



# Pandemic Response to Coronavirus Disease 2019 (COVID-19): Initial Assessment Report

*FEMA Operations January through September 2020*

January 2021

FEMA

*FEMA acknowledges that COVID-19 continues to affect individuals and families throughout the United States. Cases continue to rise, and more Americans are feeling the direct and indirect effects of the pandemic in their personal and professional lives. This Initial Assessment Report is intended to help the agency learn and take improvement actions, and to reflect on the early operations. It is focused on the period from January 2020 through the end of September 2020, and FEMA's roles and responsibilities in the response operation. The report is not a review of actions taken by other federal agencies or state, local, tribal, territorial, non-governmental, or private-sector partners. FEMA's National Response Coordination Center remains activated, with U.S. Department of Health and Human Services and other federal partners fully integrated, as the response to COVID-19 continues. FEMA Regional Administrators continue to coordinate closely with state governors, emergency managers, and public health directors.*

# Letter from the Administrator

The COVID-19 pandemic continues to disrupt the lives of all Americans, significantly affecting public health, the economy, and our social fabric. Upon the release of this report, the SARS-CoV-2 virus and its associated disease, COVID-19, has infected more than 22 million Americans and led to the deaths of more than 370,000 Americans, as reported by the CDC. The COVID-19 pandemic will have lasting effects and transform not only our society, but the profession of emergency management and how we respond to disasters, threats, and the unknowns of the future.

Over the year, I have asked emergency managers from across the country to work as a team on behalf of the American people, to coordinate, to problem solve, and to act in the face of extraordinary challenges. I have witnessed tremendous innovation and grit in the face of adversity throughout this response, and I am thankful for the heroic efforts made to protect lives and prevent suffering; however, the same challenges that have prompted tremendous creativity and highlighted the best of our emergency management community have also laid bare gaps and shortcomings in our plans, procedures, and policies. Today, I ask emergency managers to take on another task—to dedicate themselves to continuous improvement and learning from this event as the response continues.

It is essential that those of us charged with preparing the nation for its worst day reflect on the challenges posed by COVID-19, share our findings, and make improvements based on this experience. This Initial Assessment Report represents an initial step in that process, with the hard work of bringing about change still to come. FEMA will improve and we will continue to be transparent in our actions. We will use lessons learned from this response as catalysts for change in how the agency serves our state, local, tribal, and territorial partners for the ongoing operations and future disasters; coordinates across all level of government; and manages operations. Our response to COVID-19 has emphasized the importance of enhancing our whole-of-government capabilities, building dynamic and integrated data management capabilities, and continuing to invest in logistics and supply chains. We will focus our efforts on these areas, as detailed in this report.

The COVID-19 pandemic continues; undoubtedly, the coming months will raise new challenges and require actions currently unforeseen. We will continue to assess operations and identify best practices, areas for improvement, and innovations. I am releasing this report recognizing that we cannot wait to take steps to improve our readiness and that we cannot do it alone. Preparedness is a continual process, one that we must evaluate and enhance every day. The entire emergency management community has a responsibility to learn, improve, and invest in expanding capability at all levels of government to respond to the evolving requirements of the pandemic and future catastrophes.

As we start 2021, I want to again acknowledge the thousands of professionals who have worked tirelessly. I am proud of the FEMA workforce and their adaptability and resilience in an uncertain response environment and I am equally proud to serve as the nation's lead emergency manager. Again, I ask all of you to lead, innovate, and be resourceful. This is a whole-of-America response and I need every emergency manager to continue to be an active participant in solving the Nation's hardest problems.

Pete Gaynor

FEMA Administrator

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# Executive Summary

The COVID-19 pandemic has affected all facets of life. The United States has had over 22 million confirmed cases, and 370,000 deaths due to COVID-19, as reported by the U.S. Centers for Disease Control and Prevention (CDC).[1] Mitigation measures in response to the pandemic have significantly changed everyday life, including widespread closures of businesses and schools. With the declaration of a public health emergency (PHE) on January 31, 2020, the federal government began to implement public health measures to safeguard the American public. The Presidential Declaration of a nationwide emergency under the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act) on March 13, 2020, increased the level of federal response from the Federal Emergency Management Agency (FEMA), as well as support to state, local, tribal, and territorial (SLTT) partners across the nation. The whole-of-government response to COVID-19 and the operating environment for FEMA quickly changed as illustrated by the following list of significant dates in 2020.

### Significant COVID-19 Pandemic Dates

December 31, 2019 – The World Health Organization (WHO) notes several cases of viral pneumonia in Wuhan, China

January 7, 2020 – China attributes the outbreak to a novel coronavirus

January 21, 2020 – First confirmed U.S. case of the novel coronavirus is identified

January 30, 2020 – WHO declares a Public Health Emergency of International Concern

January 31, 2020 – Public health emergency is declared nationwide for the United States

March 11, 2020 – WHO characterizes the virus as a global pandemic

March 13, 2020 – The President declares a nationwide emergency declaration under the Stafford Act

March 15, 2020 – The President establishes 15-day social distancing guidelines

March 19, 2020 – FEMA assumes the lead for the federal response to COVID-19

March 29, 2020 – The United States has the highest number of confirmed cases in the world, with 103,321 cases, as reported by WHO[2]

April 3, 2020 – FEMA and U.S. Customs and Border Protection issue joint statement on using the Defense Production Act to keep scarce medical resources within the United States[3]

May 4, 2020 – The Food and Drug Administration authorizes the first antibody test[4]

June 15, 2020 – FEMA and U.S. Department of Health and Human Services (HHS) realigned the existing COVID-19 Task Forces into a working group construct in order to ensure the long-term sustainment of federal COVID-19 response operations in support of states, tribes, and territories, and HHS established a Joint Coordination Cell to oversee the five working groups

June 16, 2020 – CDC reports nursing home residents represent 40% of COVID-19 deaths

July 30, 2020 – The COVID-19 epicenter of cases moves into the Midwest

August 9, 2020 – 5,000,000 cases in the U.S. are reported by CDC

September 4, 2020 – A temporary halt in residential evictions to prevent the further spread of COVID-19 is announced by CDC[5]

September 8, 2020 – The Transportation Security Administration screens more than 3 million passengers over Labor Day weekend using *Stay Healthy. Stay Secure.* protocols

The agency's response to COVID-19 has been unprecedented. When the White House directed FEMA to lead operations, COVID-19 became the first national pandemic response that FEMA has led since the agency was established in 1979. It was also the first time in U.S. history the President has declared a nationwide emergency under Section 501b of the Stafford Act and authorized Major Disaster Declarations for all states and territories for the same incident. FEMA, through its 10 regions, continues to manage 57 concurrent Presidential Major Disaster Declarations for COVID-19 and to work with 91 tribal nations.

The record-breaking response operations included the activation of the National Response Coordination Center (NRCC) for 301 days (and counting). From March 29, 2020, through June 30, 2020, the 249 Project Airbridge flights sped more than 1.7 billion units of personal protective equipment (PPE) and other medical supplies into the United States, and FEMA coordinated with the private sector on distribution of billions of pieces of equipment and supplies.

### Private Sector Coordination and PPE Allocation

As of September 27, 2020, FEMA, HHS, and the private sector coordinated the delivery of 249 million N95 respirators, 1.1 billion surgical masks, 46.7 million eye and face shields, 432 million surgical gowns/coveralls, and more than 28.6 billion gloves to SLTT partners. In support of the U.S. Department of Veterans Affairs (VA), FEMA also coordinated shipments of more than 8.1 million N95 respirator masks, 500,000 surgical masks, more than 3.3 million gloves, 595,360 face shields, and 30,000 surgical gowns to facilities across the country. To address the critical need in long-term care facilities, FEMA delivered 30,458 medical shipments to nursing homes in all 50 states and two territories.

As communities across the country struggled with the impacts of the pandemic, FEMA continued to deliver assistance to its partners. As of the end of September 2020, FEMA had obligated $42.6 billion in individual assistance, more than four times the previous annual record. Within 48 hours of the President's announcement that a new grant program needed to be developed, the Lost Wages

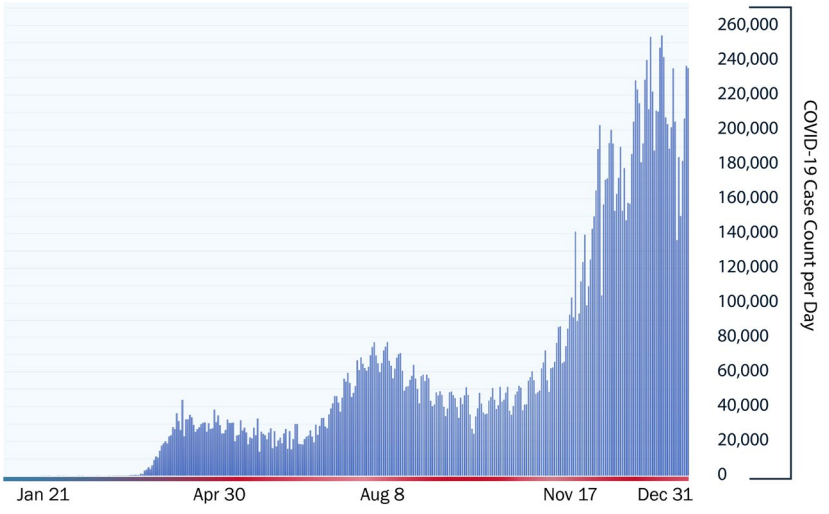
Assistance grant application and associated program guidance were posted on Grants.gov and FEMA.gov, respectively. FEMA streamlined the grant review award timeline, lowering the average 20 days to just two days.

FEMA also responded to many disasters in 2020, including a record-breaking hurricane season in the Atlantic Ocean, and the most active fire year on record for the West Coast, with record-breaking wildfires in California, Colorado, Nevada, New Mexico, Oregon, Utah, and Washington. To help communities prepare for these events, FEMA released the COVID-19 Operational Guidance for the 2020 Hurricane Season (CPOG) in May 2020, which was developed and published in only 23 days. The disaster operations outside of COVID-19 included the following:

- Supporting California's largest fire in history, the August Complex Fire.
- Managing the response to 10 named storms in September alone, two more than the previous highest number; with five active tropical cyclones on the same day, September 14.
- Awarding the largest and second largest Public Assistance Program grants in history to Puerto Rico. On September 23, 2020, FEMA awarded $9.5 billion to the Puerto Rico Electric Power Authority (PREPA) to rebuild Puerto Rico's electric grid and infrastructure and $2 billion to the Puerto Rico Department of Education to rebuild Puerto Rico's educational facilities.

The scale and duration of COVID-19 operations challenged FEMA's capabilities as the agency coordinated with the White House Coronavirus Task Force (WHTF) and other federal agencies, supported its SLTT partners, and simultaneously worked to preserve its own workforce from illness. In addition, because the COVID-19 pandemic strained global supply chains and existing stockpiles of PPE, FEMA had to adapt to manage scarce resources that were insufficient to meet national demands. This response tested FEMA's capacity to maintain operational awareness of both the types and quantities of items that states were requesting.

As of the publication of this report, COVID-19 cases continue to rise exponentially in the United States (see Figure 1).[6] The pandemic is not over; FEMA's role in the federal response continues. FEMA still has over 1,100 people deployed to support COVID-19 operations and has averaged over $310,000,000 in weekly COVID-19 obligations since September 30, 2020. The purpose of assessing an ongoing response is to provide FEMA leadership with real-time data and findings so the




*Source: CDC*

**Figure 1. Daily U.S. COVID-19 Cases through December 31, 2020**

agency can implement and incorporate best practices across the agency to support current COVID-19 operations. This report will also inform the FEMA Administrator's 2021 planning guidance and prepare the agency for potential future pandemic incidents.

This report focuses on FEMA's role in COVID-19 operations at the field, region, and headquarters (HQ) levels. It does not evaluate the role of other federal agencies or SLTT partners, non-governmental organizations, or private sector partners. This report covers the timeframe from January 2020 through the end of September 2020, and primarily focuses on March 19, 2020, when FEMA assumed the lead for the federal response, through September 30, 2020. The report is a collaborative product led by FEMA's Continuous Improvement Program (CIP) and it reflects the experiences of HQ, all 10 FEMA regions, and the field offices in affected states, tribes, and territories.

FEMA analyzed an extensive amount of data, conducted hundreds of interviews and hotwashes across FEMA HQ and all 10 FEMA regions, and conducted surveys that garnered 7,358 responses. This report captures insights, identifies key operational and strategic-level findings, and offers recommendations to inform FEMA and the emergency management community in the five areas summarized below, which collectively include 32 key findings and 57 recommendations. Detail on the key findings and recommendations are detailed in the proceeding sections and provided in summary tables in Appendix A

## Coordinating Structures and Policy

Section 1 focuses on the authorities, policies, and organizational structures FEMA applied and leveraged when leading operations and includes five key findings and 11 recommendations. FEMA used federal structures and policies in non-typical ways to effectively respond to the unprecedented nature and scope of the COVID-19 pandemic. This response involved close coordination with the U.S. Department of Health and Human Services (HHS), the creation of operational task forces, the establishment of a Unified Coordination Group (UCG), extensive coordination with the White House Coronavirus Task Force (WHTF), and an expanded process for messaging approval and distribution.

Initial planning envisioned that HHS, rather than FEMA, would take the lead in the pandemic response; however, on March 18, 2020, the President and Vice President informed the FEMA Administrator that FEMA would be leading the response. The decision to shift the lead role from HHS to FEMA involved a rapid adjustment to the operation's organizational structure and real-time adaptations of coordination mechanisms. On March 19, 2020, the operational task forces that HHS stood up were transferred to FEMA. Although the new organizational construct required for this response presented challenges to task forces integrating into the NRCC structure, these issues were resolved as integration and coordination improved over time. In addition, FEMA and the White House were able to coordinate effectively and efficiently to formulate and implement a response even though existing plans and policies did not envision a WHTF led by the Vice President requiring frequent communication of decisions.

*For the COVID-19 response, the UCG brought FEMA and HHS executives together to make operational decisions. (FEMA)*

Notably, the COVID-19 response was the first time FEMA had implemented a federal interagency UCG. The UCG effectively adapted its role to meet the challenges presented by the pandemic as federal government priorities shifted to managing resource scarcity challenges across the nation; however, the development of procedural documents to support UCG operations would help response staff engage the UCG more effectively. Staff supporting the NRCC and task forces often did not understand the UCG's role and reported not knowing how and when to engage with the UCG. Frequent communication and steady information flow between the NRCC chief and the UCG principals helped mitigate some of the challenges that arose from a lack of familiarity with UCG procedures.

In leading the National Joint Information Center (NJIC), FEMA had to modify its procedures for coordinating messaging with the interagency partners and the WHTF. The lack of clarity about FEMA and the UCG authorities and roles created confusion about the clearance process for external messages. The unprecedented COVID-19 response has exposed areas where messaging product logistics can be better refined, implemented, and communicated.

## Resources

The COVID-19 pandemic has led to insufficient resources to meet national demands. Section 2 describes how FEMA adapted systems and processes for identifying and allocating resources and pursued new methods of procuring and expediting their availability. This section has eight key findings and 16 recommendations. The health care sector was most affected, with global shortages of PPE and testing kits. In response, FEMA procured and managed unfamiliar resources and adapted to working in an environment marked by global shortages.

The COVID-19 pandemic stressed the traditional resource request process and systems, which affected FEMA's understanding of the resources needed, and often required significant time to manually process requests. Resource scarcity meant requests often could not be completely fulfilled, and FEMA addressed resource shortages with new analytical tools and collaboration with the private sector. New analytical products, like FEMA's Resource Allocation Tool and the Supply Chain Data Tower, showed the importance of data in emergency management. The Resource Allocation Tool incorporated private sector supply data, health data, RRFs, historical supply information, and frequency of requests to better allocate and distribute resources. The Data Tower was a public-private partnership to centralize distributor inventory movement and supply chain information.

Despite global shortages, FEMA distributed billions of dollars' worth of PPE and other resources (see Figure 2). Project Airbridge expedited critical supplies from the global market to domestic supply chains and reduced the transit time between manufacturer and customer from 30–45 days via ocean freight to about 5 days. Over a span of 92 days, Project Airbridge delivered over 1.7 billion units of PPE and medical supplies. Unfortunately, the lack of a centralized system to integrate non-FEMA resources affected visibility of the resources shipped and the estimated delivery dates for the SLTT partners.

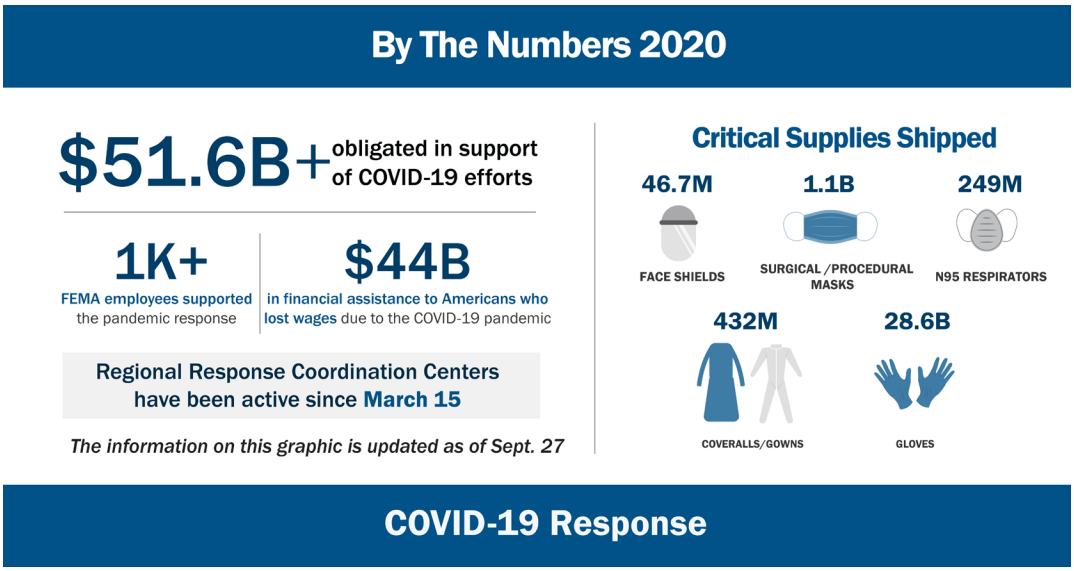



**Figure 2. FEMA Distributed Billions of Resources and in COVID-19 Aid**

FEMA coordinated with private sector partners to expand access to scarce resources but lacked a consistent strategy across the operation for involving the private sector. FEMA used the Defense Production Act (DPA) to retain medical exports for domestic use, prioritize federal contracts with medical suppliers, and partner with the private sector to assess future needs and production capabilities. On August 12, 2020, FEMA established a 708 Voluntary Agreement under the DPA with manufacturers of PPE and other health care resources to facilitate communication between the government and private sector and improve distribution and allocation of these items. New DPA processes created additional administrative steps, but still allowed the DPA to be used in novel ways that could prove useful for future catastrophic incidents.

## Supporting State, Local, Tribal, and Territorial Partners

Section 3 outlines FEMA's approach to COVID-19 response operations that were locally executed, state, tribe, and territory managed, and federally supported, and how personnel, resources, and communications were used. FEMA's established operational relationships provided an effective national framework for the federal government to serve and support SLTT partners. This section contains five key findings and eight recommendations. FEMA's established operational relationships provided an effective national framework for the federal government to serve and support SLTT partners.

FEMA's approach to incident management was largely successful in supporting partners based on pre-existing relationships and coordination systems, practices, and past engagements. FEMA Integration Teams (FITs) and Incident Management Assistance Teams-Advance (IMAT-As) provided valuable planning and resource coordination for partners. FIT and IMAT-A members answered inquiries, connected partners to FEMA stakeholders, and supported SLTT partners during COVID-19 operations for response to other natural disasters. Opportunities exist to improve staffing, training, deployment, and systems access for these teams to further advance their ability to support SLTT authorities.

*FEMA provided funding to support SLTT alternate care facilities to significantly increase the nation's health care capacity. (FEMA)*

The complexity and magnitude of the COVID-19 response led to challenges in coordination and communication with several SLTT partners and contributed to inconsistent provision of support, difficulty in allocation of resources, ambiguity in cost share obligations, and delays in some SLTT engagement. Supporting the tribal partners effectively was a specific challenge. Notably, there were 91 COVID-19 tribal nation recipient agreements, 172 sub-recipient agreements under state declarations, and one major disaster declaration for the Seminole Tribe of Florida. Existing relationships between tribal nations and FEMA differed across the regions, which led to variation in response efforts.

Given the nature of the pandemic, the federal government expedited funding to partners to fulfill emergency needs, deferring determination of allocation for various federal funding sources, which have different rules governing cost share and applicability. Given the number of different funding sources, it was often not clear to SLTT partners who was funding the fulfillment of each request and the extent of their own cost shares. As a result, the regions worked closely with SLTT partners to resolve funding stream confusion.

Vague engagement guidance and product clearance protocols hindered the regions' ability to successfully convey accurate and timely information to SLTT partners. The lack of an SLTT partner-specific engagement plan at HQ with targeted messaging for specific stakeholders and groups created communications challenges in identifying, relaying, and addressing the needs of partners. The Office of External Affairs appointed a Regional Coordinator to advocate on behalf of the regions in federal-level meetings and to ensure full coverage and distribution of federal messaging to the regions.

## Preparedness and Information Analysis

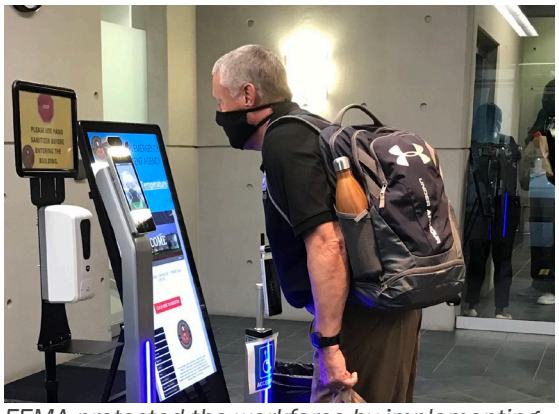
Section 4 discusses the preparedness actions that were taken prior to COVID-19, and how information was collected, managed, and analyzed during the operations. This section includes seven key findings and eight recommendations. Federal pandemic planning was insufficient for a national incident and did not account for interagency operations, resource shortages, and an integrated federal approach to supporting SLTT partners effectively. The 2018 Pandemic Crisis Action Plan (PanCAP) did not envision FEMA as the agency leading federal response for a whole-of-government response under the Stafford Act, or its role in managing health and medical supplies and equipment for SLTT partners nationally. FEMA regional pandemic plans either did not exist or did not account for jurisdiction-specific capabilities or deficiencies.

Existing pandemic plans identify information requirements for decision making; however, they lack the specificity and guidance to establish data collection and reporting mechanisms for effective decision-making for a national event. Decision-makers did not initially have all the information they needed to make the most informed decisions about scarce resource allocation and prioritization of medical supplies. Regionally, the processes and mechanisms for the flow of information during a pandemic between SLTT partners, HHS, and other FEMA partners had generally not been established prior to the event. Without refined data requirements, FEMA asked for and received many types of data requests from regional, state, and local entities.

FEMA's current situational awareness reporting products limit data sharing and data-driven decision-making. FEMA and regional staff needed additional information not identified or shareable in existing products, so FEMA developed their own decision-making products to suit their audiences. HHS and FEMA's use of separate information management systems during COVID-19 response operations hampered the agencies' ability to establish and maintain a common operating picture.

## Organizational Resilience

Section 5 covers FEMA's actions to protect and preserve its workforce and maintain and staff steady-state and disaster operations. This section contains seven key findings and 14 recommendations. The COVID-19 pandemic directly challenged FEMA's ability to maintain its organizational resilience as it faced anticipated and unanticipated disruptions to its internal operations and supporting mission requirements. FEMA was supporting 43 concurrent, open disaster declarations with over 5,000 personnel deployed prior to standing up the NRCC for COVID-19 operations. Agency leadership took several actions to preserve the workforce and ensure continuity of programs and staffing in this complex environment, requiring exceptional cross-agency collaborations.



*FEMA protected the workforce by implementing protective measures for staff entering facilities, such as temperature screening kiosks. (FEMA)*

To protect the health and safety of the workforce, FEMA implemented and enhanced protective measures over time. Specific measures included cleaning procedures at FEMA's fixed and disaster facilities, COVID-19 contact tracing, maximum telework options, temperature and wellness screenings, personal protective equipment (e.g., facial coverings) and associated guidance, COVID-19 testing for employees on assignment, and random onsite COVID-19 testing for individuals entering select FEMA facilities. Investments in mobility enabled FEMA to implement an agency-wide shift to telework, with FEMA employees reporting high levels of productivity while working remotely. Through a shift in resources and workforce innovation, FEMA was largely able to adapt and execute its mission while operating in the COVID-19 environment.

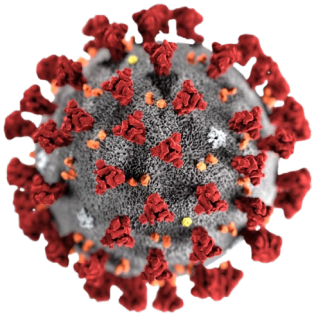
The pandemic also presented unique challenges to FEMA's processes, including how guidance was adapted and messaged, decisions were made, and programs were delivered, all while sustaining critical agency operations. FEMA's Pandemic and Emerging Infectious Disease Workforce Protection Plan had not been recently updated, and headquarters was delayed in establishing clear coordination on internal workforce guidance and communications in the early stages of COVID-19. Because of this delay, the FEMA workforce perceived messaging as untimely, unclear, or both. While FEMA was successful in leveraging its Continuity of Operations Plan Pandemic Annex and continuity tactics for workforce protection; using continuity nomenclature in agency messaging caused confusion about how programs and resources should be prioritized. FEMA was not, however, prepared to staff its NRCC for a long-duration pandemic incident of national scale and was hampered by the need for employees with specialized skillsets and by its workforce management practices. FEMA's restoration planning efforts provided the workforce comprehensive COVID-19 guidance and resources, but the agency will require additional focus on behavioral and mental health support for its workforce going forward.

The COVID-19 pandemic forced the agency to enable a virtual workforce and identify new strategies for using technology. It also affected how the agency protected its people, from preventing the spread of the virus in its workplaces to addressing the workforce's emotional and physical health.

# Overview of the Coronavirus Disease 2019 Pandemic

## The Coronavirus

On December 31, 2019, the World Health Organization (WHO) obtained open-source information indicating several cases of "viral pneumonia" in Wuhan, China. The WHO informed its Global Outbreak Alert and Response Network partners of the cluster of pneumonia cases on January 2, 2020.[7] On January 7, 2020, Chinese authorities indicated that the reported outbreak was attributable to a novel coronavirus, and the WHO reported human-to-human transmission of the virus on January 21, 2020.[8] The first confirmed case of the novel coronavirus in the United States occurred on January 21, 2020, in a person who had recently returned from Wuhan, China. This marked the beginning of the recognized series of events leading to FEMA's COVID-19 response.



*SARS-CoV-2 (CDC Public Health Image Library)*

The WHO declared a Public Health Emergency of International Concern (PHEIC)[a] on January 30, 2020, upon observing that human-to-human transmission of the novel coronavirus had developed in four countries outside of China. The WHO characterized the virus as a pandemic on March 11, 2020, in response to evidence the number of cases outside China had increased 13-fold, and the number of affected countries had tripled.[9] At that time, public health authorities began to recognize the risks associated with the novel coronavirus classified as SARS-CoV-2 and its associated disease, known as "coronavirus disease 2019" or "COVID-19." The highly contagious and virulent nature of this disease has led to the worldwide spread of significant illness and death.[10,11] COVID-19 remains, as of this writing, a pandemic.[b] The high degree of pre-symptomatic and asymptomatic transmission of COVID-19 is unprecedented; these unique characteristics have contributed to the ongoing challenges the U.S. faces in its response to this disease. As of September 10, 2020, the best estimate of the U.S. Centers for Disease Control and Prevention (CDC) is that 50% of COVID-19 transmission occurs before symptom onset and that approximately 40% of patients are asymptomatic throughout the course of the disease.[12]

[a] A *Public Health Emergency of International Concern (PHEIC)* is defined in the International Health Regulations (2005) as "an extraordinary event which is determined to constitute a public health risk to other States through the international spread of disease and to potentially require a coordinated international response."
[b] A *pandemic*, as defined by the CDC, refers to an epidemic that has spread over several countries or continents, usually affecting a large number of people.

COVID-19 exacts a disproportionate toll on older people, the immunocompromised, nursing home residents, people with disabilities, and individuals with a variety of underlying conditions, including obesity, diabetes, heart conditions, and chronic obstructive pulmonary disease.[13] Health care workers, first responders, meat packers, poultry workers, and public transportation employees represent a portion of the "essential workers" who face an inordinate risk of exposure to COVID-19.

*Essential workers face a high risk of exposure to the virus and require personal protective equipment. (FEMA)*

Additionally, members of racial and ethnic minority groups, multigenerational families, and lower income individuals are disproportionately burdened by a higher incidence of simultaneous multiple chronic diseases or conditions and a decreased capacity to maintain mitigation measures such as social distancing. The racial and ethnic disparities in the frequency of U.S. COVID-19 cases, hospitalizations, and deaths are represented in Table 1 relative to the national per capita data from the CDC, as of November 30, 2020.

**Table 1. U.S. COVID-19 Cases, Hospitalization, and Deaths by Race/Ethnicity**

| Rate ratios compared to white, non-Hispanic persons | American Indian or Alaska Native, non-Hispanic persons | Asian, non-Hispanic persons | Black or African American, non-Hispanic persons | Hispanic or Latino persons |
|---|---|---|---|---|
| Cases | 1.8x higher | 0.6x higher | 1.4x higher | 1.7x higher |
| Hospitalizations | 4.0x higher | 1.2x higher | 3.7x higher | 4.1x higher |
| Deaths | 2.6x higher | 1.1x higher | 2.8x higher | 2.8x higher |

*Source: CDC*[14]

This is the landscape of the COVID-19 pandemic in the United States today. Faced with this myriad of challenges, the federal government has coordinated a vast array of fiscal, physical, and resource-intensive interventions that involve cooperation and collaboration with interagency and state, local, tribal, and territorial (SLTT) partners. The following overview provides a chronological perspective of key events and actions taken during the pandemic to establish a foundation for the FEMA COVID-19 Initial Assessment Report. Figure 3 provides a timeline of key events that occurred in the United States during the period of January 1, 2020, through September 30, 2020. Appendix B provides a table with the content of the timeline.

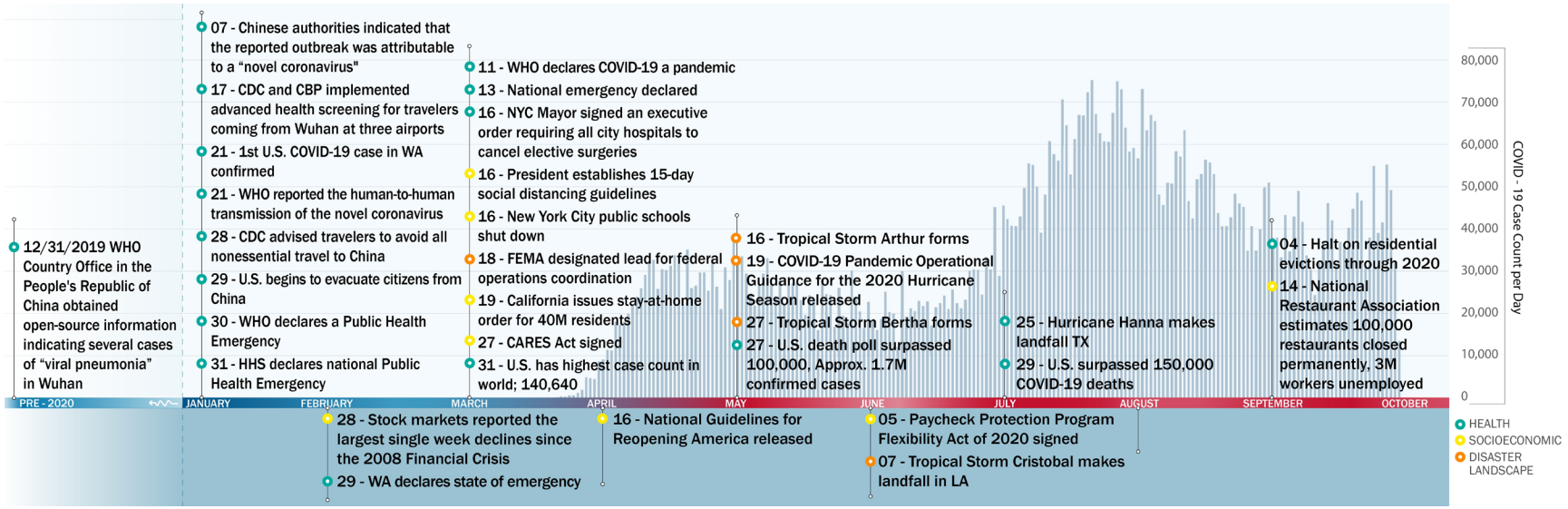



**Figure 3. COVID-19 Pandemic Timeline in the United States**

## Health Landscape

On January 17, 2020, an awareness of the risks associated with the novel coronavirus prompted the CDC and U.S. Customs and Border Protection to implement advanced health screenings at three airports for travelers coming from Wuhan.[15] Just four days later, on January 21, 2020, the state of Washington confirmed its first case—a traveler from the Wuhan area—cementing the threat on U.S. soil. The CDC advised travelers to avoid non-essential travel to China[16] and issued guidance on infection prevention and control practices for health care providers.[17] As the number of COVID-19 cases and deaths in China increased and more countries reported human-to-human transmission, the United States began to evacuate citizens from China on January 29, 2020.[18] On January 31, 2020, the Secretary of Health and Human Services declared a public health emergency for the entire United States.[19]

The outbreak continued to spread in Washington, where an individual from the Seattle area died and new cases emerged inside a nursing care center, leading officials to declare a state of emergency on February 29, 2020.[20] Cases began to rise rapidly across the country, and on March 13, 2020, the President declared a nationwide emergency declaration under Section 510(b) of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act), and concurrently issued an emergency declaration under the provisions of the National Emergencies Act of 1976.[21] On March 16, 2020, as New York emerged as the epicenter of cases in the U.S.,[22] the mayor of New York City signed an Emergency Executive Order requiring all city hospitals to cancel elective surgeries effective March 20, 2020.[23] Hospitals across the country were increasingly overwhelmed, and states began to request personal protective equipment (PPE) from the Strategic National Stockpile (SNS).[24]

*Alternate care facilities open as COVID-19 cases rise. (FEMA)*

By the end of March, the United States reported the highest case count in the world, with 103,321 confirmed cases per the WHO.[25] On May 27, the U.S. death toll, as reported by the CDC, surpassed 100,000, with nearly 1.7 million confirmed cases.[26] In June, some states started requiring visitors from hot-spot states to self-quarantine amid growing case counts across the nation,[27] and an increasing number of states issued mandatory mask orders.[28] Also in June, analysis of U.S. COVID-19 deaths by the Center for Infectious Disease Research and Policy showed that nursing home residents accounted for 40% of the total deaths.[29] In July and August, as coastal states saw decreasing or stabilizing case counts, more central states started to see their case counts rise.[30] By early August, the United States reached 5 million confirmed cases,[31] with a death toll of more than 150,000, based on CDC data.[32]

The government continued to implement public health measures to safeguard the American public. On September 4, 2020, the CDC announced a temporary halt on residential evictions effective through December 31, 2020, citing this action as a public health measure to prevent the further spread of the disease.[33] The U.S. Transportation Security Administration, employing its "Stay Healthy, Stay Secure" protocol, screened more than 3 million passengers at airports during the Labor Day holiday weekend, including 969,000 on September 4, 2020. This represented the most individuals screened on any single day since March 17, 2020.[34] By the end of September, the President provided an update on the national COVID-19 testing strategy, citing a plan to distribute 150 million rapid tests to states and territories.[35]

## Socioeconomic Landscape

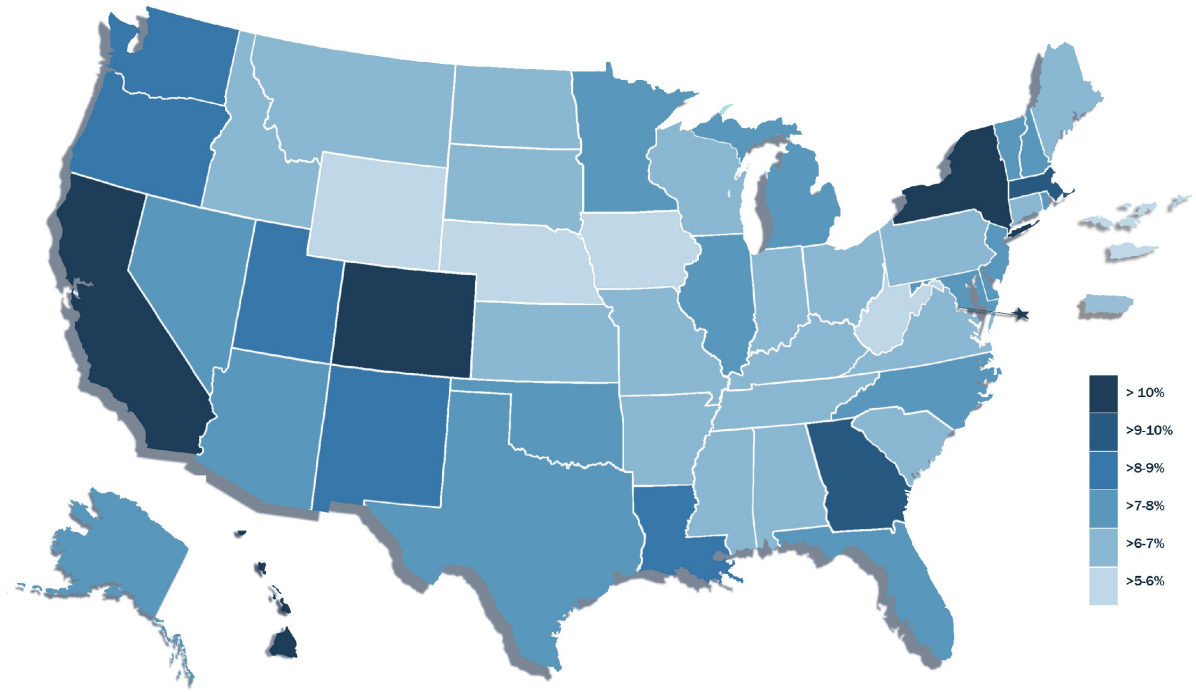
In late February, financial markets plunged as COVID-19 cases spiked outside China.[36] As the nation's economic indicators declined, public concern associated with COVID-19 more visibly increased in March. People began to stockpile staple home goods such as toilet paper, hand sanitizer, canned goods, and face masks. These items became scarce because of a sudden uptick in consumer demand, limited domestic production, and disrupted supply chains across industries.

On March 13, 2020, the President declared a national emergency, which released billions of dollars in federal funding to fight disease spread; three days later, he established 15-day social distancing guidelines for Americans.[37] New York City public schools shut down[38] and California issued a stay-at-home order for its 40 million residents.[39] Businesses and government agencies started implementing different work shifts and teleworking capabilities for employees. Events such as music festivals and sporting tournaments were delayed or cancelled. In an unprecedented attempt to contain the outbreak, officials in the nation's largest cities ordered thousands of retail stores, bars and restaurants, and entertainment venues to close their doors to customers.[40] Public polling indicated that 9 out of 10 Americans stopped going to bars and restaurants.[41] Figure 4 represents the decrease in open small businesses across the United States from March to September 2020.

The federal government began to implement measures to stimulate the economy. On March 27, 2020, the President signed the Coronavirus Aid, Relief, and Economic Security (CARES) Act into law, the largest single spending bill in the nation's history. The CARES Act included stimulus for small businesses through the Paycheck Protection Program (PPP), which provided up to eight weeks of payroll support for eligible businesses. The Federal Reserve used a range of tools to support the economy, including lowering the federal fund rate and encouraging banks to lend money to businesses in need.

By mid-April, most Americans were under stay-at-home orders. People who felt that their constitutional rights and livelihoods were threatened began to protest in state capitals nationwide against local enforcement of mask requirements and business closures.[42] On April 16, 2020, the White House released broad guidelines for how communities could resume aspects of public life, including the reopening of schools, restaurants, and theaters in certain areas of the country, based on evidence that the virus was waning.[43] Amid these efforts to address public health and economic concerns,[44] the unemployment rate continued to rise sharply in most states. The national

unemployment rate peaked at 14.7% in April 2020 (compared to 3.5% in February 2020).[45] In an April 2020 survey, the National Bureau of Economic Research indicated that 41.4% of small businesses reported temporary closures.[46] In the meantime, meat and poultry processing facilities reported large outbreaks among workers, adding to existing disruptions in the domestic food supply chain.[47] Beginning in May, many states began to ease COVID-19-related restrictions and allowed businesses such as restaurants, retail stores, and salons to reopen.[48]




*Data not available for American Samoa, Guam, Commonwealth of Northern Mariana Islands

**Figure 4. Decrease in the Percentage of Open/Operating Small Businesses by State**

On June 5, 2020, the President signed the Paycheck Protection Program Flexibility Act of 2020, modifying provisions related to the loan forgiveness for small businesses under the PPP.[49] States applied different approaches to reopening business, with many states reversing their re-openings in late June and early July as cases surged and concerns about disease transmission, hospitalizations, and insufficient testing increased.[50] Large retail stores including Walmart, CVS, and Target started requiring all shoppers to wear facemasks in thousands of stores across the country.[51]

The end of summer brought uncertainty about the new school year. An analysis of the 100 largest school districts in the United States published in September revealed that 74% would utilize remote learning as their sole back-to-school instructional model, while 24% would utilize standard in-person instructional methods full-time.[52] Hundreds of colleges and universities reversed or altered their reopening plans for the fall semester by delaying in-person instruction to a later date or instituting online instruction.[53]

The real gross domestic product fell sharply in the second quarter of 2020, at an annual rate of 32.9%.[54] Industries across the energy, health care, meat, restaurant, shipping, travel, and transportation sectors were severely affected. On September 14, 2020, the National Restaurant Association estimated that approximately 100,000 restaurants were closed either permanently or long term, and nearly 3 million restaurant employees remained out of work.[55]

*In addition to the pandemic, 2020 was a historic year for natural disasters, requiring FEMA operations. (FEMA)*

## Disaster Landscape

Before and during the pandemic, FEMA responded to multiple disasters, including a dam/levee break, two earthquakes, floods, severe storms, tornadoes, and wildfires (see Figure 5). The 2020 hurricane season proved to be very active, with Tropical Storms Arthur and Bertha forming on May 16 and 27, respectively, before the official June 1 start of the season. On May 19, 2020, FEMA released the COVID-19 Pandemic Operational Guidance for the 2020 Hurricane Season. This guidance was applicable to all hazards and was designed "to help emergency managers and public health officials best prepare for disasters, while continuing to respond to and recover from coronavirus (COVID-19)."[56] As of September 30, 2020, there had been 25 named Atlantic Ocean storms and 2020 became the most active Atlantic hurricane season in history. This added another layer of complexity to the existing pandemic challenges. The Gulf Coast was particularly susceptible to the onslaught of storms as Tropical Storm Cristobal, Hurricane Hanna, Hurricane Isaias, Hurricane Laura, Tropical Storm Marco, and Hurricane Sally all affected this region between June 7 and September 16. Seven major disaster declarations were issued for three of these hurricanes: Isaias, Laura, and Sally. FEMA's financial assistance (which encompasses Individual Assistance, Public Assistance, and Hazard Mitigation Assistance) was $710,033,782, as of December 14, 2020, for these major disaster declarations.[57]

While the eastern United States faced storms, the western United States battled wildfires in the most active fire year on record, which included 5 of the 10 largest fires in California's history. Deadlier wildfires than in years past swept across the West Coast, causing thousands to evacuate. A record-breaking number of wildfires erupted across California, Colorado, Nevada, New Mexico, Oregon, Utah, and Washington, with FEMA personnel deployed to nine of these events. Three major disaster declarations were issued for three of these wildfires, which involved more than 2,606,251 acres[58] and $95,151,324, as of December 14, 2020,[59] in FEMA financial assistance and support.

