Emergency Management

# Emergency and Disaster Deployments

## Fiscal Years 2016–2023

*August 30, 2024*

Office of Homeland Security Statistics
U.S. Department of Homeland Security

# Message from the Executive Director of the Office of Homeland Security Statistics

August 30, 2024

I am pleased to present the following report, "Emergency and Disaster Deployments" for Fiscal Years 2016–2023, which was prepared by the Office of Homeland Security Statistics (OHSS). OHSS is the DHS statistical unit established in September 2023 to perform independent statistical reporting. OHSS is led by the DHS Statistical Official. Its mission is to provide quality assurance and governance of Department-wide statistical data, support data-driven decision-making, and improve the efficiency and transparency of statistical reporting.

The report supports the requirements and best practices of the Foundations for Evidence-Based Policymaking Act of 2018 (Evidence Act) and the principles of the Federal Emergency Management Agency (FEMA) Learning Agenda. The U.S. Government Accountability Office (GAO) audit *Actions Needed to Address Deployment and Staff Development Challenges* (GAO-20-360) notes a need for mechanisms, including collecting relevant data, to assess how effectively FEMA's disaster workforce was deployed to meet mission needs in the field. This report supplies foundational facts about FEMA disaster workforce deployments that can support future evaluations and evidence-based policymaking.

The report provides deployment data for all events authorized under the Robert T. Stafford Disaster Relief and Emergency Assistance Act.

I am pleased to respond to any questions you may have. Please do not hesitate to contact us at ohss@hq.dhs.gov.

Sincerely,

Marc Rosenblum
DHS Statistical Official
Executive Director, Office of Homeland Security Statistics

# Emergency and Disaster Deployments

# Table of Contents

# I. Background

## Federal Emergency Management Agency (FEMA) Mission

On April 1, 1979, President Carter established the Federal Emergency Management Agency (FEMA). Its two functions are civil defense and emergency management.[1] In 2002, President George W. Bush signed the Homeland Security Act.[2] This Act created the U.S. Department of Homeland Security (DHS) on March 1, 2003. It united FEMA and 21 other organizations.

FEMA's mission is helping people before, during, and after disasters. FEMA derives much of its authority from the Robert T. Stafford Disaster Relief and Emergency Assistance Act[3] (Stafford Act). FEMA may provide support when the president of the United States declares an emergency or major disaster under the Stafford Act. FEMA's staff can assist with emergencies, disaster response, and recovery.

## FEMA Workforce and Locations

FEMA's workforce is organized into 23 cadres. Cadres are groups of employees ordered by type of work. The cadres cover a wide range of skills and experience required for disaster response and recovery operations. These skills include acquisitions, disaster emergency communications, financial management, hazard mitigation, and individual assistance.

FEMA staff have six primary position types:

**Table 1.**

**FEMA Position Types**

| Position Type | Description |
|---|---|
| Permanent | Hired through a competitive process. Employees may gain competitive status after one year of continuous service and full career tenure after three years of continuous service. |
| Cadre of On-Call Response/Recovery Employee (CORE) | Hired to work for a specific, limited period, between two to four years. Eligible for the same benefits as permanent employees, but do not gain competitive status nor career tenure. |
| Reservists (On-Call) | Temporary, on-call workforce. Reservist work is available on an as-needed basis (it is not full-time or continuous). Appointments are for up to two years and can be renewed. |

[1] E.O. 12127
[2] Public Law 107–296
[3] Public Law 100-707

| Position Type | Description |
|---|---|
| FEMA Corps | Full-time, team-based service program for young adults. Members must between 18-26 years old. There is no age limit for team leaders. |
| Local Hire | Local residents who aid in the recovery of their community throughout the recovery process. Appointments are for 120 days and may be extended based on the needs of the disaster. |
| Surge Capacity Force (SCF) | Volunteer federal employees from DHS components and other federal agencies. The DHS Secretary may activate SCF if an incident exceeds the capacity of the FEMA disaster workforce. |

FEMA coordinates the deployment of staff from other federal agencies. Deployments of non-FEMA staff are directed through mission assignments.[4] A mission assignment is a FEMA work order used with or without reimbursement. These work orders direct another federal agency to use its authorities and resources in support of state, local, tribal, and territorial government assistance. This report does not include mission assignments. Data on mission assignments can be found at OpenFEMA.

FEMA has both program and regional offices located throughout the United States.

