalities and injuries, as well as damage to hundreds of structures across different communities on the two islands.

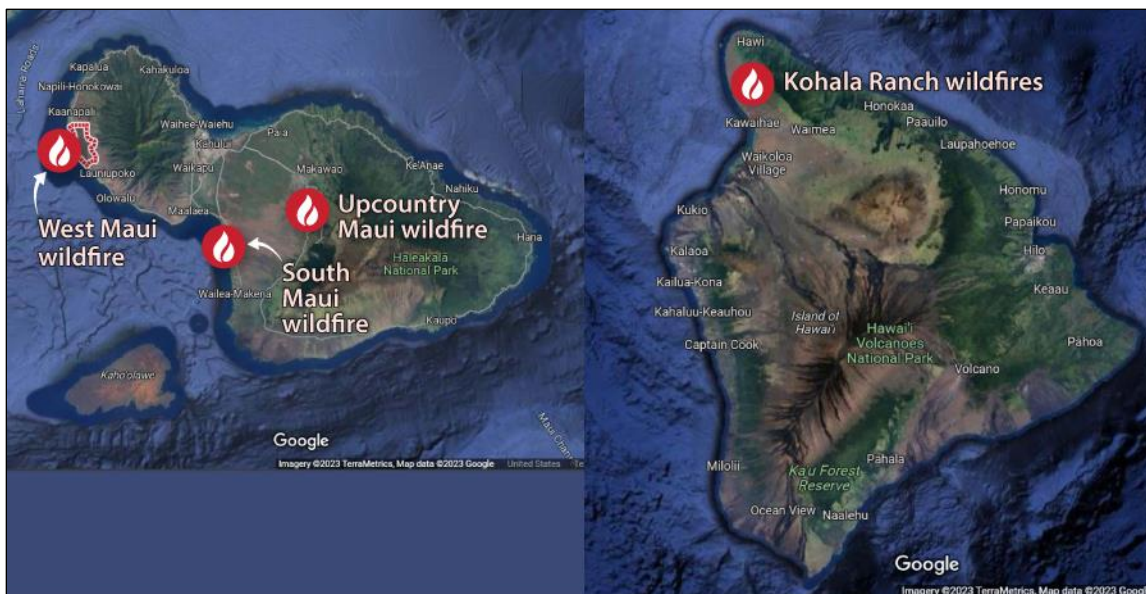
## Winds and Wildfires on Maui and Hawaii Islands

Beginning on August 8 and 9, wildfires ignited on Maui and Hawaii islands and spread quickly due to strong winds. The National Weather Service (NWS) previously issued [red flag warnings](#), meaning critical fire weather conditions are either occurring or expected, for the [leeward](#) side of the Hawaiian Islands for August 8 and 9. The NWS said [Hurricane Dora](#), which passed about 500 miles south of the islands during the same time period, strengthened trade winds and caused gusts of about 60-80 miles per hour. The winds knocked out power, blocked roads with downed powerlines and other debris, grounded firefighting helicopters, and hampered firefighting efforts. Some communications, such as landlines, cellular services, and 911 services, were lost due to the winds and wildfires. As of August 14, 2023, the wildfires have caused more fatalities than any other U.S. [wildfire in the past century](#). According to [Maui County press releases](#) and other sources, the wildfires have caused injuries and evacuations of more than 10,000 visitors and hundreds of residents and have forced some people to flee into the ocean. The U.S. Coast Guard, the Hawaii National Guard, and various Hawaii emergency services are responding by air, sea, and ground.

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**Figure I. Maui and Hawaii Wildfires**

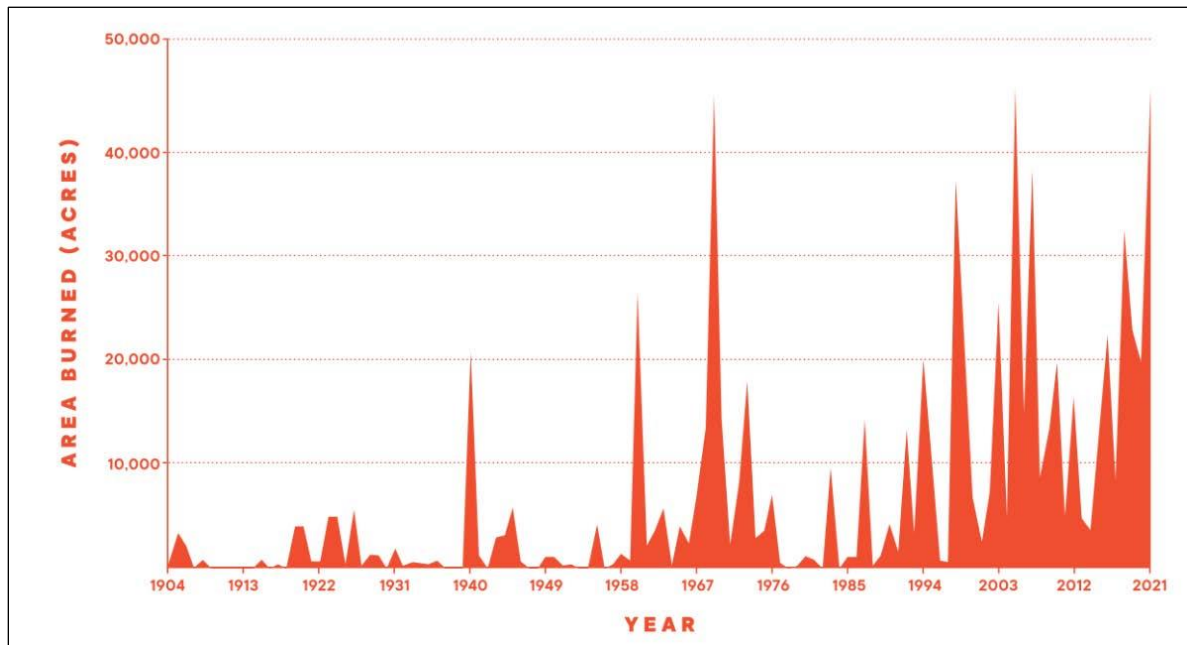
**Source:** Google maps, modified by CRS.