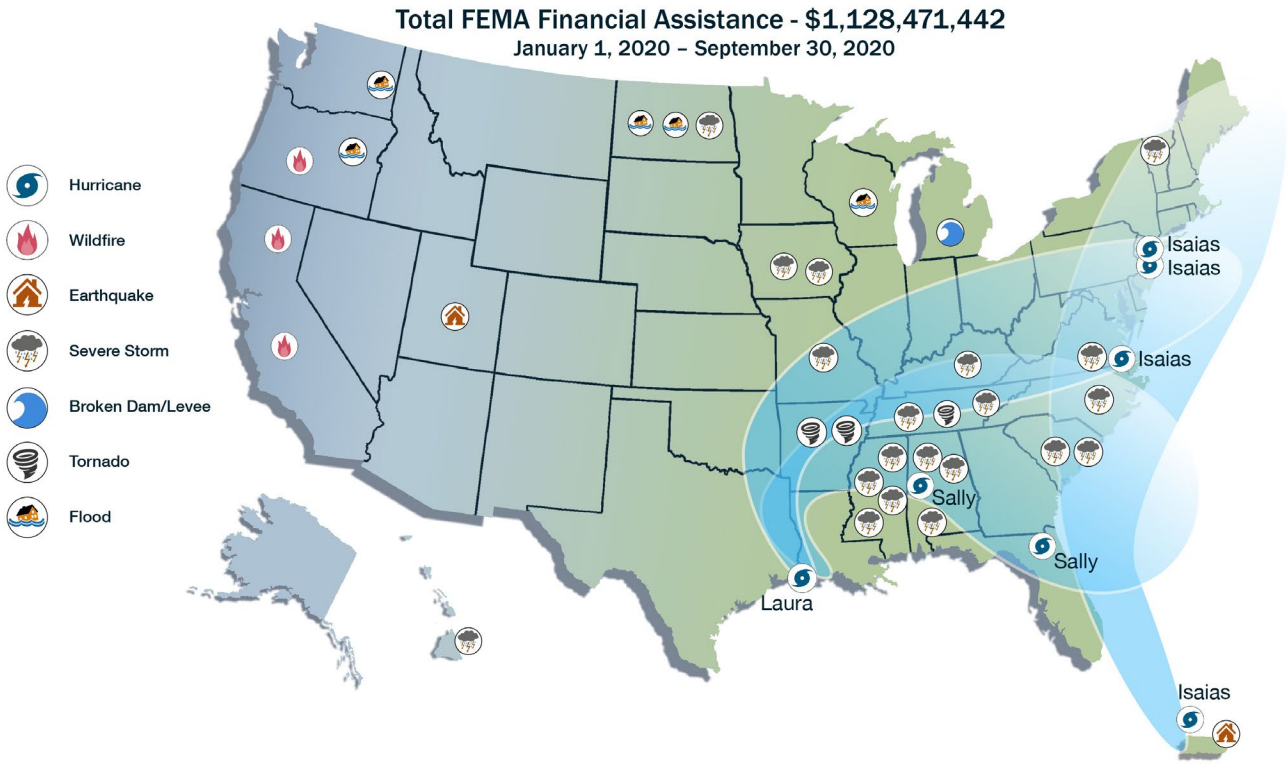



**Figure 5. Major Disaster Declarations, January–September 30, 2020**

## Timeline

The timeline in Figure 6 captures events from January 1, 2020, through September 30, 2020, and focuses on FEMA's actions and decisions related to the pandemic response. The timeline also includes key actions taken by organizations engaged in monitoring, communicating, and coordinating intergovernmental response activities to mitigate the effects of COVID-19. Appendix B provides tables with the content of the various timelines in the report.

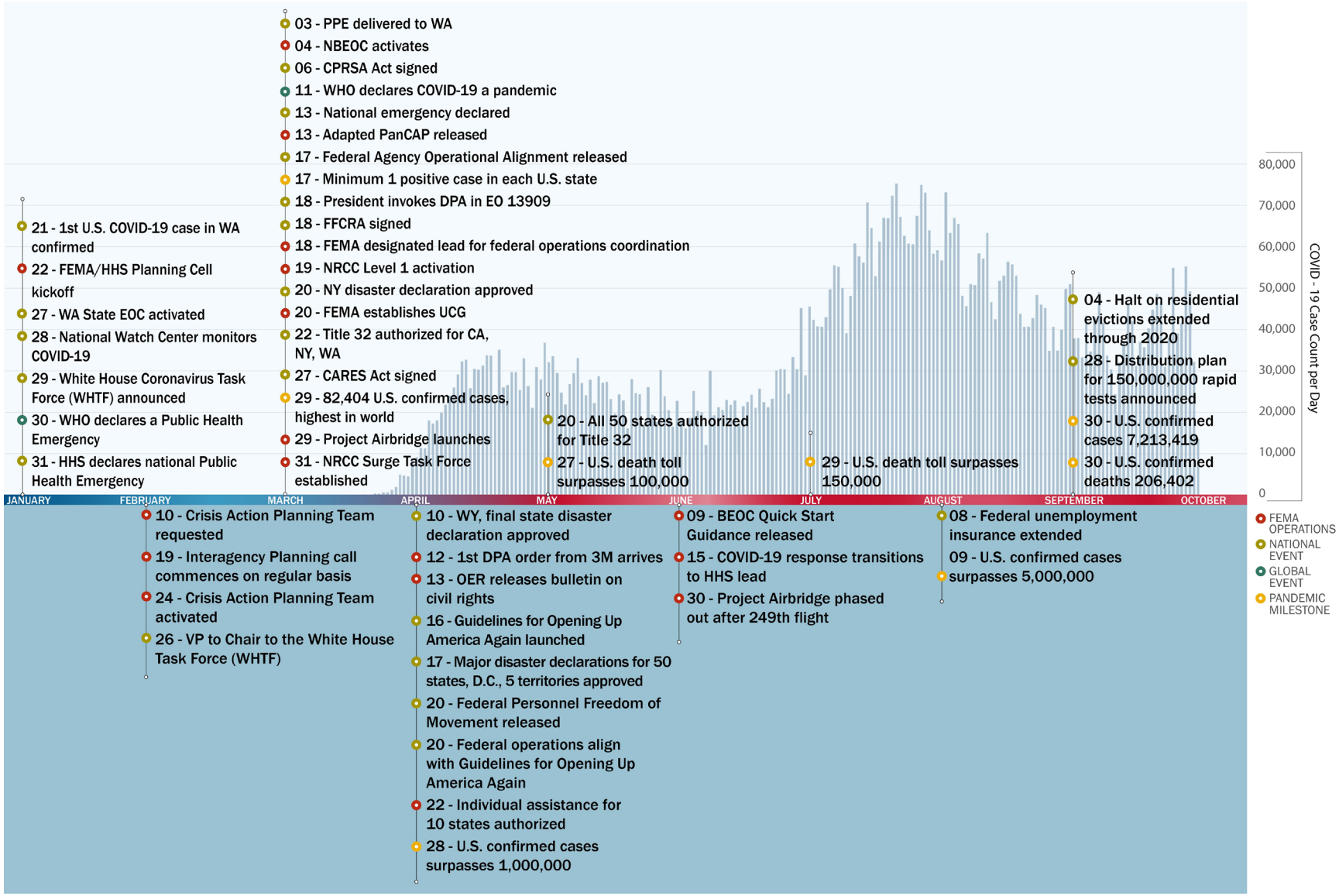
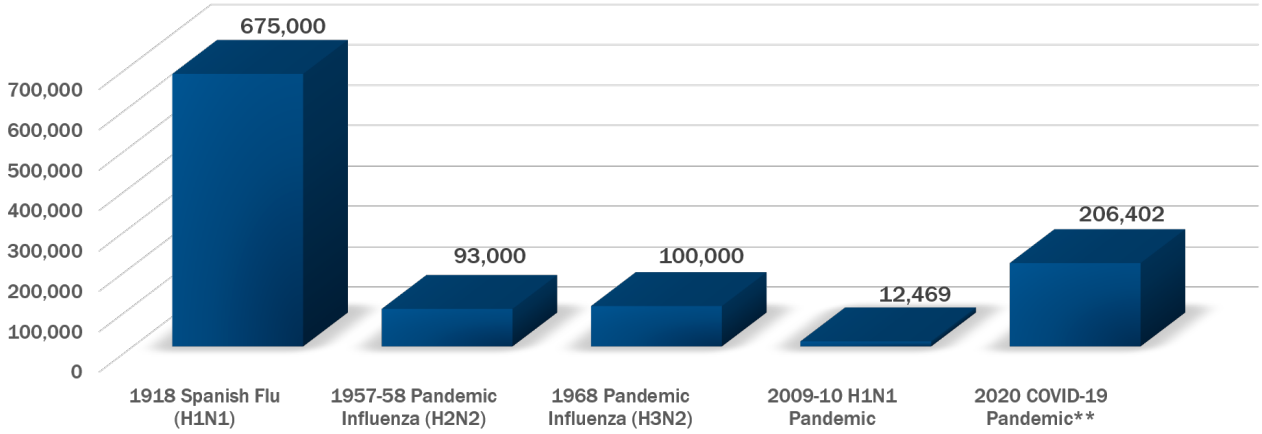



**Figure 6. FEMA COVID-19 Response Overview Timeline**

# Introduction to Federal Operations During a Pandemic

The scale of the federal government's response to COVID-19 is unprecedented, as is FEMA's effort to coordinate across agencies; state, local, tribal, and territorial (SLTT) partners; and the private sector. The COVID-19 pandemic represents the first time in U.S. history that the President authorized major disaster declarations for all states and territories for the same event. In responding to the pandemic, FEMA managed 57 concurrent Presidential Major Disaster Declarations—one for every state, the District of Columbia, five territories, and the Seminole Tribe of Florida—while simultaneously activating all 10 FEMA Regional Response Coordination Centers (RRCCs).

The response to COVID-19 is first time FEMA has led federal operations for an infectious respiratory disease pandemic since the agency was established in 1979 (see Figure 7). Consequently, the COVID-19 pandemic has tested FEMA and decades of emergency management doctrine defined by the National Incident Management System (NIMS), National Response Framework (NRF), and National Disaster Recovery Framework (NDRF).




*Source: CDC*

**Figure 7. Deaths from Select Pandemics Affecting the United States, 1918–2020**

## Authorities and Operating Environment for a Pandemic Response

### HHS Authorities and PPD-44

The operating environment for a pandemic is unique among all incidents FEMA supports because the authorities guiding a public health emergency (PHE) do not directly align with FEMA's authorities

and corresponding policies. The Secretary of Health and Human Services can invoke the department's authorities under Section 319 of the Public Health Service Act to declare a nationwide PHE. For COVID-19, the PHE was declared on January 31, 2020 (retroactive to January 27, 2020), and civil rights laws remained in force, with the HHS Office for Civil Rights enforcing applicable federal civil rights laws within its jurisdiction. The declaration allowed the Secretary of Health and Human Services to take appropriate actions in the response to the emergency consistent with other authorities, including grants, contracts, investigations into the cause of the disease, and treatment or prevention. The U.S. Department of Health and Human Services (HHS) may also provide supplies, equipment, and services.

The Public Health Emergency Fund is also available to HHS for responding to immediate needs resulting from the PHE. The fund may be used to facilitate coordination among federal and SLTT entities, as well as public and private health care entities, affected by the PHE. Also relevant to pandemic planning, the HHS Assistant Secretary for Preparedness and Response (ASPR) manages the Strategic National Stockpile (SNS), which is the U.S. national repository of antibiotics, vaccines, antitoxins, and other critical medical supplies.

National policy, specifically Presidential Policy Directive 44 (PPD-44), outlines the approach for managing domestic incidents when there is neither a presidential major disaster declaration nor an emergency declaration under Section 501(b) of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act), as was the case initially with COVID-19. PPD-44 enhances the ability of the federal government to respond to domestic incidents by providing for the timely identification of a lead federal agency (LFA) to oversee the federal response prior to a national disaster declaration and by ensuring that an appropriate incident management capability is available. Under this authority, FEMA supported HHS with incident management capability for the COVID-19 response.

## White House Coronavirus Task Force

Concurrent with the PHE declaration, on January 29, 2020, President Donald J. Trump established the White House Coronavirus Task Force (WHTF) to oversee the executive branch's response to COVID-19. The task force—led by Vice President Michael Pence and including all federal departments and agencies with roles in the pandemic response—coordinates and oversees the Administration's efforts to monitor, prevent, contain, and mitigate the spread of COVID-19. HHS and FEMA are part of the WHTF.

The National Security Council requested an update of the interagency Pandemic Crisis Action Plan (PanCAP) to organize the federal response. The PanCAP, originally drafted in 2013 and subsequently revised in 2018, describes the concept of operations and broad organizational construct for pandemic influenza response, triggers, indicators, phased Emergency Support Function (ESF) activities, and federal department and agency roles and responsibilities. FEMA and HHS planners met at the HHS Secretary's Operations Center to quickly adapt the 2018 PanCAP into a COVID-19-specific plan by updating the facts, assumptions, and critical considerations associated with the disease as it was understood at the time. This March 13, 2020, version was coordinated with the Emergency Support Function Leadership Group (ESFLG) and was titled the PanCAP Adapted

(PANCAP-A), U.S. Government COVID-19 Response Plan, which is not a public document. The coordination structure for the federal response to COVID-19 was defined in the PanCAP-A, as shown in Figure 8.

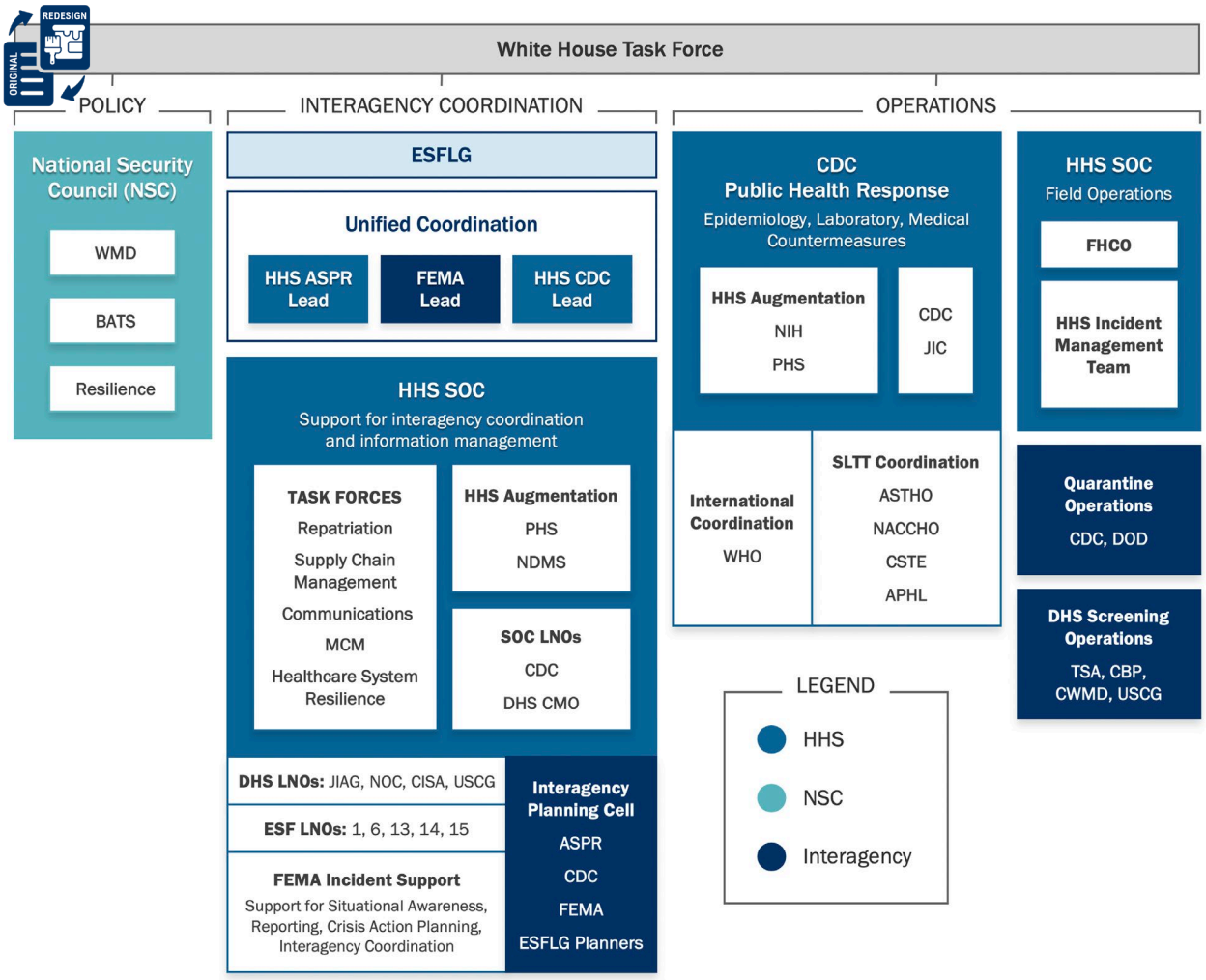



**Figure 8. Initial COVID-19 Response Organization Structure as Shown in the March 13, 2020, PanCAP Adapted USG COVID-19 Response Plan**

## Shift to FEMA under Stafford Act Authorities

In addition to publishing the PanCAP-A on March 13, 2020, the President declared a nationwide emergency under Section 501(b) of the Stafford Act the same day. This declaration granted FEMA access to its broad authorities, as codified in CFR Title 44, and the Disaster Relief Fund. This declaration allowed federal assistance to be mobilized and directed in support of SLTT response efforts.

The federal response structure changed almost immediately. On March 18, 2020, the WHTF directed FEMA to lead the federal response to COVID-19 under the Stafford Act authority and funding. FEMA implemented that direction on March 19, 2020. This decision proved to be a pivotal moment for

FEMA Headquarters (HQ) and the regional offices as they assumed the lead role in responding to this event. The role also presented extraordinary resourcing and logistical challenges. These included using emergency procurement authorities such as the Defense Production Act, adapting systems for receiving requirements and prioritizing them in coordination with SLTT jurisdictions, allocating resources based on timing and need factors, tracking and communicating with requestors on the status of supply and delivery, performing data analysis, developing projections for future needs, and performing a plethora of other supply chain management tasks.

FEMA issued its first ever Civil Rights Bulletin on April 9, 2020. FEMA's Office of Equal Rights is responsible for ensuring compliance with and enforcement of FEMA's external Civil Rights obligations under Sections 308 and 309 of the Stafford Act to ensure that FEMA, SLTT partners, and non-governmental relief and disaster assistance organizations provide relief and assistance activities in an equitable and impartial manner, without discrimination on the grounds of certain protected bases. The bulletin offered best practices for SLTT partners in anticipating and attending to civil rights concerns during COVID-19 operations with information on effective communication access; inclusive planning, response, and recovery; language access, physical accessibility, and environmental justice.

## UCG and National Coordination

On March 19, 2020, FEMA's National Response Coordination Center (NRCC) became the center of activity and decision-making for the Unified Coordination Group (UCG), which had four principals: FEMA Administrator Peter Gaynor, HHS Assistant Secretary for Preparedness and Response Dr. Robert Kadlec, Assistant Secretary for Health ADM Brett Giroir, and Director of the Influenza Division in the National Center for Immunization and Respiratory Diseases at the U.S. Centers for Disease Control and Prevention (CDC) Dr. Daniel Jernigan, MPH.[60] This shift to the NRCC operating structure created challenges in the ongoing efforts to coordinate COVID-19 operations (see Figure 12 in Section 1 Coordinating Structures and Policy).

FEMA's command and control coordination hubs are the NRCC at the national level and the 10 Regional Response Coordination Centers (RRCCs). These centers maintain connectivity with other federal agencies and SLTT emergency operations centers, forming the backbone of FEMA's command and control capability under the National Incident Management System (NIMS). Additionally, in May 2020, FEMA also stood up an NRCC surge site in Washington, D.C., to support other disaster operations, as required.

## Regional Coordination and SLTT Assistance

All 10 FEMA regions activated their RRCCs for the COVID-19 response. The regions implemented strategies for coordinating with other federal agencies, including forming working groups and inviting representatives from other federal agencies, such as HHS, to collocate in the RRCCs. Regions extended their capacities to support SLTT partners by using existing FEMA Integration Teams (FITs) already embedded in most of the states, as well as Incident Management Assistance Teams-Advance (IMAT-As) and liaison officers to enable in-person coordination in state operations and to advise, facilitate, and support requests for assistance. All state, tribal, and territorial partners

*Community-based testing sites are stood up across the nation to track infections. (FEMA)*

became eligible for FEMA Public Assistance Category B, Emergency Protective Measures, through the nationwide emergency declaration by the President. This assistance included funding for alternative care facilities, medical centers, non-congregate sheltering, community-based testing sites, disaster medical assistance teams, mobile hospitals, emergency medical care, and the transportation of necessary supplies such as food, medicine, and personal protective equipment (PPE). The IA Crisis Counseling Program grants were also approved for all 50 states, D.C., Puerto Rico, Guam, and the U.S. Virgin Islands. As seen in Table 2, the assistance, including Category B and other sources, rendered by FEMA and its federal partners to SLTT partners, through September 30, 2020, totaled over $53.8 billion.[61]

**Table 2. FEMA-Obligated Funds for SLTT COVID-19 Efforts, as of September 30, 2020**

| Federal Funding or Program | Obligated Funds[c] |
|---|---|
| Emergency Food and Shelter | $200,000,000 |
| Emergency Management Performance Grant Program COVID-19 Supplemental (EMPG-S) | $100,000,000 |
| Commodities | $38,000,000 |
| Crisis Counseling | $306,000,000 |
| Lost Wages Assistance | $42,000,000,000 |
| National Guard | $2,500,000,000 |
| PPE (medical supplies and pharmaceuticals) | $3,200,000,000 |
| Public Assistance Emergency Protective Measures (Non-PPE) | $3,400,000,000 |
| Temporary Medical Facilities (medical personnel, mortuary, ambulance services) | $2,100,000,000 |

## FEMA's Organizational Resilience

During the response to COVID-19, the FEMA workforce was not immune to the threat facing the country. The pandemic required FEMA to adapt its response practices and workforce posture to not only respond to the pandemic but also simultaneously protect its staff. On March 4, 2020, the FEMA Administrator set three priorities for the agency as COVID-19 began to affect the country. These priorities have guided agency operations:

- Preserve the force—take a proactive posture in informing and protecting our employees;

[c] Obligated funds have been rounded to the nearest million.

- Conduct mission essential functions continuously and be prepared to do so in a COVID-19 degraded environment (be prepared to suspend nonessential functions if required); and
- Lead federal operations on behalf of the White House Coronavirus Task Force.

The workforce rapidly shifted to telework (including those reservists and those deployed to virtually support disaster operations), canceled normal disaster response travel, and adopted remote disaster assessment practices to maintain continuity in programs while protecting staff. FEMA took protective measures to isolate critical operational teams by having them physically distance so that they could remain available for other disasters. Under this new work environment, FEMA responded both to COVID-19 and to a record-breaking series of hurricanes and wildfires. This response is ongoing at the time of this report's release, as the pandemic continues.

# Scope, Methodology and Organization of the Initial Assessment Report

## Scope of the Initial Assessment Report

This report addresses the timeframe from January 1, 2020, through September 30, 2020. This report focuses on FEMA's role in the COVID-19 response operations; it does not assess other federal agencies or SLTT jurisdictions.

## Methodology

FEMA applied a data-driven, mixed methods approach to developing this report. Initial data collection centered on the Administrator's three priorities of preserving the workforce, leading operations on behalf of the WHTF, and executing the agency's mission essential functions. As the incident evolved and additional data were collected, those priorities served as the foundation for the report's five thematic areas with corresponding observations. To compile this report, FEMA did the following:

- Developed a consistent national data collection plan
- Conducted interviews and hotwashes with NRCC leadership as well as with the leads and staff from the multidisciplinary interagency task forces
- Conducted 244 interviews and 44 hotwashes across HQ and all 10 FEMA regions
- Deployed 14 surveys in the Regions and NRCC that had 2,928 collective respondents
- Briefed three interim assessments to senior leadership on tactical and operational findings
- Interviewed the Administrator; senior executives in the Office of Response and Recovery, Mission Support, and Resilience; and the 10 FEMA Regional Administrators
- Deployed a FEMA-wide survey that had 4,430 respondents

This expansive collection effort (summarized in Figure 9) provided every employee at the agency an opportunity to contribute feedback on FEMA's internal and public response to the COVID-19 pandemic. FEMA analyzed these data, performed a detailed document review, engaged with program office subject matter experts, and developed the following sections and observations that assess FEMA's activities during the COVID-19 operations:

- Coordinating Structures and Policy
- Resources
- Supporting SLTT Partners
- Preparedness and Information Analysis
- Organizational Resilience

Appendix C provides more detail on the evaluation approach and methodology.


**Figure 9. Primary Data Sources for the COVID-19 Initial Assessment Report**

# Agency Response

## Section 1. Coordinating Structures and Policy

COVID-19 continues to affect the entire nation, requiring a long-duration response rather than a quick transition to recovery efforts. This incident led FEMA to leverage existing federal policies and structures in a non-typical way. FEMA's response involved close coordination with the U.S. Department of Health and Human Services (HHS), the creation of operational task forces, the establishment of a national-level Unified Coordination Group (UCG), extensive coordination with the White House Coronavirus Task Force (WHTF), and an expanded national-level process for messaging approval and distribution (see Figure 10). Inclusion of these additional steps, processes, and actors represented a striking adaptation of FEMA's established emergency response methods, and challenged efforts at coordination, unified decision-making, and timely implementation of response activities. These challenges present important learning opportunities as FEMA positions itself to respond to similar incidents in the future. Table 3 summarizes the key findings for the section.

**Table 3. Summary of Key Findings for Coordinating Structures and Policy**

| Section 1: Coordinating Structures and Policy summary of key findings | |
|---|---|
| 1.1. | The global scope of the pandemic outstripped assumptions made in existing policies, plans, and procedures, which did not account for FEMA taking a lead agency role during a pandemic; this affected the agency's ability to coordinate an effective response. |
| 1.2. | FEMA consistently and effectively engaged with the White House Coronavirus Task Force during COVID-19. While the level of engagement with the Task Force was unplanned, FEMA adapted its traditional disaster communication and coordination mechanisms to meet requirements. |
| 1.3. | The UCG effectively adapted to manage resource shortages during COVID-19 operations despite the challenges posed by the group's novel role in the response. |
| 1.4. | The operational task forces successfully managed lines of effort for COVID-19 operations; however, FEMA faced challenges integrating task forces into the existing National Response Coordination Center (NRCC) structure, leading to undefined or unknown roles, responsibilities, lines of authority, and organization, which resulted in coordination and communication challenges throughout the operation. |
| 1.5. | FEMA Office of External Affairs was able to establish the National Joint Information Center with HHS and other federal partners; however, the lack of clarity about FEMA's and the UCG's role created confusion around the external messaging clearance process designed for this response. |

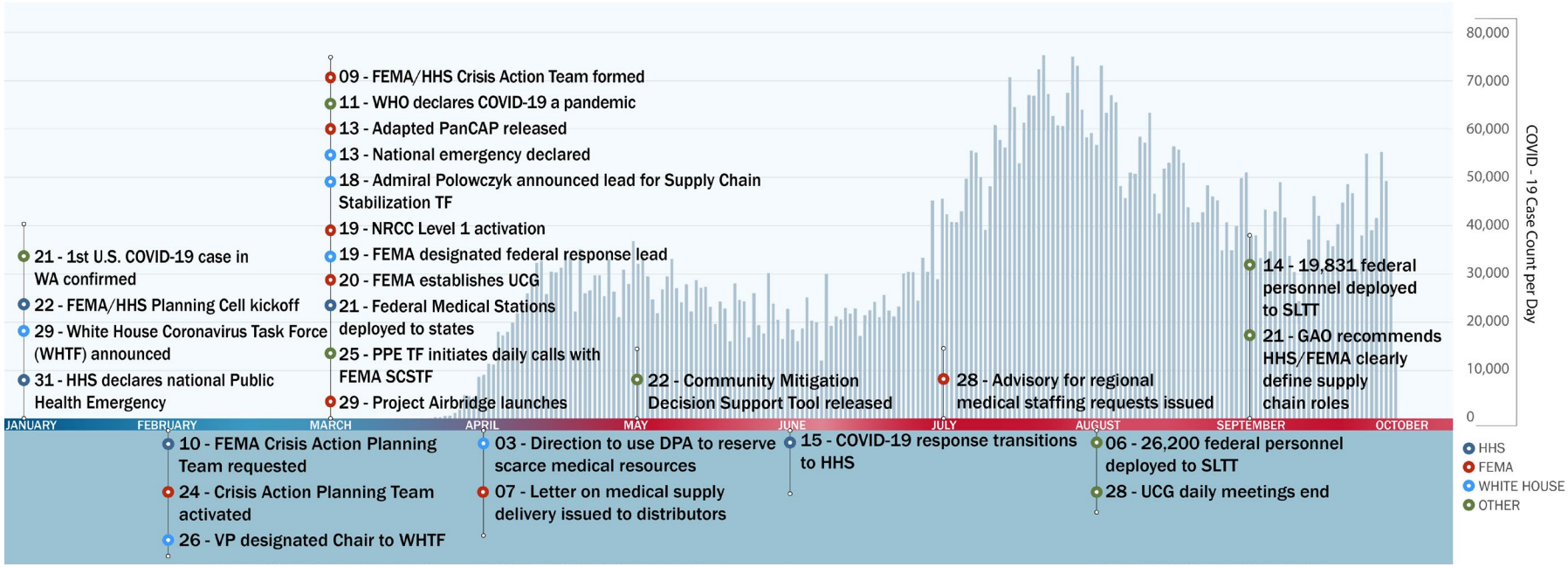



**Figure 10. Interagency Coordination Timeline**

**Key Finding 1.1:** The global scope of the pandemic outstripped assumptions made in existing policies, plans, and procedures, which did not account for FEMA taking a lead agency role during a pandemic; this affected the agency's ability to coordinate an effective response.

Existing federal doctrine was in place prior to the COVID-19 outbreak to provide direction on the roles and responsibilities of federal agencies responding to domestic incidents—this doctrine reflects parallel and overlapping authorities between FEMA and HHS. Although FEMA has been delegated the authority to lead the administration of disaster relief and emergency assistance functions under the Stafford Act,[62] the Public Health Service Act also gives HHS the authority to lead the federal public health and medical response to public health emergencies (PHEs).[63] A PHE declaration provides the secretary of HHS the authority to enable extensive discretionary actions, as deemed necessary, to manage the public health threat.[64] These parallel and overlapping authorities require a shared understanding of how agencies will coordinate with one another in a response. The Crimson Contagion Functional Exercise AAR 2020, led by HHS in 2019, which simulated interagency engagement in a pandemic response, identified a lack of mechanisms or processes to facilitate coordination of the federal government's response to a pandemic.

*President Donald J. Trump meets with members of the White House Coronavirus Task Force in FEMA's National Response Coordination Center. (FEMA)*

Based on statutory authorities, federal planning directed that HHS, rather than FEMA, would take the lead in the response. Presidential Policy Directive 44 (PPD-44) stipulates that the lead federal agency (LFA) direct the federal response prior to a national disaster declaration, as highlighted in Figure 11, which shows the roles and responsibilities of FEMA and other federal agencies during disaster response. The 2018 Pandemic Crisis Action Plan (PanCAP) identified HHS as the LFA. The PanCAP Adapted (PanCAP-A), which was finalized by FEMA and HHS in March, also identified HHS as the LFA for the COVID-19 response, with support from FEMA for coordination. This scenario is reinforced by the Biological Incident Annex (BIA) to the Response and Recovery Federal Interagency Operational Plans (FIOPs), which assumes that HHS will act as the LFA for biological incidents where a Stafford Act declaration has not been made.[65] Parallel funding authorities are also in place, allowing both FEMA and HHS to dedicate funding to a response.

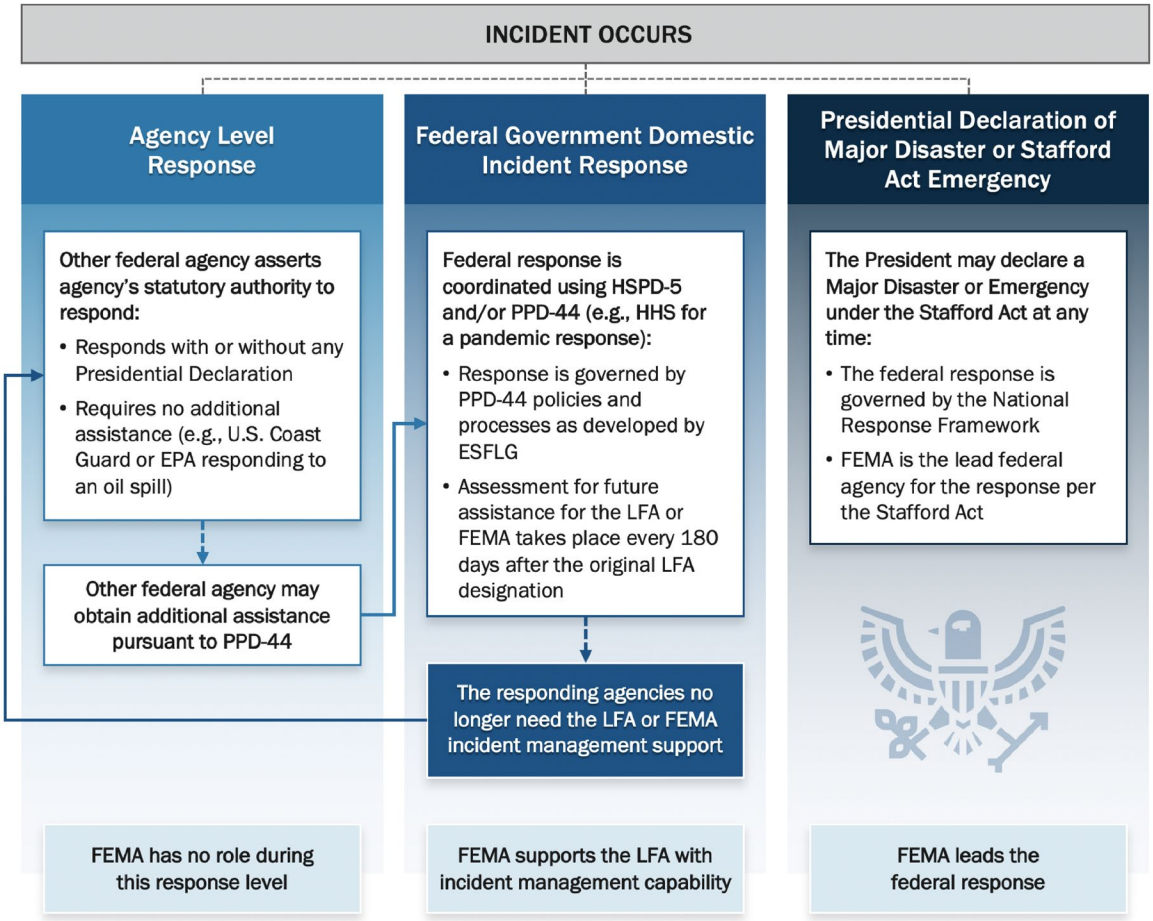



**Figure 11. Federal Incident Management Decision Tree**

On March 13, 2020, the President declared a nationwide emergency, pursuant to Stafford Act Section 501(b), and announced that HHS would continue to serve as LFA, with FEMA providing support.[66] However, HHS's designation changed on March 18, 2020, when the President and Vice President informed the FEMA Administrator that FEMA would be leading the response. FEMA's new leading role in COVID-19 operations was announced during a March 19, 2020, video teleconference (VTC) that the President and Vice President held with state governors.[67, 68]

The decision to shift the lead role from HHS to FEMA involved a rapid adjustment to the operation's organizational structure and real-time adaptations of coordination mechansims not envisioned in the PanCAP, PanCAP-A, and BIA. Communication of FEMA's new role began on March 18, with the FEMA Administrator providing direction to Regional Administrators and Headquarters (HQ) executives responsible for Response Operations. On March 19, 2020, FEMA's National Response Coordination Center (NRCC) activated to level 1, and on March 20, 2020, FEMA and HHS established a Unified Coordination Group (UCG) for decision-making.

At the senior management and UCG level of response operations, interviewees indicated that despite FEMA's changing role, the lines of authority were clear, communications were open and consistent,

and that response operations were unified. However, FEMA NRCC management staff, task force members, and support staff reported in interviews that response operations were complicated by uncertainty about roles and decision-making authority. These personnel report a lack of communication on the shift to FEMA leading operations on March 19, 2020. This created a general misunderstanding of roles and responsibilities for response staff who referenced the formal announcement on March 13 and were not aware of either the FEMA Administrator's conversation with the President and Vice President or the later VTC with state governors. In addition, PPD-44 stipulates that the LFA role does not apply to operations conducted under the Stafford Act or the National Contingency Plan. Although PPD-44 does not stipulate what happens to a former LFA upon Stafford Act declaration, ongoing LFA references after the Stafford Act designation created misunderstandings about that role and its place in the response.

The divergence from established policy and doctrine and the incomplete communication of changes in LFA contributed to conflicting impressions over the roles and authorities of FEMA and HHS among staff across the response. Staff reported that this uncertainty limited FEMA's ability to integrate the task forces into an NRCC-led response, a topic which is further discussed in finding 1.4.

Pre-existing federal documentation and authorities have enabled FEMA, HHS, and other federal agencies to respond to the COVID-19 outbreak with a rapid commitment of both actions and funding. At the same time, the unique and unprecedented nature of the pandemic has revealed ways in which documentation and authorities can be more clearly delegated, implemented, and communicated during a nationwide disaster. The recommendations offered below will help ensure that the roles and responsibilities for all agencies are well understood from an early stage to enable a more coordinated federal response.

### Recommendations for Key Finding 1.1

**Recommendation 1.1.A:** Clarify FEMA's authorities during a federal response to a pandemic and refine FEMA's role in such national-level incidents. Assess and revise national-level doctrine to ensure that it provides clarity and specifics about FEMA's role and authorities during incidents there is a response by the entire federal government. This includes establishing a funding plan to clarify which agencies are financially responsible for which aspects of a response.

**Recommendation 1.1.B:** Assess the integration of LFAs and their organizational structures into NRCC and UCG operations, and incorporate appropriate requirements. Future responses should ensure that federal guidance is understood and applied consistently across all non-Stafford Act incidents involving a federal response and requiring FEMA support. FEMA's assessment should include needed documentation and protocols for a non-Stafford Act federal response. This may include revising existing frameworks and FIOPs to incorporate PPD-44 and the use of multiple agency authorities during a response and revising or creating more operational and tactical documents.

**Recommendation 1.1.C:** Conduct training on updated guidance, as well as exercises to validate the guidance, to establish understanding of and familiarity with the roles and responsibilities articulated in Recommendation 1.1.B. Opportunities should be explored to incorporate this guidance into

ongoing or upcoming exercises related to COVID-19 operations, including how to integrate non-Stafford Act incidents into exercises, including the regions.

**Key Finding 1.2:** FEMA consistently and effectively engaged with the White House Coronavirus Task Force during COVID-19. While, the level of engagement with the Task Force was unplanned, FEMA adapted its traditional disaster communication and coordination mechanisms to meet requirements.

Although the White House has engaged with FEMA during many incident responses, the scale of the COVID-19 outbreak drove increased White House engagement with FEMA and other federal agencies. PPD-44, the NRF, the BIA, and the PanCAP do not delineate a White House task force; rather, they envision giving ownership to a federal agency through LFA designation. HHS was identified as the LFA for the COVID-19 response with support from FEMA in the PanCAP. FEMA later became responsible for implementing PanCAP-A when it assumed the role of LFA.

While existing plans and policies did not envision a WHTF led by the Vice President, FEMA's senior leadership noted that the WHTF was nimble and effective in making executive decisions in real time. The daily engagement of federal principals allowed for open dialogue, rapid decision-making, and elimination of obstacles to the response. It provided guidance and direction to the FEMA response and clearly articulated major decisions.

The increased frequency of White House engagement and the national effect of the pandemic required FEMA to take additional steps to ensure consistent communication of decisions across the agency. Beginning on March 20, FEMA's Chief of the NRCC began daily coordination calls with all FEMA regions, ensuring response leaders across the country were aware of key decisions made the previous day. These daily synchronization meetings also helped the regions track the status of resource requests. As is frequent in all disasters, some states that believed their needs were not being met circumvented the Regional Administrators (RAs) and appealed directly to the White House. Frequent engagement between regions and the NRCC facilitated the flow of information needed to support state's requests.

Despite these challenges posed by increased White House engagement, FEMA and the White House were able to coordinate effectively and efficiently to formulate and implement a response.

### Recommendation for Key Finding 1.2

**Recommendation 1.2.A**: Ensure that FEMA is well equipped for a future event involving extensive cooperation with another agency and substantial engagement from the White House at an operational level. To do so, FEMA should apply lessons learned from the COVID-19 response to develop internal best practices for interactions with the White House and develop approaches to accommodate enhanced White House engagement beyond regular interaction with the NSC. FEMA HQ should develop procedures to ensure that the FEMA regions are informed in a timely manner of decisions and communications from the White House.