**Table 2.**

FEMA Regions

| Region | States/Territories/Tribal Nations |
|---|---|
| Region 1 | Connecticut \| Maine \| Massachusetts \| New Hampshire \| Rhode Island \| Vermont \| 10 tribal nations |
| Region 2 | New Jersey \| New York \| Puerto Rico \| Virgin Islands \| 8 tribal nations |
| Region 3 | Delaware \| Maryland \| Pennsylvania \| Virginia \| District of Columbia \| West Virginia \| 7 tribal nations |
| Region 4 | Alabama \| Florida \| Georgia \| Kentucky \| Mississippi \| North Carolina \| South Carolina \| Tennessee \| 6 tribal nations |
| Region 5 | Illinois \| Indiana \| Michigan \| Minnesota \| Ohio \| Wisconsin \| 34 tribal nations |
| Region 6 | Arkansas \| Louisiana \| New Mexico \| Oklahoma \| Texas \| 68 tribal nations |
| Region 7 | Iowa \| Kansas \| Missouri \| Nebraska \| 9 tribal nations |
| Region 8 | Colorado \| Montana \| North Dakota \| South Dakota \| Utah \| Wyoming \| 29 tribal nations |
| Region 9 | Arizona \| California \| Hawaii \| Nevada \| Guam \| American Samoa \| Commonwealth of Northern Mariana Islands \| Republic of Marshall Islands \| Federated States of Micronesia \| 150 tribal nations |
| Region 10 | Alaska \| Idaho \| Oregon \| Washington \| 271 tribal nations |

[4] 44 C.F.R. §206.2(a)(18)

# Emergency and Disaster Declarations and Deployments

When a state or territory experiences a major disaster or emergency, its governor can request a declaration from the president of the United States. Either a governor or a tribal chief executive can request a declaration for a tribal nation. Based on an evaluation of the request and the statutory criteria for a major disaster or emergency, the President may issue a declaration. Each declaration covers only one state or tribal nation, so a major disaster or emergency that spans multiple jurisdictions may have multiple declarations.

- Major Disaster: Any natural catastrophe in the United States can qualify as a major disaster. This includes any hurricane, tornado, storm, high water, wind driven water, tidal wave, tsunami, earthquake, volcanic eruption, landslide, mudslide, snowstorm, or drought. It also includes, regardless of cause, any fire, flood, or explosion. The president decides whether a natural catastrophe qualifies as a major disaster based on the severity of damage.[5]
- Emergency: Any occasion or instance for which the president determines that federal help is needed. Federal help supplements state and local efforts to save lives and protect people and property.[6]

The Stafford Act authorizes FEMA to deploy staff to respond to declarations (emergency and major disaster) and limited authority to conduct deployments for events before and after a declaration. When deploying personnel for disasters or emergencies, FEMA uses the event types noted in table three.

**Table 3**

Event Types

| Event Type | Initiated By | Purpose for Deployments |
|---|---|---|
| Activation | FEMA | Preparing or prepositioning resources at the national or regional level to respond to the impending incident.<br><br>Activation deployment data are not included in this report. These regional and national coordination efforts are generally not associated with a specific declaration or funded by the Disaster Relief Fund.[7] |

[5] Official definition at 44 C.F.R. §206.2(a)(17)
[6] Official definition at 44 C.F.R. §206.2(a)(9)
[7] The Disaster Relief Fund (DRF) is the primary source of funding managed by FEMA for disaster relief authorized under the Stafford Act.

| Event Type | Initiated By | Purpose for Deployments |
|---|---|---|
| Pre-Declaration | FEMA | Deploying to conduct preliminary damage assessments (PDAs) when a declaration request seems imminent.<br><br>Sometimes, a pre-declaration deployment is not followed by a declaration. For example, FEMA may deploy in preparation for a hurricane, but the hurricane does not make landfall so there is no declaration. |
| Emergency Declaration | Governor or tribal chief executive requests and declared by the president | Providing federal resources to supplement state and local governments to save lives and protect people and property.<br><br>Immediate funding limited to $5 million.<br><br>Can be paired with a Major Disaster declaration to get immediate funds. |
| Major Disaster Declaration | Governor or tribal chief executive requests and declared by the president | Providing resources for natural catastrophes that cause severe damage beyond state or local capabilities.<br><br>No funding limit but has a delayed processing time.<br><br>Makes a wide range of federal assistance programs available. |
| Fire Management | State requests and FEMA decides to provide support | Mostly consists of providing Fire Management Assistance Grants.<br><br>A fire that exceeds state and local resources can be declared an emergency or major disaster. |
| Post-Joint Field Office (JFO) | FEMA | Providing federal resources after initial response efforts associated with a declaration are complete and the JFO is deactivated.<br><br>The JFO is a temporary central location for coordination of federal, state, local, tribal, nongovernmental, and private-sector organizations for field-level incident management activities. |
| Long-Term Recovery | FEMA | Permanent restoration of infrastructure, housing, agricultural industry, natural resources, community well-being, and the local economy, with attention to mitigation of future impacts of a similar nature.<br><br>Long-term recovery deployment data are not included in this report. These efforts are generally not associated with a specific declaration or funded by the Disaster Relief Fund. |

# Hazards

Hazards are the source or cause of harm or difficulty. All emergency and disaster declarations are associated with a hazard. Hazards can be natural (resulting from acts of nature), technological (resulting from accidents or failures of systems or structures), or human caused (resulting from the intentional actions of an adversary).