**Notes:** Wildfires noted on these maps are approximate locations as of the morning of August 10, 2023. The maps only show wildfires that were active and caused significant reported damage on August 8 and 9. NASA's Fire Information for Resource Management System (FIRMS) provides satellite imagery of active fires and hotspots in the United States. FIRMS noted additional active wildfire locations on Oahu, Maui, and Hawaii on August 8 and 9; those are not shown here.

## Wildfires in the State of Hawaii

According to the [Pacific Fire Exchange](#), wildfires can occur on the islands at any time. Over the last decade, Hawaii has experienced an annual average of over **1,000 ignitions burning more than 20,000 acres each year** on the main inhabited islands (**Figure 2**). The **primary drivers** of wildfire occurrence are human-caused ignitions; expansion of nonnative, fire-prone grasslands and shrublands; strong **rain shadow** effects; and episodic drought. These incidents raise questions about how **climate change influences wildfires**. Other natural factors that influence wildfire risk are the location of the islands, topography, and native ecosystems. Each island has mountains (i.e., extinct or active **shield volcanoes**) and gently sloped lowlands. The prevailing northeasterly trade winds bring humid ocean air up against each mountain and produce rain on the east side, leaving the west side dry (also called a *rain shadow* or the *leeward side*). The **native ecosystems** on the dry sides include dry shrublands, dry grasslands, and dryland forests; on the wet sides, they include subalpine grasslands, montane and lowland semi-wet and wet grasslands, and forests.

Since Hawaii's native ecosystems evolved without frequent wildfire, they are vulnerable to disturbance by fire. Wildfires have **removed about 90% of dryland forests**, which have been replaced by nonnative fire-prone grasses. In addition, **reductions in farming and ranching** in Hawaii have left land fallow and ungrazed, allowing nonnative fire-prone grasses to take over these landscapes, adding to the wildfire risk.

**Figure 2. Hawaii Wildfires: Acres Burned, 1904 to 2021**

**Source:** Clay Trauernicht, Department of Natural Resources and Environmental Management, University of Hawaii at Manoa.

## Challenges to Emergency Response Efforts

Many factors may complicate wildfire response and recovery efforts in Hawaii, including the following:

- Landline, cellular and [emergency communications](#) systems are currently inoperable in many affected areas, jeopardizing efforts to locate and secure survivors.
- [Ongoing power disruptions](#) affecting [thousands](#) are likely to continue. Such disruptions may endanger [vulnerable populations](#) dependent on electricity.
- The remote location of the Hawaii islands relative to the contiguous United States [inhibits the deployment of emergency resources](#). Affected communities may wait [hours to weeks](#) for the arrival of provisions by air or sea transport.
- Wildfire debris removal is often [complex](#) due to the dangers of ash contaminants.
- News media report shortages of temporary shelter for survivors, a [particular risk](#) following wildfires, which tend to render affected houses uninhabitable.

## Availability of Federal Assistance

Jurisdiction over wildfire response on the islands is divided between federal and state agencies. In general, the Department of the Interior (DOI) responds to wildfires on [DOI lands](#), Department of Defense (DOD) responds to wildfires on [DOD lands](#), and the Hawaii Division of Forestry and Wildlife ([DOFAW](#)) responds to wildfires on state lands (see CRS In Focus IF12384, *Federal Interagency Wildfire Response Framework*), including the August wildfires. DOFAW's [fire response maps](#) show firefighting responsibilities. DOFAW has agreements with DOI and DOD regarding firefighting assistance and coordination, and it receives some funding from the U.S. Forest Service for fire management.

On August 10, 2023, President Biden [declared a major disaster](#) under the Stafford Act, providing [certain counties](#)

- [Public Assistance](#) to nonfederal governments and eligible nonprofits for 75% of the costs of eligible [fire suppression](#) and emergency assistance;
- [Individual Assistance](#) to [individuals and households](#) for temporary housing, uninsured home repairs, and other losses; and
- [Hazard Mitigation Grant Program](#) assistance to reduce future disaster losses (available statewide).

The location of DOD facilities on Oahu [may help](#) expedite the federal delivery of emergency generators and the execution of “mission assignments.” FEMA is coordinating federal response and recovery efforts in concert with federal and state entities, particularly DOFAW. FEMA [increased regional capabilities](#) in Hawaii following compound wildfire and typhoon disasters in the state in 2018. FEMA expanded capacity in distribution centers in Hawaii and the use of advance contracts to minimize delays in the delivery of emergency commodities.

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