**Key Finding 1.3:** The UCG effectively adapted to manage resource shortages during COVID-19 operations despite the challenges posed by the group's novel role in the response.

To manage significant competition for resources and support requests from federal and SLTT partners, an interagency principals-level UCG[d] was established to guide the federal government's response efforts to the COVID-19 pandemic.[69] The primary role of this federal-level UCG was to approve, elevate, and adjudicate strategic operational and policy decisions about the nation's limited supply of critical lifesaving medical supplies and equipment to meet the demands of states, tribes, and territories.

*A total of 76 alternate care facility sites were prioritized through the UCG, providing 23,274 beds. (FEMA)*

The COVID-19 UCG was the first federal interagency UCG FEMA had implemented. Typically, in disaster operations, unified command occurs at state level, between FEMA's Federal Coordinating Officer and the State Coordinating Officer. The magnitude of this response required leaders across the federal government to collaborate to make urgent, critical decisions. Therefore, as recommended in the BIA, the COVID-19 UCG principals consisted of the FEMA Administrator, the HHS Assistant Secretary for Preparedness and Response Incident Manager, the HHS Assistant Secretary for Health, and the HHS Centers for Disease Control and Prevention (CDC) lead (see Figure 12).[70]

The UCG was activated on March 20, 2020, and met daily until June 2, 2020. Despite the UCG's intention to serve as a decision-making body on resource allocation, the finite number of medical resources and the limited capacity of private sector supply chains forced the UCG instead to prioritize the limited resources available based on the requests received. A data-driven approach employed by the task forces and NRCC informed decisions about how to handle limited medical resources. The information from these teams helped the UCG weigh such considerations as the number of cases, number of deaths, available intensive care unit beds and ventilators, prevalence of vulnerable populations, and knowledge of a location's medical infrastructure when making resource allocations.

[d] UCG in this report refers to the FEMA-led COVID-19 Unified Coordination Group. Another group during the pandemic response convened under the nomenclature "UCG" and was hosted outside of FEMA. For this report, UCG only refers to the FEMA-led group.

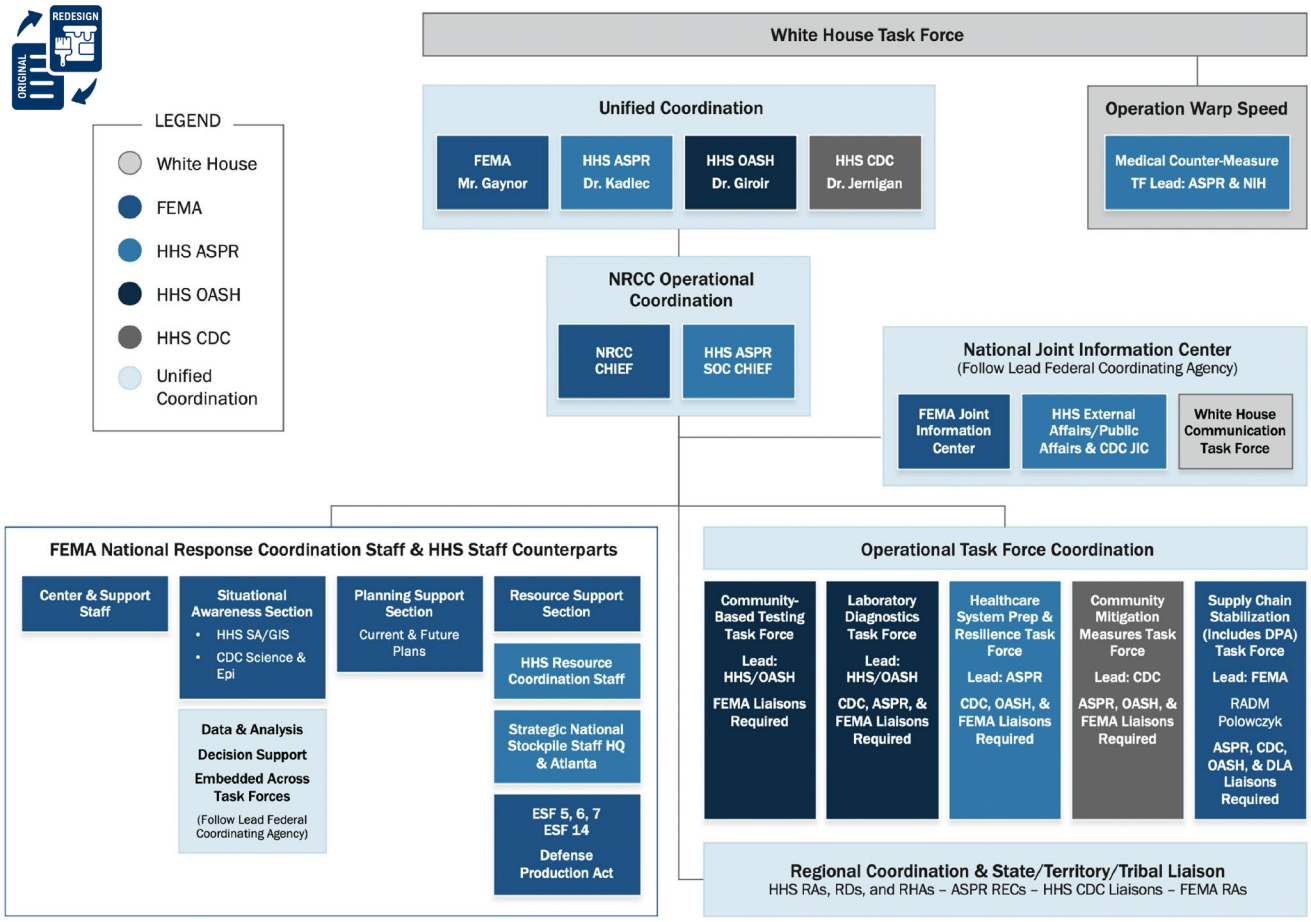



**Figure 12. Revised UCG Structure in COVID-19 Response**[e]

To address supply shortages, the UCG scrutinized requests for supplies and urged the states to exhaust resources at the state level before seeking support from the UCG. The UCG also required detailed information about requested supplies and equipment, and often presented alternative solutions that states may not have considered. Over time, requests to the UCG for supplies were reduced as states resolved shortfalls internally and as supply shortages eased.

Overall, the UCG effectively adapted its role to meet the challenges presented by the pandemic as federal government priorities shifted to managing resource scarcity challenges across the nation; however, the development of procedural documents to support UCG operations would help response staff engage the UCG more effectively. Staff supporting the NRCC and task forces often did not understand the UCG's role and reported not knowing how and when to engage with the UCG. There were daily solicitations for submissions to the UCG agenda, but staff did not know which decisions should be routed through the UCG and which they could make independently. For example, staff on one of the task forces indicated that they were not always clear on the cross-task force clearance

[e] Not all eight task forces referenced in the report are listed. The CBTS was rolled up under Lab Diagnostics Task Force; Medical Countermeasures was a BARDA core mission, and Continuity was a National Continuity Program core mission.

process and were unable to distinguish decisions that could go through their home agencies from decisions that needed to go through UCG review. Others on the task force reported uncertainty about how information was reaching the UCG, the decision-making process, and when or whether they would receive responses.

Frequent communication and steady information flow between the NRCC chief and the UCG principals helped mitigate some of the challenges that arose from a lack of familiarity with UCG procedures. In addition, FEMA senior leadership and decision-makers reported no confusion about information that should go to the UCG for decision-making. The inclusion of the FEMA Administrator, HHS Assistant Secretary for Health, and SCTF lead in both the UCG and WHTF promoted consistent communications and situational awareness between FEMA and the White House for all task forces, and allowed decisions to be made and actions to be taken more efficiently. The coordination structures implemented supported the scalable, flexible response this incident required.

A future federal interagency UCG should build upon the lessons learned during the COVID-19 response in preparation and coordination for nationwide disasters. Specifically, formal doctrine should codify updated guidance on the roles, operating procedures, and engagement strategy for the UCG. In addition, expanded communication on the role of the UCG should include guidance to inform stakeholders of the UCG's activation and outline protocol for engaging with the UCG.

### Recommendations for Key Finding 1.3

**Recommendation 1.3.A.:** Standardize and establish interagency UCG protocol and revise applicable doctrine. FEMA should consider revisions that could include: (1) updating the FIOPs to reflect more accurately the role of a UCG in an interagency, nationwide catastrophic response; (2) outlining the triggers that may require UCG activation and defining the intent of the group in each scenario; (3) identifying scenarios in which urgent decision-making may require interactions that deviate from normal UCG operations; and (4) providing guidance for future incidents that offers information on other non-traditional means of fulfilling resources if Direct Federal Assistance is unavailable.

**Recommendation 1.3.B.:** Codify the UCG charter and standard operating procedures (SOPs), and clearly outline the role(s) of the UCG and the criteria for engaging with the UCG in formal doctrine to eliminate confusion and to promote adherence to UCG protocol. This should include the staffing and resources required for the UCG and a strategic communications plan to support cohesive messaging around the role, function, and engagement of the UCG.

**Key Finding 1.4:** The operational task forces successfully managed lines of effort for COVID-19 operations; however, FEMA faced challenges integrating task forces into the existing NRCC structure, leading to undefined or unknown roles, responsibilities, lines of authority, and organization, which resulted in coordination and communication challenges throughout the operation.

HHS stood up eight operational task forces to support the response. The task forces proved useful in managing lines of effort to sustain federal operations during the unprecedented scale and

complexity of the incident. Despite working in a mostly virtual environment, task forces managed to pull together experts for a rapid response. Task forces were able to build relationships with key public health stakeholders and address the critical needs of SLTT partners. Although the new organizational construct required for this response presented challenges to task forces integrating into the NRCC structure, these issues were resolved as integration and coordination improved over time. This was supported by the Planning Support Section (PSS) assigning planning specialists to each task force.

Following the activation of the NRCC to Level I on March 18, 2020, HHS transferred the task forces to FEMA as the new lead agency for the response on March 19, 2020 (see Table 4). Before their integration with FEMA, task forces were led mainly by subject matter experts from HHS, the Department of Defense, and other federal agencies. These experts had rarely worked within the NRCC organization or under Incident Command System (ICS) principles. Some of the task force functions were similar to those already in place in the NRCC sections, complicating their integration into existing NRCC operations. Each task force had its own situational awareness and planning capabilities, which contrasted with the traditional National Incident Management System (NIMS)/ICS structure. There was no guidance for how the task forces were to engage with the existing NRCC operating structure, except for the organization chart that showed task forces and NRCC sections reporting to the UCG. Thus, FEMA inherited task forces that were organized outside of the agency's traditional doctrine. FEMA adapted its organization for effective operational integration of the task forces. As the pandemic response progressed, the task force roles and compositions were adapted to meet the evolving needs of the response. On June 15, 2020, task forces transitioned to HHS leadership and control; they are now categorized as work groups.

**Table 4. COVID-19 Task Forces, March 2020**

| Task Force | Task Force Lead | Task Force Role |
|---|---|---|
| Community Based Testing Sites (CBTS) | HHS and FEMA | Increase community-based testing sites |
| Data Management (DATF) | HHS and FEMA | Develop data sources for modeling, and allocation of resources |
| Health care Resilience (HRTF) | HHS and FEMA | Optimize health care workforce, facilities, supplies |
| Laboratory Diagnostics (LDTF) | HHS and FEMA | Inform supply, allocation, prioritization of resources, from testing through diagnostics and reporting |
| Supply Chain (SCTF) | DOD and FEMA | Maximize protective and lifesaving resources and equipment in critical areas of need |
| Medical Countermeasures (MCTF) | HHS and FEMA | Identify:<br>-Status, needs, gaps in medical countermeasure (MCM) development<br>-Approaches for development to licensure<br>-Efficiency of workgroups and reporting<br>-Address queries on MCM availability, use |

| Task Force | Task Force Lead | Task Force Role |
|---|---|---|
| Community Mitigation (CMTF) | HHS and FEMA | Assist SLTT in mitigation strategies to slow transmission, reduce morbidity, with focus on vulnerable populations |
| Continuity (CTF) | FEMA | Maintain situational awareness of mission essential functions, identify risks, facilitate mitigation |

Overall, responders in the NRCC and on the task forces demonstrated an ability to adapt to requirements posed by the new operational paradigm and the number of critical stakeholders. Challenges reported in this section diminished over time as individuals became more familiar with roles, responsibilities, and procedures. Under the traditional NIMS/ICS structure, task forces are integrated into operations by common communications and authority lines.[71] However, task forces' staff reported issues with horizontal and vertical communication channels and concerns about meeting the demands of joint leadership because the decisional support structures were not well defined. Although each task force technically had FEMA and HHS "co-leads," it was unclear within each task force whether they were true co-leads or primary and deputy leads, or whether the FEMA lead managed only FEMA personnel. Uncertainty about who directed the task forces' activities led to conflicting orders. NRCC and task force leaders reported in interviews that the SCTF and DATF often received directions from the WHTF, either bypassing the NRCC chief or receiving commands from both. However, senior leaders have conveyed their impressions that task force engagement with the WHTF included the NRCC.

Following the initial transition of the response from HHS to FEMA, inconsistent communication among and between task forces and NRCC operational sections led to inefficient cooperation, overlap in reporting, and confusion about which data to share, with whom, and how. Task forces varied in their access to information and reporting requirements. Lack of coordination and duplication of effort were especially prevalent between DATF, SAS, and PSS, and among the SCTF and Resource Support Section (RSS). Additionally, duplication of efforts occurred between task forces and Donations Management, International Affairs, Emergency Support Function 6 (ESF-6),[f] and Private Sector Engagement. Coordination among operational units improved over time as communication and information sharing became more efficient.

Task force leadership observed a lack of strategy between the task forces and the NRCC operations. The task force roles within the NRCC were not defined until two to three weeks after they were established. For example, LDTF staff did not understand how the task force fit into the National Resource Prioritization Cell through which they had to work. SAS leadership did not understand which questions to direct to the RSS and which to direct to the SCTF, which appeared to have similar

[f] FEMA, "National Response Framework", Emergency Support Functions, Mar. 2018, accessed Nov. 23, 2020. Emergency Support Functions (ESFs) provide the structure for coordinating federal interagency support for a federal response to an incident. ESFs group functions that provide federal support to states and federal-to-federal support, both for Stafford Act declared disasters and emergencies and for non-Stafford Act incidents.

responsibilities. These issues were eventually resolved, but they posed challenges to an effective, coordinated, and efficient response during the outset of the pandemic.

Overall, the concept of task forces in the COVID-19 response worked as they became more integrated into the NRCC. However, it could have been implemented more effectively at the outset if the supporting organizational structure were better defined for a more seamless integration into the NRCC operations.

### Recommendations for Key Finding 1.4

**Recommendation 1.4.A:** Promote NIMS/ICS use throughout other federal agencies and SLTT partners to help facilitate better integration into future efforts.

**Recommendation 1.4.B:** Develop a summary report on the task forces and COVID-19 operations. Assess how the task forces follow NIMS/ICS principles and would integrate into the NRCC or other operational structures; establish clear vision, end states, analytical goals and requirements, tasks, and objectives from an early stage; and develop a concept of operations outlining the roles of task force leadership. FEMA should ensure task forces incorporate civil rights and equity into their decision-making, especially given the disproportionate effects of COVID-19 on protected groups. Task force members should receive training on relevant civil rights requirements and equity, including data collection considerations. Task force members should also consult civil rights subject matter experts before, during, and after implementation.

**Recommendation 1.4.C:** Update the ESF-14 SOP and PanCAP to articulate a cohesive approach for industry engagement and operational integration for clarity across the operational enterprise through the NBEOC during NRCC activations. FEMA must coordinate across the agency to ensure ESF-14 and the efforts of the NBEOC are included into doctrinal and planning updates to ensure unity of effort between the NRCC, RRCC, and the field. Office of Business, Industry, and Infrastructure Integration (OB3I), as the agency's ESF-14 lead, should explore approaches to more effectively integrate interagency counterparts into the NBEOC structure for consistent coordination of authorities, data, analysis, and engagement with the private sector to serve as the centralized clearinghouse (as it was originally designed). This includes developing pre-scripted mission assignments and developing new interagency agreements.

**Key Finding 1.5:** FEMA Office of External Affairs was able to establish the National Joint Information Center with HHS and other federal partners; however, the lack of clarity about FEMA's and the UCG's role created confusion around the external messaging clearance process designed for this response.

At the onset of the federal response to COVID-19, HHS used procedures outlined in the PanCAP to coordinate public messaging. Upon transition of operations in March, FEMA assumed oversight of public messaging through ESF-15. On March 19, 2020, the NJIC stood up, co-led by FEMA and HHS. ESF-15 is a federal government organizing structure that integrates the communications and external affairs support of all federal departments and agencies involved in a coordinated federal

disaster response.[72] ESF-15 coordinates federal actions to provide the required external affairs support to SLTT, insular area, and federal incident response entities.[73] ESF-15 procedure does not typically require FEMA to obtain White House approval for public messages. However, COVID-19 response protocol designated the White House Office of the Vice President as the final approval authority for potential national-level impact communications issued by FEMA.

From March through early June, FEMA's Office of External Affairs (OEA) responded to more than 2,400 inquiries and messaging product requests received from task forces and FEMA leadership. Table 5 shows a summary of OEA outputs. The number of public inquiries received and responded to via FEMA.gov, FEMA News Desk inbox, and FEMA Web Team inbox was two times greater in the first half of 2020 than it was in all of 2019. Additionally, FEMA's COVID-19 websites received over 5.6 million unique page views from February 15, 2020, through June 13, 2020. OEA leadership regarded its disaster management in this complex, virtual telework environment as "a remarkable achievement."

**Table 5. Office of External Affairs Products in Support of COVID-19 Operations from March 13, 2020 to September 30, 2020**

| Number | Products |
|---|---|
| 2,400 | Received more than 2,400 media inquires |
| 1,479 | Shared social media posts |
| 526 | Distributed English and Spanish news releases |
| 445 | Created web pages and increased web traffic (for FEMA.gov and Ready.gov) |
| 223 | Posted media items/images on website |
| 43 | Produced COVID-19 focused videos |
| 5.6M | Received over 5.6 million unique web page views |

One of the major challenges in responding to the surge of inquiries and requests was in the review clearance and approval process. Since the authorities, roles, and organizational structure of the UCG and Task Forces were vague and undefined (Finding 1.4), OEA likewise had difficulty establishing a straightforward process of information verification, approval, and leadership clearance for distribution. OEA relies on the incident operational structure to determine the clearance process and, as the operation did not have clear task force roles and responsibilities, the OEA team had to navigate an unfamiliar and undefined organizational space. Accuracy is the most important element of public health messaging and OEA staff erred on the side of caution which often meant double-checking and triple-checking information before its release.

Due to the national emergency, the WHTF needed to coordinate messaging not only from FEMA, but also from the more than 40 departments and agencies involved in WHTF operations. The goal was a national message that was clear and concise. COVID-19 presented new challenges that required new

procedures. The OEA adapted its messaging product process to ensure that any information it developed or disseminated obtained White House approval prior to release. OEA created an approval mechanism for routing messaging products to all tiers of leadership and that also created a record of these products. This revised process had many steps, involving personnel from multiple offices and agencies and the White House.

The adaptations to the ESF-15 structure for the clearance and approval for the release of products were not understood within the NRCC. The NRCC and task forces cited a lack of clarity on the revised messaging approval requirements. They reported submitting products for review multiple times and through multiple channels. These channels varied by submission but included the OEA NRCC desk, the task force liaisons, OEA leadership, and the OEA Action Office. This clearance process was, at times, frustrating for all involved, including the OEA staff. A clearance flow chart and a product tracker were created to mitigate the identified difficulties.

OEA centralized COVID-19 messaging at FEMA HQ to preserve version control of all documents that were produced. In addition, OEA maintained a track of messaging products within the ESF-15 COVID-19 communications planning and products process, but it did not always contain real-time information and updates and was not easily accessible for those who submitted products to check their status. This limited insight into clearance status, product version updates, and product distribution logistics affected the ability of OEA staff to identify a product's status or to report it to interagency associates. When RAs lacked an internal view of when or where to access messaging for their stakeholders, RA staff looked to the external FEMA.gov website for approved public messaging. This process hindered the RAs' ability to respond efficiently to their stakeholders with targeted, consistent, and current messaging.

The unprecedented COVID-19 response has exposed areas where messaging product logistics can be better refined, implemented, and communicated. The recommendations below will help to improve the coordination and visibility of the message production and approval process for more timely and consistent release of important information during a pandemic response.

### Recommendations for Key Finding 1.5

**Recommendation 1.5.A:** Revise the ESF-15 SOP and PanCAP to include clear messaging approval and distribution procedures when there are multiple federal agencies under the decision-making role of the White House. ESF-15 SOP revisions should include defining set lines of authority for the review and final clearance of each product type—FEMA internal and external documents—with appropriate branding for external documents.

**Recommendation 1.5.B:** Develop a new product tracker for NRCC operations with a standardized labeling system that provides real-time visibility to follow each product through the clearance process and keep stakeholders informed of the status of their requests and include an inquiry tracking capability.

## Summary of Recommendations for Coordinating Structures and Policy

The coordination for this event brought about much learning and the identification of important process-oriented documentation and guidance to enhance FEMA's role in disaster operations in the future. Clear policies and repeatable, flexible procedures form the basis for the recommendations for this section, which are summarized in Table 6.

**Table 6. Summary of Recommendations for Coordinating Structures and Policy**

| Section 1: Coordinating Structures and Policy Summary of Recommendations |
|---|
| 1.1.A. Clarify FEMA's authorities during a federal response to a pandemic and refine FEMA's role in such national-level incidents. Assess and revise national-level doctrine to ensure that it provides clarity and specifics about FEMA's role and authorities during incidents there is a response by the entire federal government. This includes establishing a funding plan to clarify which agencies are financially responsible for which aspects of a response. |
| 1.1.B. Assess the integration of LFAs and their organizational structures into NRCC and UCG operations and incorporate appropriate requirements. Future responses should ensure that federal guidance is understood and applied consistently across all non-Stafford Act incidents involving a federal response and requiring FEMA support. |
| 1.1.C. Conduct training on updated guidance, as well as exercises to validate the guidance, to establish understanding of and familiarity with the roles and responsibilities articulated in Recommendation 1.1.B. |
| 1.2.A. Ensure that FEMA is well equipped for a future event involving extensive cooperation with another agency and substantial engagement from the White House at an operational level. |
| 1.3.A. Standardize and establish interagency UCG protocol and revise applicable doctrine. |
| 1.3.B. Codify the UCG charter and SOPs, and clearly outline the role(s) of the UCG and the criteria for engaging with the UCG in formal doctrine to eliminate confusion and to promote adherence to UCG protocol. |
| 1.4.A. Promote NIMS/ICS use throughout other federal agencies and SLTT partners to help facilitate better integration into future efforts. |
| 1.4.B. Develop a summary report on the task forces and COVID-19 operations. Assess how the task forces follow NIMS/ICS principles and would integrate into the NRCC or other operational structures; establish clear vision, end states, analytical goals and requirements, tasks, and objectives from an early stage; and develop a concept of operations outlining the roles of task force leadership. |
| 1.4.C. Update the ESF-14 SOP and PanCAP to articulate a cohesive approach for industry engagement and operational integration for clarity across the operational enterprise through the NBEOC during NRCC activations |

| Section 1: Coordinating Structures and Policy Summary of Recommendations |
| --- |
| 1.5.A. Revise the ESF-15 SOP and PanCAP to include clear messaging approval and distribution procedures when there are multiple federal agencies under the decision-making role of the White House. |
| 1.5.B. Develop a new product tracker for NRCC operations with a standardized labeling system that provides real-time visibility to follow each product through the clearance process and keep stakeholders informed of the status of their requests and include an inquiry tracking capability. |

The federal coordination was clear in the management of resources for the COVID-19 operations. Supporting SLTT partners in a resource-constrained environment and the innovations applied during the response are the focus of the next section.

## Section 2. Resources

The COVID-19 pandemic required FEMA to respond to a globally resource-constrained incident for the first time with countries competing for the same medical supplies. Within the United States, every level of government was also seeking the same personal protective equipment (PPE) resources. This operating environment necessitated building new capability that worked toward developing whole-of-nation supply chain visibility and provided for direct federal leadership of national resource mobilization, adjudication, and allocation. During most disasters, FEMA manages abundant supplies and resources domestically, moving them from unaffected areas to affected areas which represent a limited portion of the nation. To respond to the COVID-19 pandemic, FEMA was charged with managing resources in an incident where demand far exceeded supply, testing the agency's capacity to maintain operational awareness of the types and quantities of items that states were requesting and receiving. The health care sector was affected most by the pandemic, with PPE—especially N95 respirators—and COVID-19 testing kits in such high demand globally that no market-based supply chain was able to meet the demand unassisted.

*FEMA delivered medical supplies, PPE, and food to states. (FEMA)*

Responding to the pandemic required expansive coordination from FEMA, which had never operated a logistics mission of this scope and magnitude prior to COVID-19, nor had ever been required to have the strategic role of national resource coordination. Figure 13 provides a timeline of key events related to the operations and supply chains. Leading the response to public health emergencies has historically been the domain of the U.S. Department of Health and Human Services (HHS), not FEMA, and many of the resource requirements for logistics missions were outside of the traditional FEMA resource allocation mission. These circumstances led to significant implementation challenges for the request process.

To facilitate an integrated logistics operation, the federal Supply Chain Task Force (SCTF) was established to manage the sourcing and distribution of life-saving and life-sustaining equipment, such as PPE and mechanical ventilators. The SCTF executed an approach, shown in Figure 14, with four lines of effort (LOEs) to rapidly increase the current supply of medical supplies and equipment, and to expand domestic production to fortify the long-term supply:

- **Preservation**'s purpose was to extend the life of existing PPE and other supplies. A critical component of this strategy was to develop guidance prioritizing the allocation and most appropriate use of supplies for specific needs.

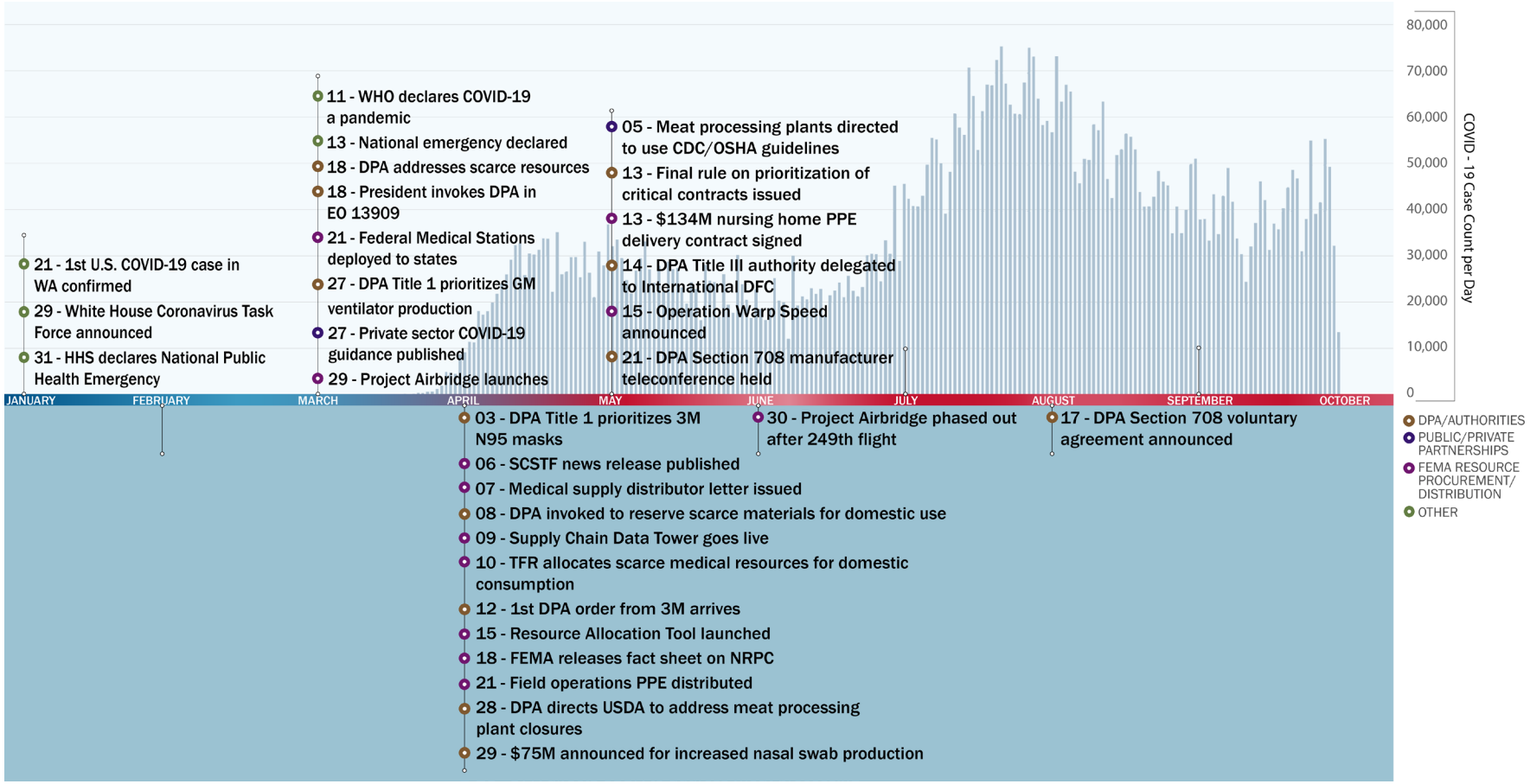



**Figure 13. Supply Chain Timeline**

- **Acceleration** in the industrial sector helped suppliers meet the urgent demand. Manufacturers increased the speed of production and shipment of critical resources. FEMA used Project Airbridge to rapidly move PPE from foreign manufacturers to the United States.

- **Expansion** of production capacity occurred as companies activated excess, idle production lines or facilities to support increased manufacturing of necessary PPE and sanitization supplies. Public-private partnerships took advantage of offers from American businesses to match needs.

- **Allocation** of supplies facilitates the distribution of critical PPE to "hot spots" for immediate resupply. States report on supplies and can request assistance when they experience a shortage.

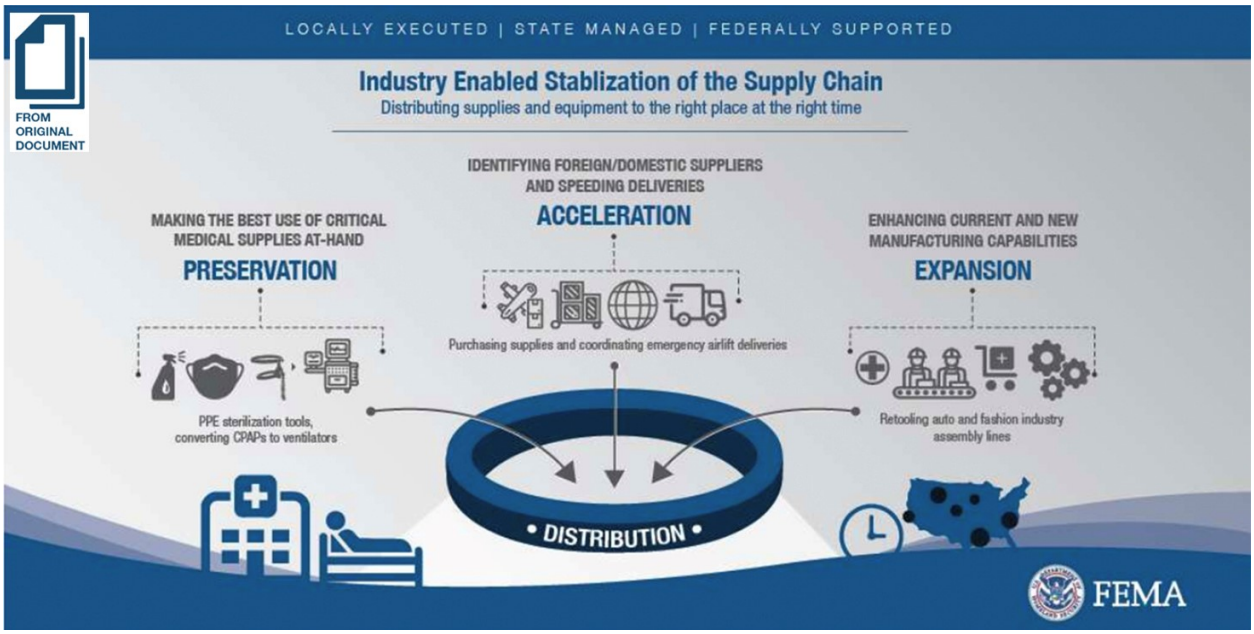



**Figure 14. Supply Chain Stabilization Process that Shows Three of the Lines of Effort**

To distribute the resources obtained from the four LOEs to state, local, tribal, and territorial (SLTT) partners in need, FEMA collaborated with its regional logistics offices and public and private supply chains. The dedication of FEMA and other federal agencies coordinating and supporting the PPE mission ensured that, for the most part, jurisdictions received the items they needed, but delays and other difficulties often occurred. The findings in this section, summarized in Table 7, are grouped into two categories:

- **Logistics**. Management of scarce resources defined FEMA's response to the COVID-19 pandemic. SLTT partners all were requesting the same resources and there were not enough to fulfill those requests.

- **Supply chain stabilization**. The SCTF worked with major commercial distributors to facilitate rapid distribution of existing resources and to prepare the supply chain for future requirements. The SCTF worked along the four LOEs to improve FEMA's ability to globally source scarce commodities. Though most of the SCTF's efforts focused on the medical supply chain, the FEMA response also looked at the cross-sector supply chain, which includes meat processing plants.

Findings in this section align with the supply chain LOEs and the use of Defense Production Act (DPA) authorities.

**Table 7. Summary of Key Findings for Resources**

| Section 2: Resources Summary of Key Findings | |
|---|---|
| 2.1. | The COVID-19 pandemic stressed the resource request process and systems, which resulted in FEMA having an incomplete understanding of the resources needed and required significant time to manually process requests. |
| 2.2. | FEMA addressed resource shortages with new analytical tools and collaboration with the private sector to make data-driven allocation decisions. |
| 2.3. | The NRCC coordinated the national mobilization and distribution of billions of dollars' worth of PPE and other resources, but the lack of an initial centralized system to integrate non-FEMA resources supporting mission requirements affected visibility of the resources shipped and the estimated delivery dates for SLTT partners. |
| 2.4. | FEMA executed an unprecedented number of mission assignments to federal partners in innovative ways to support state, tribal, and territorial requirements, but the nature of the incident revealed insufficient policies and procedures for handling the duration and complexity of the operations. |
| 2.5. | FEMA coordinated with private sector partners to expand domestic manufacturing of scarce resources but lacked a coordinated strategy across the operation for involving the private sector, which resulted in inconsistent communication, guidance, and direction. |
| 2.6. | Although donations are traditionally managed at the SLTT level, the national scope of the disaster led FEMA to solicit donations through the NRCC for the first time and implement several actions over the course of the response that resulted in more RRFs being fulfilled. |
| 2.7. | Project Airbridge expedited essential supplies from the global market to domestic supply chains to respond to shortages, and the deficit revealed limitations in FEMA's identification of mission critical resources and understanding of the related complexities and interdependencies in the end-to-end supply chain. |
| 2.8. | The DPA was used in novel ways that could prove useful for future catastrophic incidents, but implementation was difficult due to the complexity of issues and limited trained staff. |

**Key Finding 2.1:** The COVID-19 pandemic stressed the resource request process and systems, which resulted in FEMA having an initial incomplete understanding of the resources needed and required significant time to manually process requests.

FEMA's ordering process relies on the WebEOC Crisis Management System (WebEOC) and the Logistics Supply Chain Management System (LSCMS) to leverage resources supporting state, territorial, and tribal governments' disaster response. WebEOC is used to receive, source, and track

asset requests, and it is intended to provide transparency for all strategic partners, regardless of location or whether the request originated in WebEOC or LSCMS.

A Resource Request Form (RRF) is the standard method for establishing the needs of a jurisdiction in WebEOC, and for submitting a request to the federal government for support to meet those needs. Once received, RRFs requesting federal government assistance are reviewed, sourced, and routed for approval. If approved, the request is routed to the proper sourcing method for ordering; for COVID-19 operations that was usually LSCMS. If disapproved, the requestor is notified of the disapproval and the reason—for example, a duplicate request. Before the COVID-19 pandemic, the logistics mission historically supplied jurisdictions either from existing stockpiles maintained in FEMA warehouses or through procurement, directing commodities from unaffected areas to affected areas.

The nationwide response to the pandemic led to an inundation of RRFs that initially overwhelmed the existing system to receive and process them. This was exacerbated by the novelty of the resources being requested and the lack of available resources to fill and meet requirements. As of October 2020, jurisdictions had sent out more than double the amount of RRFs than in prior years (see Table 8).

**Table 8. Number of RRFs Issued by FEMA**

| Year | Number of RRFs |
|---|---|
| 2017 | 5,485 |
| 2018 | 4,208 |
| 2019 | 2,068 |
| 2020 | 8,973 |

Over the course of the pandemic, WebEOC and LSCMS have undergone continual modification. Although splitting RRFs by line item is a standard practice to accommodate the sourcing of supplies from different vendors, this occurred at an unprecedented rate as part of the COVID-19 operations, especially during the early stages, due to resource scarcity. To further address asset shortages, FEMA created a new "Partially Fulfilled" status option in RRF forms. Additionally, numerous changes were made to WebEOC's interface to streamline the request process and create a more intuitive user experience, and further updates remain pending. In particular, the specificity of PPE requests required an expansion of pre-populated resource lists to enable detailed RRFs reflecting jurisdictions' needs. However, because many of these software capabilities took time to develop, there were some delays in their implementation. Although WebEOC and LSCMS eventually captured assets sourced outside of FEMA, including supplies obtained through private donations and the Strategic National Stockpile (SNS), these were not initially integrated.

The completeness and accuracy of resource requests varied greatly by state. Incomplete RRF submissions required regional FEMA personnel to perform tedious data extraction or to engage in follow-up inquiries with the states, both of which resulted in delays. Many states also requested inordinately large or expedited resource orders that did not correspond to their current requirements, making it necessary for regional offices to follow up with states to validate relative needs and further contributing to backlogs.

Though some states already possessed extensive disaster response experience and were familiar with the resource and incident management system, others had not submitted requests in as many

as five years and faced a steep learning curve. States can submit RRFs in WebEOC, but many chose to instead send their requests to regional offices via email, requiring regional personnel to reformat and enter them as RRFs in WebEOC. In a survey of 1,432 state respondents deployed during COVID-19, only 35% reported using WebEOC, and many said they found the system slow and confusing to use. Between late March and October of 2020, FEMA held 56 online WebEOC training sessions for employees. Yet, according to a recent survey of over 1,200 FEMA employees, the majority of FEMA personnel receive WebEOC accounts and training only when they are already deployed in a disaster response role; many employees do not receive any formal training at all and must rely on ad hoc guidance from coworkers.

Although modifications to FEMA's LSCMS and WebEOC enabled the request process to adapt to the pandemic environment, they also created unintended consequences. Splitting RRFs placed a significant burden on jurisdictions to track shipments and mark requests as "Partially Fulfilled." Jurisdictions that had historically sent a single RRF for different but interdependent requests—for example, water and food shipments to be distributed together as meals—found during the pandemic that these became separate requests with unsynchronized fulfillment schedules.

### Recommendations for Key Finding 2.1

**Recommendation 2.1.A:** Build on the lessons learned during the COVID-19 operations and invest in developing a long-term strategy to evaluate the efficiency of resource and incident management systems in maintaining the common operating picture during a disaster, and, based on the results of the evaluation, develop a plan for implementing the development and refinement of those systems to create a more complete common operating picture and enable more timely and effective decision-making.

**Recommendation 2.1.B:** Assess the standard resource request submission processes for consistency of application and identification of causes for variance from the process. Implement a plan for reducing the process variances. Where applicable, FEMA should provide the funds and resources for appropriate and sufficient training for personnel with roles requiring their use of the resource and incident management systems to ensure those personnel have operational capability. All Incident Management FEMA personnel should receive WebEOC accounts and undergo training prior to their deployment in a disaster response role.

**Key Finding 2.2:** FEMA addressed resource shortages with new analytical tools and collaboration with the private sector to make data-driven allocation decisions.

Local resource scarcities often occur during disasters, but supplies can still typically be procured within the United States. During COVID-19, states were requesting up to 60 days' worth of supplies in their RRFs at a time when there were nationwide challenges in meeting a week's worth of supplies. Despite the challenges, FEMA has supported many of the needs of its SLTT partners, worked to distribute needed PPE through a resource allocation algorithm, and managed to partially fill resource requests when resources were available.

## Mechanical Ventilators: Expanding Supply and Managing Speculative Demand

*(FEMA)*

When HHS first began deploying ventilators in March 2020, the Strategic National Stockpile (SNS) had 16,600 ready to deploy.[74] By September 2020, the federal government had over 138,000 ventilators on hand and available to deploy. The government built this supply by rating contracts under the DPA and helping manufacturers get the supplies they needed to produce ventilators as quickly as possible, while ensuring that those ventilators were routed through the SNS to where they were needed most.

Over the course of COVID-19 operations through August 2020, states, territories, and tribal nations requested a total of 156,044 mechanical ventilators. Early in the response, models were still being developed to create accurate projections of the number of new cases, the number of hospitalizations (including intensive care unit (ICU) patients), and the rate at which PPE would be expended. In the face of such uncertainty, states prepared for the worst by asking for large numbers of ventilators from the SNS—ventilator requests from March 16 to 31 totaled 133,239. To address this very public demand for ventilator support, FEMA's Data Analytics Task Force (DATF) began tracking projected ventilator requirements and supply by state and territory on March 31. On April 1, FEMA adopted a new process to manage federal ventilator resources, requiring states and tribal nations to substantiate their ventilator requests with data showing current supply, current hospital and ICU occupancy data, and the ability to stand up new ICU beds.[75]

By mid-April, the projected ventilator supply emergency had not come to pass, as states were seeing decreasing rates of ventilator use.[76] The DATF continued its daily assessment of ventilator supply and usage through May 12. On that date, the DATF reported only one jurisdiction with ventilator usage at more than 50% of supply, and the overall reported national data showed 106,069 total ventilators and 29,192 (28%) in use. Ventilator requirements were reduced as medical professionals gained more knowledge of appropriate treatment options for COVID-19. Doctors also learned that mechanical ventilators are not the best option for all patients; alternative noninvasive respiratory support is suitable for a subset of patients.[77]

Upon activation of the NRCC, not all response members understood who led the resource allocation mission and how it fit into the overall response. FEMA, HHS, and task force personnel had to deconflict roles and responsibilities. To facilitate integration and establish unity of effort, FEMA embedded experienced logistics personnel at the HHS Secretary's Operations Center prior to FEMA taking the lead role, and in the SCTF. These personnel were able to advise leadership and operationally coordinate with other NRCC sections as necessary.