**Table 4.**

Hazard Types

| Hazard Type | Description |
|---|---|
| Biological | An occurrence in which material of biological origin causes damage to people, animals, plants, natural resources, or infrastructure |
| Chemical/Toxic Substances | Poisonous vapors, aerosols, liquids, and solids that have toxic effects on people, animals, or plants |
| Civil Unrest | A mass action that challenges public safety, such as riots, acts of violence, unlawful obstructions or assemblages, or other disorders prejudicial to public law and order |
| Coastal Storm | A violent atmospheric disturbance to the local maritime conditions (i.e., waves or water levels or both) |
| Dam/Levee Break | The failure of a barrier used to regulate the level or flow of water resulting in an increase in the risk of water causing damage or injuries |
| Drought | An occurrence in which the amount of water available in an area falls short of expected or required levels due to meteorological, hydrological, agricultural, or socioeconomic conditions |
| Earthquake | Ground shaking and radiated seismic energy caused by a slip on a tectonic fault, by volcanic or magmatic activity, or by other sudden stress changes in the earth |
| Flood | The overflow of water onto normally dry surfaces causing damage or injuries |
| Human Cause | A harm or difficulty resulting from the intentional actions of an adversary |
| Hurricane/Typhoon | A tropical cyclone, formed in the atmosphere over warm ocean areas, in which wind speeds reach 74 miles per hour or more and blow in a large spiral around a center or "eye" |
| Mud/Landslide | An occurrence in which masses of rock, earth, or debris, including combinations of loose mud, sand, soil, water, and air, travel down a slope under the influence of gravity |

| Hazard Type | Description |
|---|---|
| National Special Security Event | An event designated by the secretary of homeland security for which the Secret Service leads security operations. Examples include Presidential Inaugurations, State of the Union Addresses, United Nations General Assemblies, Republican National Conventions, and Democratic National Conventions. |
| Other | Water shortage, building collapse, etc. |
| Severe Storm | A violent atmospheric disturbance characterized by a combination of impacts that often include lightning, strong winds, extensive rain, and hail |
| Tornado | A violently rotating column of air touching the ground, usually attached to the base of a thunderstorm |
| Tropical Storm | A tropical cyclone, like a hurricane/typhoon, but in which maximum sustained wind speeds are 39 to 73 miles per hour |
| Tsunami | Large, destructive waves typically caused by underwater earthquakes or volcanic eruptions |
| Volcano | An opening in the Earth's crust that allows molten rock, gases, and debris to escape to the surface |
| Wildfire/Fire | Combustion or burning and accompanying light, heat, and smoke |
| Winter Storm/Snow/Severe Ice Storm | A destructive storm in which the main types of precipitation are snow, sleet, or freezing rain due to low temperatures |

# Deployment Tracking System

The FEMA Workforce Management Division Deployment and Analysis Branch operates the Deployment Tracking System (DTS). This web-based system assigns and tracks the deployment of disaster personnel. It includes dashboards, reports, search, and mapping tools, and automatic notifications.

FEMA uses DTS to ensure personnel safety while deployed. Workers can report their safety status daily. They also use it to evaluate past staffing to make disaster response more efficient.

DTS enables FEMA to see the following personnel details to support deployment decisions:

- Availability dates for deployment
- Job positions (current and past)
- Qualifications, skills, and credentials
- Languages
- Training
- Deployment history
- Notifications and responses

# II. Data Summary

This section details the data fields included in the accompanying Deployment Tracking System microdata file and how to interpret and use each field.

## Deployments

Deployments represent the assignment of an individual to an event for a defined period. Each row of data represents a unique deployment. An individual can be deployed to the same event multiple times. An individual cannot be deployed to multiple events at the same time. There are three fields in the data that provide time parameters for each deployment:

**Table 5.**

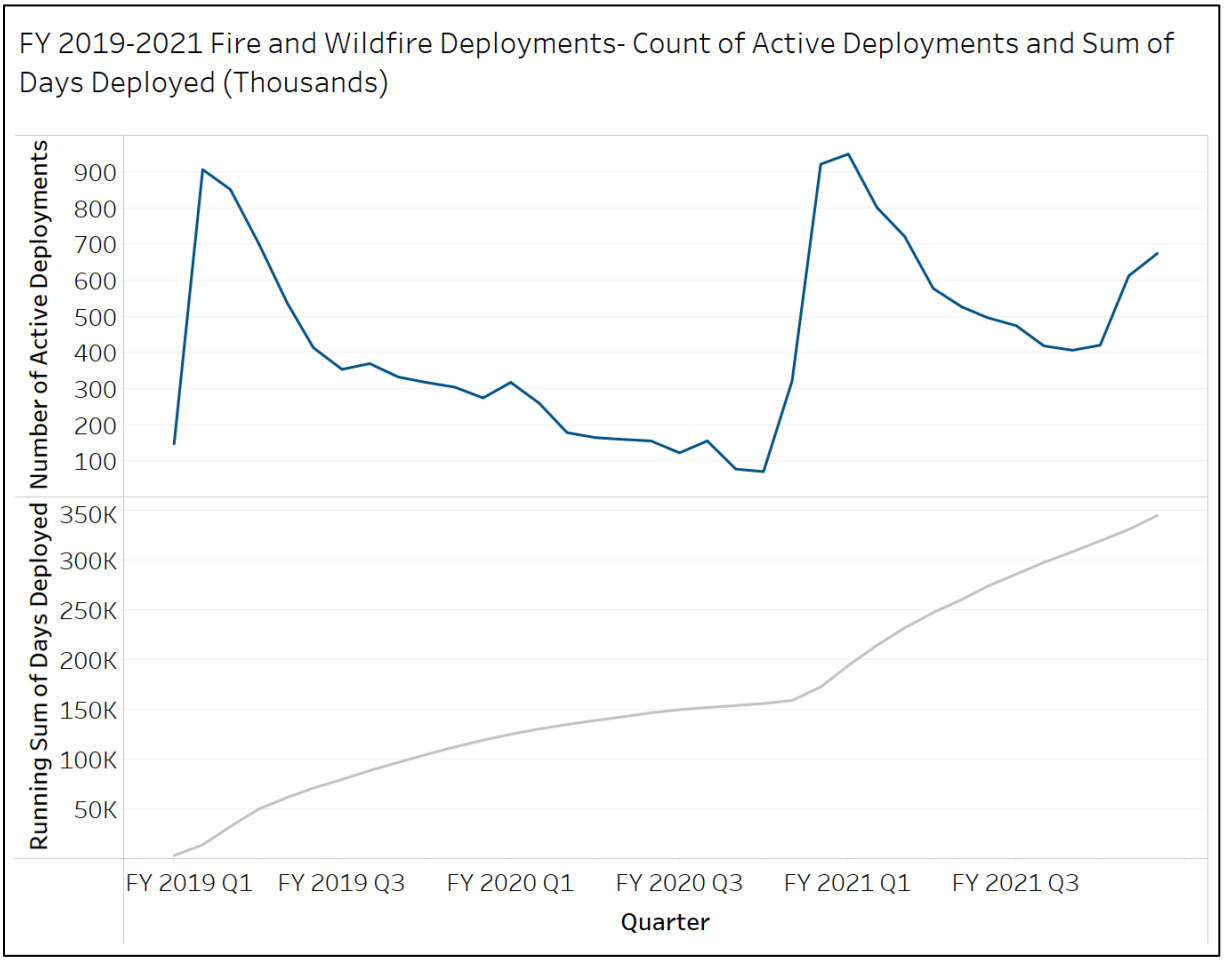
**Deployments Data Fields**

| Data Field | Example | Description |
|---|---|---|
| Deployment ID | 9397791822364530000 | Unique identifier for each deployment |
| Date on Site | 08/23/2022 | The date the individual arrived at their duty station for the deployment |
| Departure Date | 03/03/2023 | The date the deployment concluded. If the deployment was still active as of September 30, 2023, the departure date is blank. |
| Days Deployed | 192 | The duration of the deployment, equal to the number of days between the Departure Date and the Date on Site. If the deployment was still active as of September 30, 2023, the days deployed is blank. |

The deployment data fields are useful for time series analysis. The top of Figure 1 shows the count of active deployments to wildfire events from FY19-21. The bottom of Figure 1 shows the cumulative sum of days deployed to wildfire events from FY19-21.