The multiple resource management systems that contained the data needed to maintain operational visibility also presented challenges. The Defense Logistics Agency used its own system, FEMA used LSCMS and HHS managed the SNS information. These systems did not have data exchanges, which led to manual actions and data that was not synchronized or incorporated efficiently.

An additional challenge was the initial lack of access to private sector health care data. The majority of hospitals in the United States are not publicly owned, and therefore had no mechanism to share information broadly with federal authorities.[78] The initial lack of data on PPE demand and supply created a large operational gap that was eventually filled by the SCTF's efforts to obtain production and distribution information from the "Big Six" medical distributors. These commercial distributors—McKesson, Henry Schein, Owens & Minor, Cardinal Health, Medline, and Concordance Healthcare Solutions—distribute approximately 90% of the PPE and medical supplies in the country.[79]

Resource allocation was one COVID-19 response challenge that was addressed with data analysis tools. The National Resource Prioritization Cell (NRPC) and the Response Analytic Cell (RAC) within the Resource Support Section (RSS) of the NRCC had distinct but complementary roles during the response in developing data tools to inform NRCC task forces, sections, and senior leadership on where and how to allocate resources.

The NRPC served as a bridge between RSS and the SCTF. This system combined normal RSS functions of resource adjudication with a task force developed to support stabilization of the supply chain during the pandemic. The primary mission of the NRPC was to use private and public sector data to provide the private sector with allocation guidance for Project Airbridge. This system was consistent with the formation of established lanes of authority: SCTF focused on supporting the health care supply chain and RSS focused on the distribution of federal goods to SLTT partners. Major challenges for NRPC included a lack of data, concurrent development of analytic products, lack of clear metrics or data on PPE burn rates and supply, and a lack of a clear coordination of analytic goals for the response.

During the pandemic, every state and region experienced a shortage of PPE. Because demand exceeded the available supply, FEMA and the NRCC needed to develop a methodology for allocating and distributing resources. To meet this need, the Resource Analytics Cell (within the RSS) developed the Resource Allocation Tool to support allocation decision-making for the RSS and the UCG. This tool complemented hot spot analysis (areas that had or were likely to have emergent needs according to metrics on case or death rates and resource scarcity) by using an algorithm that incorporated private sector supply data, health data, RRFs, historical supply information, and frequency of requests. Outputs from the tool informed bulletins that were socialized to RSS leaders and regions to ensure common operational understanding of needs. The data and algorithm used for the tool were comparable to those used by the NRPC for its bulletin to the SCTF, leading to a similar overall data strategy in meeting separate allocation goals. The NRPC also included demographic information for population factors, internal supply data, and disease statistics that included confirmed cases, increases in confirmed cases, total mortality, and increase in mortality over the last seven days. The creation of this tool stood in contrast to normal FEMA response measures, in which HQ supplies regions and regions allocate resources to affected SLTTs. For COVID-19, HQ adjudicated resources nationally.

The Resource Allocation Tool is a clear example of data-driven decision-making and FEMA's ability to develop tools necessary to meet the complex demands of the response. However, even with its value for informing leadership decision-making, there were challenges with the tool's broader use within

the response, and there are limitations for its general use in other disasters. Because of limited visibility of the tool outside the RSS, the tool's usefulness is limited to HQ and regional RSS leadership. Within the NRCC, not all personnel were aware of the tool and its abilities. This lack of awareness likely resulted from the development of other data analytic tools for resource allocation outside of the RSS, as well as a lack of communication about the development of these tools. The utility of this type of tool also depends on the circumstances: the tool is most valuable for large catastrophic events in which regional or national resources are scarce. Despite these issues, the Resource Allocation Tool provided useful information to help the UCG make difficult allocation decisions. The tool also highlights the critical need for data analysts in emergency response situations to expand the agency's data-driven operations.

Issues with resource availability persist in ongoing COVID-19 operations, emphasizing the importance of a coordinated effort to proactively manage resources in support of nation-wide requirements. A November 2020 Government Accountability Office (GAO) report indicates that "While the Department of Health and Human Services (HHS) and the Federal Emergency Management Agency (FEMA) have made numerous efforts to mitigate supply shortages and expand the medical supply chain, shortages of certain supplies persist. In September 2020, GAO reported that ongoing constraints with the availability of certain types of personal protective equipment (PPE) and testing supplies remain due to a supply chain with limited domestic production and high global demand."[80]

### Recommendation for Key Finding 2.2

**Recommendation 2.2.A:** Develop a coordinated strategy for data-driven operations. FEMA should learn from the approaches and methodologies developed to identify their broader application to other disaster and catastrophic scenarios. This strategy should include the skills required to design and develop the tools needed, and an implementation plan to building capability within existing staff or recruiting staff with the capabilities required. As part of deliberate planning, FEMA should identify datasets that would be required during a catastrophic incident and develop a process to access those data when needed. The identification of data gaps and negotiation of data access would be more effectively addressed as a preparedness activity. Having the needed information at the start of an incident would a allow for a faster and more informed response.

**Key Finding 2.3:** The NRCC coordinated the national mobilization and distribution of billions of dollars' worth of PPE and other resources, but the lack of an initial centralized system in the NRCC to integrate non-FEMA resources affected visibility of the resources shipped and the estimated delivery dates for the SLTT partners.

The FEMA logistics mission involved transporting over $7 billion in resources across the nation. FEMA partnered with private industry, non-governmental organizations (NGOs), and other federal agencies to manage the complex logistical operations. On March 25, 2020, NRCC personnel began

allocating resources to affected communities. However, as the pandemic continued, all states and regions were affected at a high rate, and multiple hot spots of cases appeared.

FEMA activated task forces in multiple regions and worked with SLTT partners on the ground to coordinate distribution and delivery efforts. As the pandemic spread, different areas were affected to different degrees and states had multiple surges of cases. This led to regions having their own unique logistical challenges and increased the complexity of the operation. Because COVID-19, unlike the incidents to which FEMA traditionally responds, did not affect physical infrastructure, FEMA and its partners were able to use air, ground, and maritime modes of transportation and delivered over 800 million items across the United States, as of September 25, 2020, as illustrated in Figure 15.

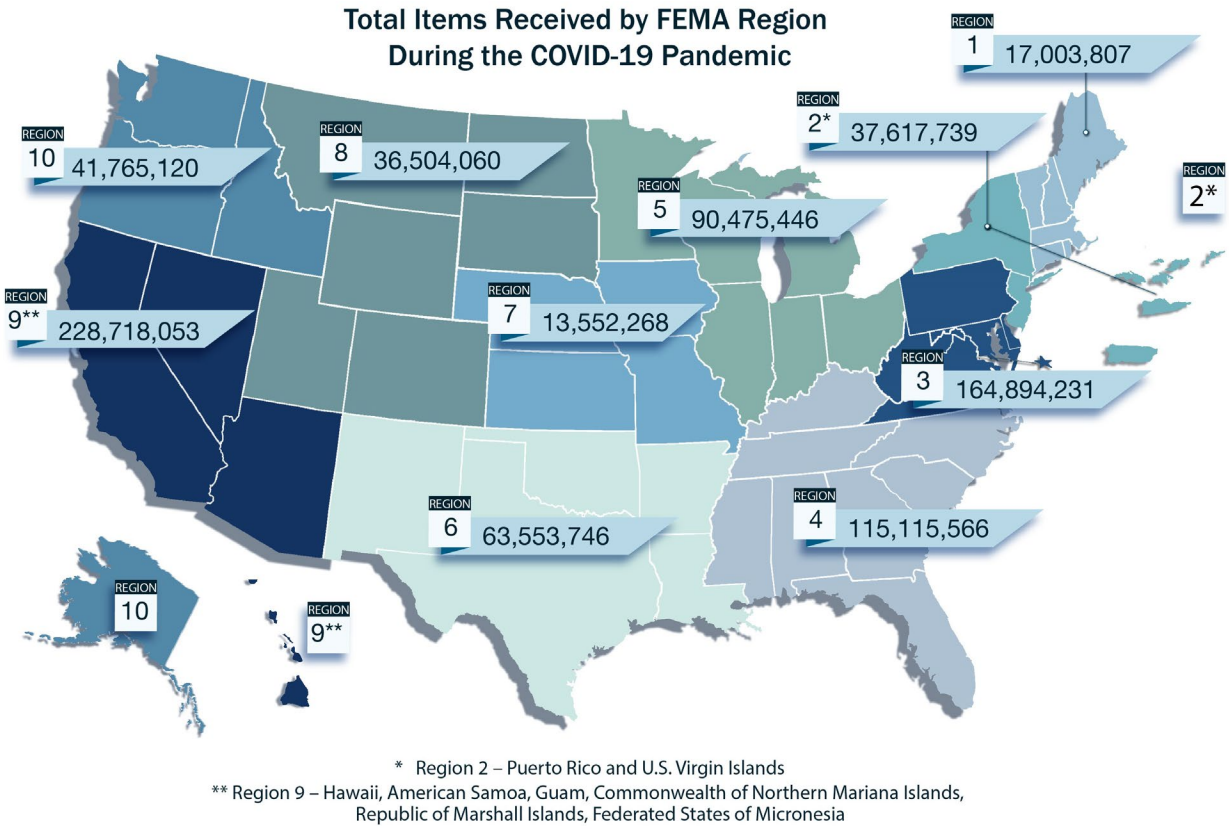



**Figure 15. Total Items Received by FEMA Regions During the COVID-19 Pandemic**

FEMA established and maintained staging areas for resources in federal warehouses located in Louisville, Kentucky, and Harrisburg, Pennsylvania. These warehouses inventoried, staged, and distributed commodities requested through RRFs to the regions. At these staging areas, staff were able to combine multiple orders of PPE and other commodities to create more comprehensive shipments, which increased the efficiency of logistics efforts. FEMA transportation personnel would then transport these commodities to the states, where they were distributed to communities.

Regional FEMA leadership used alternative methods to facilitate resource distribution because of the logistical focus on hot spot areas and existing relationships between regions and states. Regional warehouses were established in Regions 1, 2, 3, 7, and 9 to facilitate a rapid response and to serve as locations for regional personnel to track supplies and stock resources in anticipation of COVID-19 surges in their states. Given the far-reaching effects of the pandemic in all sectors, regions were a very large part of the logistical operations and were instrumental in the allocation and distribution of resources, especially PPE. Region leaders noted that because of their professional relationships with SLTT officials and governments, they had a much better understanding of supply and demand signals and were able to break down larger shipments into manageable "kits" to deliver quickly to nearby affected areas.

### Providing PPE to Nursing Homes Nationwide

In support of a White House initiative, the Supply Chain Task Force PPE Cell coordinated the delivery of over 15,400 PPE packages to Medicare- and Medicaid-certified nursing homes in 53 states and territories by June 11, 2020. These PPE packages consisted of eye protection, gloves, gowns, and masks.

The COVID-19 pandemic created several challenges for logistical tracking systems. FEMA's LSCMS was one of many tracking systems for the mobilization of resources in this response. LSCMS' scope is ordering and tracking FEMA (or FEMA-procured) resources, and it does not have a requirement to track other resources. LSCMS was able to produce reports when tracking FEMA-procured resources, throughout the process from procurement to distribution. However, the nature of the environment and scope of the pandemic stressed resource tracking in the NRCC and revealed lacking capabilities regarding resources managed or procured by groups other than FEMA. For example, FEMA used LSCMS to track information for resources that were procured by private sector and NGO partners but transported by FEMA, but it required a manual entry of data.

Despite the logistical challenges, FEMA was able to use its expertise and private sector relationships to implement alternative tracking systems, including FedEx and UPS, to increase visibility of LSCMS-tracked shipments during this response. As part of the coordinated effort, FEMA delivered close to 350 million cloth face coverings to states, territories, tribes, and private sector industries, as shown in Table 9.

The NBEOC also received significant outreach and offers from private sector companies that offered donations or services in support of requirements. After the NBEOC validated the information, it was passed to the relevant task force or program office for action. There were many complaints from the private sector companies, who said that no one ever followed up on their offers for help.

**Table 9. FEMA Delivered Millions of Cloth Face Coverings to SLTT and Critical Infrastructure**

| Sector/Agency | Cloth Covering Totals |
|---|---|
| Chemical | 6,514,952 |
| Communication | 2,287,700 |
| Critical Manufacturing | 972,500 |
| Dams | 134,500 |
| Dialysis | 4,707,500 |
| Energy | 2,022,501 |
| Food/Agriculture | 3,528,172 |
| Health | 179,000 |
| Long Term Care Facilities | 12,794,783 |
| National Voluntary Organizations Active in Disaster | 25,074,500 |
| State/Territory | 134,871,943 |
| Transportation | 113,040,500 |
| Tribal | 5,360,150 |
| United States Government | 34,990,955 |
| Water | 3,480,000 |
| **Grand Total** | **349,959,656** |

## Recommendations for Key Finding 2.3

Recommendation 2.3.A: Assess resource coordination and distribution operations at the HQ and regional levels to revise and refine plans and ensure integration with SLTT partners. Nationally, FEMA should identify practices that should be incorporated for future operations. Activities that may be applied for future operations should be incorporated by updating planning documents and procedures. Operational planning should be coordinated with SLTT partners to ensure a comprehensive approach. FEMA should leverage pre-existing relationships between regions and their states to help logistical and supply chain efforts and take advantage of systems already in place, while continuing to facilitate a stabilized supply chain and operations.

Recommendation 2.3.B: Identify and implement a business intelligence tool for resource tracking in the NRCC, which would create a centralized system to incorporate FEMA and non-FEMA resources. The system should maintain situational awareness by aggregating, visualizing, and sharing data in the NRCC and with partners.

**Key Finding: 2.4:** FEMA executed an unprecedented number of mission assignments to federal partners in innovative ways to support state, tribal, and territorial requirements, but the nature of the incident revealed insufficient policies and procedures for handling the duration and complexity of the operations.

FEMA issues mission assignments (MA) to task and fund federal resources to support disaster needs.[81] There are two categories of MAs, Federal Operations Support (FOS) and Direct Federal Assistance (DFA), that FEMA uses for support, the differences of which are highlighted in Table 10.

**Table 10. Mission Assignment Categories**

| | Federal Operations Support | Direct Federal Assistance |
|---|---|---|
| State, tribe, or territory cost share | 0% | 0% to 25% |
| Requires a Presidential disaster declaration | No | Yes |
| Recommended period of performance | 7 to 10 days | Up to 60 days |

MAs task federal agencies to provide federal-to-federal support, allowing FEMA to coordinate the federal government's response and recovery missions.[82] DFA MAs provide goods and services for eligible emergency work when a state, tribal, or territorial government has exhausted its own capabilities to provide those services. If either type of support has an extended requirement, guidance recommends transitioning from an MA to an interagency agreement.

FEMA applied a new approach to FOS that saved significant time. Traditionally, activation MAs are issued to activate other federal agency liaisons to support regional and HQ disaster activities. These activation MAs are issued to cover eligible expenditures incurred by other federal agencies supporting response operations. Typically, these MAs are issued by regions and/or HQ to cover eligible expenditures incurred by other federal agency staff supporting disaster operations. Given the national scope of the COVID-19 pandemic, this would have required each MA to be replicated a minimum of 10 times, and potentially more than 50 times, for each major declaration for each state, tribe, or territory. FEMA HQ and regions collaborated to establish a single national MA and issued individual regional mission assignment task orders (MATOs) for each federal partner engaged. This process centralized both requests and fulfillment, which lifted the administrative burden from the other federal agencies and regions while giving FEMA HQ better situational awareness into what specifically the assigned MA funding was supporting.

National activation MAs allowed more flexibility for other federal agencies, which were short staffed and had teams supporting multiple states and regions which would not have been allowed under specific MAs for each declaration. This process also streamlined cost reconciliation, reducing the time required to track expenses incurred by the other federal agencies and expediting the reimbursement process. MATOs provided cost estimates by region to ensure proper funding was kept in place across all regions. Once major declarations were in place and staffing requirements

stabilized, the national activation MAs transitioned to the regional and state levels, which is more consistent with traditional response operations. Implementation of national MAs required FEMA to develop and manage new processes and constantly communicate between the FEMA Response Office and the Field Based Operations within the Office of the Chief Financial Officer (OCFO), which manages the Disaster Response Fund (DRF). Through this revised process FEMA was able to issues billions of dollars in MA obligations as of December 14, 2020 (see Table 11).

During COVID-19 pandemic operations, through DFA, FEMA authorized Title 32 (T-32) National Guard (NG) deployments for 49 states and the territories by executing MAs with the Department of Defense (DOD), beginning in March, to provide additional personnel and capability under governors' direction.[83]

**Table 11. Mission Assignment Details**

| MA Details | Numbers |
|---|---|
| Total MAs | 755 |
| Amendments to MAs | 5,058 |
| Total MA Obligations | over $4.8 billion |

The response to COVID-19 is the first time Title 32 has been authorized at this scale and is the largest number of mission assignments ever issued for Title 32, with a peak of more than 40,000 Title 32 soldiers supporting operations. These initial MAs were issued with no state cost share. On August 3, 2020, President Trump issued memoranda extending his authorization of Federal Title 32 status for NG deployments in support of COVID-19 pandemic response through the end of the year.[a] These extensions came with updated guidance reducing the federal cost share from 100% to 75% from August 22, 2020, through December 31, 2020, with a few states having an extended 100% federal cost share status.[a]

The MAs for NG deployments extend beyond the standard 60-day maximum for life-saving and sustaining operations. However, given the Presidential guidance during COVID-19 operations, FEMA is continuing to fund these MAs to the NG to provide critical support for COVID-19 operations. Use of T-32 alleviated requirements for states to fund, and later seek reimbursement for, their NG activations. Most response efforts require NG to activate for days or weeks, not months. In response to the shrinking tax revenue and tenuous fiscal situations states found themselves in, placing the NG in T-32 status allowed states to keep the NG activated throughout the protracted response operations. In addition, T-32 provided NG personnel with federal pay and benefits. Because of the risk of exposure to COVID-19, the use of T-32 ensured that NG soldiers and airmen received full military coverage for health care and other benefits.


*National Guard deployed under Title 32 to support COVID-19 operations. (FEMA)*

The use of MAs to task T-32 personnel imposed a significant administrative burden on DOD, the states, and FEMA. The time required to seek sufficient justification and to consult with FEMA on the necessity of the requested response is longer than if governors simply invoked their NG in state active duty under existing Stafford Act processes.

### Recommendation for Key Finding 2.4

**Recommendation 2.4.A:** Evaluate the policy adaptions to mission assignments during the COVID-19 operations, and revise or develop policy and procedures that are required to enable FEMA to provide consistent support to partners in future incidents.

**Key Finding: 2.5:** FEMA coordinated with private sector partners to expand domestic manufacturing of scarce resources but lacked a consistent strategy across the operation for involving the private sector, which resulted in inconsistent communication, guidance, and direction.

Despite the PanCAP and PanCAP-A listing the National Business Emergency Operations Center (NBEOC) as the lead for private sector engagement, multiple government entities engaged the private sector, including the White House, NRCC, UCG, task forces, and FEMA Regions. There was no established guidance for coordinating or communicating these engagements, which often led to duplicate contacts. Leadership reported that no single point of contact had a complete picture and understanding across the multiple entities coordinating with the private sector. As a result, there was no opportunity to cohesively engage with industry in a strategic manner, and messaging and direction outward to stakeholders were not uniform. The lack of a strategic, nationwide approach to bring industry together missed opportunities to increase expansion operations and include partners who could have supported requirements.

Despite the lack of integrated approach, the NBEOC received more than 8,000 inputs and offers that required screening to ensure validity, and then was responsible for passing them to the appropriate party to follow up (see Figure 16). The Office of Business, Industry, Infrastructure, and Integration (OB3I) which leads the NBEOC has limited staffing, and at the height of operations, the NBEOC increased staffing from 4 to 48. The team fielded offers of support, capabilities, and donations.

There were also offers to retool corporate manufacturing operations to support demands for PPE and manufacturing operational needs. The effects of COVID-19 also led to industry reaching out for insight on how to stabilize their own operations. The NBEOC was able to build out its vision of four operating branches to execute operations in response to demand. To maintain this functionality, the OB3I will need more personnel to meet steady-state coordination requirements and significantly more trained staff to meet future operational demands.

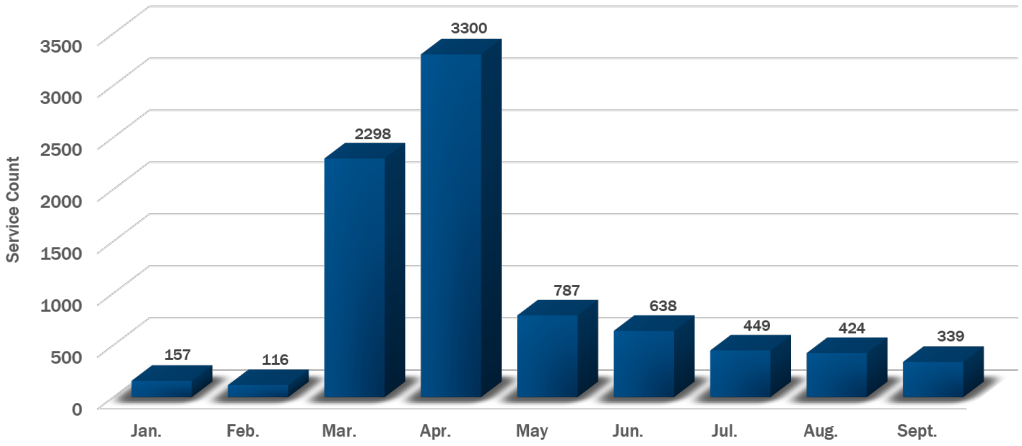



**Figure 16. NBEOC Service Desk Tickets**

Manufacturing expansion was one part of the four-pronged supply chain stabilization approach for the COVID-19 pandemic response.[84] The expansion line of effort focused on increasing manufacturing production capacity of critical health care supplies and equipment needed to respond to the pandemic. Manufacturers increased production capacity with additional machinery, and in some cases retooled assembly lines to make new products.[85] FEMA, along with other collaborating agencies, explored opportunities within the private sector to increase manufacturing capacity of critical medical supplies using non-traditional manufacturers.[86] While traditional medical supply and equipment manufacturers increased in-house production capabilities, they also worked outside of their organizations, assisting other companies with retooling efforts to increase the overall production of critical supplies.[87]

## Regional Private Sector Engagement

Early in the response, Regions 8, 9, and 10 private sector liaisons realized the value that a regional coordination cell would provide, given the extent of the pandemic and the national shortages. They implemented a Western Regional Coordination Dashboard as a communication and situational awareness tool. The Region 10 private sector liaison created a PPE Exchange Tool dashboard that matched needs with available supplies. The self-maintaining dashboard required no FEMA personnel; site users matched needs with supplies themselves. Use of the site widened beyond the initial western regions to include users across the country. The site was active from April 13, 2020, to May 29, 2020, and received over 5,200 visits, when attendance fell off because states had made their own connections to private sector organizations. Region 9 also worked with FEMA HQ, the government of California, and a Chinese automaker to obtain the certification needed for the company to retool plants in China to make masks. Region 9 worked with the FDA to prioritize the certification and worked to complete steps to ensure the product was acceptable. Ultimately, the company received the certification and was able to successfully produce N95 respirators and surgical masks.

The expansion effort facilitated some collaborative relationships between traditional medical supply and equipment manufacturers and other types of companies with underutilized production capacity. This model of private industries working together has increased supplies of ventilators, N95 respirators, and other critical items.[88]

The SCTF, which includes HHS, DOD, and FEMA personnel, reviewed over 350 leads of American businesses that wanted to support the national response effort that were validated by the NBEOC and then sent for action. Task force members actively worked to create private sector partnerships, pairing companies that offered their excess factory production capacity, the talents of their workforce, and access to their raw material supply chains, with critical supply manufacturers that had expertise in producing PPE, ventilators, and other needed equipment.[89] This went beyond FEMA's traditional private sector engagement of increasing resource supply to matching resource offers to requests and needs.

Examples of manufacturing efforts include the following:

- Connecting a U.S. manufacturer with trade associations to expand hand sanitizer production capacity.
- Facilitating a joint initiative between a U.S. medical manufacturer and a retailer to provide 8.4 million isolation gowns to the private market within three months.
- Responding to state requests for more PPE by contracting with three textile manufacturers to produce a total of 88.6 million reusable level-1 isolation gowns.
- Providing assistance to multiple non-medical manufacturers, which allowed them to retool existing facilitates to create millions of masks.[90]

## Cross-Sector Supply Chain Stabilization


*(FEMA)*

In addition to sourcing and distributing health care supplies such as PPE, FEMA also worked to help stabilize cross-sector supply chains, including the U.S. meat processing industry. The NBEOC develop products from its SCAN and PULSE capabilities to project global supply chain disruptions and forecast domestic challenges from COVID-19 disruptions. FEMA's DATF tracked COVID-19 outbreaks in meat packing plant worker communities and directed resources to those communities. FEMA's NBEOC also worked with Centers for Disease Control and Prevention (CDC), Cybersecurity and Infrastructure Security Agency (CISA), and U.S. Department of Agriculture (USDA) to provide supplies to keep the meat packing plants open. Shipments included masks and testing supplies and media.

### Recommendations for Key Finding 2.5

**Recommendation 2.5.A:** Articulate a long-term strategy for engaging the private sector and coordinating across HQ, the regions, and the field in future disaster responses. The strategy should be consistent with ESF-14 and build on the lessons learned from the pandemic. FEMA should identify the desired outcomes and national resources required, integrate preparedness activities, and enhance the NRCC's understanding of private sector capabilities and processes to obtain support for stabilizing lifelines and providing resources. This strategy should lead to operational tools and integration of private sector data to support operations through the NBEOC.

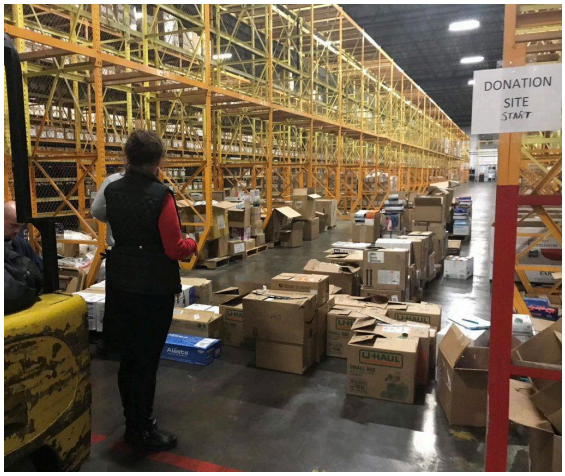
**Recommendation 2.5.B:** Invest in continued application of the Supply Chain Analysis Network (SCAN), Platform for Understanding the Lifeline Stabilization of the Economy (PULSE), and other methods of understanding marketplace capacities and capabilities to improve operational understanding, resource management, and alignment of effort with industry before, during, and after disasters. OB3I should also have resources to conduct analysis and manage information that provides ongoing national economic, business operational resilience, and supply chain assessment capabilities for the FEMA enterprise.

**Recommendation 2.5.C:** Develop a plan for integrating the private sector comprehensively in preparedness across the agency to include planning, organization, equipment, training, and exercises at HQ and the regions. Invest in staffing for OB3I capability at HQ and the regions to liaise with and coordinate on behalf of private sector partners to implement the plan.

**Key Finding 2.6:** Although donations are traditionally managed at the SLTT level, the national scope of the disaster led FEMA to solicit donations through the NRCC for the first time and implement several actions over the course of the response that resulted in more RRFs being fulfilled.

The COVID-19 operations marked the first time NRCC solicited donations. Previously, to avoid competition with states and regions (under the state responsibility model), the NRCC has avoided doing so. In this response, because the donations were being used to fill the states' RRFs and support their requirements, it was not viewed as a competition for the items.

The Donations Management Team received 265 donations, which included 142 private donations, 70 from other countries, and 53 from other federal agencies. The most common resource category was PPE, followed by cleaning supplies (e.g., hand sanitizer). Region 3 set up a federal warehouse, which allowed it to accept, cross-dock, and distribute




*FEMA's Donations Management Team received 265 donations from the private sector, other countries, and other federal agencies. (FEMA)*

large international donations throughout the Mid-Atlantic region. FEMA Logistics issued an MA to the United States Postal Service (USPS) to support the movement of donated materials. FEMA worked with the USPS to ship donated PPE to jurisdictions in all 10 regions, including Guam and Puerto Rico.

The Donations Management Team, including regional offices, also coordinated efforts to match donations with tribal nations. Donations management at FEMA HQ was very effective in pushing out available resources to SLTT partners such as small tribal nations, which may not have been listed as hot spots in daily task force PPE bulletins. Region 9 helped connect tribal nations—regardless of declaration status—with donors and resources through a team composed of tribal liaisons, logistics, private sector liaisons, and volunteer coordinators. For future international donations, FEMA's International Affairs Division is working with Customs and Border Protection (CBP), the Department of the Interior, and FEMA's Office of Tribal Affairs to understand how to better support tribal partners.

The Donations Management Team was able to use donations to fill RRFs from SLTT partners. If a donation did not match an open RRF, it was matched to a voluntary organization active in the disaster operations. Because the donations were matched to specific RRFs from the states, and not being received by FEMA as a federal agency, a concerted effort was made to accept all donations if a suitable recipient could be identified. The Donations Management Team worked to ensure that both donor and recipient were satisfied. For example, a donation of non-sterile surgical gowns could not be used in an operating room, so they were matched with a meat packing plant which required surgical gown protection, but not sterility.

There are three other actions worth highlighting. First, at the beginning of the response, GSA was advertising PPE on its "excess government supply" website for sale to the public. The Donations Management Team worked with GSA to identify its PPE that was in demand, and GSA would donate it directly to FEMA as excess equipment. Second, for "small" donations, such as 10 boxes of gloves, the team would redirect the donor to contact and deliver the items directly to local community partners, such as emergency management departments, hospitals, or food banks.

On March 25, 2020, the U.S. Department of State released a cable directing all U.S. foreign missions to assess potential PPE sources from foreign partners to support the U.S. response to COVID-19. The U.S. received significant offers of foreign assistance resulting in FEMA's International Affairs Advisors adjudicating a record number of foreign offers of assistance and facilitated the regulatory review, acceptance, and delivery of more than 35 million PPE items from 21 foreign partners, as of September 30, 2020 (see Figure 17).

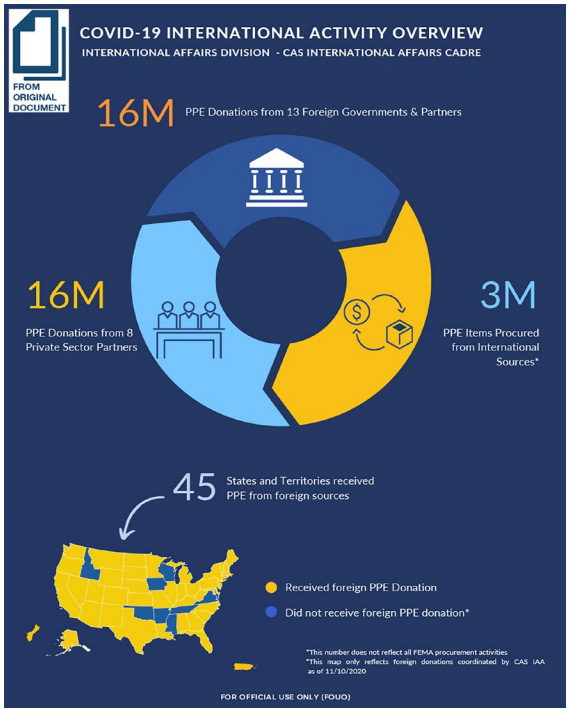



**Figure 17. COVID-19 International Activity Overview, as of September 30, 2020**

### Recommendation for Key Finding 2.6

**Recommendation 2.6.A:** Identify appropriate documentation to capture donations management practices for the future, taking into account the difference between directing domestic and foreign offers of assistance and when FEMA accepts donations versus coordinating the direct donation to SLTT partners. FEMA should standardize policies and processes in coordination with Office of Chief Counsel (OCC) and ensure that NRCC leadership has full visibility on issues relating to donations management that cross agency or international boundaries.

**Key Finding 2.7:** Project Airbridge expedited essential supplies from the global market to domestic supply chains to respond to shortages, and the deficit revealed limitations in FEMA's identification of mission critical resources and understanding of the related complexities and interdependencies in the end-to-end supply chain.

The federal government's response and lessons learned from the 2009 H1N1 influenza pandemic and the 2014 Ebola virus epidemic emphasized the importance of maintaining a domestic PPE and medical supply manufacturing base capable of meeting demand for future responses. However, there is a persistent lack of large-scale PPE production in the United States. After two major infectious disease public health scares in just over a decade, supply chains remained tethered to Asia. PPE ships from Asia by ocean freight. The *2017 Hurricane Season FEMA After-Action Report* recommends that FEMA "develop a more comprehensive understanding of supply chains, as well as stronger relationships with critical private sector partners to support rapid restoration in response to catastrophic incidents."[91] These lessons informed FEMA's response to the COVID-19 pandemic.


*FEMA transported scarce medical supplies via Project Airbridge. (FEMA)*

By March 2020, it was clear that domestic manufacturing of PPE and medical supplies would not be able to keep up with the demand caused by the explosive growth of COVID-19 in the United States. Additionally, the lengthy transit time of regularly scheduled PPE from Asia would not be able to stabilize the rapidly deteriorating supply chains. Shipping PPE via air freight is also uneconomical; private distributors would not pursue this method without additional financial assistance. With a domestic manufacturing sector unable to surge production to meet demand, FEMA initiated Project Airbridge as a public-private partnership to supplement and accelerate the distribution of medical supplies and PPE from foreign manufacturers to the United States.[92] FEMA chartered privately owned planes

for medical distributors to drastically speed up the arrival of PPE goods to the domestic market, reducing shipment times from 30–45 days via ocean freight to approximately 5 days via air freight.[93]

The Supply Chain Task Force identified that PPE and medical supplies would become limited, and it partnered with the Big Six medical distributors to ensure supplies were transported to areas in need. This partnership was governed by a memorandum of agreement (MOA) signed between March 28 and 30, 2020, by each of the distributors and U.S. Department of Homeland Security (DHS) / FEMA;[94,95] the U.S. Department of Justice reviewed the MOA to ensure compliance with anti-trust laws.[96]

### Key Responsibilities of the Memorandum of Agreement between the Medical Distributors and DHS/FEMA

DHS/FEMA would:

- Pay for chartered flights and fuel to transport PPE and medical supplies to the United States.
- Supply distributors with a list of hot spot counties with the most pressing needs.

Distributors agreed to:

- Pay for all other distribution costs.
- Share detailed supply chain information with DHS/FEMA.
- Prioritize at least 50% of Project Airbridge PPE for existing customers in hot spots.
- Sell the remaining PPE to other customers as they normally would.
- Sell their Project Airbridge PPE at a reasonable price (i.e., the price that a prudent and competent buyer would be willing to pay given available data on market conditions).

Project Airbridge operated from March 30, 2020, through June 29, 2020, and chartered 249 flights from Cambodia, China, Honduras, Malaysia, Thailand, Turkey, and Vietnam. Over a span of 92 days, Project Airbridge delivered over 1.7 billion units of PPE and medical supplies to prioritized areas (see Table 12 and Figure 18).

**Table 12. Number and Type of Project Airbridge Supplies Sent to Prioritized Areas, March 29, 2020, through June 30, 2020**

| Type of PPE and Medical Supplies | Number Sent to Prioritized Areas |
|---|---|
| Gloves | 1,436,665,085 |
| Gowns | 206,765,087 |
| Face masks | 68,055,885 |
| N95 respirators | 1,802,134 |
| Face shields | 1,576,312 |
| Coveralls | 495,815 |

| Type of PPE and Medical Supplies | Number Sent to Prioritized Areas |
|---|---|
| Oxygen delivery devices | 389,619 |
| Thermometers | 252,485 |
| Nebulizers | 121,157 |
| Miscellaneous* | 16,174,344 |
| Total | 1,732,297,923 |

** includes stethoscopes, blood testing supplies, adhesive thermometer strips, and several other miscellaneous supplies.*

The Project Airbridge flights arrived in 12 cities near domestic supply chain hubs, from which the PPE and medical supplies were distributed nationally. The majority of PPE and medical supplies were delivered to Chicago, Los Angeles, and New York. The Project Airbridge timeline details that the vast majority of PPE and medical supplies were delivered in April, with March, April, May, and June receiving 3%, 78%, 14%, and 5% of units, respectively. Project Airbridge temporarily stabilized supply chains and allowed time for a surge of ocean freight PPE to arrive at domestic ports. FEMA began transitioning the responsibility of Project Airbridge to HHS by the start of June, and the transition was completed by June 15. Project Airbridge flights continued to wind down through the end of June; its 249th and final flight was on June 29, 2020. Figure 19 shows how commercial distributors supplied PPE across the county, which includes Project Airbridge.

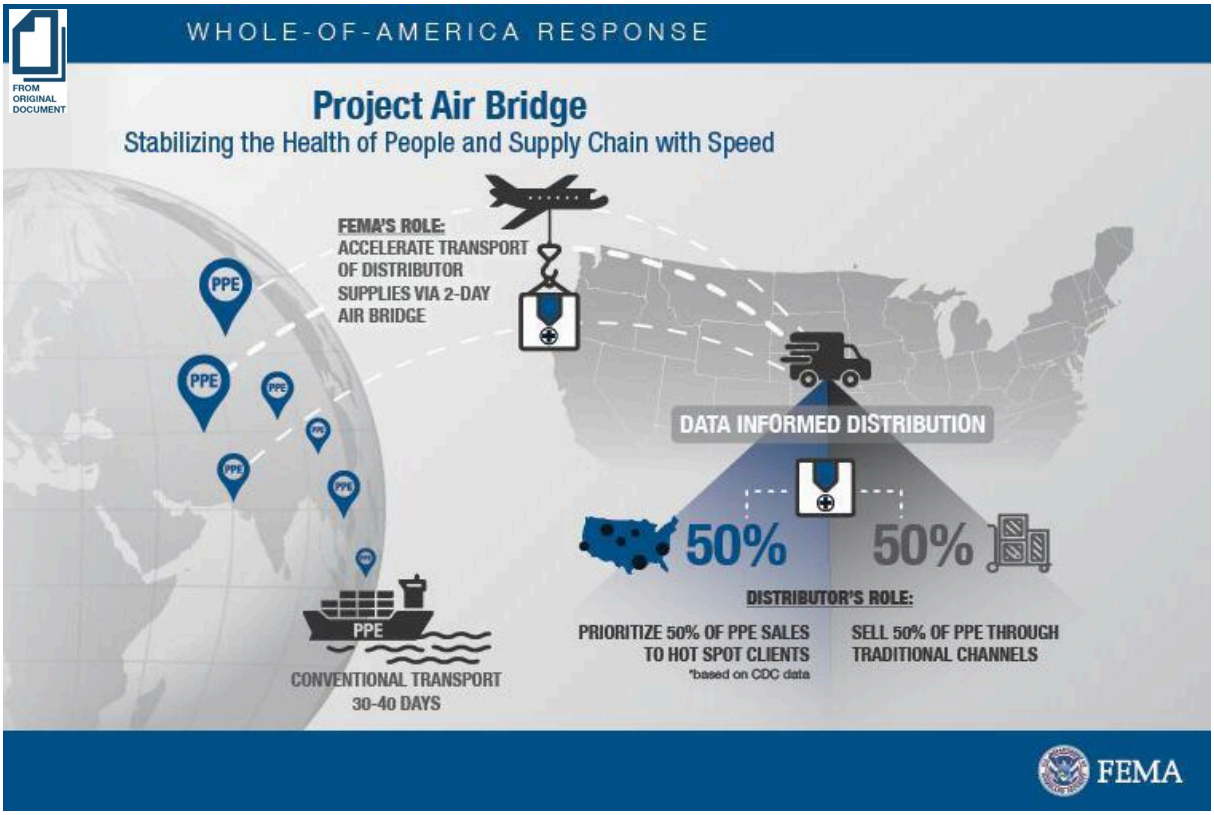
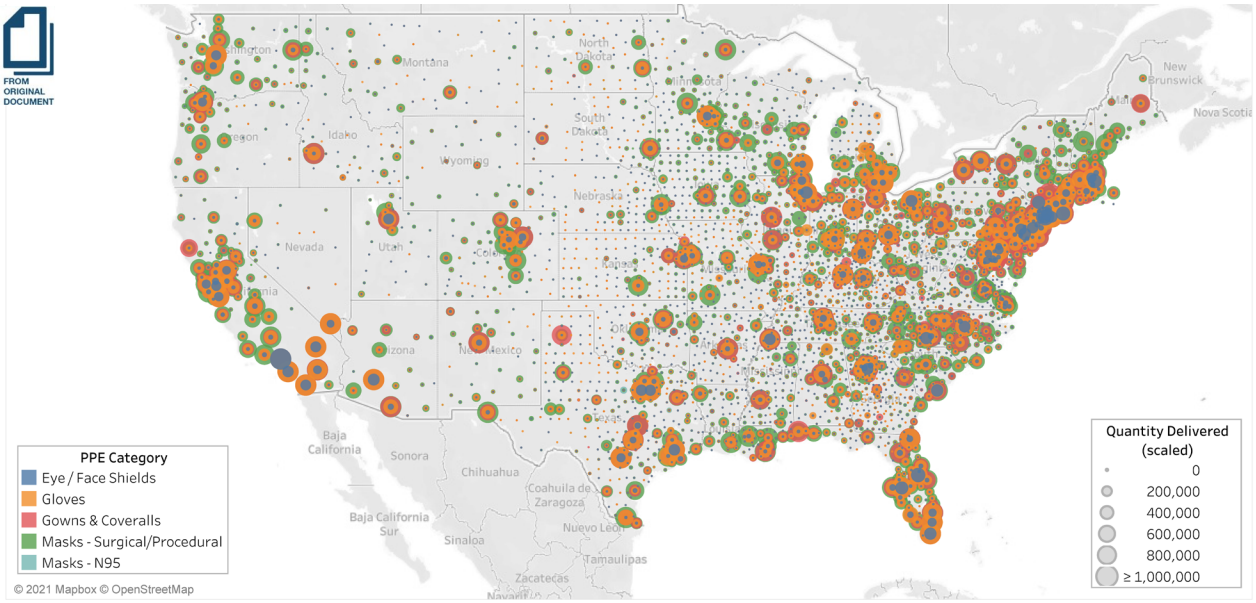



**Figure 18. Project Airbridge Delivered over 1.7 Billion Units of PPE and Medical Supplies to Prioritized Areas**




Gloves scaled to hundreds in visualization, all units in "eaches". Quantities are mapped to counties. County locations are provided by the U.S. Census and represent the center of a county's geographic area. As the U.S. Census provides the centroid of both land and water area, some county markers may appear as located slightly outside the land area boundary.

**Figure 19. FEMA Coordinated with Commercial Distributors to Ship PPE to Hot Spots through their supply chain which included Project Airbridge resources, March 1, 2020 – July 4, 2020**

The Project Airbridge MOA directed distributors to allocate at least 50% of all PPE and medical supplies for areas that DHS/FEMA and HHS designated as hot spots. PPE and medical supplies not allocated for hot spots were incorporated into the companies' normal private sector networks. To fulfill the requirements of the MOA, the NRPC provided a list of county hot spots and priority sectors for PPE distribution on a routine basis. NRPC initially issued 18 Resource Prioritization Bulletins for the distributors every 96 hours but later relaxed the schedule to one every week. While not the primary intent, the Resource Prioritization Bulletins were not typically available to SLTT partners, and if they had been provided, they could have been helpful for planning or visibility purposes.

To verify compliance with the 50% PPE prioritization requirements agreed to in the MOA, FEMA's Supply Chain Advisory Group issued the Project Airbridge Distributor Compliance Report in October 2020. This report concluded that only four of the six distributors met the requirement to send 50% of the PPE brought over through Project Airbridge to prioritized areas, with Concordance Healthcare only shipping 48% and Henry Schein shipping 44% to the counties most in need. The compliance report noted that the combined efforts of the six distributors sent two times more resources to the identified priority areas than was required in the agreement.

## Supply Chain Data Tower

*(FEMA)*

Managing the supply chain data for critical health care equipment and supplies was a priority in the COVID-19 operations. Beginning in April 2020, the NRCC developed a new public-private partnership for the centralization of these data to identify inventory movement and supply chain information from distributors as well as parishes and counties receiving supplies. HHS lawyers managed the signing of MOAs between the U.S. government and the private sector distributors in coordination with the regions, SLTT partners, and hospitals. This new effort resulted in an information storage and retrieval application known as the "data tower." The data tower grew iteratively to include pharmaceutical distribution, hospital inventory, and testing equipment. In addition to serving as an underpinning of many other data tools, the SCTF consolidated this information to develop hot spot analyses and inform resource allocation decisions by folding them into HHS Protect, which was then used to produce the Resource Prioritization Bulletins, which allocated resources directly to hot spots. The data tower highlights the incredible importance and utility of high-quality information for logistics, allowing for data-driven decision-making.

### Recommendations for Key Finding 2.7

**Recommendation 2.7.A:** Build capability for monitoring and understanding business and industry supply chains and develop plans for aligning the resource management required for national catastrophic events to build greater pre-incident insight and inform awareness of gaps or trends that require mitigation. FEMA should continue to engage the private sector and coordinate with other federal agencies regarding supplies, surge capacity, and supply chain information on critical equipment during emergencies. This information should drive the development of courses of action for addressing resource and supple shortfalls, and the implementation of steady-state actions to address the identified gaps.

**Recommendation 2.7.B:** Continue engaging the private sector and facilitating interagency coordination of supply chain risk assessment, surge capacity, and resources available via procurement or visibility into commercial distribution, and with consideration of relevant DPA authorities. FEMA, as co-primary lead for both ESF-7, Logistics, and ESF-14, Cross-Sector Business and Infrastructure, should lead coordination on supply chain stabilization outcomes.

**Recommendation 2.7.C:** Commit resources to assign a dedicated private sector coordinator for each region to build state and private sector capability. FEMA should build this capability based on the

region's risk and economic composition and ensure that it is integrated into the agency-wide efforts of OB3I's Business, Industry, and Infrastructure Integration Program.

**Key Finding 2.8:** The Defense Production Act (DPA) was used in novel ways that could prove useful for future catastrophic incidents, but implementation was difficult due to the complexity of issues and limited trained staff.

The Defense Production Act (DPA)[97] was established during the Korean War and is based largely on the World War II War Powers Act,[98] which had sweeping statutory capabilities to command the U.S. economy to operate toward a singular purpose.[99] Though application of DPA authorities was more straightforward when American goods were largely domestically manufactured, it remains an important authority for identifying national shortfalls and meeting critical demands for scarce resources. DPA is also valuable as a preparedness tool as outlined in Executive Order 13603, "National Defense Resource Preparedness,"[100] by requiring the identification of resource gaps and establishing contracts based on those needs. Establishing Title 1 priority contracting related to the identified resources can lead to accomplishing mission outcomes faster during an incident. Many companies proactively engaged with the federal government to identify how they could support COVID-19 requirements, and there is an opportunity to use the DPA as a pre-disaster resource to build agreements and formalize engagement with the private sector based on critical resource gaps.

### The Defense Production Act: A Valuable Tool Supporting COVID-19 Operations

Effective DPA use required partnership with industry and the mobilization of capability. During the COVID-19 response, FEMA executed DPA to support operations. FEMA has purchased 220 million respirators through six orders on a priority contract. FEMA has also used Title I for the exercise of allocation authorities with the export cargo restrictions, which limited PPE critical to the response from being exported to other countries. Under Title VII, FEMA completed a voluntary agreement on August 17, 2020, that allows the government to coordinate and share information with the private sector in ways which would normally be prohibited by antitrust laws toward the long-term engagement with suppliers and distributers to support federal pandemic response through a series of plans of action.

The DPA allows the government to place priority-rated contracts and orders,[101] supports resource allocation by the federal government,[102] prohibits and defines penalties for hoarding,[103] supports expenditures for resource production,[104] and allows collaboration with the private sector that would otherwise violate anti-trust laws.[105] Table 13 includes the DPA provisions used during COVID-19 operations. DPA is a powerful tool that, if used to its fullest capabilities, can allow the U.S. to mobilize and coordinate key resources.

**Table 13. Major Provisions of the Defense Production Act Applied During COVID-19 Operations**

| Major Provisions of the Defense Production Act Applied During COVID-19 Operations | |
|---|---|
| Title I | **Sec. 101** Allows the federal government to require all domestic distributors and producers of material to prioritize federal contracts and their performance above all other existing contracts (excluding contracts of employment) as deemed necessary to promote the national defense. This section also allows for the federal government to allocate resources as necessary to meet the national need.<br>**Sec. 102** Prohibits hoarding as defined by the DPA. To meet the criteria of hoarding, one must accumulate material in excess of reasonable demands of business or personal or home consumption, or for the purpose of resale in excess of prevailing market prices.<br>**Sec. 103** Defines penalties for hoarding. |
| Title III | **Sec. 303** Allows the federal government to provide funding to the private sector to improve or expand domestic industrial base capabilities to protect the national defense. |
| Title VII | **Sec. 708** Allows the federal government to establish voluntary agreements with the private sector to share information. Voluntary agreements provide an antitrust defense for actions properly taken under the voluntary agreement. |

The process for DPA implementation is largely described in Executive Order 13603, which identifies government agencies with key equities in DPA implementation, and delegates roles and responsibilities accordingly.

For Title I, DOD, the U.S. Department of Energy, and DHS (through FEMA) act as "determination departments" for the federal government (see Figure 20). This means that these agencies determine when and whether DPA authority should be used, then coordinate with "resource agencies" to execute use of Title I of the DPA. DHS maintains a central coordination role with resource agencies for DPA use. Through DHS Delegation 09052, FEMA operates the DPA on behalf of DHS.[106] However, FEMA does not have independent "resource agency authority" to issue DPA-rated contracts and orders, outside of what has been delegated from other agencies. The U.S. Department of Commerce and the U.S. Department of Agriculture have delegated fairly broad resource authority to FEMA for their resources ("industrial resources" and "food resources," respectively).[107]

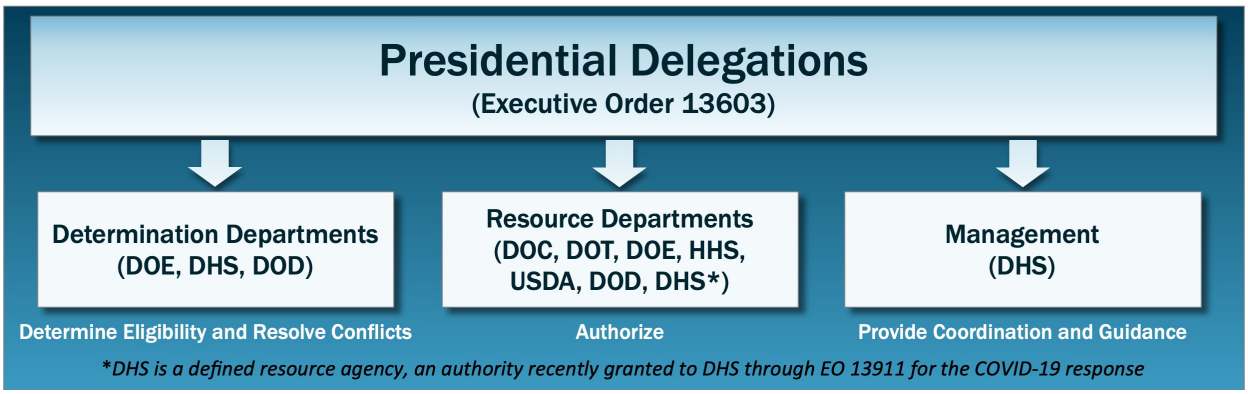



**Figure 20. Presidential Delegations (Executive Order 13603)**

In March 2020, President Trump signed three major executive orders that defined key roles and responsibilities for COVID-19 operations related to DPA. Executive Order 13909, "Prioritizing and Allocating Health and Medical Resources to Respond to the Spread of COVID-19,"[108] submitted March 18, affirmed HHS' role as the lead medical resources agency for the pandemic. Executive Order 13910, "Preventing Hoarding of Health and Medical Resources to Respond to the Spread of COVID-19,"[109] further delegated authority to HHS to lead the anti-hoarding mission of scarce medical resources, with blanket authority to define scarce items. Executive Order 13911 expanded authority for DPA activities for COVID-19 to DHS/FEMA, making DHS/FEMA and HHS jointly responsible for the use of the DPA for health and medical resources for COVID-19.[110] This designation allowed both agencies to execute DPA authorities for health and medical resources for COVID-19. This led to FEMA becoming responsible for developing regulations and programs for executing the medical resource supply mission related to COVID-19, which increased the burden on FEMA's limited DPA mission personnel.

EO 13911, and its delegation to DHS/FEMA for health and medical resources to respond to COVID-19, may have resulted in part because HHS did not delegate its authority under the DPA to other agencies. This type of delegation is common within the EO 13603 framework; for example, the Department of Commerce and Department of Agriculture both have longstanding delegations of authority to DHS/FEMA.[111] Figure 21 outlines the process for the execution of DPA by FEMA in the COVID-19 operations.

GAO concluded that DPA Title I contract prioritization could have been used more frequently during the event, but because of an incomplete understanding of secondary and tertiary effects to the commercial market that would result from priority contracts, its use was limited.[112] Neither HHS nor FEMA understood the domestic supply chain at the beginning of the response. FEMA was assisted by the deployment of Rear Admiral John Polowczyk, Vice Director for Logistics, Logistics Directorate (J4), Joint Staff, who led the SCTF. It was not until the SCTF established the data tower, which aggregated data from the Big Six medical distributors, that private sector information on domestic supply and demand was available to HHS and FEMA.

FEMA has limited subject matter expertise in end-to-end supply chain management. Logistics and supply chain management for FEMA in traditional disaster operations means coordination with shippers and distribution agents, without the consideration of raw materials, production, and manufacturing lines. With DPA, the federal government could have controlled domestic supplies of key materials, but its reticence to disrupt private sector supply chains and lack of expertise on current supply chains meant that it used Title I less frequently and more deliberately.

Allocation authority under Title I of the DPA was also used through the Temporary Final Rule, "Prioritization and Allocation of Certain Scarce or Threatened Health and Medical Resources for Domestic Use," on April 10, 2020.[113] This Allocation Order was brought about by a Presidential memorandum, "Memorandum on Allocating Certain Scarce or Threatened Health and Medical Resources to Domestic Use,"[114] which directed DHS/FEMA to prohibit inappropriate export of certain critical materials.

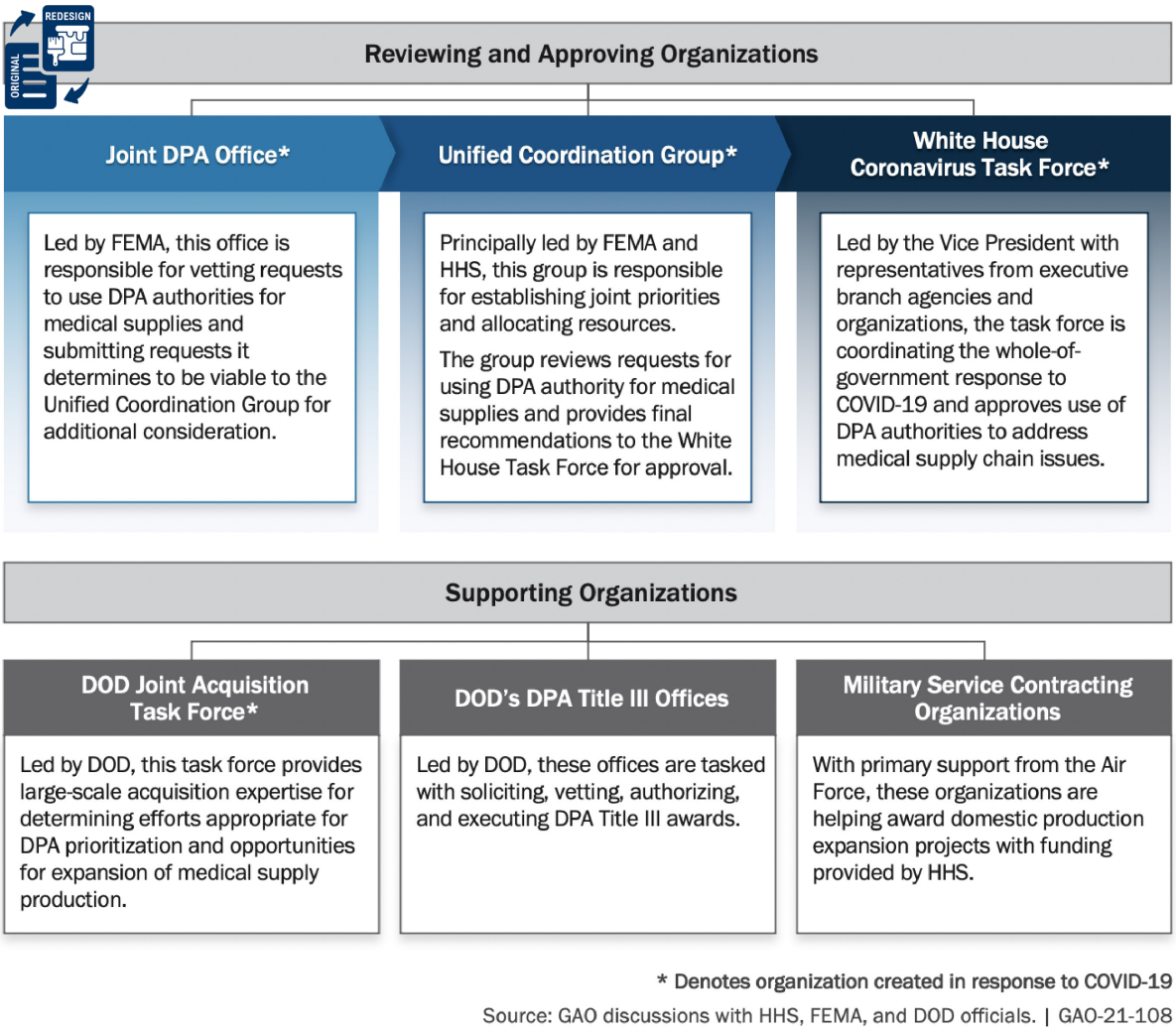



**Figure 21. DPA Review and Approval Process**[g]

The DPA Program Office for FEMA consists of 4 full-time employees (at the end of the Cold War, the office had more than 60 people). Although staffing has been reduced, the mission and responsibilities outlined in CFR 44 have not changed, leading to operational limitations from manpower shortages. During the response, the team was augmented from 4 to 30, with additional staff across the federal government; some were familiar with DPA, but many needed to be trained and taught the details of the act. Several FEMA staff who were leveraged for this mission hold positions that require them to deploy in other capacities during disasters; they are not consistently available to support the DPA mission. Because of the technical nature of DPA and its importance during a catastrophic event, a lack of trained, permanent personnel dedicated to supporting that mission represents a major operational gap.

[g] This graphic is from GAO-21-108, Defense Production Act. It should be noted that the FEMA Joint DPA Office was co-led by FEMA and HHS.

Section 708 of DPA allows for the government to coordinate and share information with the private sector in ways which would normally be prohibited by antitrust laws. Actions properly taken by private sector parties under the voluntary agreement that are within the scope of a plan of action and sufficiently overseen by FEMA receive an affirmative defense against antitrust action. DHS/FEMA completed a "Voluntary Agreement for the Manufacture and Distribution of Critical Healthcare Resources Necessary to Respond to a Pandemic" announced on August 17, 2020, after over three months of coordination and review.[115] Currently, over 50 medical PPE manufacturers, distributors, and subject matter experts have signed on to the agreement. This is the first time FEMA has entered into a voluntary agreement and one of the few times the authority has been used. The current agreement is active for five years and will allow long-term support of suppliers and distributers to support federal pandemic response. OB3I in coordination with FEMA's DPA Program Office are responsible for the implementation of the voluntary agreement.

FEMA intends to implement the voluntary agreement through a series of plans of action. FEMA has completed one plan of action to date—for protective equipment manufacture, allocation, and distribution—and is in the process of developing draft plans of action for therapeutics and other areas related to the COVID-19 response. While this represents a significant opportunity to engage and expand opportunities with the private sector, it will require staffing resources to implement and represents an opportunity to pursue other considerations in steady-state for identified critical resources that could be affected from other threats and hazards.

This effort required coordination between HHS, FEMA, and other federal agencies, to support manufacturers' information requirements. In practice, this was a tremendous effort within the COVID-19 response that led to the development of the Export Cargo Review Interagency Working Group. NBEOC, CBP, and CISA supported the Joint DPA Office effort by centralizing a significant number of private sector requests for information on the export cargo rule and responding quickly to inquiries. FEMA's OCC, International Affairs Division and the RSS supported this effort by reviewing exports for usable products and flagging products that needed to be returned to the domestic supply.

### Recommendations for Key Finding 2.8

**Recommendation 2.8.A**: Identify the Incident Support personnel required that would support the FEMA DPA Office when rapid scale-up during an incident is necessary. Building personnel and capability could include: (1) FEMA should coordinate to develop a plan to recruit and train the identified positions; (2) FEMA should also develop and conduct training for offices, to include OCPO, OCFO, and Logistics, that have roles supporting DPA activities; and (3) formalize an interagency process allowing for staff familiar with DPA from other agencies to readily support operations.

**Recommendation 2.8.B**: Assess existing staffing and funding levels to implement the guidelines and processes established in Executive Order 13603 §103-104VI, and other related requirements found in statutes or executive orders, such as EO 12656, Assignment of Emergency Preparedness Responsibilities, and all other requirements, such as those in CFR Title 44, including Subsection F, Preparedness. To do this, FEMA should (1) approach DPA as a readiness-focused mission and have staff, plans and systems in place before an event occurs; (2) leverage National Exercise Program

exercises and after-action review findings with clear follow-up DPA action recommendations; (3) ensure sufficient staffing to service the DPA authorities, responsibilities, and requirements defined for DHS/FEMA in CFR 44; and (4) create an annex or section in the DPA Committee report to Congress that identifies key items (or item groups) that would likely be a critical gap for a federal response to an incident.

**Recommendation 2.8.C:** Evaluate relevant authorities, such as Executive Orders and statutory text, and assess the current administrative requirements for implementing the Act to propose updates to the DPA. Congress should update the Act to enable a more efficient application of the authorities to the operational requirements in disasters.

## Summary of Recommendations for Resources

The following summary of recommendations reflects significant lessons learned from a national resource-constrained event (see Table 14). The pursuit of strategies and investments in preparedness activities of planning, training, and equipping, coordinated between FEMA, other federal agencies, SLTT, and private sector partners is important to ensuring that future responses have a greater understanding of resources, vulnerabilities, and priorities in meeting operational requirements.

**Table 14. Summary of Recommendations for Resources**

| Section 2: Resources Summary of Recommendations |
|---|
| 2.1.A. Build on the lessons learned during the COVID-19 operations and invest in developing a long-term strategy to evaluate the efficiency of resource and incident management systems in maintaining the common operating picture during a disaster, and, based on the results of the evaluation, develop a plan for implementing the development and refinement of those systems to create a more complete common operating picture and enable more timely and effective decision-making. |
| 2.1.B. Assess the standard resource request submission processes for consistency of application and identification of causes for variance from the process. Implement a plan for reducing the process variances. |
| 2.2.A. Develop a coordinated strategy for data-driven operations. FEMA should learn from the approaches and methodologies developed to identify their broader application to other disaster and catastrophic scenarios. |
| 2.3.A. Assess resource coordination and distribution operations at the HQ and regional levels to revise and refine plans and ensure integration with SLTT partners. Nationally, FEMA should identify practices that should be incorporated for future operations. |
| 2.3.B. Identify and implement a business intelligence tool for resource tracking in the NRCC, which would create a centralized system to incorporate FEMA and non-FEMA resources. The system should maintain situational awareness by aggregating, visualizing, and sharing data in the NRCC and with partners. |

| Section 2: Resources Summary of Recommendations |
| --- |
| 2.4.A. Evaluate the policy adaptions to mission assignments during the COVID-19 operations, and revise or develop policy and procedures that are required to enable FEMA to provide consistent support to partners in future incidents. |
| 2.5.A. Articulate a long-term strategy for engaging the private sector and coordinating across HQ, the regions, and the field in future disaster responses. The strategy should be consistent with ESF-14 and build on the lessons learned from the pandemic. |
| 2.5.B. Invest in continued application of the Supply Chain Analysis Network (SCAN), Platform for Understanding the Lifeline Stabilization of the Economy (PULSE), and other methods of understanding marketplace capacities and capabilities to improve operational understanding, resource management, and alignment of effort with industry before, during, and after disasters. |
| 2.5.C. Develop a plan for integrating the private sector comprehensively in preparedness across the agency to include planning, organization, equipment, training, and exercises at HQ and the regions. Invest in staffing for OB3I capability at HQ and the regions to liaise with and coordinate on behalf of private sector partners to implement the plan. |
| 2.6.A. Identify appropriate documentation to capture donations management practices for the future, taking into account the difference between directing domestic and foreign offers of assistance and when FEMA accepts donations versus coordinating the direct donation to SLTT partners. FEMA should standardize policies and processes and ensure that NRCC leadership has full visibility on issues relating to donations management that cross agency or international boundaries. |
| 2.7.A. Build capability for monitoring and understanding business and industry supply chains and develop plans for aligning the resource management required for catastrophic events to build greater pre-incident insight and inform awareness of gaps or trends that require mitigation. FEMA should continue to engage the private sector, and coordinate with other federal agencies regarding supplies, surge capacity, and supply chain information on critical equipment during emergencies. |
| 2.7.B. Continue engaging the private sector and facilitating interagency coordination of supply chain risk assessment, surge capacity, and resources available via procurement or visibility into commercial distribution, and with consideration of relevant DPA authorities. FEMA, as co-primary lead for both ESF-7, Logistics, and ESF-14, Cross-Sector Business and Infrastructure, should lead coordination on supply chain stabilization outcomes. |
| 2.7.C. Commit resources to assign a dedicated private sector coordinator for each region to build state and private sector capability. FEMA should build this capability based on the region's risk and economic composition and ensure that it is integrated into the agency-wide efforts of OB3I's Business, Industry, and Infrastructure Integration Program. |
| 2.8.A. Identify the Incident Support personnel required that would support the FEMA DPA Office when rapid scale-up during an incident is necessary. |

| Section 2: Resources Summary of Recommendations |
| --- |
| 2.8.B. Assess existing staffing and funding levels to implement the guidelines and processes established in Executive Order 13603 §103-104VI, and other related requirements found in statutes or executive orders, such as EO 12656, Assignment of Emergency Preparedness Responsibilities, and all other requirements, such as those in CFR Title 44, including Subsection F, Preparedness. |
| 2.8.C. Evaluate relevant authorities, such as Executive Orders and statutory text, and assess the current administrative requirements for implementing the Act to propose updates to the DPA. Congress should update the Act to enable a more efficient application of the authorities to the operational requirements in disasters. |

These resources were critical in helping SLTT partners in their execution of the mission. The next section speaks to FEMA's engagement and role in coordinating directly with these partners throughout the operation.

# Section 3. Supporting State, Local, Tribal, and Territorial (SLTT) Partners

FEMA's forward-leaning posture for COVID-19 sustained the locally executed, state-managed, and federally supported response construct and enhanced the whole-of-government response to better serve state, local, tribal, and territorial (SLTT) partners. The agency's investment in its regional resources and staff and its established operational relationships and lines of trust provided an effective framework for the federal government to support SLTT partners in executing their own jurisdictional responses. FEMA integrated the HHS Assistant Secretary for Preparedness and Response (ASPR) into response operations, in person where possible, and was well positioned, with personnel on the ground distributed among the 10 regions. Embedded staff working directly with SLTT partners through FEMA Integration Teams (FITs), Incident Management Assistance Teams – Advance (IMAT-As), and liaison officers (LNOs) were instrumental in providing customer service. Figure 22 provides a timeline of key regional coordination events.

FEMA Headquarters (HQ) successfully delegated authority to its Regional Administrators (RAs), allowing them to leverage established regional relationships and coordinate with SLTT partners. This delegation was made in recognition of the likely scope and scale of pandemic and based on the need to push power to the edge and empower RAs to deliver assistance aggressively. HQ leadership accepted the inherent risks in that decision because it was the only way in which to deliver outcomes that would save and sustain life. This was a departure from the approach in other recent catastrophic incident responses. To support this decision, HQ leadership intentionally built more robust and regular communications with the RAs and stayed synchronized throughout operations.

However, the complexity and magnitude of the response led to challenges in coordination and communication with several SLTT partners and contributed to inconsistent provision of support, difficulty in allocation of resources, ambiguity in cost share obligations, and delays in some SLTT engagement. Areas for improvement include the need for consistent communication strategies, additional training and interagency exercises focused on the whole-of-nation response to a public health emergency, updated standard operating procedures for better integration of FEMA staff into SLTT partner organizations, new doctrine and policies to institutionalize coordinating mechanisms, and enhancement of organizational constructs to improve SLTT service delivery during a pandemic.

In this section, we describe the findings as they relate to FEMA's experience supporting its SLTT partners during COVID-19 operations and provide recommendations. Table 15 provides a summary of each finding.

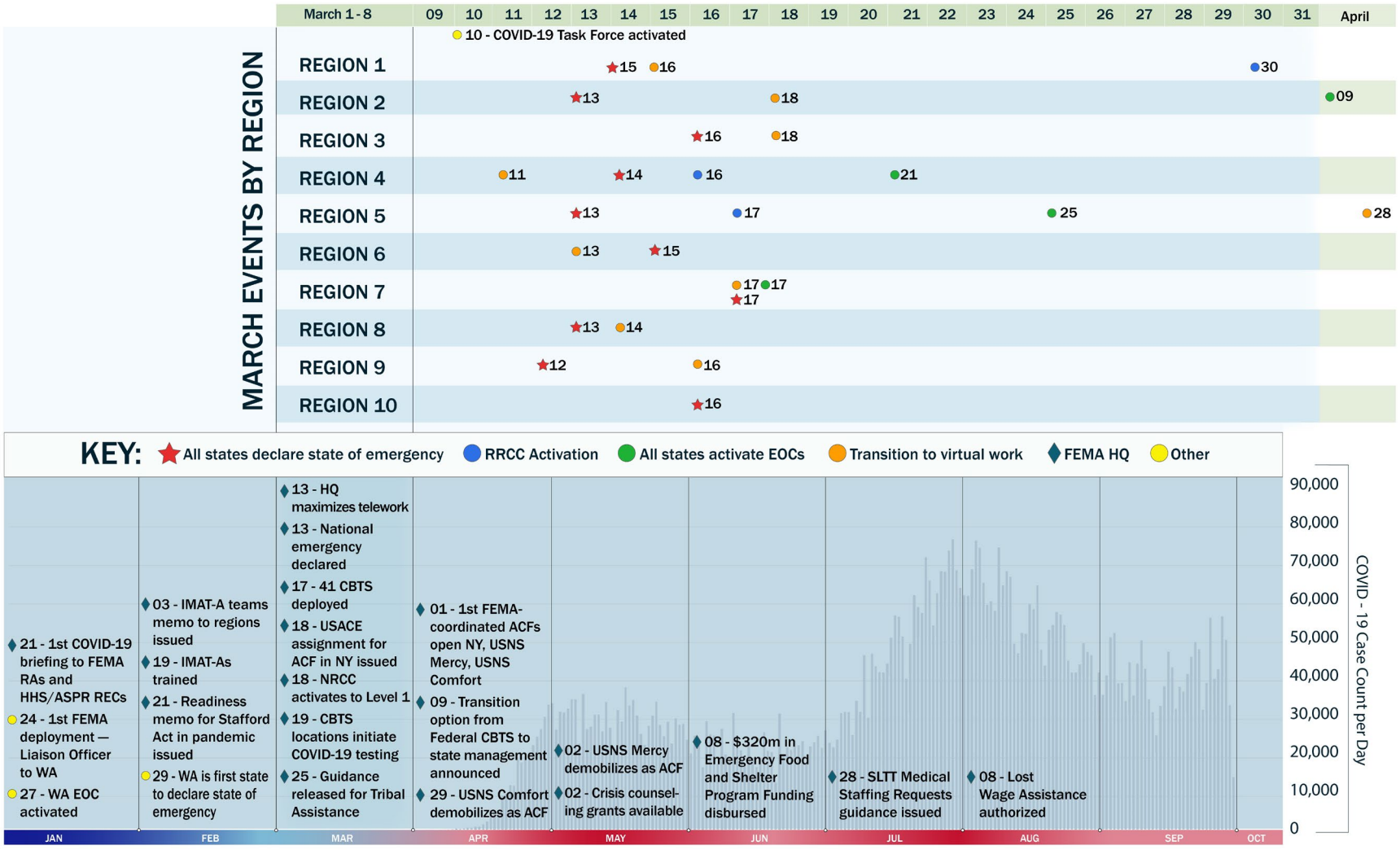



**Figure 22. Regional Coordination Timeline**

**Table 15. Summary of Key Findings for Supporting SLTT Partners**

| Section 3: Supporting SLTT Partners Summary of Key Findings | |
|---|---|
| 3.1 | FEMA's approach to incident management—including organizational structures, communications, and personnel mobilization—was largely effective in supporting SLTT partners based on pre-existing relationships, established coordination systems and practices, and a proven history of past engagements. |
| 3.2 | FEMA Integration Teams (FITs) and Incident Management Assistance Teams – Advance (IMAT-As) provided valuable planning and resource coordination support to SLTT partners; however, the engagement of these members varied by region because of SLTT needs, differences in personnel expertise, and the lack of standard agency roles and responsibilities for the positions. |
| 3.3 | Relationships between tribal nations and FEMA differed across regions, which led to variation in response efforts in an already unprecedented event. |
| 3.4 | The federal government expedited funding to SLTT partners, deferring the determination of funding sources that led to varying, and often unclear, cost-share requirements when those resources were provided. |
| 3.5 | Communications support from Office of External Affairs across FEMA HQ and the regions effectively adapted to the constantly changing dynamics of COVID-19 operations; however, vague SLTT engagement guidance and product clearance protocols hindered the regions' ability to successfully convey accurate and timely information to SLTT partners. |

**Key Finding 3.1:** FEMA's approach to incident management—including organizational structures, communications, and personnel mobilization—was largely effective in supporting SLTT partners based on pre-existing relationships, established coordination systems and practices, and a proven history of past engagements.

Strong relationships between FEMA's regional offices and state governors and state emergency management agencies were essential in coordinating FEMA's COVID-19 operations. Furthermore, the designation of the RAs as Federal Coordinating Officers (FCOs) was used to ensure consistency in support and allow coordination between senior leaders; it was a successful construct during COVID-19 operations. RAs report generally positive feedback from SLTT partners regarding FEMA's direct support, which has been echoed in other outreach efforts.

Each of the 10 regions tailored their support based on the specific needs of their SLTT partners and the resources available within the region. Although there were some early issues coordinating with SLTT partners on data calls (e.g., requests for information on response activities) from the National Response Coordination Center (NRCC) and the RRCCs, and some frustration with constantly changing instructions and funding streams (see Finding 3.4), these concerns were mitigated by exceptional support from FEMA's IMAT-As, FITs, and LNOs (See Finding 3.2). Those personnel were an extension of the regional response and are an essential element of FEMA's incident management

approach. Figure 23 reflects the federal whole-of-government response, “ensuring an effective and efficient working relationship with FEMA's SLTT partners.”


**Figure 23. Whole-of-Government Response**

FEMA and each of the major agencies in the Department of Health and Human Services (HHS), including ASPR, the Centers for Disease Control and Prevention (CDC), and the Indian Health Services (IHS), have distinct organizational structures and methodologies to support their respective roles and responsibilities based on their normal operating environments. As shown in Figure 24, these differences created significant issues with coordination and service delivery to SLTT partners for COVID-19 operations. Several regions received feedback from their states indicating that they were frustrated with the federal government’s inconsistent engagement and communication, which differed from a traditional disaster response, in which the FEMA regions serve as the primary coordinating entity for the SLTT partners. Therefore, for some SLTT partners, expectations for support were not met, primarily because of issues with other federal agencies and the operational task forces (as described in Section 1). The lack of coordination between FEMA, HHS agencies, and the task forces on data calls, operations, and funding streams caused additional strain between FEMA and SLTT partners.

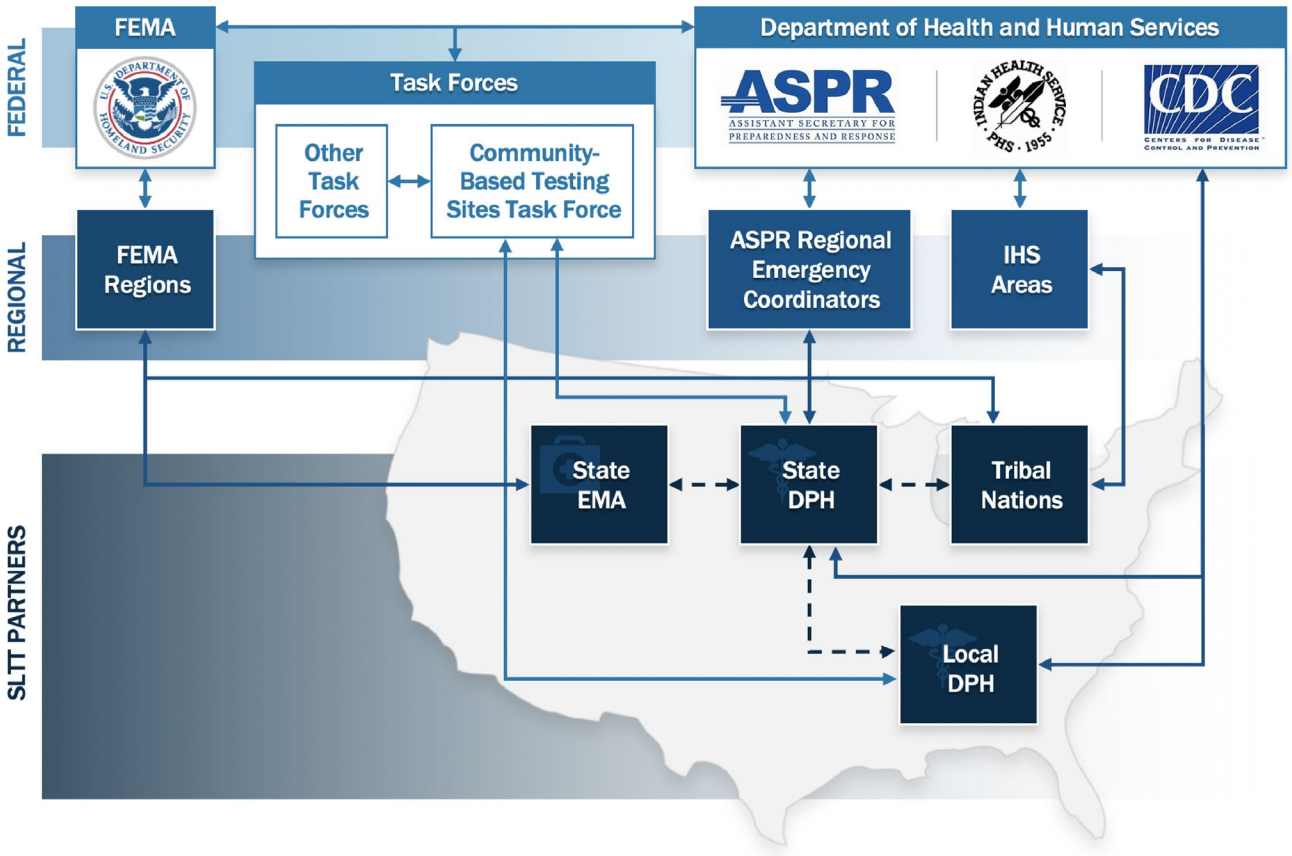



**Figure 24. Coordinating Structures for SLTT Service Delivery**

However, FEMA regions did establish ways to productively engage the other federal agencies with SLTT partners. For example, weekly calls between the NRCC task forces and RAs updated the regions on the status and activities of the task forces and other operational units, which allowed the regions, IMAT-As, and FITs to better support the states; FEMA also held regular meetings with state governors and tribal nation and territory leadership. Furthermore, FEMA regions implemented strategies for coordinating with other federal agencies, including forming working groups and inviting representatives from other federal agencies, including HHS, to co-locate in the RRCCs. Regions also worked directly with other federal agencies, including the U.S. Department of Agriculture (USDA), U.S. Department of Housing and Urban Development (HUD), General Services Administration (GSA), and U.S. Department of Veterans Affairs (VA), to meet their SLTT partners' specific needs.

The development of these business practices related to interagency coordination among lead agencies such a FEMA, HHS, and other federal agency partners will aid in promoting greater overall communication to ensure more efficient support of SLTT partners. This collaboration will also greatly increase understanding among federal partners about each agency's capabilities and how those capabilities can be leveraged during novel events that do not fit in the traditional response framework.

### Alternate Care Facilities, an Example of Successful Interagency Cooperation


*(FEMA)*

During the initial response period, SLTT partners requested alternate care facilities (ACFs), anticipating their medical facilities would be overwhelmed. FEMA supported the establishment of ACFs by determining the funding, coordinating the mission assignments, and prioritizing sites through the UCG. As of November 10, ASPR reports that 76 federal ACFs were established by the U.S. Army Corps of Engineers (USACE) and/or from the Strategic National Stockpile (SNS), totaling 23,274 beds. The FEMA Public Assistance (PA) program is also providing $2.48 billion to support an additional 1,265 SLTT ACFs to significantly increase the nation's health care capacity.

## Recommendations for Key Finding 3.1

**Recommendation 3.1.A.** Review and update communications plans for multi-regional and national events based on COVID-19 operations and practices. In novel events or when there are new and innovative response approaches being applied, communications plans should ensure there are regular communications with regional leadership as well as key interagency personnel.

**Recommendation 3.1.B**. Building on the HHS-sponsored Crimson Contagion 2019 series of exercises, FEMA should continue to plan and conduct training and exercises focused on how federal agencies coordinate and communicate with SLTT partners during response operations, especially with partners not traditionally involved in natural disasters, encouraging all of the federal government to actively participate in these events.

**Key Finding 3.2:** FEMA Integration Teams and Incident Management Assistance Teams – Advance provided valuable planning and resource coordination support to SLTT partners; however, the engagement of these members varied by region because of SLTT needs, differences in personnel expertise, and the lack of standard agency roles and responsibilities for the positions.

To support the national response and the regional operations, the FEMA Administrator directed the RAs to roster IMAT-As. Throughout the COVID-19 operations, IMAT-As have been deployed to support operational coordination in at least 22 states, five territories, the District of Columbia, New York City, and two tribal nations. Following a core tenet of pandemic response—minimize response personnel to maximize social distancing—a small, four-person IMAT-A was designed to establish a federal presence—with a state, local, or tribal authority as a primary coordinating entity—to develop and implement appropriate strategies for accomplishing directions set by the RA. There were differences in how each region deployed IMAT-As. Some regions deployed them to all states, while others sent personnel to supplement FITs in lieu of formally deploying IMAT-As. Both approaches were successful.

The IMAT-A concept was applied in similar ways to support SLTT partners during the 2009 H1N1 pandemic and for the 2013 H7N9 avian influenza virus. In anticipation of the COVID-19 requirements, FEMA pre-identified teams in February. This forward-leaning posture enabled the FEMA regions to quickly deploy the personnel when necessary.

In 2017, FEMA announced the formation of FITs to provide direct support to SLTT partners.[116] Furthermore, the *2017 Hurricane Season FEMA After-Action Report* specifically included recommendations to "leverage the new FEMA Integration Teams and technical assistance to help states build capacity."[117] Through a phased, scalable, and tailored approach, the FIT implementation program has facilitated a coordinated FEMA regional presence for improved cooperation, connection, and communication for a strengthened local capacity and more effective response and recovery operations.[118]


*FEMA FITS, IMAT-As, and LNOs provided support to SLTTs. (FEMA)*

By the start of the COVID-19 operations, there were 100 FIT members across the 10 regions, covering 38 states, one territory, and two tribal nations. Based on SLTT support requests and regional support strategies, FEMA transitioned many FIT members who were already embedded with SLTT partners as deployed LNOs, state support personnel, or IMAT-A team members to minimize the deployment of additional staff. The first FEMA deployment for COVID-19 was a Washington FIT that served, in January, as an LNO to the state of Washington. Because of their pre-existing state-specific knowledge and established relationships with the states, some regions used only the FIT staff to provide necessary support to some states, rather than deploying a larger IMAT-A. FITs have been an invaluable resource for COVID-19 operations for many regions because of the trust, integration, and working knowledge of state capabilities and needs they have built, as well as the federal resources to address those needs. For example, Region 6 noted that the FITs provided the RRCC with key state emergency management and public health information and reports, and because the FITs were engaged with the states on a day-to-day basis, the RRCC was able to prioritize information collection activities, thereby saving valuable time and decreasing the need for additional staffing requirements.