**Figure 1.**

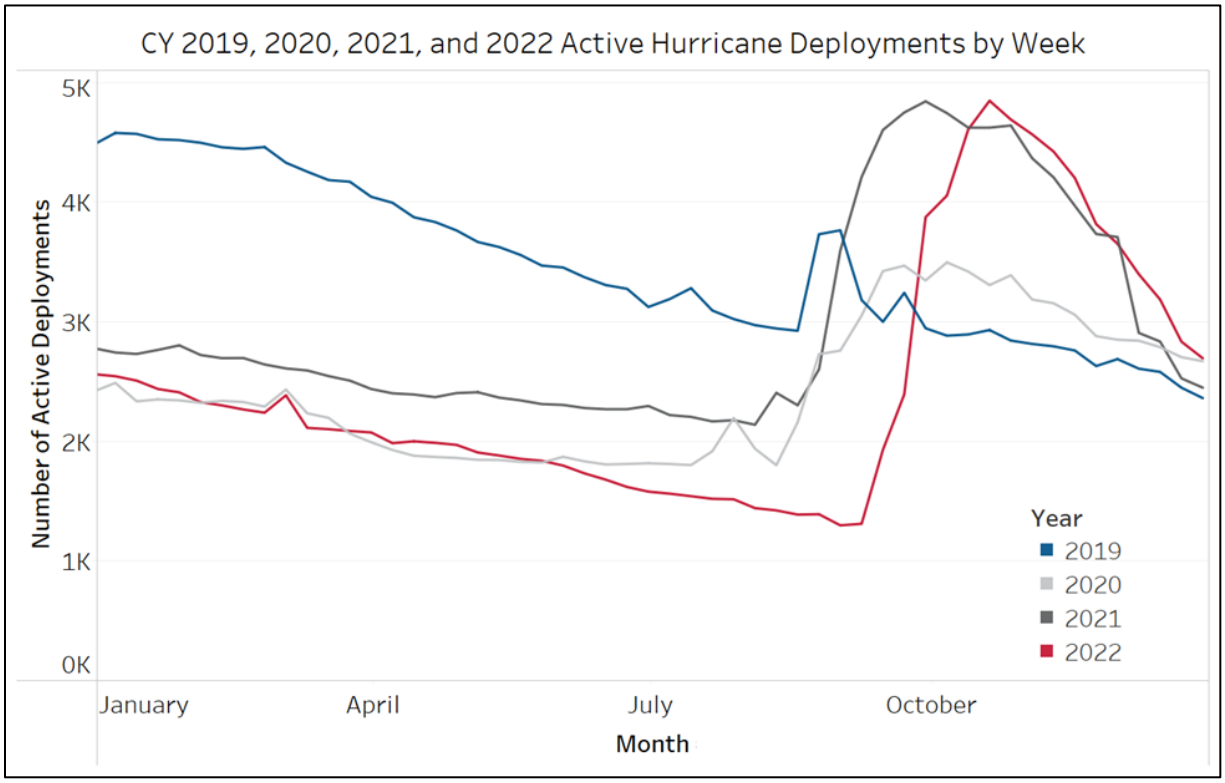
FY19-21 Wildfire Deployments




A deployment is active on a given date if it falls between the Date on Site and the Departure Date. Figure 2 shows the number of active deployments to hurricane events from FY19-22. Calculating active deployments is useful for manpower analysis, including the peak active workforce.

**Figure 2.**

CY 19-22 Active Hurricane Deployments




# Hazards

An incident is a natural, technological, or human caused occurrence that may cause harm and that may require action. The source of an incident is a hazard. Each event is associated with a single hazard. There is one field in the data that describes the hazard:

**Table 6.**

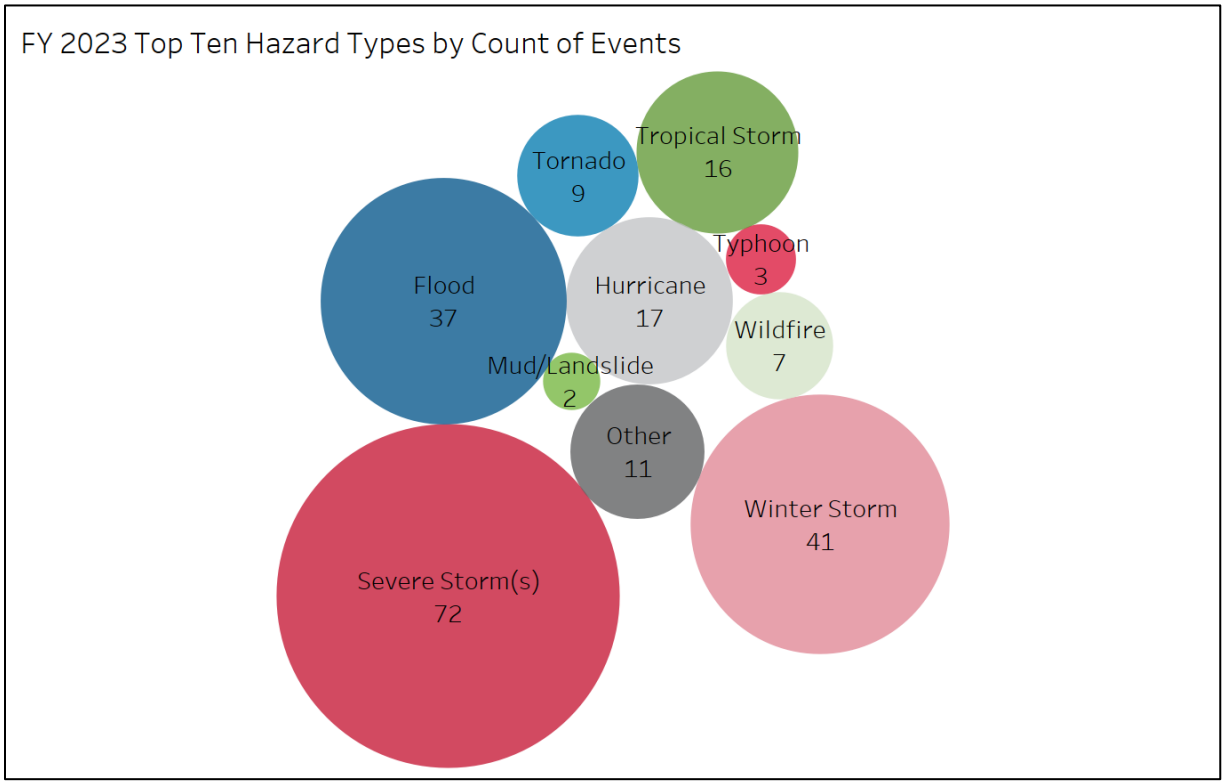
Hazards Data Fields

| Data Field | Example | Description |
|---|---|---|
| Hazard Type | Hurricane Sandy | Categorical grouping of hazards |

The hazard data fields are useful for filtering and grouping the data for analysis of similar events. Figure 3 shows the ten most common hazard types for events in FY23.

**Figure 3.**

FY23 Top 10 Event Hazard Types




# Events

Deployments are all made to support a specific event. There are five fields in the data that describe each event.

**Table 7.**

Events Data Fields

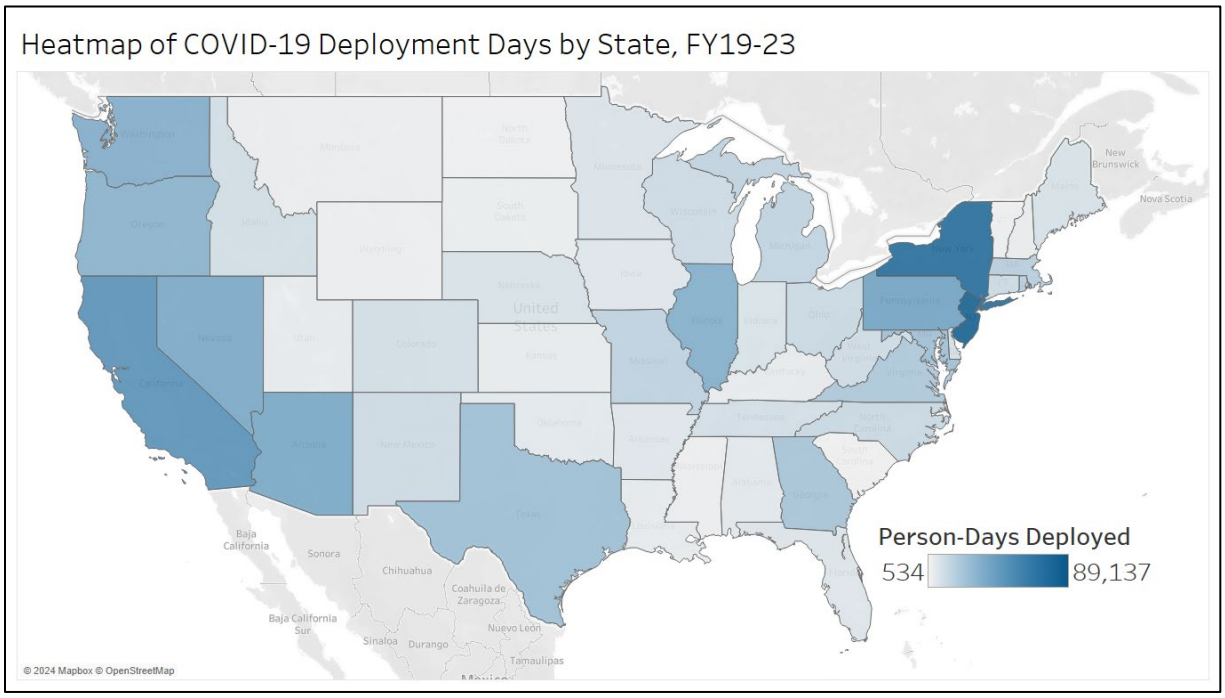
| Data Field | Example | Description |
|---|---|---|
| Event ID | 11196 | Four- or five-digit unique identifier for each event |
| Event Start Date | 8/15/2014 | The first date deployments could be made in support of the event |
| Event Type | Disaster Deployment | Categorical events described in Declaration/Deployment Type section, excluding Activation and Long-Term Recovery |
| Event Region | Region 3 | FEMA Regional Office responsible for the event |

| Data Field | Example | Description |
|---|---|---|
| Event Location | Connecticut | State or territory the duty station the deployment is in[8] |

Event Region and Event State are useful for geographic analysis. Figure 4 shows a heatmap of the sum of days deployed for COVID and Figure 5 shows a heatmap of the sum of days deployed for hurricanes. Days deployed for COVID are spread across the entire United States with, generally, a greater number of days deployed in states with greater populations. Hurricane deployments are concentrated in southeastern coastal states where hurricanes often make landfall.

**Figure 4.**

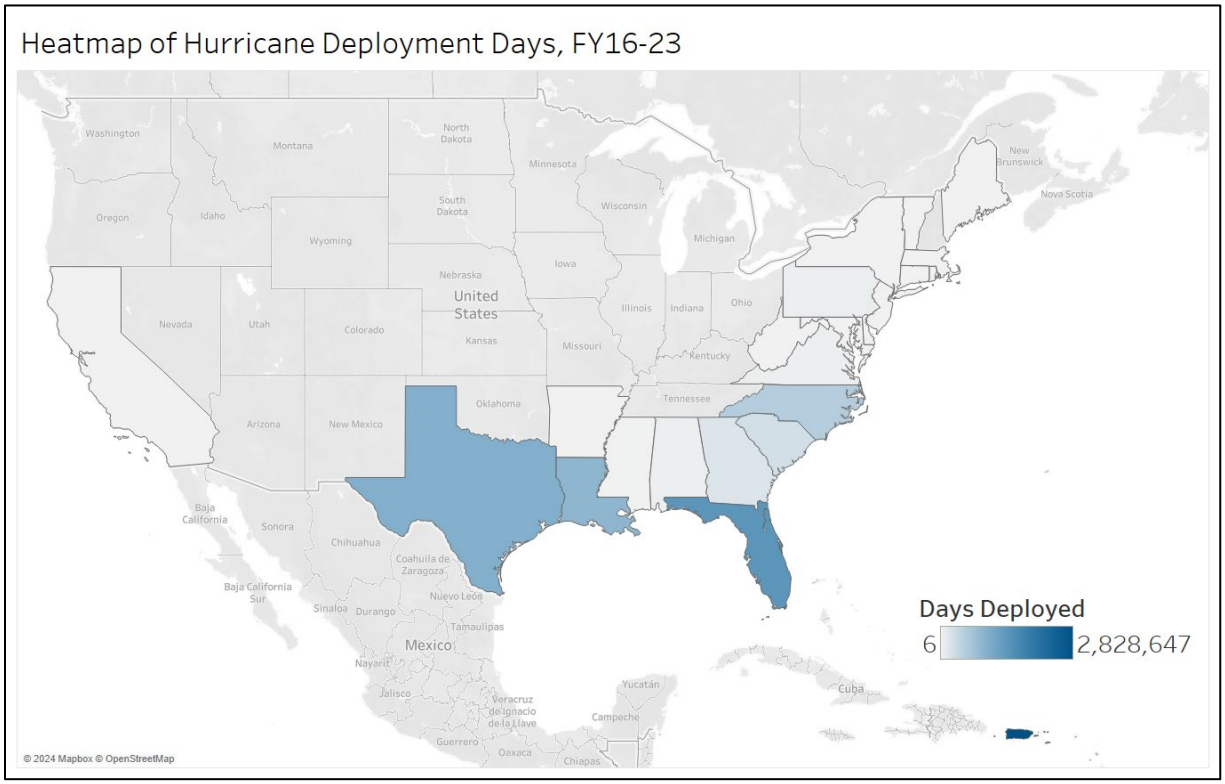
COVID Days Deployed Heatmap




[8] When FEMA deploys personnel to tribes, this field captures the state geographically aligned to the tribe's location.

**Figure 5.**

Hurricanes Days Deployed Heatmap




FEMA releases data about declarations made by the president of the United States on OpenFEMA. For a subset of events that are associated with a declaration (Emergency Declaration Deployments, Disaster Deployments, and some Fire Management Deployments) there are two fields in the data that can be matched to the declarations data on OpenFEMA.