Many SLTT partners have described the FITs as trusted partners who were immediately ready, willing, and able to provide support. Additionally, some FIT and IMAT-A staff were able to support their SLTT partners with their response to other natural disasters while operating in a COVID-19 environment.

FIT and IMAT-A members answered SLTT inquiries, connected SLTT partners to appropriate FEMA stakeholders, and guided SLTT partners through complex federal procedures. They were able to alleviate some of the states' burden by coordinating information needs with RRCCs that coordinated with the NRCC. However, some struggled with limited information and unclear guidance on mission and tasking. The lack of coordination on data calls and resources at an HQ level (between FEMA, HHS, task forces, etc.) caused strain between IMAT-As/FITs and SLTT partners. For example, although it was a part of their job to help SLTT partners ascertain more synchronized and coordinated communication from federal coordinating entities, IMAT-As and FITs found it challenging at times to maintain situational awareness. As a result, IMAT-As and FITs were not always able to meet the SLTT partners' expectation of having FEMA help them understand where they stood on the priority list of a greater response. Nor could they always ensure the state's priorities were conveyed to the federal government.

### Feedback from SLTT Partners on the Strength of FITs

- "Our FIT Teams have been critical to our successful COVID-19 response effort and we have received universal praise and gratitude from our State partners on all our FIT members." (State partner in Region 1)
- "The FITs have been an invaluable resource both to FEMA and the states and, through this COVID-19 response, validated the need and concept of expanding and sustaining these teams going forward." (State partner in Region 5)
- "The FIT members have been critical to the success of the COVID-19 response operation from the beginning to current operations – from their initial role in the FIT, to their role as LNO, to serving in more operational roles as part of the IMAT-A teams." (State partner in Region 6)

A key part of the IMAT-A and FIT role was to support SLTT partners with requesting and tracking resources. Though the intention may have been for such actions to be limited to FEMA activities, the SLTT partners needed them to assist with other federal agency interactions in the whole-of-government response. FITs and IMAT-As, however, did not always have the training, permission, or access to all necessary platforms for this additional assistance. For example, two states reported they needed to verify that the Strategic National Stockpile (SNS) was out of stock of relevant items before orders could be placed via a Resource Request Form (RRF). The states needed IMAT-As and FITs to assist with placing and monitoring SNS orders, even though the teams had no access to necessary SNS systems and no visibility on submitted SNS orders. Similarly, some FITs and IMAT-As were tasked with monitoring resources at community-based testing sites (CBTSs); however, IMAT-As and FITs had no visibility into the inventory system the CBTSs were using, which impeded effective coordination between IMAT-As and the CBTS Task Force. Some CBTS employees at the sites communicated directly with FEMA HQ, bypassing the state emergency operations centers or the RRCCs. As a result of these complications, some SLTT partners questioned the extent of their FITs' capabilities.

Regions reported issues with staffing, training, deployment, and systems access, which impeded FITs' and IMAT-As' ability to support their SLTT partners. Each IMAT-A was tasked with deploying a Team Leader, Logistician, Planner, and External Affairs Advisor. However, because of the nationwide scale of the incident and limited availability of staff, not every IMAT-A had the suggested skillsets. For example, one region needed additional logisticians to accommodate a logistics-focused mission with CBTSs. Because of the personnel shortages, some staff were assigned to IMAT-A work outside of their normal disaster roles as listed in the FEMA Qualification System (FQS). That created issues with training and access to key systems like WebEOC, which are tied to FQS position titles. As a best practice, some staff supporting work outside of their normal disaster roles requested access to training they needed for the response. For example, IMAT-A and FIT members from Regions 8 and 10 requested training normally given to full IMAT team members on managing relationships with states and the RRCC. Additionally, some FIT members have received LNO training and were prepared for the role, relieving the region from deploying new staff. Specifically, Regions 1, 4, and 10 provided LNO training for their FITs, which proved to be essential for FITs' success in terms of the support they were able to provide.

One region also reported challenges in providing appropriate personal protective equipment (PPE) to FITs to mitigate viral spread while on site with the agency's state partners. There were also no uniform mitigation measures applied to the FITs, as there were for regional personnel, because their situations depended on the actions of the individual states. Some states quickly instituted strict mitigation measures and transitioned to virtual environments, while other states delayed such action and did not have mitigation measures.

Overall, FEMA regions provided some combination of FITs, IMAT-As, and LNOs to all SLTT partners nationwide. The scope and scale of the incident reduced some teams' effectiveness, and their effectiveness varied across SLTT partners. However, most FITs and IMAT-As were able to serve as a valuable resource for coordination between SLTT partners and the national operational units.

### Recommendations for Key Finding 3.2

**Recommendation 3.2.A.** Continue the rollout and resourcing of FITs—including embedding FITs within all states and territories—ensuring the full rollout of multiple FITs for each state and territory and consider how FITs can be used to support tribal partners. Regions may also want to consider cross-training with IMAT positions to increase flexibility in the event of another multi-regional emergency.

**Recommendation 3.2.B.** Codify in policy and doctrine the deployment of regional support personnel to their SLTT partners, encompassing regional IMATs, IMAT-As, FITs, and LNOs. This documentation should include roles for each type of team, guidance for interacting with each other, required training, Deployment Tracking System positions, naming conventions, hierarchy in steady-state operations and disasters, and necessary equipment, including technology, safety equipment, and PPE. Communications plans from the region to the teams should also be established to maintain situational awareness and ensure the teams have the information necessary to support SLTT partners. Determine whether documentation is sufficient and requires greater training and education of staff, or if the current documentation needs to be updated or developed. As part of this effort,

develop formal policies and procedures for when and how FITs should assume an LNO role with SLTT partners, how FITs should integrate into an IMAT or IMAT-A when deployed, and how to ensure FITs receive formal LNO and IMAT training as part of their onboarding. Regions may also want to consider including FITs in exercises and meetings with SLTT and regional leadership. Upon completion of this concept of operations (CONOPs), all relevant systems, policies, and procedures should be updated to codify the CONOPs into FEMA doctrine.

**Key Finding 3.3:** Relationships between tribal nations and FEMA differed across regions, which led to variation in response efforts in an already unprecedented event.

According to the *2019 National Preparedness Report*, tribal nations generally have larger gaps in preparedness than states, territories, and urban areas; tribes were also disproportionally affected by COVID-19.[119, 120] The pandemic resulted in an unprecedented number of tribal nation declarations, and for many tribal nations, this was both their first disaster response and the first time they requested resources from the federal government. In many regions, relationships and processes for coordination with tribal nations were well established prior to COVID-19 or were enhanced as a result of the nature of the incident, and therefore the response was seamless. However, FEMA engagement with tribal nations in other regions was complicated because the tribes had limited experience in making requests to FEMA for necessary resources.

*FEMA supports tribal governments during disasters to receive disaster assistance. (FEMA)*

The Sandy Recovery Improvement Act of 2013 (SRIA) amended the Stafford Act in the recognition of tribal governments as inherently sovereign nations. As a result of this legislation, all federally recognized tribal nations became eligible to request federal declarations. Tribal nations may receive support for the COVID-19 PA program under an emergency or major disaster declaration as (1) state declaration Subrecipients, (2) Recipients under a FEMA-tribe agreement for the nationwide emergency declaration or a state major disaster declaration, or (3) as a Recipient under their own declaration. Prior to the COVID-19 nationwide emergency declaration and after the enactment of the 2013 SRIA legislation, FEMA had received a total of 39 tribal nation major disaster/emergency declaration requests, and the President had approved 25 declarations (23 major disasters and 2 emergencies).

On March 25, 2020, in response to the demands associated with the pandemic, FEMA encouraged tribal governments to work with their respective states for assistance.[121] There were 91 COVID-19

tribal nation Recipient agreements and one major disaster declaration in the United States for PA (see Table 16).

**Table 16. Tribal Nation Recipients and Tribal Relations Personnel, as of November 13, 2020**

| HQ/FEMA Region | Tribal Nation Recipients | Major Disaster Declarations | Tribal Relations Personnel |
|---|---|---|---|
| HQ | N/A | N/A | 3 |
| 1 | 4 | 0 | 1 |
| 2 | 1 | 0 | 1 |
| 3 | 0 | 0 | 1 |
| 4 | 2 | 1 | 1 |
| 5 | 2 | 0 | 1 |
| 6 | 25 | 0 | 1 |
| 7 | 9 | 0 | 1 |
| 8 | 4 | 0 | 2 |
| 9 | 41 | 0 | 2 |
| 10 | 3 | 0 | 4 |
| Total | 91 | 1 | 18 |

Additionally, there were 172 Subrecipient agreements for PA issued under state declarations. Individual Assistance (IA) for COVID-19 Major Disaster Declarations was limited to the Crisis Counseling Program (CCP) and Other Needs Assistance (ONA) Lost Wages Assistance. All states and the District of Columbia were approved for IA-CCP and all tribal nation members were eligible for these services.

Many tribal nations had not managed a disaster response or asked for emergency assistance prior to the COVID-19 pandemic, and some lacked clarity on the process to request support or identify support that might be available. The level of federal support to tribal nations also varied because of the different number of dedicated tribal relations personnel in each FEMA region and their levels of expertise. Tribal relations personnel also experienced challenges resulting from the different strategies and structures for support established in each region. For example, as of March 30, 2020, Region 1 had one full-time tribal relations position for 10 tribal nations, while Region 10 had four tribal relations personnel in support of 272 tribal nations. Understanding these variations will be critical in moving forward and in future responses for anticipating support requirements, equipping and educating program staff, and developing relationships.

Many regions maintained effective situational awareness of tribal nation needs and resource requests. Several of the regions with a larger tribal presence shared emails and held regular calls with regional leadership, FEMA tribal personnel, and tribal nation leadership to collaborate and share information. These coordination calls with tribal nations were a strength in the effort to maintain situational awareness and address tribal concerns. Though some tribal nations preferred in-person communications, FEMA tribal staff were able to adapt to a virtual work environment quickly and effectively. In Region 2, FEMA staff provided PA technical assistance for the Grants Management

Portal to four tribes using Zoom for Government. This effort efficiently tracked PA project updates and capturing required documentation. Additionally, Region 7 used YouTube videos and a hotline for grant applications to bridge the experience gap for tribal nations applying for federal aid. Some regions also helped connect tribal nations with donated resources. For example, Region 4 prioritized tribal nations as recipients for any donations from the Red Cross and other agencies. Other regions assigned regional leadership, like a Deputy FCO who handled all tribal engagement, which served as a best practice for centralized leadership and coordinating tribal response efforts.

Regional Best Practices for Tribal Engagement:

- Shared emails and regular calls with FEMA tribal personnel and tribal leadership
- Coordinated EA, PA, and Grant staff on federal assistance for the tribal nations
- Prioritized tribal nations with resources from donations
- Assigned FCO personnel as centralized leaders
- Provided dedicated resource for CARES Act

Although coordination across federal agencies was sometimes inconsistent, some FEMA regions were able to coordinate effectively with other federal agencies, such as GSA, USDA, and HUD, to meet specific tribal needs. Although some FEMA regions had existing relationships with their HHS and IHS counterparts before COVID-19, other regions had to develop new working partnerships to meet the needs of the tribal nations. At the onset of the COVID-19 operations, FEMA, IHS, and the Bureau of Indian Affairs largely conducted outreach to tribal nations separately because of their different resources and missions. As the response progressed, federal interagency calls were coordinated in order to streamline federal assistance to the tribal nations and reduce duplication of effort. New relationships were formed, or existing ones improved, between the tribes and FEMA, HHS, IHS, and state governments, to address their unique needs. FEMA also became more familiar with the medical capabilities of the tribal nations and gained a better understanding of tribal processes. However, the lines of statutory authority and funding responsibility were not well understood between HHS's public health emergency authorities and FEMA's Stafford Act authorities, which led to occasional difficulty in requesting resources, such as PPE, between IHS and FEMA, and understanding the different cost shares for each agency. Furthermore, while interagency collaboration at the regional level improved over time, there is significant room to enhance the headquarters-level coordination of federal interagency efforts between FEMA, HHS, and IHS.

### Recommendation for Key Finding 3.3

**Recommendation 3.3.A**. Develop a tribal nation engagement strategy, supported by consistent staffing and training, that includes the desired outcomes and resources required to appropriately support the tribal nations, with flexibility for regional application. The strategy should identify an approach for the equitable distribution of personnel throughout each region dedicated to program delivery for all 574 tribal nations. FEMA should provide additional training and funding to internal staff and external stakeholders to establish and improve tribal emergency management programs related to low-frequency, high-impact events such as pandemics. The strategy should also include

how to increase education and awareness among tribal nations regarding FEMA and federal resources by identifying existing knowledge and capacity gaps and strengthening tribal emergency managers' understanding of the resources and mechanisms available to access federal disaster assistance.

**Key Finding 3.4:** The federal government expedited funding to SLTT partners, deferring the determination of funding sources that led to varying, and often unclear, cost-share requirements at the time those resources were provided.

Given the nature of a pandemic, the federal government expedited trillions of dollars of new and existing funding to SLTT partners, with guidance and regulations being determined during disaster operations, which combined with, in some cases, the deferment of the determination of funding sources and led to varying, and often unclear, cost-share requirements. FEMA prioritized expediting funding to fulfill SLTT emergency needs. FEMA leadership agreed that this approach was necessary to meet SLTT partners' needs during this pandemic. In a national public health emergency, multiple funding sources exist to pay for emergency support: in addition to FEMA's Disaster Relief Fund, HHS had funding authorities that included ASPR, CDC, SNS, IHS, the Centers for Medicare and Medicaid Services, and the HHS Health Emergency Fund. Additionally, four spending bills passed by Congress provided applicable funding streams.[122] Figure 25 shows the intricacies of the multiple funding sources available for the COVID-19 operations.

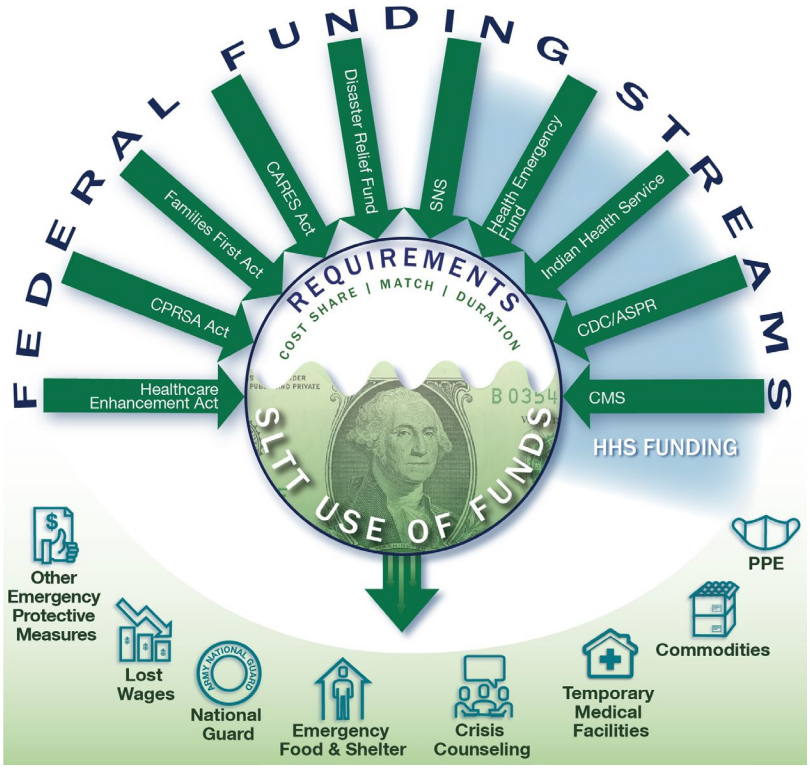



**Figure 25. Multiple Funding Streams Result in Unclear Requirements**

Each of the funding authorities has rules governing cost share and applicability. Given the number of different funding sources, it was often not clear to SLTT partners who was funding the fulfillment of each request and the extent of their own cost shares. For example, in most cases, FEMA assistance comes with a 25% cost share. HHS funding does not come with a cost share, but it can restrict funding to only health and medical purposes. The Stafford Act Declarations allow for FEMA funding to be retroactively applied to emergency protective measures as far back as January 20, 2020.

> Throughout the COVID-19 operations, FEMA's PA and Interagency Coordination Divisions have produced fact sheets, guidance documents, and resource roadmaps for SLTT partners to understand and pursue federal funds from FEMA and other federal agencies,[a] with contributions from the Recovery Support Function Leadership Group (RSFLG) and the coordinating agencies for each of these RSFs, including the Department of Commerce, HHS, and HUD. For example, FEMA published the COVID-19 Economic Recovery Resource Roadmap, which explains how federal funds, particularly CARES Act funding, can be used to promote recovery. Additional resource roadmaps focus on health care, education, food and nutrition, and housing.[a] An example of one of the successes of the COVID-19 operations, these recovery resources include a new, searchable library of funding stream information for SLTT partners.

In addition to the variability in funding authority rules, the cost share parameters for these funding sources changed more than once during the response. For example, there was initially no interagency agreement about cost sharing in effect. On April 5, 2020, HHS and FEMA signed a memorandum of understanding and reimbursable agreement that required HHS to cover PPE and associated costs up to $1.5 billion, with no SLTT cost share. Although that agreement was signed on April 5, 2020, it did not become effective until April 15, creating a phased interval that was not clear to all stakeholders involved.

It is the job of FEMA's Office of Chief Financial Officer (OCFO) to assign the funding source for support efforts, which are highly complex, especially for the support provided by other federal agencies, as well as many expenditures made by SLTT partners. For example, the funding and SLTT cost share for USACE activities depends on how the mission was assigned. The same mission may have different funding streams and cost share if assigned to a national program versus a regional program. Expenditures from the task forces were particularly complex, as they included representatives from FEMA, multiple HHS entities, and often other federal agencies, with orders placed in various agencies' unique systems.

Even orders placed in FEMA's RRF system had complex funding streams. For example, it is unclear which funding stream will eventually pay for essential emergency supplies and equipment for 15 different IHS facilities. IHS placed orders through FEMA because it was unable to source the resources on its own. Some of these facilities serve multiple tribal nations across multiple states (and regions).

In March 2020, as a result of the spread of COVID-19, all SLTT partners received an emergency or disaster declaration for limited PA and IA. Further, FEMA's Federal Insurance and Mitigation

Administration (FIMA) explored the possibility of a request for the Hazard Mitigation Grant Program (HMGP). As a result, FIMA's HMGP COVID Strike Team developed an HMGP Fact Sheet that may be used broadly by the SLTTs for lifelines. To date, nearly $100 million for projects has been used to support health and medical care facilities reducing risk and ensuring resilience against natural disasters. Over the next 6 to 36 months, FIMA will be promoting consideration of projects to enhance health and medical facilities.

In June 2020, the Department of the Treasury determined that Coronavirus Aid, Relief, and Economic Security (CARES) Act funding could be used to meet SLTT cost share requirements.[123] Although the CARES Act provided billions of additional disaster funds complementing the Stafford Act, many tribal nations reported encountering roadblocks and disparate treatment in their attempts to access the CARES Act funds. Some tribal nations were concerned about being billed later for the non-federal cost share, especially for unused supplies. It was also unclear when supplies would be provided using HHS authorities at 100% federal cost share, versus FEMA PA's authorities at 75% federal cost share, with a 25% non-federal cost share. In 2018, the Government Accountability Office reported that many tribal nations cannot afford to meet the 25% SLTT cost share for FEMA funding and/or cannot afford to pay in advance for later reimbursement.[124]

FEMA's RAs and the regional staff worked closely with SLTT partners to alleviate funding stream concerns to the greatest extent possible. They coordinated with SLTT partners addressing the concerns; utilized resources from other federal agencies like USDA, VA, GSA, HUD, and others to meet specific needs; and worked directly with the SLTTs to implement new and creative approaches specific to the pandemic.

For example, the IA Program Office developed new guidance on using PA Emergency Protective Measures funding to provide for feeding and other immediate needs.[125] Regions assisted their SLTT partners in implementing this guidance, including addressing some issues resulting from the differences between the PA and IA programs.

Disaster Unemployment Assistance, which traditionally accompanies major disaster declarations, was not authorized under the COVID-19 declarations for any states, territories, or tribal nations.[126] When the President initiated the Lost Wages Assistance (LWA) as a supplemental benefit for unemployment insurance benefits, FEMA had to establish and implement a new program, which did not exist prior to this incident. FEMA posted official guidance and FAQs on FEMA.gov.[127] In total, FEMA has obligated over $42 billion for LWA providing significant aid to the American people through this unprecedented funding method. FEMA worked with state and territories to leverage established unemployment insurance processes and systems to implement the supplementary lost wages assistance. To achieve this, some states had to adjust their unemployment systems to also pay out LWA. For context, over the last 15 years, FEMA has averaged $12.7 billion per year in annual appropriations to the Disaster Relief Fund.[128] The $42 billion for LWA in 2020 exceeds FEMA's total Disaster Relief Fund appropriations for every year except 2005 ($68 billion for a year that included Hurricanes Katrina, Rita, and Wilma) and 2018 ($45 billion for the year that followed 2017's Hurricanes Harvey, Irma, and Maria).

SLTT partners received additional support through the Community Services National Integrated Policy and Implementation Cell (CSNIC), which was stood up to provide guidance and technical support to regions, states, and territories seeking funding through the CCP. CSNIC has been a best practice that allowed FEMA Community Services to award (to date) 32% of the total lifetime awards of the program (1985 to 2020) in the last eight months.

These multiple complex acquisition and funding streams have resulted in complexities that will take significant time and effort to resolve. Because there were multiple and sometimes redundant sources of assistance which were not clear to the SLTT, guidance for SLTT compliance was not straightforward.

### Recommendation for Key Finding 3.4

**Recommendation 3.4.A.** Continue developing and expanding roadmaps, searchable libraries, and comprehensive funding matrices, complete with respective cost-sharing schemes, to allow SLTTs to determine the best approach to cost recovery while helping FEMA staff provide guidance and support effectively like those produced during the COVID-19 operations.[129] Consider incorporating the Catalog of Federal Domestic Assistance, Disaster Financial Management Guide, and other FEMA planning guides into the searchable library. This should include documented processes for engaging and involving parties with funding authorities and policy decisions (e.g., OCFO, NRCC, and other federal agencies) to capture their knowledge of the existing authorities and communicate it to regions and SLTT partners. These processes should include coordination with other federal agencies regarding additional appropriations to determine what funding and funding authorities might be needed, and work with Congress to appropriate against the agreed-upon language.

**Key Finding 3.5:** Communications support from the Office of External Affairs across FEMA HQ and the regions effectively adapted to the constantly changing dynamics of COVID-19 response; however, vague SLTT engagement guidance and product clearance protocols hindered the regions' ability to successfully convey accurate and timely information to SLTT partners.

During the rapidly evolving COVID-19 operations, providing the appropriate messaging to meet SLTT stakeholder needs proved particularly challenging. The lack of an SLTT partner-specific engagement plan with targeted messaging for specific stakeholders and groups created communications challenges in identifying, relaying, and addressing the needs of SLTT partners. Initially, FEMA Office of External Affairs (OEA) did not have a clear understanding of the unique messaging needs of multiple audiences. For example, Daily Briefing Points contained high-level information geared toward leadership, whereas information on Project Airbridge was better suited to the media, and fact sheets containing technical information were intended for health care providers. Even as different audiences wanted and needed the same information, it was still necessary to tailor the messaging and the delivery to a particular audience for better understanding.

OEA quickly identified the importance of providing oversight and strategic coordination among all regions for improved stakeholder communication (see Figure 26). The regions commended OEA

leadership for appointing an OEA Regional Coordinator, who regularly worked with the regions but was not a member of the OEA staff. The Regional Coordinator possessed the regional knowledge and expertise to coordinate OEA support. This gatekeeping role allowed the Regional Coordinator to advocate on behalf of the regions in federal-level meetings and also ensured full coverage/distribution of federal messaging to the regions. This solution was well executed and is credited with establishing communications unity among the regions for the COVID-19 operations.

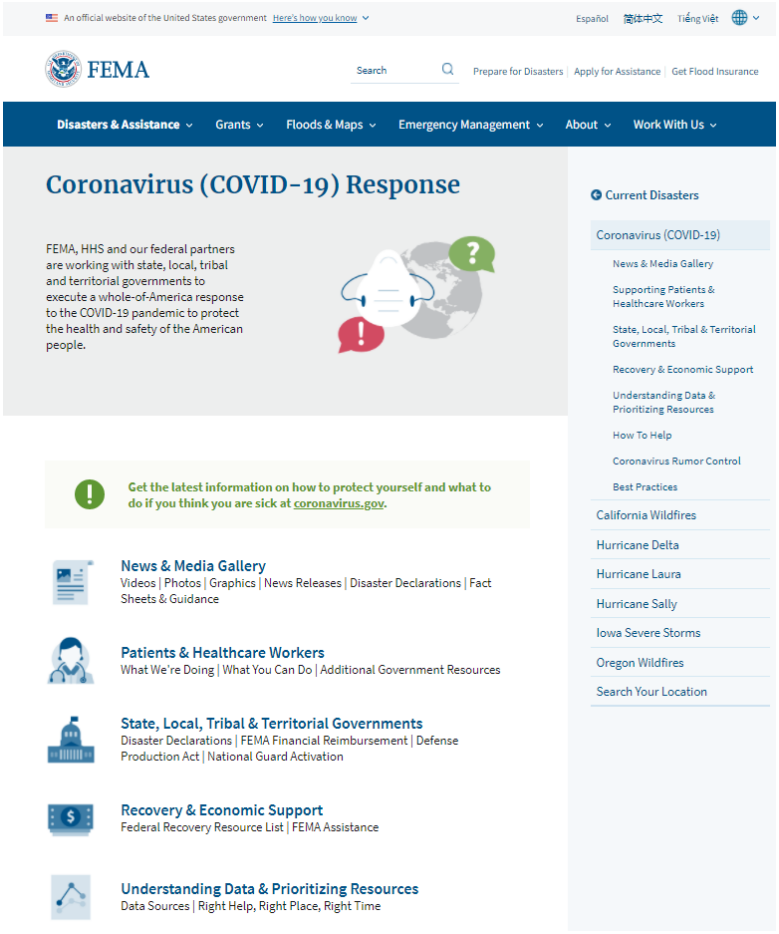



**Figure 26. FEMA OEA Provided Up-to-Date Information on the COVID-19 Response on the Agency Webpage**

FEMA, within the NJIC, integrated a Spanish language team dedicated to informing the public on topics related to COVID-19. FEMA furnished information through social media and traditional media with releases and statements to inform the Spanish-speaking communities. This team also amplified messages and critical information from other federal agencies in Spanish language and other languages. FEMA also translated COVID-19 guidance in 15 different languages in support of local, state, and federal officials.

Staff at HQ and the regions indicated there was not clear documentation about what information could be shared and which personnel were authorized to speak on behalf of the agency, which often resulted in misunderstanding, errors, and guesswork. Initially, regions were not allowed to engage with the media and were advised that the White House would control the narrative of the response. A strategy shift encouraged RAs to hold regular media engagements. However, RAs did not always have the information they needed to be successful in conducting media engagements. In one region that had received a large quantity of masks, the RA erroneously stated at a news conference that the masks had come from Project Airbridge, when in fact they had come from a DOD donation. Both the RA and FEMA faced backlash from the inaccurate statement. Several RAs cited similar situations and expressed the need for better communication tools to prevent RAs from providing false information to the public. Furthermore, it is important to develop specific guidance for greater

coordination with the White House for efficiently routing regional communications products to meet SLTT partner needs.

FEMA communication approaches were adapted and improvised to meet the evolving challenges of the COVID-19 operations; however, application of a consistent and specific communications strategy would have helped to address multiple unanticipated communications issues. Specifically, an SLTT-focused communications strategy would have provided organizational structure, outreach objectives, and messaging protocol for engaging with SLTT partners, and it would have significantly reduced misunderstanding in conveying messages to the media. A methodology to better understand the varying needs of SLTT partners would also have helped communications teams in their efforts to direct effective, useful information to the right audiences. Learning from these challenges and implementing revised processes will help FEMA provide greater support to SLTT partners during future nationwide responses.

### Recommendations for Key Finding 3.5

**Recommendation 3.5.A.** Ensure that a strategic communications plan is developed and released for every disaster response when the NRCC is activated or when significant coordination between government agencies is required. FEMA should consider (1) developing a methodology to assess the needs of stakeholders and codify it into existing procedural documentation for future large-scale emergency responses, (2) including guidance on tailoring messaging and delivery to audiences with the goal of answering questions or addressing concerns specific to the needs of that group, (3) identifying and clearly communicating which messaging can be shared with which groups and who is authorized to speak on behalf of the agency, and (4) conducting stakeholder assessments to understand engagement with distributed content.

**Recommendation 3.5.B.** Employ a knowledge management system and database to track engagements and inquiries to provide real-time insights into the needs of stakeholder groups. This should include maintaining a repository of cleared information and content that can be quickly retrieved and used to engage with media, stakeholders, survivors, and the general public.

## Summary of Recommendations for Supporting SLTT Partners

FEMA supports SLTT partners in their response and recovery operations. The investments at HQ and the regions, and the repeated activation and use of those approaches for disasters has resulted in a proven disaster management capability. FEMA should continue to expand its steady-state engagement with SLTT partners, which has proven dividends during COVID-19 operations, and improve coordination internally and with other federal agencies to provide even more proactive and customer-focused support in the future. The specific recommendations to do this are summarized in Table 17.

**Table 17. Summary of Recommendations for Supporting SLTT Partners**

| Section 3: Supporting SLTT Partners Summary of Recommendations |
|---|
| 3.1.A. Review and update communications plans for multi-regional and national events based on COVID-19 operations and practices. In novel events or when there are new and innovative response approaches being applied, communications plans should ensure there are regular communications with regional leadership as well as key interagency personnel. |
| 3.1.B. Building on the HHS-sponsored Crimson Contagion 2019 series of exercises, FEMA should continue to plan and conduct training and exercises focused on how federal agencies coordinate and communicate with SLTT partners during response operations, especially with partners not traditionally involved in natural disasters, encouraging all of the federal government to actively participate in these events. |
| 3.2.A. Continue the rollout and resourcing of FITs—including embedding FITs within all states and territories—ensuring the full rollout of multiple FITs for each state and territory and consider how FITs can be used to support tribal partners. |
| 3.2.B. Codify in policy and doctrine the deployment of regional support personnel to their SLTT partners, encompassing regional IMATs, IMAT-As, FITs, and LNOs. |
| 3.3.A. Develop a tribal nation engagement strategy, supported by consistent staffing and training, that includes the desired outcomes, and resources required to appropriately support the tribal nations, with flexibility for regional application. |
| 3.4.A. Continue developing and expanding roadmaps, searchable libraries, and comprehensive funding matrices, complete with respective cost-sharing schemes, to allow SLTTs to determine the best approach to cost recovery while helping FEMA staff provide guidance and support effectively like those produced during the COVID-19 operations. |
| 3.5.A. Ensure that a strategic communications plan is developed and released for every disaster response when the NRCC is activated or when significant coordination between government agencies is required. |
| 3.5.B. Employ a knowledge management system and database to track engagements and inquiries to provide real-time insights into the needs of stakeholder groups. |

FEMA collaborates with SLTT partners on preparedness efforts and plan development before disasters. These plans are based on the best available data and discuss coordination before, during, and after disasters. The unprecedented nature of the COVID-19 operations required FEMA to review and analyze data that it does not traditionally collect and adapt plans to meet the needs of its partners (both federal and SLTT). The next section describes these challenges and findings and provides recommendations that lay out the next steps for engagement in planning, data collection, and situational awareness for FEMA to work with its federal and SLTT partners.

## Section 4: Preparedness and Information Analysis

As the scale of the COVID-19 pandemic became clear, FEMA encountered challenges at both the national and regional levels by the limited scope—and, in some cases, the absence—of the federal government's pandemic plans and their operational considerations. As discussed in Key Finding 1.1, FEMA's role was envisioned as support to HHS for a pandemic response, and never as the lead agency. These pandemic plans included data and information relevant to decision-making and the prioritization of resources that did not match the scope and size of the COVID-19 pandemic. Sharing essential information among response partners at all levels to maintain situational awareness required FEMA to adapt conventional communication means, technologies, and platforms. COVID-19 operations revealed areas in which the agency can improve planning and information sharing to inform future operations. Table 18 summarizes key findings for this section.

**Table 18. Summary of Key Findings for Preparedness and Information Analysis**

| Section 4: Preparedness and Information Analysis Summary of Key Findings | |
|---|---|
| 4.1. | Federal pandemic planning did not account for the large-scale interagency operations, resource shortages, and integrated federal approach to supporting SLTT partners required to respond to this pandemic. |
| 4.2. | Federal plans did not envision FEMA leading the federal response for national pandemic operations, and neither HQ nor the regions have current, comprehensive plans for a leading role, limiting the efficiency of applying the agency's operational capability. |
| 4.3. | FEMA's ability to anticipate SLTT requirements was affected by insufficient understanding of SLTT projected consequences and capabilities. |
| 4.4. | Although current pandemic plans identify information requirements, they lack the specificity and guidance to establish data collection and reporting mechanisms for effective decision-making. |
| 4.5. | Without refined data requirements, independent approaches to data collection and analysis proliferated the number of requests to regional, state, and local entities. |
| 4.6. | FEMA's current situational awareness reporting products limit data sharing and data-driven decision-making. |
| 4.7. | The lack of a shared common operating picture (COP) limited situational awareness and stakeholder collaboration on mission objectives. |

**Key Finding 4.1:** Federal pandemic planning did not account for the large-scale interagency operations, resource shortages, and integrated federal approach to supporting SLTT partners required to respond to this pandemic.

Existing federal preparedness efforts did not adequately anticipate the magnitude of the national response to the COVID-19 pandemic, including issues with organizing and delegating authority and

resource shortages. Pandemic planning at FEMA assumed the agency would be supporting HHS efforts during a domestic health response. COVID-19 showed the need to expand this planning to include situations where FEMA would become the lead agency during a major health event and how the federal government can respond during global PPE shortages.

The Department of Homeland Security (DHS) and FEMA had existing plans that recognized the threat a pandemic posed to the health and wellbeing of their workforce and the population. These plans included assumptions from the 2005 H5N1 and 2009 H1N1 pandemic threats. FEMA coordinated with federal agencies on pandemic preparedness and response issues, including leading or supporting the completion of assigned tasks in the 2006 National Strategy for Pandemic Influenza Implementation Plan. Figure 27 provides a timeline of events related to preparedness and information analysis, including FEMA's efforts to update planning and guidance to address operations in a COVID-19 pandemic environment.

In 2007, the Government Accountability Office indicated that the 2006 National Strategy for Pandemic Influenza Implementation Plan did not adequately "specify how the leadership roles and responsibilities will work in addressing the unique characteristics of an influenza pandemic, which could occur simultaneously in multiple locations and over a long period."[130] In 2013, the *DHS H1N1 After-Action Report Executive Summary* noted that "FEMA's use of the Incident Management Assistance Teams-Advance (IMAT-As) demonstrated the need for a clearer understanding of roles, responsibilities, coordination, and integration efforts to effectively support state and regional partners."

FEMA adapted its planning documents in response to lessons learned from the 2013 release of the DHS H1N1 After-Action Report: Executive Summary. The 2013 Pandemic Crisis Action Plan (PanCAP) was developed as the federal government monitored the emerging H7N9 avian influenza in China and the MERS-CoV outbreak in the Middle East. The Department of Health and Human Services (HHS) and FEMA worked jointly on the 2018 PanCAP, and the 2020 PanCAP Adapted (PanCAP-A), which intended to establish the federal government's operational posture for pandemic events in the United States. They did not fully account for the challenges associated with interagency coordination, collaboration, and cooperation during a pandemic, even though concerns about these challenges were highlighted in multiple previous documents. The 2018 PanCAP was exercised in 2019 during the Crimson Contagion event led by the HHS Office of the Assistant Secretary for Preparedness and Response (ASPR). The after-action report released in January 2020 highlighted concerns about the federal government's capacity to respond to a pandemic. These concerns included the following:

- Lack of a mechanism for coordination across or tasking other federal departments and agencies during an influenza pandemic or other biological incident response.
- Insufficient and conflicting statutory authorities and policies tasking HHS to lead the federal government's response to an influenza pandemic.

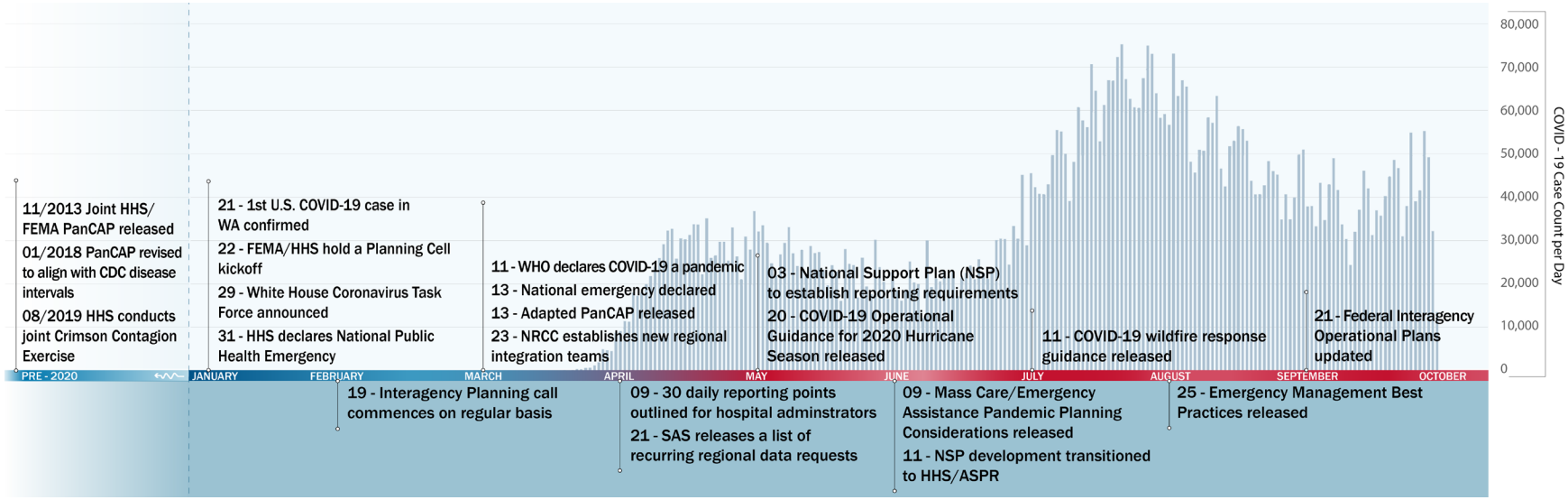



**Figure 27. Preparedness and Information Analysis Timeline**

- The Biological Incident Annex to the Response and Recovery Federal Interagency Operational Plans and the Pandemic Crisis Action Plan do not outline the organizational structure of the federal government response when HHS is designated as the lead federal agency.
- Disparate information management systems hampered establishing and maintaining a national common operating picture

The PanCAP-A was created as the threat of COVID-19 was rising internationally, and it attempted to address the Crimson Contagion findings and the anticipated effects of COVID-19. The HHS and FEMA plan update did include planning assumptions that specifically addressed significant supply chain shortages, and that the effects may result in significant shortages in medical supplies and equipment. It also notes that as the federal response to COVID-19 evolves beyond a public health and medical response, additional federal departments and agencies will be required to respond to the outbreak and secondary effects, increasing the need for coordination to ensure a unified, complete, and synchronized federal response. These issues were not addressed in the 2018 PanCAP. While they show a progression in operating assumptions for the survey, they came too late to substantively affect operations.

### Recommendation for Key Finding 4.1

**Recommendation 4.1.A**: Establish an interagency planning working group to review the COVID-19 incident and update the PanCAP for a whole-of-government response. The plan should build on the 2020 COVID-19 operations, with updated modeling and simulation to build out the scenario, develop assumptions, and identify the courses of action for operational requirements.

**Key Finding 4.2:** Federal plans did not envision FEMA leading the federal response for national pandemic operations, and neither headquarters nor the regions had current, comprehensive plans for a leading role, limiting the efficiency of applying the agency's operational capability.

The 2018 PanCAP states that HHS is the lead federal agency managing all federal public health and medical responses to emergencies, including a pandemic. In the event of a Stafford Act declaration, FEMA is responsible for coordinating federal support for consequence management. The federal interagency process supports HHS, as requested, to assist SLTT partners with related preparedness and response activities. (See Section 1 for more details on the roles and responsibilities of response partners.) The determination of FEMA's role led to different levels of planning and investments in preparedness activities. Additionally, the designation of FEMA as the agency leading federal response on March 18, 2020, and the delegation of resource and supply management responsibilities to FEMA were not adequately addressed in the 2018 PanCAP or any preceding document.

FEMA regional pandemic plans either did not exist or do not account for FEMA assuming the role of the agency leading federal response in a pandemic (see Finding 4.2). Prior to March 2020, only 5 of the 10 FEMA regions had pandemic plans: Regions 1, 5, 6, 7, and 10 (see Table 19). Only

Regions 1 and 7 acknowledged that supply chain management could be a challenge during a pandemic—and none of the plans discuss ways to mitigate negative effects on the supply chain.

**Table 19. Applicable Plans Established Before the COVID-19 Pandemic**

| **Regional Plans** | |
|---|---|
| Region 1 – Hazard Annex to the Region 1 All-Hazards Plan: Pandemic Influenza | Developed 2013 |
| Region 5 – Pandemic Implementation Plan | Developed 2015 |
| Region 6 – Annex R Pandemic Operations | Developed 2009 |
| Region 7 – Pandemic Influenza Contingency Plan | Developed 2009 |
| Region 10 – Pandemic Appendix to the Region 10 All-Hazards Plan | Developed 2014 |
| **National Plans** | |
| PanCAP | Developed 2013; revised 2018; PanCAP-A in 2020 |
| Interagency Pandemic Operations Plan H7N9/MERS-CoV | Developed 2013 |
| Biological Incident Annex to the Response and Recovery Federal Interagency Operations Plans (FIOPs) | Developed 2017 |
| National Strategy for Pandemic Influenza Implementation Plan | Developed 2006 |
| DHS Pandemic Influenza Preparedness, Response, and Recovery Guide for Critical Infrastructure and Key Resources | Developed 2006 |

### Recommendation for Key Finding 4.2

**Recommendation 4.2.A:** Based on the role Congress and the Administration direct FEMA to play in pandemic operations, and the authorities granted, the agency should review, revise, and develop plans for headquarters (HQ) and the regions, commensurate with their roles, that account for learning from the COVID-19 operations.

**Key Finding 4.3:** FEMA's ability to anticipate SLTT requirements was affected by insufficient understanding of SLTT projected consequences and capabilities.