**Table 8.**

Declarations Data Fields

| Data Field | Example | Description |
|---|---|---|
| OpenFEMA Declaration String | FM-5433-NM | Agency standard method for uniquely identifying Stafford Act declarations — concatenation of declaration type, disaster number, and state code |
| OpenFEMA Declaration Title | Nogal Canyon Fire | Title for the disaster |

All events are unique to a single state, but many incidents FEMA responds to impact several states. In addition, within a single state, deployments often transition from one event to another based on the lifecycle of FEMA's response to an incident. There are two grouping fields in the data that can be used to understand these relationships between events.

**Table 9.**

Grouping Data Fields

| Data Field | Example | Description |
|---|---|---|
| Incident | Hurricane Sandy | Groups events across the country related to the same incident. This is a discretionary field in DTS and not all events are grouped into an incident. |
| Event Group | 12 | Unique identifier to group all predecessor events within a single state through the lifecycle of FEMA's response to an incident. A blank Event Group means the event did not have a predecessor or successor event. |

Figure 6 shows active deployments for the Hurricane Dorian Incident by Event Type. FEMA deployed people to 8 states and territories in response to Hurricane Dorian. Figure 7 shows only the active deployments for the Hurricane Dorian Incident that are in the Puerto Rico Event Group. Unlike in other states, Puerto Rico only received a Pre-Declaration and Emergency Declaration and did not receive a subsequent Disaster Declaration or Post-JFO.

**Figure 6.**

Active Deployments for Hurricane Dorian by Event Type

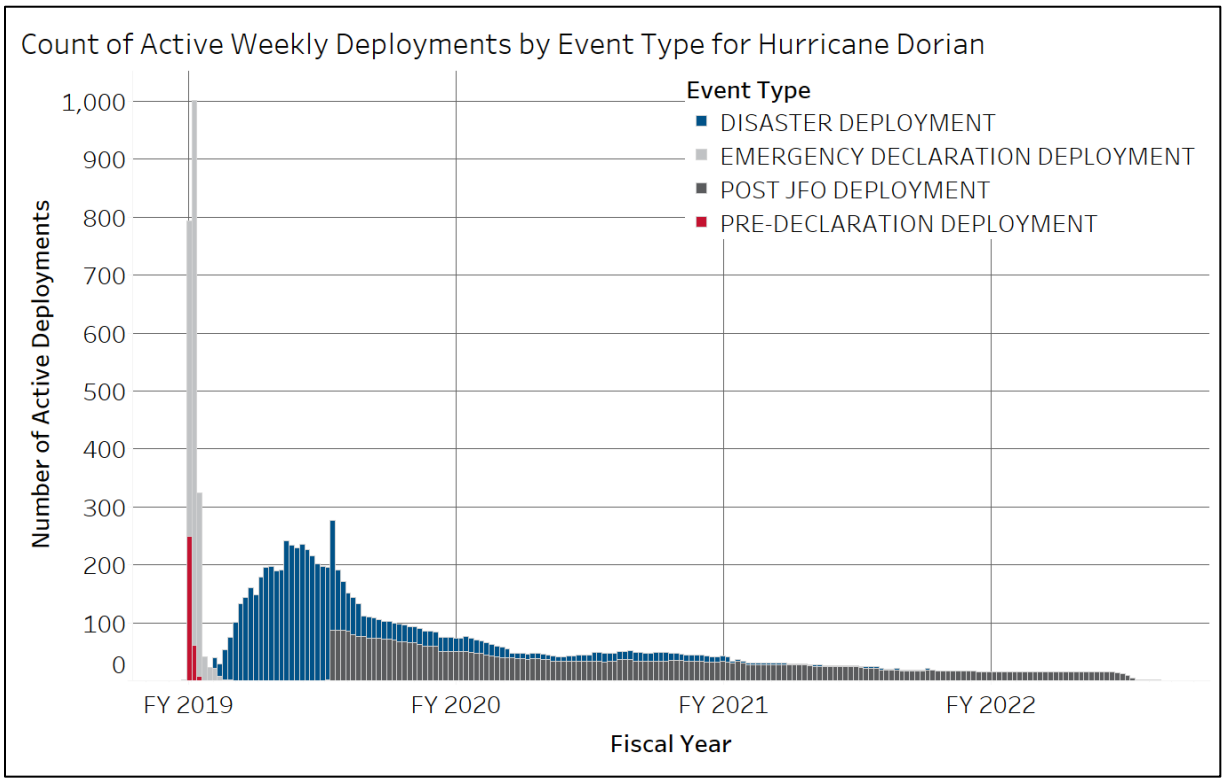


**Figure 7.**

Active Deployments in Puerto Rico for Hurricane Dorian by Event Type