Planning should be informed by risk and vulnerability based on historical events and data obtained through modeling and simulation. States, territories, major urban areas, and tribes conduct a Threat and Hazard Identification and Risk Assessment (THIRA) to model the consequences of their most likely threats and hazards to better understand their risks and set targets for preparedness capabilities, which are then assessed through the Stakeholder Preparedness Report (SPR). This assessment provides one input into the federal planning process.

In 2019, only 25 states' THIRAs included a pandemic among the threats to which their communities are the most vulnerable.[131] States and urban areas also indicated, in the THIRA/SPR, that in a worst-case scenario, medical care and life-sustaining goods delivery were two of the capabilities that were furthest from the desired goal, as seen in Table 20, from the 2019 National Preparedness Report.[132]

**Table 20: Worst-Case Capability Snapshot by Community Type**

| | Capability Closest to Goal | Capability Furthest from Goal |
|---|---|---|
| States and Territories | Situation Briefings<br>Interoperable Communications<br>Sanitation | Community Protection<br>Medical Care<br>Clear Critical Roads |
| Urban Areas | Situation Briefings<br>Interoperable Communications<br>Communications Systems | Community Sheltering<br>Medical Care<br>Life-Sustaining Goods Delivery |
| Tribes | Interoperable Communications<br>Water Service<br>Sanitation | Community Sheltering<br>Community Power<br>Community Protection |

These represent only high-level considerations for understanding SLTT capabilities for a pandemic, but federal planning efforts should address anticipated areas where SLTT partners would be overwhelmed or do not have capabilities to conduct operations. The absence of anticipated consequences from half of the states for a pandemic, the SLTT partners' assessments of their capabilities in the SPR, and discrepancies in the methodology used to project consequences limit FEMA's ability to use the THIRA/SPR data comprehensively.

Additionally, interagency coordination in the development and maintenance of pandemic planning has not been sufficient. Since 2002, the Centers for Disease Control and Prevention (CDC) has provided annual funding to implement protocols that are intended to build and strengthen SLTT public health capabilities to effectively respond to a range of public health threats, including infectious diseases. The most recent CDC guidance associated with this finding is defined in the 2018 Public Health Emergency Preparedness and Response Capabilities: National Standards for State, Local, Tribal, and Territorial Public Health document.[133] The Public Health Emergency Preparedness (PHEP) program requires SLTT partners to have "scenario-specific and all-hazards, response-based plans in place that describe incident response strategies based on the nature and scope of incidents including pandemic influenza, anthrax, and other emerging infectious diseases."[134] The PHEP program provides operational support for the National Preparedness System structure and assists in formalizing the role of Emergency Support Function (ESF) 8, Public Health and Medical Services, in partnership with SLTT emergency management agencies. There is no requirement for SLTT partners to coordinate or integrate their findings, plans, and procedures from other federal agency activities with the THIRA/SPR processes or FEMA regional pandemic planning initiatives. It is essential that all of government pursue a collaborative and integrated approach to planning.

## Recommendations for Key Finding 4.3

**Recommendation 4.3.A:** Institutionalize an integrated and coordinated approach to the development and maintenance of pandemic plans at all levels of government with SLTTs, public health partners, emergency management agencies, and the private sector, and exercises to validate those plans.

**Recommendation 4.3.B:** Improve consequence analyses at all levels of government and in coordination with non-governmental partners. There is a shared responsibility to conduct consistent and comprehensive modeling and simulation of data that realistically assess risk and response capabilities in order to better develop realistic planning and understanding of the effects of a catastrophe and the resulting critical resources demands. These data enhance the effectiveness of locally executed, state-managed, federally supported operations. FEMA should update guidance to ensure planning and data from other federally funded efforts are incorporated into FEMA requirements like the THIRA/SPR.

**Key Finding 4.4:** Although current pandemic plans identify information requirements, they lack the specificity and guidance to establish data collection and reporting mechanisms for effective decision-making.

FEMA COVID-19 operations required an increased amount of new data to inform decision-making at all levels. During initial response operations, FEMA did not have all the data necessary to fully inform decision-making on resource prioritization and allocation. FEMA pandemic plans (see Table 19 in Finding 4.2) identify elements of essential information and critical information requirements relevant to FEMA's role as a supporting and coordinating agency, but do not address many of the information requirements that became necessary for operations (see Findings 4.1 and 4.2). When FEMA became the lead agency for the federal response, FEMA decision-makers required information derived from data that FEMA does not traditionally collect, including data on health care supply vendors and supply chains and the volume and distribution of equipment and supplies.

Although FEMA plans broadly acknowledge that information sharing and data collaboration with interagency partners are important, FEMA and HHS did not have relevant, established data collection plans and sharing agreements for data specific to COVID-19 operations. The PanCAP, PanCAP-A, and region-specific plans anticipate leveraging HHS networks and agreements to collect public health data. Similarly, FEMA plans assign responsibility for collecting data to the relevant ESF or interagency partner with subject matter expertise. Because the COVID-19 response structure differed from established doctrine, the partners that would have performed data collection were not necessarily activated in the National Response Coordination Center (NRCC), or they were assigned to different task forces. Regionally, the processes and mechanisms for the flow of information between SLTTs, HHS, and other FEMA partners had generally not been established prior to the event.

At the national level, FEMA's collaboration with HHS and other agencies began slowly. During the initial response, there was confusion about the roles, responsibilities, and authorities of the two agencies and the relevant data to inform decision-making. Privacy issues and legal authorities regarding the handling of health information also had to be addressed. A 2012 report on H1N1 and

the after-action report for the 2019 Crimson Contagion Exercise documented challenges related to interagency data sharing.[135] During COVID-19, agency stakeholders noted concerns about data sharing policies, data use restrictions, and established data reporting structures.

*Throughout the pandemic, the NRCC operations continued, as pictured here in the Hurricane Delta Response. (FEMA)*

As a result of the data sharing delays, data sharing agreements—and the process for sharing and receiving the information—had to be established at the federal level during ongoing response activities. Data related to hospital materiel and capacity, state COVID-19 case counts, and fatalities were collected from multiple—and sometimes inconsistent—sources. This resulted in decision-makers not having all the information they needed to make the most informed decisions about scarce resource allocation and prioritization of medical supplies.

### Recommendation for Key Finding 4.4

**Recommendation 4.4.A:** Update national and regional pandemic plans with the data points decision-makers require to make informed decisions. These plans should identify the sources of those data points and the partners who maintain those data and should include information collection plans that incorporate the data sources (both government and non-government). Federal interagency data sources should be considered and pursued for integration across the whole of government. FEMA should, where appropriate, establish memorandums of understanding and data sharing agreements with these partners to increase operational readiness for future disaster operations.

**Key Finding 4.5:** Without refined data requirements, independent approaches to data collection and analysis increased the number of requests to FEMA regions and SLTT and private sector partners.

FEMA did not anticipate the types, variety, and amount of data needed to respond to the COVID-19 pandemic. FEMA plans and processes had to be adapted during response operations. Although this rapid adaptation was not unique, the size, scope, and complexity of the pandemic compelled the agency to adjust its processes and leverage interagency and state partnerships in unique ways. FEMA generated multiple and often disparate tools, resources, and capabilities for data collection, analysis, and decision-making. Although FEMA and HHS were able to eventually work through information sharing challenges, incomplete data collection plans and independent data collection initiatives affected the FEMA response operations during the first months of COVID-19.

During the initial COVID-19 response, FEMA was unclear what information it needed to collect and lacked a comprehensive information collection plan (see Finding 4.4). When an incident occurs, FEMA develops a National Support Plan (NSP) that adapts plans to address circumstances specific to the disaster. The NSP, in accordance with the National Incident Management System (NIMS), establishes reporting requirements for data calls and objectives. These requirements are used to develop products for agency leadership, such as the Senior Leadership Brief (SLB), and help the regions develop their information collection plans. Ideally, an NSP would be ready for implementation upon the NRCC's activation. FEMA began to develop an NSP for COVID-19 response on March 20, 2020, but a finalized NSP was not approved until early May 2020.[h] During initial response efforts, the National Response Coordination Staff leadership did not clearly define reporting expectations for data calls.

Absent specific, established data collection guidance, approaches varied by region. The lack of coordinating structures for managing data requests to SLTT partners between FEMA HQ and the regions resulted in duplicate requests for information. In some instances, the NRCC and WHTF did not coordinate with the regions when reaching out to partners. This led to HQ requesting information that the regions were already collecting on HQ's behalf. Multiple, redundant requests from FEMA overwhelmed SLTT partners during response operations and caused confusion that affected the relationship and trust between FEMA and its partners.

FEMA regions were postured differently in their ability to collect, analyze, and disseminate data and information. Some regions reported standing up data analysis groups that included several dedicated analysts, while other regions formed smaller cohorts or none at all. FEMA's ability to collect and analyze data was not consistent across the agency. Access to data and the ability to make requests of state and local partners sometimes depended on established relationships and personal initiative. For certain data, FEMA worked with HHS and state health departments. Some regions reported that they quickly established reporting relationships, while others noted significant factors that improved their ability to collect data. These factors included the existing relationships between the regions and their state partners, the working dynamic between FEMA and HHS partners, and medical facilities' ability to respond to the numerous data requests. Regions reported that the presence of positive, established relationships with state partners and HHS counterparts' ability to effectively engage with partners with which FEMA had no relationship were key factors of success. Many hospitals were not comfortable sharing data outside the established health care hierarchy. Concerns about personally identifiable information being released and general litigation on data safety made it difficult for FEMA and HHS to press states and health systems for information.

Even when FEMA's access to data was relatively robust, data validity and verification remained challenges. HQ and FEMA regions reported collecting data from a variety of sources, such as HHS, CDC, private sector networks, and open-source research. However, the information within these data sources did not always align or match. In these instances, the regions and the Data Analytics Task

[h] The NRCC PSS transitioned the development of the NSP to HHS/ASPR planning section on June 11.

Force (DATF) within the NRCC attempted to confirm the data with other sources; however, tight timelines for reporting made consistent and thorough quality assurance a challenge.

On April 9, 2020, FEMA and HHS administrators released a letter to hospital administrators outlining 30 data points for hospital networks to report daily.[136] The DATF identified data sources and reporting vehicles. Regional, state, and local entities were instructed to use three primary systems for reporting: (1) TeleTracking, (2) a COVID-19-specific module of the previously established CDC National Health Support Network reporting platform, and (3) existing state and hospital information systems linked directly with HHS Protect.[i] To meet these requirements, reporting entities submitted data in different formats, which resulted in receiving entities requiring extensive time to collect, validate, and consolidate the data into usable formats.

FEMA coordinated requests for data and established data analysis working groups to coordinate and provide better visibility on information collection at the national, regional, and interagency levels. As the pandemic environment evolved and data needs changed, the data requirements outlined in the original letter to hospitals were often adjusted. The most common data points requested from hospitals included bed availability, intensive care unit (ICU) bed availability, ventilators on hand, and confirmed COVID-19 patient census. Quality assurance remained an issue, since data from partners were often incomplete and required verification and validation to appropriately inform response and resource allocation. FEMA HQ, in coordination with the regions and interagency partners, pressed reporting entities to provide more complete data submissions to validate and support resource requests coming from the state and local levels. Despite FEMA's coordination efforts, duplicate data requests persisted. The processes for making requests were not always clear to state and local partners, changed frequently, and were not always followed by requesters. SLTT partners did not always understand why certain data were being requested or how the data they were providing were being used. This dynamic caused significant confusion and frustration for reporting entities.

## Recommendation for Key Finding 4.5

**Recommendation 4.5.A:** Develop an implementation plan for improved data application to disaster operations that considers non-governmental data management and applications and allocate resources to pursue identified courses of action to improve data-driven operations. Examine the planning approach to data management and analytics based on preparedness-driven requirements and lessons learned from past disasters. FEMA should assess existing data systems, analysis, and products for their usability and effectiveness in informing and guiding senior leadership decision-making before, during, and after disasters.

[i] The HHS Protect platform was established April 10, 2020, for the authentication, amalgamation, and sharing of health care information for COVID-19 response; HHS Protect integrates more than 200 previously disparate data sources across federal, state, and local governments and the health care industry.

**Key Finding 4.6:** FEMA's current situational awareness reporting products limit data sharing and data-driven decision-making.

An interagency response requires an established, agreed-upon common operating picture (COP) for dynamic and static data to achieve real-time situational awareness across all levels of incident management and jurisdictions. FEMA's established COP, WebEOC, is an online crisis management system accessible to federal, state, territorial, and tribal partners to coordinate and support response operations and maintain situational awareness. WebEOC hosts reports that support situational awareness, such as the SLB, which provides leadership executive-level information summarizing the incident situation and critical effects, actions, and limiting factors to inform decision-making. With the increased data demands of a national-level response, FEMA faced challenges maintaining situational awareness across response partners using the established COP and report structure.

*Situational awareness* is the ability to identify, process, and comprehend critical information about an incident. Gaining and maintaining situational awareness requires extensive information collection and ongoing monitoring.

Although the SLB can be adapted to include additional information specific to an incident, such as task force updates and COVID-19 case mapping, its current structure as a multi-page static report provides point-in-time data. The SLB's broad distribution across response partners makes real-time adaptations to accommodate new data challenging, and limits the scope of data appropriate for a broad audience.[j] Data collection cycles at all levels do not always match FEMA's reporting cycles, which sometimes led to updates being delayed until the next report. Each data element is manually entered and formatted into the SLB template, resulting in a delay between data collection and reporting.

To address the limitations of static reports and to meet the significant data needs of decision-makers, some regional personnel collaborated with state and HHS partners to establish dynamic dashboards that could address region-specific reporting needs for situational awareness. FEMA Region 9 worked with HHS to develop region- and jurisdiction-specific models and dashboards. Regional staff cited the united approach with HHS as a key factor in building relationships with jurisdictions and the private sector and gaining access to data early in the response. However, changes to consolidate health-related data reporting under a federal HHS contract initially resulted in duplicate reporting to federal and regional systems and a loss at the regional level of some modeling capabilities.

[j] The COVID-19 SLB distribution list originally included more than 1,000 unique email addresses. By November 2020, when this report was drafted, the Joint Coordinating Council (JCC) had limited the distribution to COVID-19 operations senior leadership (approximately 375 addresses).

NRCC sections and task forces developed their own decision-making products to meet their needs and suit their audiences. For example, in addition to the SLB, the NRCC Situational Awareness Section (SAS) dedicated resources to developing a daily limited-distribution briefing with more detailed information for the FEMA Administrator's situational awareness. SAS, the DATF, and the Planning Support Section (PSS) each created their own "hotspot" reports to track rising COVID-19 cases. However, variability of data sources, report audiences, and reporting cycles often resulted in products that portrayed incomplete or contradictory information. To streamline data requests within FEMA, SAS established a new regional integration team (RIT) to provide centralized communication between the regions and HQ and held internal coordination meetings for further collaboration on data analysis and needs between the NRCC, PSS, SAS, and Regional Response Coordination Centers. The RIT attempted to reduce the complexity of information requests to regions and prevent duplication, in part through a standardized reporting mechanism and briefing schedule that accommodated SAS and PSS needs. On April 21, 2020, SAS released a summary of recurring regional data requests to resolve conflicting information.

To increase coordination and consolidation efforts between SAS and PSS functions when considering reporting requirements from the regions, FEMA should explore the development of a regional and stakeholder reporting mechanism that accommodates SAS and PSS requirements. By reviewing the situational awareness reporting structure to identify process improvements, FEMA will support decision-making at all levels. FEMA should examine ways that regional data analytics can inform FEMA analytics and response, including through a pilot program to identify state, regional, and national data needs.

### Recommendation for Key Finding 4.6

**Recommendation 4.6.A:** Develop an agency intelligence unit that works across the enterprise at HQ and in the regions in preparedness and operations to gather data, analyze information, build tools, and advise leadership. FEMA should develop a strategy, commit resources, and implement a plan to build this capability that can inform policy and planning, understand threats and risk, assess vulnerabilities, and enhance operations. This would include the following steps: (1) evaluate the situational awareness processes for data collection, analysis, and reporting, and the systems used to manage the information; (2) identify reporting requirements from leadership at HQ and the regions; (3) collect insight from HQ efforts and regional data analytics to inform updates; and (4) consider dynamic collection, reporting, and presentation methods to reduce the time it takes to enter the data and the timeliness and validity of information being reported.

**Key Finding 4.7:** The lack of a shared common operating picture limited situational awareness and stakeholder collaboration on mission objectives.

The Crimson Contagion 2019 Functional Exercise After-Action Report (AAR) identified HHS and FEMA's use of disparate information management systems as a hindrance to the agencies' ability to establish and maintain a COP. The Crimson Contagion AAR was released in January 2020, which left insufficient time to design and implement a solution for this issue. During COVID-19 operations,

FEMA and HHS's use of separate systems made it difficult to achieve a unified COP and situational awareness across response personnel. As FEMA's COP, WebEOC provides a platform for FEMA and response partners to collaborate and maintain situational awareness through various connected dashboards, file libraries, and other trackers. Data platforms or visualization products produced or managed outside of WebEOC can connect through two options: a single direct push into WebEOC or a two-way connection (both require an inter-connection data security agreement). However, neither capability was used for GeoHealth and GeoSpark, the two HHS operating systems that provide COVID-19 case and hospital data.

COVID-19 operations also involved a significant number of personnel who had not used the WebEOC platform previously. Between January and June 2020, more than 2,022 new users were added to WebEOC. However, for a system that has more than 18,000 users, FEMA does not have dedicated WebEOC training staff. Training is a collateral duty of the limited support staff. In response to COVID-19, the support team of six full-time staff members made more than 70 system changes and offered 56 basic trainings over a seven-month period, as well as additional ad-hoc, one-on-one, and small group training as requested. In addition, many FEMA response positions in the NRCC do not maintain or train on an updated standard operating procedure for position-specific responsibilities within WebEOC, so users are unfamiliar with how to fully use WebEOC capabilities for situational awareness. Consequently, new users deploy to positions that require regular use of WebEOC without the appropriate training.

As a result of users' inexperience with and reluctance to use WebEOC, and a need to access new data specific to COVID-19 operations, FEMA and response partners chose to directly access other systems in addition to WebEOC to maintain situational awareness on COVID-19 caseloads, resource requests, and other informational needs. Consequently, the multiple operating pictures delayed the establishment of necessary communication channels during response. Redundant or overlapping systems led to duplicate information products, storage, sharing, and assigned tasks, ultimately delaying decisions because response personnel had to address conflicting data collected through different systems.

### Recommendation for Key Finding 4.7

**Recommendation 4.7.A:** Evaluate the ability of existing systems to serve as a comprehensive COP for situational awareness at all levels and invest resources in developing WebEOC or a similar platform to provide real-time data insight, customizable across the levels of operations based on common datasets, and that can integrate additional data from other federal agencies and other partners. Provide the staff and resources to maintain and update WebEOC, and to educate, train, and equip the workforce at all levels of government.

## Summary of Recommendations for Preparedness and Information Analysis

Data-driven preparedness and operations are important to timely and efficient operations. Investments in realistic and actionable plans that imaginatively examine the what-ifs of catastrophic

environments are necessary for the creative thought and non-traditional solutions that a pandemic response requires. FEMA needs to invest and expand on the continuum of data—from modeling and simulating anticipated effects to using them to drive planning assumptions and concepts of operation, to capturing, analyzing, and reporting them during response to guide decision-makers. The recommendations in Table 21 represent momentum in that direction.

**Table 21. Summary of Recommendations for Preparedness and Information Analysis**

| Section 4: Preparedness and Information Analysis Summary of Recommendations |
|---|
| 4.1.A. Establish an interagency planning working group to review the COVID-19 incident and update the PanCAP for a whole-of-government response. |
| 4.2.A. Based on the role Congress and the Administration direct FEMA to play in pandemic operations, and the authorities granted, the agency should review, revise, and develop plans for HQ and the regions, commensurate to their roles, that account for learning from the COVID-19 operations. |
| 4.3.A. Institutionalize an integrated and coordinated approach to the development and maintenance of pandemic plans at all levels of government with SLTTs, public health partners, emergency management agencies, and the private sector, and exercises to validate those plans. |
| 4.3.B. Improve consequence analyses at all levels of government and in coordination with non-governmental partners. There is a shared responsibility to conduct consistent and comprehensive modeling and simulation of data that realistically assess risk and response capabilities in order to better develop realistic planning and understanding of the effects of a catastrophe and the resulting critical resources demands. |
| 4.4.A. Update national and regional pandemic plans with the data points decision-makers require to make informed decisions. These plans should identify the sources of those data points and the partners who maintain those data and should include information collection plans that incorporate the data sources (both government and non-government). |
| 4.5.A. Develop an implementation plan for improved data application to disaster operations that considers non-governmental data management and applications and allocate resources to pursue identified courses of action to improve data-driven operations. Examine the planning approach to data management and analytics based on preparedness-driven requirements and lessons learned from past disasters. |
| 4.6.A. Develop an agency intelligence unit that works across the enterprise at HQ and in the regions in preparedness and operations, to gather data, analyze information, build tools, and advise leadership. |
| 4.7.A. Evaluate the ability of existing systems to serve as a comprehensive COP for situational awareness at all levels and invest resources in developing WebEOC or a similar platform to provide real-time data insight, customizable across the levels of operations based on common datasets, and that can integrate additional data from other federal agencies and other partners. Provide the staff and resources to maintain and update WebEOC, and to educate, train, and equip the workforce at all levels of government. |

## Section 5. Organizational Resilience

The COVID-19 pandemic directly challenged FEMA's ability to maintain its organizational resilience as it faced anticipated and unanticipated disruptions to its internal operations. Like the rest of the country, FEMA's facilities and workforce were affected by pandemic conditions.

FEMA leadership took several actions to preserve its workforce and ensure continuity of agency programs; staffing during this volatile, unpredictable, and complex environment required exceptional cross-agency collaborations. Figure 28 provides a timeline of key actions that occurred from January through September 2020. This section is one of reflection and lessons learned for FEMA as it continues to improve procedures, functions, and execution standards. Findings here can be attributed to one or more of the following components comprising FEMA's organizational resilience: processes, technology, and people.

- COVID-19 presented unique challenges to FEMA's **processes**, including how guidance was messaged, decisions were made, and programs were delivered, all while sustaining critical agency operations.
- The pandemic forced the agency to enable a virtual workforce and identify new strategies for using **technology,** such as collaboration tools.
- The pandemic affected how the agency protected its **people,** from preventing the spread of COVID-19 in its workplaces to addressing the workforce's emotional and physical health.

Assessing FEMA's organizational resilience during the COVID-19 pandemic can help the agency better meet similar organizational challenges in the future and set a course for enhancing the way FEMA does business. Table 22 presents the key findings for this section.

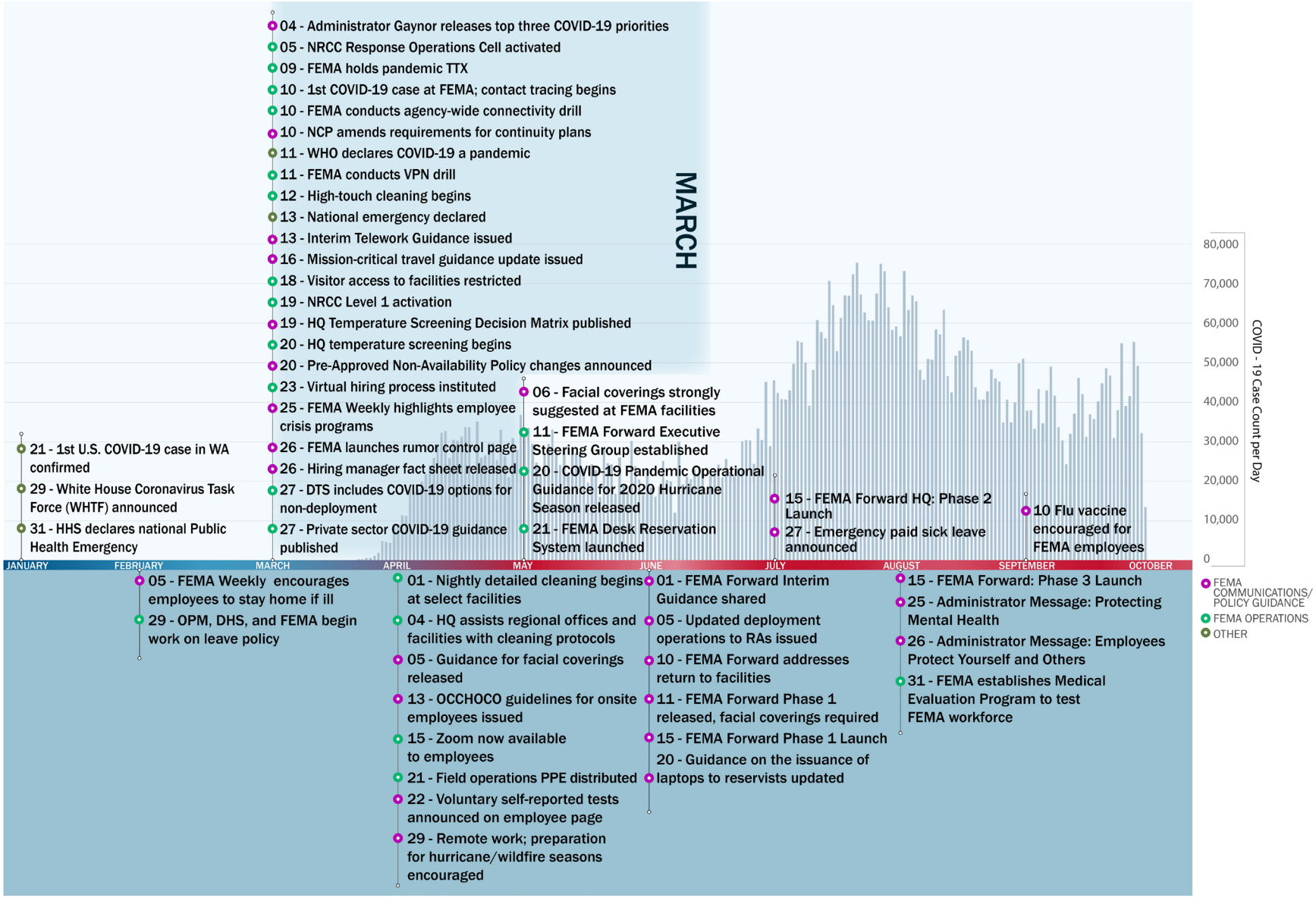



**Figure 28. Workforce Preservation Timeline**

**Table 22. Summary of Key Findings for Organizational Resilience**

| Section 5: Organizational Resilience Summary of Key Findings | |
|---|---|
| 5.1. | FEMA headquarters was delayed in establishing clear coordination on internal workforce guidance and communications in the early stages of the COVID-19 incident, resulting in messaging being perceived as untimely, unclear, or both by the FEMA workforce. |
| 5.2. | FEMA investments in mobility enabled the implementation of an agency-wide shift to telework, with 95% of FEMA employees reporting high productivity. |
| 5.3. | Even though FEMA did not activate its Continuity of Operations (COOP) plan, the agency leveraged its Pandemic Annex and continuity tactics for workforce protection; however, using continuity nomenclature in agency messaging caused confusion about how programs and resources should be prioritized. |
| 5.4. | Through a shift in resources and workforce innovation, FEMA was largely able to adapt, deliver programs, and carry out the mission while operating in the COVID-19 environment. |
| 5.5. | FEMA was not prepared to staff its National Response Coordination Center (NRCC) for a long-duration pandemic incident of national scale, and the need for employees with specialized skillsets presented challenges, as did FEMA's workforce management practices. |
| 5.6. | FEMA implemented and enhanced protective measures over time to protect its workforce's health and safety; however, the agency experienced challenges implementing and ensuring compliance with these measures nationwide. |
| 5.7. | FEMA's restoration planning efforts have provided its workforce COVID-19 guidance and resources, but these efforts should focus more on behavioral and mental health. |

**Key Finding 5.1:** FEMA headquarters was delayed in establishing clear coordination on internal workforce guidance and communications in the early stages of the COVID-19 incident, resulting in messaging being perceived as untimely, unclear, or both by the FEMA workforce.

At the onset of the pandemic, FEMA's Response Operations Cell (ROC) in the National Response Coordination Center (NRCC) was selected as the coordinating body for all COVID-19-related actions, inclusive of the agency's support to disaster operations and those issues relevant to the internal agency workforce. As the operational tempo increased and FEMA took on a larger role coordinating the nation's COVID-19 response with the U.S. Department of Health and Human Services (HHS), use of the ROC to coordinate COVID-19-related actions was quickly deemed a poor fit. Though the NRCC was to be the focal point of coordination, COVID-19 information from FEMA headquarters (HQ) continued to be released ad hoc to the workforce and independently from various components, based on varying lanes of authority. Leadership and management staff acknowledged that workforce guidance and communications were initially disorganized, with too many messages coming from multiple sources. The lack of clear coordination across all HQ components with interests in issuing guidance to the workforce—both steady-state and deployable—became a readily apparent challenge.

Recognizing the need for more coordinated and consistent communications to staff, the Administrator issued a memo to FEMA's top-level managers establishing a COVID-19 Coordination Team, whose intent was to remain focused on the workforce while remaining ready to execute the mission.

> "Stand up a coordination team that will be focused on guaranteeing we have the internal policies, guidance, protocols, and processes in place to protect the workforce. The creation of this new coordination team ensures that the ROC can remain focused on our operational functions and delivering the mission." — FEMA Administrator's memorandum, March 2020

The COVID-19 Coordination Team immediately paused all agency workforce communications and stood up a structure to coordinate across HQ. Consisting of approximately eight staff members and a lead, the team established a COVID-19 Mailbox for emailed inquiries, began tracking all communications out to agency staff, and facilitated the process of getting guidance issues routed to the appropriate office for action. The centralized mailbox for workforce-related communications and messaging provided a consistent place to streamline and focus agency efforts and should be continued in the future. This initiative is consistent with recommended best practices for the private sector business community where standing up a Crisis Management Team to address policy and guidance, or having a centralized team for communications, is a necessity when dealing with this type of wholesale disruption to the workforce.

Even with the coordination of the COVID-19 team in place, feedback from staff across the agency has been mixed on whether communications and guidance from HQ was sufficient. FEMA employees dealing with COVID-19 concerns for the workforce in the regions (e.g., field and regional leaders, safety and security officers, facility managers) cited instances where the COVID-19-related guidance was untimely, confusing, overwhelming in volume, or non-existent.

Although communication channels are firmly established within fixed facilities for HQ and regions, it is unclear which FEMA component has primary responsibility for disseminating information and standards to field entities. This lack of official guidance, however, did not prevent agency leadership from taking meaningful action when needed, such as shifting to remote work and implementing other ad hoc processes to fill gaps. As many field and HQ staff noted, the lack of guidance abated as time went on. In the COVID-19 Initial Assessment Report Agency-Wide Staff Survey, COVID-19 guidance related to safety measures, reporting on COVID-19 positive cases in FEMA employees, and telework—actions taken for the pandemic—showed favorable responses to clarity, timeliness, and other parameters for how guidance was released (see Table 23). This reflects FEMA's progress in developing and communicating messaging around COVID-19 workforce issues.

**Table 23. Percentage of FEMA Staff Who Agree/Strongly Agree that COVID-19 Safety Measures Guidance, Reporting, Telework was Released and Communicated Effectively**

| Guidance Rating | COVID-19 Safety Measures During the Response (Agree and Strongly Agree) | Tracking and Reporting COVID-19 Exposures on your team (Agree and Strongly Agree) | Telework (Agree and Strongly Agree) |
|---|---|---|---|
| Timely | 77% | 67% | 78% |
| Comprehensive | 74% | 65% | 75% |
| Clear | 73% | 62% | 75% |
| Sufficient | 72% | 63% | 74% |

### Recommendations for Key Finding 5.1:

**Recommendation 5.1.A:** Update the Pandemic and Emerging Infectious Disease Workforce Protection Plan (PEIDWPP) in partnership with subject-matter experts from across the agency and with HHS to address workforce coordination and communication processes learned from FEMA's COVID-19 experience. Include the timely collapse, closure, and return to home station for telework-supported continuation of duties to document staff mobility and safety as local and state support systems are closed or restricted to field staff.

**Recommendation 5.1.B**: Formalize the roles and responsibilities for internal communications within the agency, especially for events requiring coordination between FEMA components that are responsible for protecting the workforce. Use the COVID-19 Coordination Team approach or a similar structure to develop future internal communications strategy for the workforce.

**Recommendation 5.1.C:** Exercise and validate updated agency documentation on protective measures with a focus on decision-making and implementation of guidance for the workforce; operationalize more of FEMA's mission-enabling functions that are not traditionally exercised at HQ and in the regions.

**Key Finding 5.2:** FEMA investments in mobility enabled the implementation of an agency-wide shift to telework, with 95% of FEMA employees reporting high productivity.

Long-term technology investments coupled with COVID-19 scenario planning enabled the implementation of a fully remote workforce. The COVID-19 pandemic disrupted traditional business operations and forced FEMA to adapt to a new reality. With medical professionals discouraging in-person social contact and workplaces becoming potential sites of viral transmission, COVID-19 pushed FEMA to find virtual approaches for fostering the collaboration, knowledge management, and decision-making inherent to its work.

FEMA's investment in information technology infrastructure was a critical enabling condition that supported a virtual workforce. In 2011, FEMA executives recognized mobile technology as an important factor to allow the organization to respond to natural disasters. Later that year, the organization equipped all full-time employees with laptops and encrypted storage devices to allow its workforce to work securely at the office or in the field. Agency leadership mainstreamed telework for employees, and by 2018 the agency had invested in cloud computing for easier collaboration and file sharing. When the COVID-19 pandemic hit, FEMA's workforce had mature mobile technology and work practices to enable a shift to telework. In several surveys of FEMA employees, 90% of respondents said they had all the necessary equipment to work remotely (see Figure 29). Several regional offices provided employees with telework kits that included a monitor, headset, and office supplies.

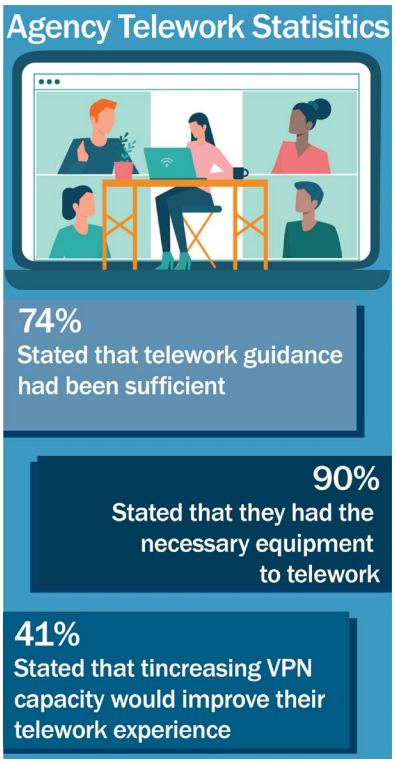



**Figure 29. FEMA Workforce Survey Statistics on Agency Teleworking**

As COVID-19 cases began to increase in early March, FEMA began taking a more prominent role in coordinating relief efforts. Though the organization had a PEIDWPP that considered physical distancing, personal protective equipment (PPE), and telework as mitigation strategies, interviews with FEMA managers suggest that the plan was either little-known or unused. Instead, FEMA executives believed the pandemic called for "steady-state operations," and they implemented telework as one approach to maintain business continuity and protect the workforce. On March 9, 2020, FEMA held a tabletop exercise to discuss issues related to the agency's ability to carry out its mission during the pandemic. Among the findings, FEMA found that it needed to: (1) roll out current technologies faster, and (2) maintain communications with SLTT partners. In anticipation of the shift to telework, FEMA leadership identified, purchased, and began delivering Zoom and Microsoft Teams, two collaboration applications that employees would need. The Office of the Chief Information Officer (OCIO) also temporarily halted all system and program updates to ease the transition to telework. On March 11, FEMA conducted an agency-wide virtual private network (VPN) drill to assess employees' ability to connect to the VPN, employees' VPN user experiences, and the Enterprise Service Desk's ability to respond to support requests. Two days later, the agency issued Interim Telework Guidance for supervisors to maximize telework.

Although some connectivity and bandwidth issues remain, a focused telework implementation and the adoption of intuitive collaboration tools enabled the workforce to self-report high productivity while teleworking. Several factors contributed to this success: (1) web conferencing and cloud-based collaboration tools had matured beyond older, faultier versions; (2) the new software was largely intuitive, which allowed some employees to self-teach or lean on peers for support; and (3) many of FEMA's employees were technologically proficient, allowing them to pick up the new technologies with ease. Still, some staff expressed a desire for more instruction, with 26% of employees stating

that telework guidance had been insufficient. As a result, the OCIO rolled out trainings in the months following the order to maximize telework.

Despite the telework drill, many FEMA employees reported having some connectivity issues after shifting to telework. The connectivity issues correlated with an uptick in Enterprise Service Desk tickets in March. Though DHS doubled VPN capacity on April 28, an October survey of FEMA employees found that 41% of respondents said increasing VPN capacity would improve their telework experience. The root cause of the connectivity issues cannot be easily determined. Employees might experience bandwidth issues if they live in remote locations or if their home internet is not fast enough for office work. After the March increase, Enterprise Service Desk tickets fell and plateaued before surging in correlation with the hurricane and wildfire seasons in September.

According to surveys of employees and interviews with FEMA leadership, many components of FEMA's work can be done remotely. As illustrated in Figure 30, an overwhelming majority of supervisors have expressed confidence in their ability to monitor their staff while working remotely, and employees have reported high productivity (noting that employees may have a risk of self-reporting bias). While nearly all employees expressed that that they had the necessary equipment to work remotely, some expressed a desire for additional equipment like computer monitors and access to printers that would improve their teleworking experience. Employees have found teleworking to be a net positive, and many prefer to telework more or full time when building access returns. As the agency moves toward repopulating facilities, it is re-evaluating its approach to telework and remote work—an initiative aimed at adapting business practices from the COVID-19 pandemic to provide FEMA with recommendations for sustaining or improving on actions to increase efficiency in the future.


**Figure 30. Survey Data Show FEMA Staff Maintain Productivity While Working**

### Recommendations for Finding 5.2:

**Recommendation 5.2.A:** Continue investing in cloud computing, information technology infrastructure, and software to meet FEMA's mission with flexibility and adaptability.

**Recommendation 5.2.B**: Continue assessing how to integrate telework throughout FEMA and develop courses of action for future operations. These courses of action should incorporate the agency's operations during the COVID-19 pandemic with the associated long-term implications for space requirements, physical layout of buildings, noise management, and automation. They must also maintain accessible technology and reasonably equip employees who are working from home. In the assessment, the agency should also evaluate VPN capacity, work to ensure staff have

sustainable internet access, and use an agency-wide accountability tool during the initial and long-term implementation of alternate or telework scenarios. All options should ensure employee performance plans are able to assess workforce efficiency and success while working remotely.

**Key Finding 5.3:** Even though FEMA did not activate its Continuity of Operations plan, the agency leveraged its Pandemic Annex and continuity tactics for workforce protection; however, using continuity nomenclature in agency messaging caused confusion about how programs and resources should be prioritized.

Throughout the COVID-19 operations, there was a misunderstanding about continuity policy across the agency for formally activating the Continuity of Operations (COOP) plan. At the beginning of the federal government's pandemic response, COOP was widely perceived as being traditionally implemented only during severe situations. The formal activation of a COOP plan was associated with a pause of routine government activities. This paradigm assumes—at least initially—that the traditional work processes supporting essential functions are no longer sustainable or attainable at FEMA's primary facilities, and that an assessment is necessary for the agency to re-engage with programmatic work. Actions traditionally associated with the activation of COOP, such as telework and other workforce protections, are applied to ensure an agency can operate under all conditions.

FEMA's COOP plan delineates the conditions for COOP activation, which include significant effects on mission, personnel, or facilities. Telework is specifically addressed as an option for the Emergency Relocation Group (ERG) and the plan requires telework agreements for designated ERG members. The COOP plan does not address prioritization of FEMA's steady-state programmatic work in a COOP event, but rather the mission essential functions (MEFs)—continuity, response, and recovery— and component essential supporting activities which must continue throughout, or resume rapidly after, an emergency.

The agency continued to execute its mission through programmatic adaptation necessitated by the pandemic. Leadership stated that FEMA did not have to activate COOP because it was able to respond to the COVID-19 incident by adapting delivery of its steady-state programs and other core functions. FEMA continued to provide service delivery to SLTT partners while HQ and regional leadership adjusted the scope, pace, and priority of programs to adapt to COVID-19 safety requirements.

Elements of the COOP plan's Pandemic Annex were implemented as leadership focused on ensuring that FEMA's MEFs, Annual Planning Guidance, and program objectives were achieved, while several FEMA-wide memos used continuity nomenclature from Presidential Policy Directive 40 (PPD-40)—using telework as a tactic to address workforce effects of COVID-19. FEMA senior leadership's goal was to redirect resources to COVID-19 operations when needed, but the lack of direction in how to support MEF activities and continue to also perform programmatic activities caused confusion. Many FEMA staff anticipated activation of continuity plans (see Table 24) and expected to receive guidance and direction about priority setting and scope of work. Decisions about priority setting during the incident were complicated by the unprecedented scale, geographic variability, and

duration of the pandemic. Responsibility for non-COOP activity prioritization in a nationwide event like COVID-19 is not assigned to any one component and warrants further evaluation to reduce or eliminate confusion.

Similar to how FEMA approaches planning for a lapse in appropriations, the agency should also identify the essential activities that must remain active and those can "go on pause" during disasters of national scope that require surge of agency resources but do not reach the threshold of a COOP activation. Additional continuity training at all levels of the agency would also help personnel understand the effect of a true COOP activation versus applying continuity strategies and tactics to continue program activities.

**Table 24. Most Respondents to an October 2020 FEMA-Wide Survey Thought that COVID-19 was a Continuity Event and that Their Offices and Directorates Implemented COOP Plans**

| | Did your office or directorate consider COVID-19 a continuity event? | Did your office or directorate implement continuity plans? |
|---|---|---|
| Yes | 53% (2206) | 59% (2247) |
| No | 6% (252) | 7% (283) |
| I don't know | 41% (1699) | 34% (1420) |

### Recommendations for Key Finding 5.3:

**Recommendation 5.3.A:** Identify a FEMA component or office responsible for analyzing of steady-state programmatic work and recommending a process for FEMA leadership to prioritize agency activities when COOP is not activated and the effects do not require only conducting MEFs, but the steady-state resources must be adjusted to support significant operational response or recovery requirements. Perform the associated analysis for what this situation entails for agency staffing steady-state and prioritized activities.

**Recommendation 5.3.B:** Update the agency's COOP plan to allow for more flexible and adaptable application of continuity tactics to events when the COOP plan is not activated. Develop an updated approach to training, exercising, and educating FEMA personnel about FEMA's COOP plans to improve the culture of continuity, per PPD-40.

**Key Finding 5.4:** Through a shift in resources and workforce innovation, FEMA was largely able to adapt, deliver programs, and carry out the mission while operating in the COVID-19 environment.

FEMA's use of technological and workforce adaptations, including changes in policy, facilitated the continuation of organizational functions. The need to enact physical distancing and the shift to a more virtual workforce presented FEMA with the opportunity to use virtual platforms in new and more expansive ways. Many offices and directorates noted using video conferencing products, like Zoom, Microsoft Teams, and Adobe Connect to interface with their organizations and stakeholders in lieu of face-to-face interaction, though some noted challenges with meeting sizes and participating

organizations' security protocols and firewalls. According to OCIO IT Operations, Zoom usage by FEMA employees increased from 12 hours in March to more than 52,000 hours in September, while over 299,000 meetings took place on Microsoft Teams from June through September. Adopting these platforms helped employees as their programmatic responsibilities evolved during COVID-19; the technology also enabled the onboarding of new employees. Although new staff still set up assigned government equipment on-site, the Office of the Chief Learning Officer (OCLO) transitioned new employee orientation to a 100% virtual environment and established a plan for 100% virtual onboarding.


*FEMA implements protective measures to help preserve the FEMA workforce. (FEMA)*

Transitioning to a virtual training environment also allowed for the continuance of FEMA's training mission. For example, the National Training and Education Division, the Center for Domestic Preparedness, and the Emergency Management Institute (EMI) suspended in-resident training and worked with U.S. Fire Administration, Field Operations Directorate, and OCLO to develop a unified FEMA Training Forward Plan aligned to the agency's "FEMA Forward" facility repopulation plan. This resulted in increased delivery of some courses. Prior to the COVID-19 pandemic, FEMA offered over 300 virtual courses, and since March, FEMA has collectively converted or developed 67 courses and identified 84 additional courses for conversion. Despite the suspension of training on FEMA campuses, the Center for Domestic Preparedness safely and responsibly supported 227 non-resident (mobile) law enforcement training deliveries, training 6,816 law enforcement first responders. Based on cost estimates—for Community Emergency Response Team volunteer and Roadmap to Resilience trainings—greater use of virtual deliveries may result in increased training capacity at a lower cost per student for certain courses ($347.42 for virtual versus $1,317.16 for in-person). The Hazard Mitigation Directorate also launched a virtual Coach and Evaluator Program, which made a pivot to virtual learning by prioritizing courses with the highest demand for delivery to the Hazard Mitigation disaster workforce, allowing for further and expedited workforce development.

Outreach to the public, including communications with SLTT partners, was transitioned to a virtual environment as well. For coordination with tribal nations, one FEMA region noted that using Zoom greatly improved the technical assistance aspect of service, as it allowed users to share screens so that FEMA Public Assistance (PA) applicants could learn about the FEMA Grants Portal. The Grant Programs Directorate also held 10 competitive grant program panel reviews virtually in May and June 2020 and issued COVID-19 supplemental grants for the Emergency Management Performance Grant and Emergency Shelter and Food Program within days of the Coronavirus Aid, Relief, and Economic Security (CARES) Act being passed. Similarly, the Procurement Disaster Assistance Team (PDAT)

organized training webinars to assist communities on proper contracting procedures during emergency or exigent circumstances when using federal funds, and it delivered 37 of these trainings with nearly 12,000 attendees. The production of an online PDAT video to assist FEMA grant recipients and subrecipients also resulted in over 6,500 views.

During COVID-19 operations, FEMA addressed new, national-level workload challenges in its PA program. With a redesigned application process, PA applicants could apply directly to FEMA for assistance without relying on a program delivery manager. With fully staffed Consolidated Resource Centers, FEMA was able to rapidly scale up to accommodate the PA requirements without deploying of thousands of staff to field operations. As a result, FEMA was able to process nationwide PA applications without having to train a cadre of staff. FEMA was also able to offer virtual damage assessments of sites by using desktop data analysis, geospatial analysis, aerial imagery, predictive modeling, or hybrid assessments with enhanced windshield surveys. Information that would generally be validated in person was done remotely. With these adaptations, through September 30, 2020, PA was able to obligate significantly more money in 2020 for non-COVID-19 projects than in any of the five years prior (see Table 25).

**Table 25. Non-COVID-19 PA Obligations for the Last Five Years**

| Calendar Year Obligated | Federal Share Obligated |
|---|---|
| 2015 | $7,886,107,474 |
| 2016 | $3,764,978,095 |
| 2017 | $3,972,321,704 |
| 2018 | $9,450,395,021 |
| 2019 | $6,940,437,807 |
| 2020 (January–September) | $18,071,797,802 |

Organizational resiliency also required workforce adaptations in the form of additional health, safety, and work-life resources and operational adaptations for those deployed. FEMA expanded workplace flexibilities to allow employees to perform their duties under new and unique circumstances, including extended telework and flexible work schedules. Policy changes also supported flexible travel arrangements, including allowing deployed employees to use a rental car rather than a plane for longer distance deployments and the option to select travel itineraries that transited through a domestic location when returning from duty in American Samoa, Guam, or the Northern Mariana Islands.[137] Other field adaptations included equipping FEMA reservists with laptops, making changes to the Deployment Tracking System (DTS) for better accountability and availability of employees, and shifting—where possible—to virtual disaster operations.

Through the challenges of a COVID-19 environment, FEMA has largely been able to continue with organizational functions while finding new and efficient ways forward for the workforce.

### Recommendation for Key Finding 5.4:

**Recommendation 5.4.A:** Institutionalize successful program and policy adaptations and build implementation plans to ensure efficiencies are not lost in the return to steady-state agency operations. FEMA should continue to embrace workforce flexibility and the use of virtual platforms that have received positive feedback (e.g., virtual town halls, damage assessments) and enable a

creative and innovative workforce culture that facilitates organizational improvements and increased resiliency.

**Key Finding 5.5:** FEMA faced challenges staffing its National Response Coordination Center for a long-duration pandemic incident of national scale, and the need for employees with specialized skillsets presented challenges, as did FEMA's workforce management practices.

FEMA's NRCC is the multi-agency center at HQ that provides federal coordination support for major disasters and emergencies. The NRCC has been activated for the longest period in FEMA's history—301 days since activating the Response Operations Cell on March 5, 2020—and remains activated at the publication of the report. It was activated at a Level 1 operating status for 168 days, starting on March 19, 2020. The NRCC supported the COVID-19 pandemic for 57 concurrent disaster declarations across the nation and a national emergency over the course of multiple months while providing incident support at a scale previously unseen by FEMA (see Figure 31). Comparatively, during the 2017 hurricane season, for Hurricanes Harvey, Irma, and Maria, and concurrent wildfires, the NRCC was activated at Level 1 for 76 days (the previous record), which was three times longer than the previous longest activation (for Hurricane Sandy in 2012).

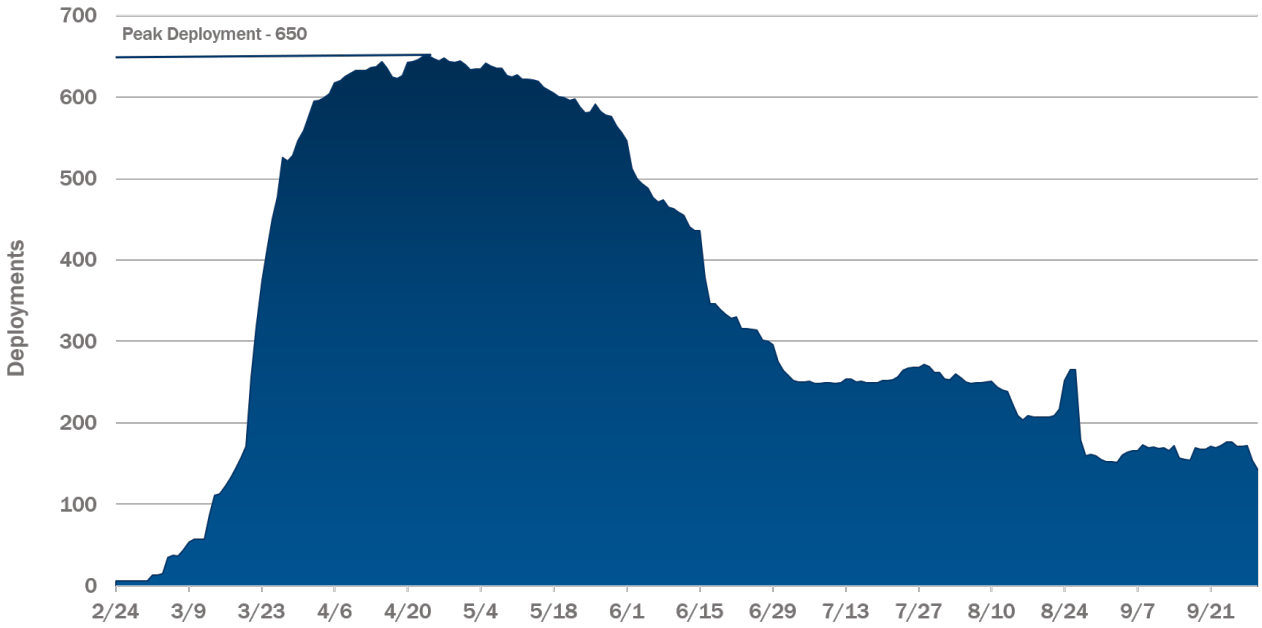



**Figure 31. Staffing of the NRCC for COVID-19 Incident, Inclusive of Both In-Person and Virtual NRCC Deployments**

FEMA moved to rapidly integrate task force personnel into the NRCC when it assumed the lead for operations on March 19, 2020. While many NRCC and task force personnel worked virtually, there were a significant number of staff coordinating and collaborating in-person. The presence of personnel in the NRCC was necessary to ensure a rapid, effective transition of operations. The NRCC did not have enough rooms or desks to accommodate the expanded operations, and the need to

physically distance staff exacerbated this constraint. Task force and NRCC personnel eventually spread out over multiple floors of FEMA's Headquarters, an action made possible because most of the FEMA workforce began working remotely. Had FEMA not been in a maximum telework environment, the task forces would not have been able to collaborate as effectively in the NRCC.

FEMA's NRCC staffing was exacerbated by two factors during the pandemic: (1) the inability to rotate new staff into the operations due to lack of dedicated staffing management structure and (2) the need for staff with specialized knowledge or skillsets for the pandemic operation.

At the onset of the pandemic, FEMA leadership anticipated pandemic absenteeism as one of the main limiting factors. Many employees who were typically rostered in NRCC roles were unable to staff in-person 12-hour shifts because of COVID-19 concerns and associated constraints. Until more positions became virtually staffed later in the activation, the in-person positions were challenging to fill. The lack of incident support management also made it harder to effectively deploy and track those staff members who were available to support the NRCC. FEMA's Field Operations Directorate (FOD) identified staff and backfills for the NRCC roster and the task forces. However, FOD did not have the authority or resources to act as a management system. At HQ, there was also a lack of support from supervisors and middle managers to approve staffing requests due to unspecified COVID-19 deployment lengths and the potential effects on steady-state programmatic work. This contributed to the shortage of available staff, making it more difficult to honor typical 30-day deployment lengths for the NRCC and task forces.

Morale suffered as staff felt overworked for long periods of time. The NRCC's Situational Awareness Section and Resource Support Section reported a shortage of staff and high turnover, in part due to burnout. Similarly, when surveyed in June, 20% of FEMA and interagency respondents did not feel workload was distributed evenly to avoid burnout. Certain FEMA regions also struggled with aspects of staffing their Regional Response Coordination Centers (RRCCs) for a long-duration incident. Training new RRCC staff, lack of identified staff backfills, and long-term deployments—virtual and in-person—causing burnout were all noted issues.

To help address the issue of staffing the NRCC, leadership in FEMA Resilience and the Office of Response and Recovery (ORR) implemented the "NRCC Surge" to quickly train new staff from March to May for when FEMA would need to support a natural disaster response while leading COVID-19 NRCC operations, and also secured and prepared a second facility for operations. Through a combination of EMI virtual course deliveries, FEMA Exercise Branch-led exercises, collaborative workshops, and NRCC observations, a total of 214 employees participated in the surge effort, 153 of which were added to NRCC rosters (see Table 26). In context, approximately 680 staff are rostered for NRCC teams at any given time, and approximately 1,100 hold NRCC position titles under the Incident Support cadre.

**Table 26. NRCC Surge Training Effort Yielded Additional Staff for the NRCC "Bench Strength"**

| | Rostered for the NRCC | Not rostered |
|---|---|---|
| Out of 214 participants in the surge effort | 153* | 61 |
| Out of 37 who started in Planning Support | 5 | 32 |
| Out of 68 who started in Resource Support | 68 | 0 |
| Out of 43 who started in Situational Awareness | 42 | 1 |
| **Note that 36 individuals were rostered under Center Support Staff and Chief's Advisory Staff and 2 individuals were rostered under unspecified sections.* | | |

The COVID-19 operation required unique process knowledge and technical skills. FEMA staff noted a lack of subject matter experts assigned to their respective task forces or sections, which forced FEMA to rely on subject matter experts from other agencies, slowing response operations. Knowledge and expertise related to medical supply acquisition and distribution and legal support to operations were in demand. The NRCC lacked depth in areas related to international affairs actions and data analytics, while also requiring a significant surge of staff to support Defense Production Act processes.

To adapt to these challenges, FEMA eliminated the NRCC night shift while maintaining an operational tempo relevant for a public health emergency, enabled a virtual workforce by allowing remote NRCC support where possible, surged other federal agencies to fill technical gaps needed in the response, and created an FOD staffing cell to help manage Incident Support staff. ORR has also invested resources in standing up a dedicated management section for the NRCC staffed by a temporary team and pending additional permanent staff.

FEMA should continue to invest in training staff and managing resources to surge to the NRCC in a deliberate manner. This may mean re-prioritizing other steady-state functions or programs to meet staffing needs, aligning steady-state staff skillsets to quickly surge for operational requirements, evaluating whether the NRCC remains a collateral duty, or engaging in some other method of identifying staffing. Given that FEMA will continue to support long-duration concurrent disasters and atypical incidents like the pandemic, a viable long-term staff management solution for the NRCC is paramount.

### Recommendations for Key Finding 5.5

**Recommendation 5.5.A:** Determine a cadre management structure for Incident Support personnel and use FEMA's Deployment Tracking System (DTS) to help manage and operationalize resources. FEMA should (1) formalize the concept of "deployment readiness," requiring staff maintain their availability in DTS and reinforce that "every employee is an emergency manager" by ensuring the entire workforce is assigned with the incident workforce title they are willing and able to deploy in; (2) designate staff based on skills and requirements; and (3) provide opportunities for staff to volunteer for NRCC duties and receive training.

**Recommendation 5.5.B:** Analyze NRCC facility requirements for national-level incidents requiring interagency operations and the integration of non-governmental partners to ensure appropriate and adequate space is available for the personnel required.

**Key Finding 5.6:** FEMA implemented and enhanced protective measures over time to protect its workforce's health and safety; however, the agency experienced challenges implementing and ensuring compliance with these measures nationwide.

Throughout the pandemic, FEMA implemented multiple protective measures at FEMA facilities to protect the workforce and prevent the spread of COVID-19. FEMA's Mission Support component coordinated the implementation of the measures and followed Centers for Disease Control and Prevention (CDC) guidance. The measures included implementing cleaning procedures at FEMA's fixed and disaster facilities, conducting COVID-19 contact tracing, encouraging maximized telework, conducting temperature and wellness screenings, providing PPE (e.g., facial coverings) and associated guidance, implementing efforts to encourage and enable physical distancing, and offering COVID-19 testing for employees on assignment and random onsite COVID-19 testing for individuals entering select FEMA facilities. While FEMA used telework as the primary tool to prevent the spread of COVID-19, the agency also introduced and enhanced additional measures, as illustrated in timeline Figure 32, to protect employees reporting to worksites.

Several enhancements, such as those for temperature screenings, also helped protect individual privacy or used technology to improve the process. For example, at first, medical screenings (e.g., temperature checks) were not considered legally permissible due to privacy concerns. When FEMA began temperature screenings in March, the agency decided not to record the results to protect individual privacy. In April, FEMA added wellness questions to the screenings—an important addition, because studies suggest a temperature check alone could miss over half of COVID-19 cases. In September, FEMA started to roll out automated screening kiosks, which used technology to navigate individuals through the screening while maintaining their privacy. FEMA also used technology to improve contact tracing and physical distancing efforts, as illustrated in Figure 33. To provide increased protections for employees supporting disaster operations in the field, in September FEMA implemented COVID-19 testing and in some cases used lodging capsules to safely house responders.

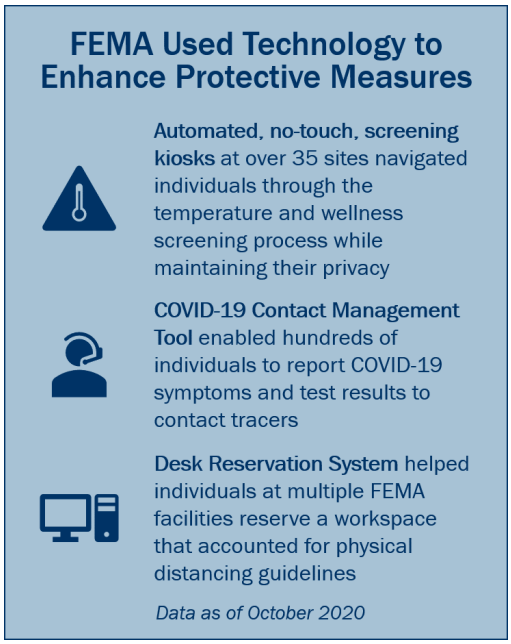



**Figure 32. Technology FEMA Used to Enhance Protective Measures**

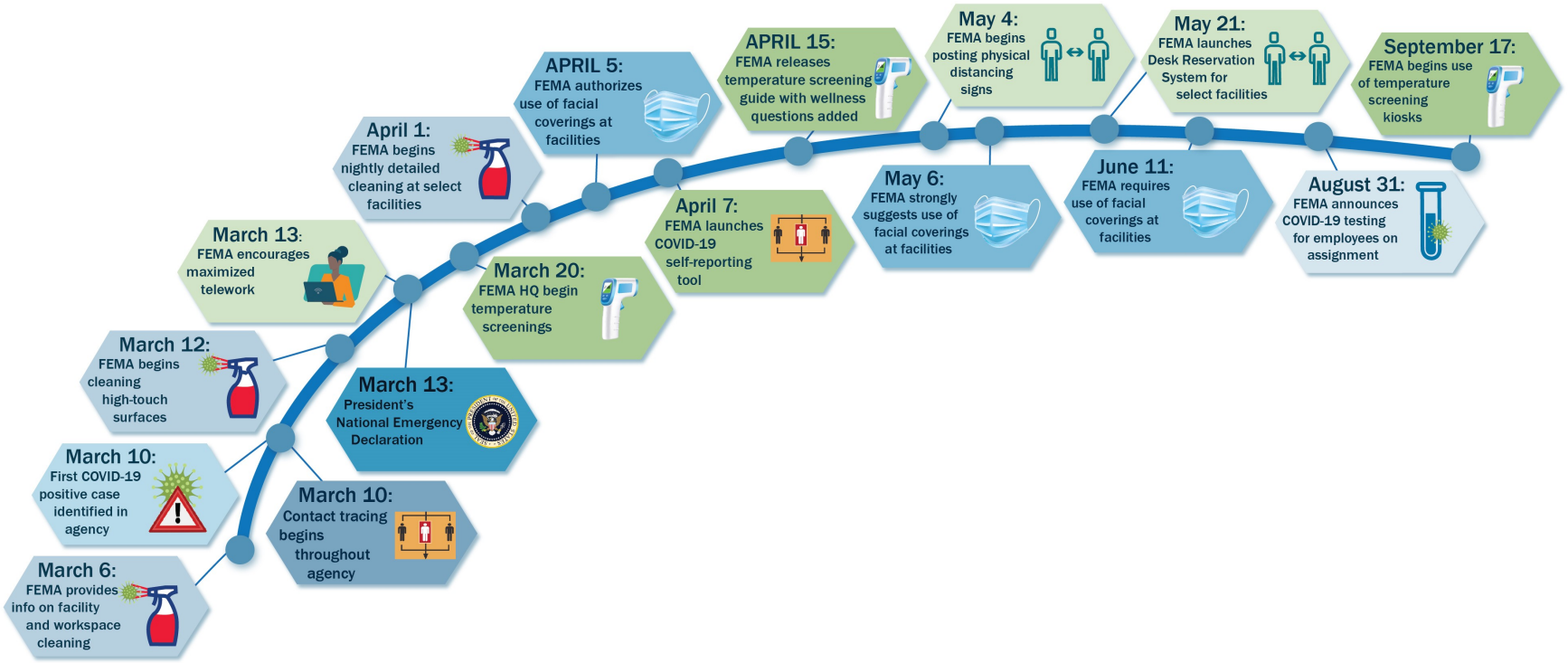



**Figure 33. Select COVID-19 Protective Measures FEMA Implemented Throughout the Pandemic**

At the beginning of the pandemic, protective measures were not consistently implemented at FEMA facilities or communicated nationwide, although this did improve over time. For instance, FEMA HQ, along with half of FEMA's regions, began temperature screenings in late March. Other regions started in April, and one site started as late as August. In another instance, FEMA regions faced challenges in obtaining protective equipment for the regional staff from the distribution centers, although issues were eventually resolved. Furthermore, FEMA did not always provide proactive, unified guidance to the regions about expectations for implementing protective measures or how the measures would be rolled out nationally. For example, when FEMA HQ began implementing temperature screenings, there was confusion among the regions about whether they should begin implementing this measure at their facilities, too. Because facilities' needs varied, FEMA's Office of the Chief Administrative Officer partnered with regional and field leadership to determine the necessary steps to protect staff at the facility, with regional and field leadership deciding which measures to implement. In June, FEMA rolled out its FEMA Forward Framework Interim Guidance, which outlined a national standard for protective measures FEMA facilities must have in place. FEMA also launched a task force in October to continue developing field protective measures and build consistency across its disaster operations.

Although agency guidance focused on FEMA facilities, it did not provide much information for staff working in other federal agency or state facilities, presenting challenges when protective measures were inconsistent. In some cases, non-FEMA facilities implemented stronger measures; for example, one state conducted COVID-19 testing for its workforce, including deployed FEMA personnel, before FEMA had issued COVID-19 testing guidance for agency employees. In other cases, regional leaders expressed concern about the risks FEMA employees faced when working in non-FEMA facilities that did not follow the protective measures FEMA did (e.g., the use of facial coverings). The agency eventually provided employee guidance for situations in which partners requested COVID-19 test results, and some regions provided employee guidance on following protective measures (e.g., the use of facial coverings) when working in non-FEMA facilities.

FEMA facilities also faced compliance challenges with protective measures such as physical distancing and the use of facial coverings, which required behavior changes. FEMA employees said physical distancing was difficult, especially at the beginning of the pandemic, because they were so "mission focused" and accustomed to working in proximity to each other during other disasters. Some employees suggested FEMA needed cultural changes, in addition to operational changes, to encourage and maintain physical distancing. FEMA employees also expressed concerns about the use of facial coverings. Initially, the CDC did not recommend that the public wear facial coverings; in April, it began recommending facial coverings when physical distancing could not be maintained. However, agency leaders did not consistently wear facial coverings at work, and some employees were concerned that leadership's lack of "leading by example" discouraged employees from following the guidance. In July, agency leaders were briefed on initial findings for FEMA's COVID-19 operations, which included employee concerns. Leaders reported this briefing helped influence their behavior and prompted them to ensure greater workforce compliance with facial coverings.

### Recommendation for Key Finding 5.6

**Recommendation 5.6.A:** Develop a comprehensive agency-wide strategy and guidance for workforce protection. FEMA should ensure it (1) documents and incorporates the workforce protection strategies successfully implemented during COVID-19 operations into plans for future pandemics or outbreaks of infectious diseases with respiratory transmission dynamics; (2) accounts for FEMA's various work locations (e.g., HQ, regions, and the field), and ensure consistent and near-simultaneous implementation of the measures, even if it is phased for resource reasons; (3) incorporates what protective measures FEMA employees should follow when working at non-FEMA facilities, especially ones with different measures than FEMA. FEMA leaders should reinforce the importance of compliance with COVID-19 protective measures by leading through example to demonstrate the agency's commitment to keeping the workforce safe.

**Key Finding 5.7:** FEMA's restoration planning efforts have provided its workforce with COVID-19 guidance and resources, but pandemic conditions will continue to have behavioral and mental health implications.

As part of agency restoration planning efforts, FEMA disseminated high-level guidance to enable facility repopulation and developed a comprehensive information portal for COVID-19 workforce guidance and resources. As the workforce continues to work remotely and staff contend with anxieties associated with returning to FEMA facilities, mental health resources will become a growing need to support employee well-being and should be a focus of workforce planning.

As shown in Figure 34, the White House and the Office of Personnel Management released "reopening" guidance in April; FEMA senior leaders developed a repopulation strategy shortly thereafter. The need for a facilities repopulation strategy led to the creation of a FEMA Executive Steering Group (ESG) and associated Program Management Office (PMO) for COVID-19 that focused on the health of people, enabling mission delivery, and evolving the way staff work. As FEMA's response continued, the ESG and its associated staff developed, codified, and disseminated the FEMA Forward Framework Interim Guidance, which covered the phased repopulation and regression of FEMA facilities based on COVID-19 conditions and the agency's remote work posture. In the COVID-19 Initial Assessment Report Agency-Wide Staff Survey, the FEMA Forward guidance was perceived by staff as being clear (68%), comprehensive (67%), timely (67%), and sufficient (66%).

The FEMA Forward PMO was a cross-functional team with representatives from several FEMA components which allowed for streamlined information sharing and decision-making. Beyond the facility repopulation strategy, the FEMA Forward PMO also facilitated development of a comprehensive COVID-19 resource and information portal on the agency's intranet page, housing the FEMA Facility Status Dashboard, the COVID Counts Dashboard, FEMA Forward Frequently Asked Questions, and the COVID-19 Mailbox for staff inquiries. During the early phases of the agency's pandemic response, guidance was unevenly shared with the workforce. In response, the information portal provided a centralized location for guidance, messaging, videos, and other job aids, ensuring consistent and timely access for all FEMA staff.

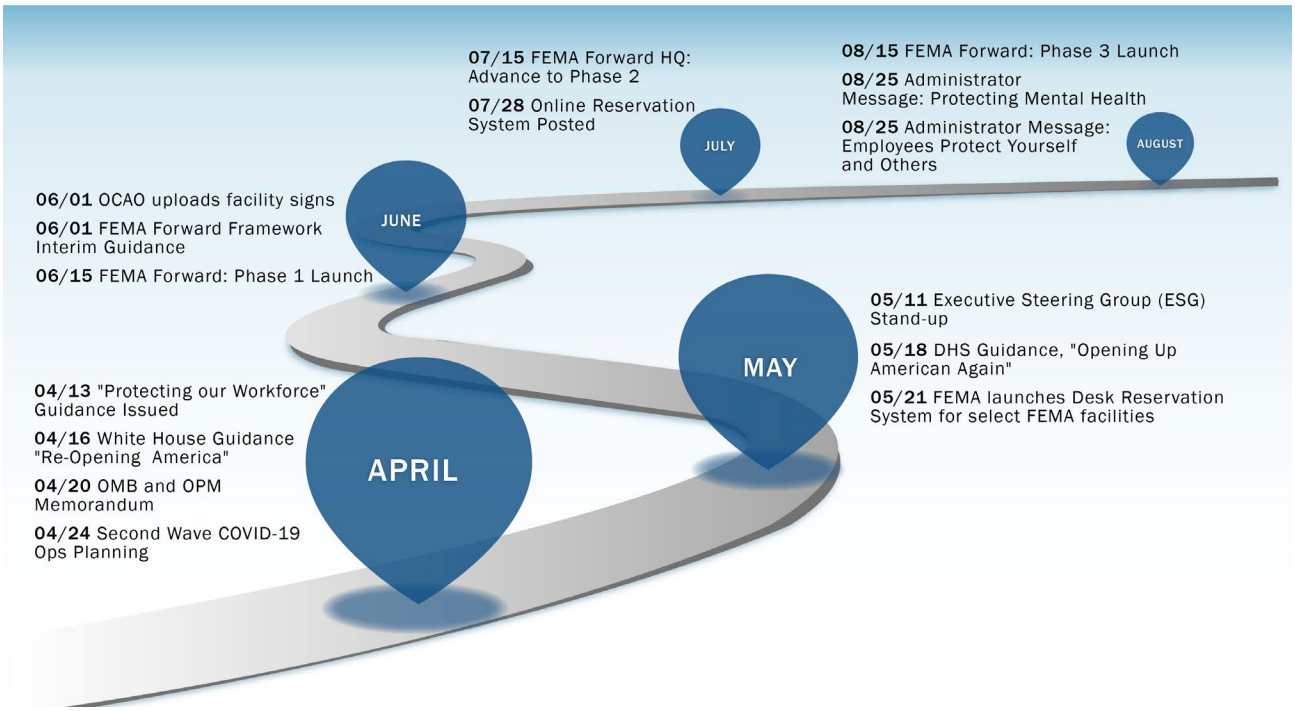



**Figure 34. Timeline of Events and Messages Relevant to FEMA Forward Standup and Tasking**

FEMA employees are increasingly referring to the agency's intranet page for COVID-19 information. From August to October 2020, the most recent version of the FEMA Forward information portal shows 6,905 unique visitors accessing the intranet site, with 1,053 total views of the Returning to Facilities page, and 1,626 total views of the COVID-19 Guidance page. However, these resources must continue to evolve in response to employee concerns. Based on a FEMA-wide survey, employees identified physical distancing (72%) and building cleanliness (82%) as the main areas of concern for returning to FEMA offices. Yet, in the same survey, 75% of respondents also believe COVID-19 safety measures were implemented effectively, which was highlighted by many of the agency's regional and HQ leaders.

FEMA Forward resources have evolved, but FEMA staff will continue to face stressors associated with working under pandemic conditions. Staff who teleworked reported issues with work-life balance, such as separating workspace from living space, balancing child and elder care with work tasks, and maintaining clearly defined work hours. The extended telework also caused disruptions in employee routines and caused some agency staff separated from co-workers and friends to feel isolated.

FEMA's Employee Assistance Program (EAP) offers free and confidential assessments, short-term counseling, and referrals to address employees' personal or work-related problems affecting mental and emotional well-being. As shown in Figure 35, of 4,430 FEMA staff surveyed, 2,716 provided their perspective on the accessibility of the agency's physical and mental health resources, and 2,357 weighed in on the utility of those services. Specifically, 46% reported physical and mental health resources as "very" or "extremely" accessible, and 52% reported that FEMA's physical and mental

health resources were "very useful," "useful," or "somewhat useful." Although this resource is available to all FEMA staff, EAP managers reported that the program is underutilized.[k]

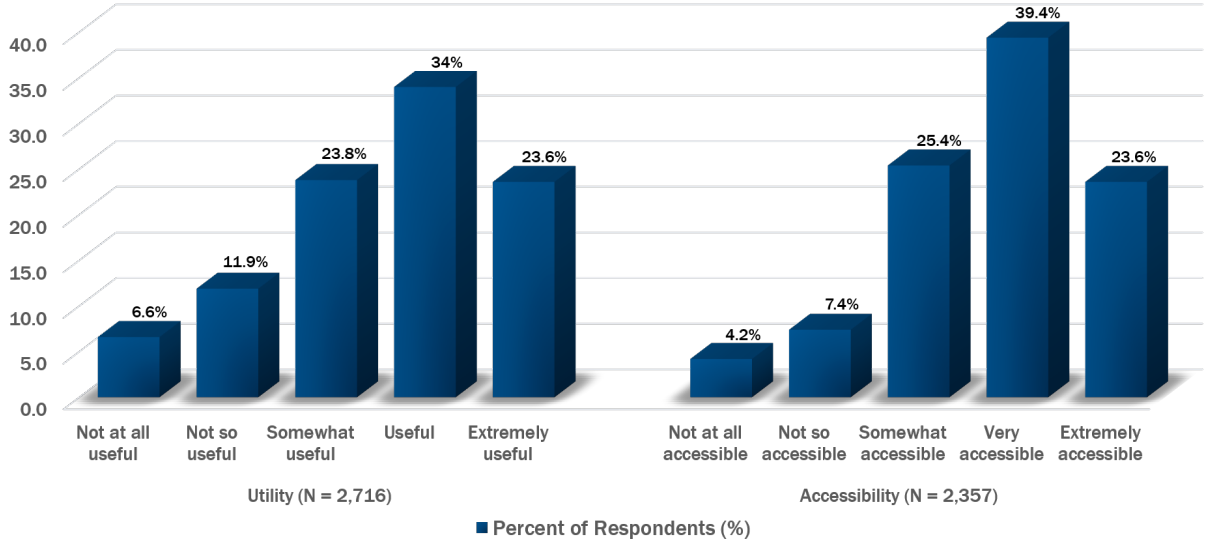



**Figure 35. Combined FEMA Survey Responses Show 46% Reported Resources as Accessible and 52% Reported that Resources were Useful**

Figure 36 reflects workforce usage of EAP resources prior to COVID-19 (January 2019) and the increase of resource usage over time. Comparing the first quarter of 2019 to the third quarter of 2020, employee use of EAP resources shows an upward trend of 15%, with the most notable increase in EAP counselor assessments (28%) occurring during first and second quarters of 2020. This increase appears to correlate with the President's pandemic declaration and FEMA's decision to maximize telework, both occurring in March. Of a total of 123 assessments during the first and second quarters, topics included counseling for emotional/stress support (30%), occupational issues (12%), relationship matters (17%), and family matters (10%). The category of "Other" (28% of assessments) include medical, financial, and education issues. As a step to increase accessibility to help, FEMA pushed an application to employees' phones that allows them to directly contact the EAP.

Given the active disaster seasons FEMA staff have been supporting in recent years, employee wellness has become a more prevalent priority; COVID-19 has brought the issue into increased focus. The pandemic has demonstrated how vital FEMA's workforce is to the mission, and that resource support must go beyond merely the physical safety and well-being; it must also include behavioral and mental health aspects. As FEMA evaluates changes to make in the near term for restoration planning and in the long term to increase organizational resilience, the agency would benefit from a more integrated approach to physical safety and behavioral health.

[k] EAP counseling is limited to six sessions and difficult to use during deployment, as time is needed to attended sessions. Legal counseling is limited to one hour.

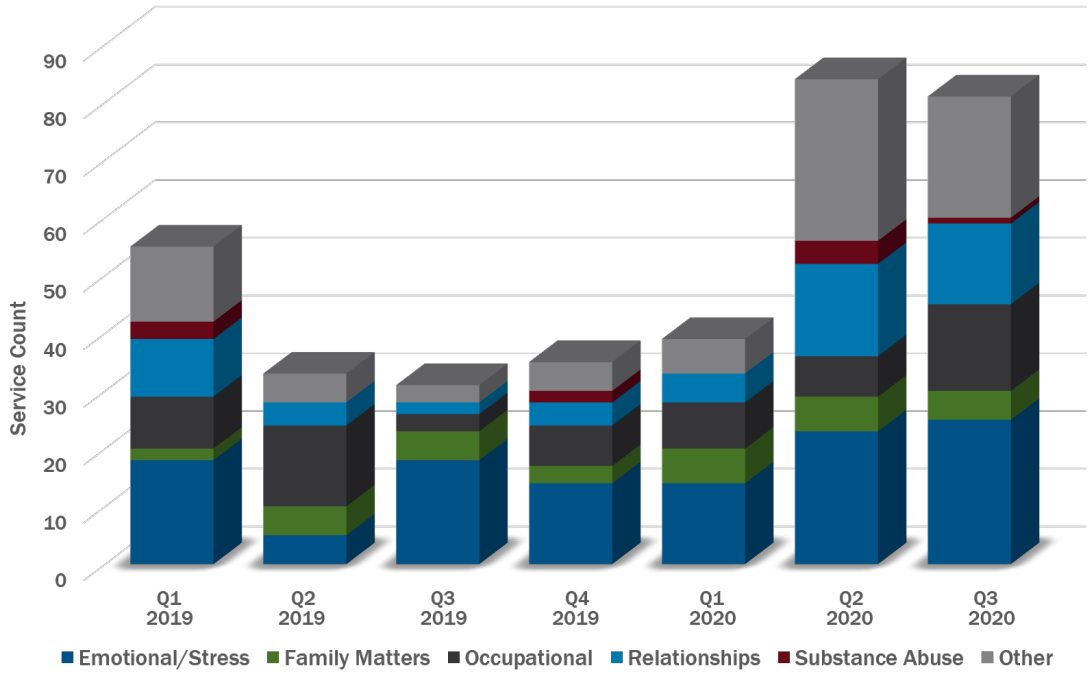



**Figure 36. EAP Usage Has Had an Upward Trend of 15% from Q1 2019 to Q3 2020**

## Recommendations for Key Finding 5.7

**Recommendation 5.7.A:** Determine how restoration planning and COVID-19 workforce adaptations can inform long-term planning for agency operations and other efficiencies, and designate a responsible FEMA component or entity to own this process.

**Recommendation 5.7.B:** Maintain consistent two-way communications with the workforce about when employees should consider returning to the workplace, considering factors such as childcare and transportation. This promotes a consistent approach to decision-making and creates a comprehensive understanding among all employees of the phased approach detailed in FEMA Forward Framework Interim Guidance. Establish feedback channels for FEMA employees to share experiences and perspectives on returning to the workplace during the pandemic. Consider separate surveys for fixed-site and deployed staff, who have unique concerns and requirements.

**Recommendation 5.7.C:** Develop a strategy for employee well-being, with an emphasis on mental health. Revise management and staff training resources, reference guides, and messaging to include methods to identify indicators of, and appropriately respond to, mental health and stress-related concerns. Provide additional stress counselor options for FEMA staff at HQ, at the regions, and in the field, since EAP counseling resources are limited to six sessions. Make mental health and available resources topics for all-hands and town hall discussions to emphasize the importance of mental health and well-being, and to reinforce FEMA's support of help-seeking.

## Summary of Recommendations for Organizational Resilience

While FEMA leadership took actions to preserve its workforce and ensure continuity of agency programs, the agency can learn from the challenges of working in a pandemic environment. Table 27 provides a summary of the lessons learned that will help FEMA enhance its business practices.

**Table 27. Summary of Recommendations for Organizational Resilience**

| Section 5: Organizational Resilience Summary of Recommendations |
|---|
| 5.1.A. Update the Pandemic and Emerging Infectious Disease Workforce Protection Plan (PEIDWPP) in partnership with subject-matter experts from across the agency and with HHS to address workforce coordination and communication processes learned from FEMA's COVID-19 experience. |
| 5.1.B. Formalize the roles and responsibilities for internal communications within the agency, especially for events requiring coordination between FEMA components that are responsible for protecting the workforce. Use the COVID-19 Coordination Team approach or a similar structure to develop future internal communications strategy for the workforce. |
| 5.1.C. Exercise and validate updated agency documentation on protective measures with a focus on decision-making and implementation of guidance for the workforce; operationalize more of FEMA's mission-enabling functions that are not traditionally exercised at HQ and in the regions. |
| 5.2.A. Continue investing in cloud computing, information technology infrastructure, and software to meet FEMA's mission with flexibility and adaptability. |
| 5.2.B. Continue assessing how to integrate telework throughout FEMA and develop courses of action for future operations. |
| 5.3.A. Identify a FEMA component or office responsible for analyzing of steady-state programmatic work and recommending a process for FEMA leadership to prioritize agency activities when COOP is not activated and the effects do not require only conducting MEFs, but the steady-state resources must be adjusted to support significant operational response or recovery requirements. |
| 5.3.B. Update the agency's COOP plan to allow for more flexible and adaptable application of continuity tactics to events when the COOP plan is not activated. Develop an updated approach to training, exercising, and educating FEMA personnel about FEMA's COOP plans to improve the culture of continuity, per PPD-40. |
| 5.4.A. Institutionalize successful program and policy adaptations and build implementation plans to ensure efficiencies are not lost in the return to steady-state agency operations. |
| 5.5.A. Determine a cadre management structure for Incident Support personnel and use FEMA's Deployment Tracking System (DTS) to help manage and operationalize resources. |
| 5.5.B. Analyze NRCC facility requirements for national-level incidents requiring interagency operations and the integration of non-governmental partners to ensure appropriate and adequate space is available for the personnel required. |
| 5.6.A. Develop a comprehensive agency-wide strategy and guidance for workforce protection. |

| Section 5: Organizational Resilience Summary of Recommendations |
| --- |
| 5.7.A. Determine how restoration planning and COVID-19 workforce adaptations can inform long-term planning for agency operations and other efficiencies, and designate a responsible FEMA component or entity to own this process. |
| 5.7.B. Maintain consistent two-way communications with the workforce about when employees should consider returning to the workplace, considering factors such as childcare and transportation. |
| 5.7.C. Develop a strategy for employee well-being, with an emphasis on mental health. |

# Conclusion

The Initial Assessment Report covers response activities through September 30, 2020; however, at this time FEMA continues its mission to help the nation meet the ongoing challenges faced with the COVID-19 pandemic. The public health crisis has not abated. The first case of COVID-19 in the United States was reported on January 21, 2020. Since concluding the analysis for this report, the number of COIVD-19 cases has risen over 22 million, and over 370,000 deaths have been reported by the CDC.[138]

The recommendations from this report will help FEMA and the nation to be more prepared and resilient for the next pandemic. These recommendations emphasize the importance of the following:

- The incident management structure—that FEMA has built, tested, and proven over years of coordinating federal disaster operations of all scopes and sizes—is critical to building relationships across levels of government. These relationships, based on trust and partnership, are vital, and FEMA must take advantage of every opportunity to reinforce these partnerships.
- Official, repeatable, and clear documentation is needed. Updating doctrine, guidance, plans, and procedures to reflect the national nature of COVID-19 will help future staff learn from the experience and mitigate issues.
- The private sector and non-governmental organizations have a critical role to play in readying the nation for disasters. FEMA must invest in new capabilities for collaboration and pursue innovative solutions for the toughest problems.
- Data is foundational to make decisions. Investments in systems and sharing agreements, together with the analysts and staff to make the data actionable and relevant, are needed to advance and leverage new technologies and capabilities.
- Emergency managers are flexible, adaptive, and innovative. FEMA's investments over the last decade enabled a quick transition of work environments. Continued investments in personnel, resources, and processes for the future will build on those successes.

From the end of the report timeframe of September 30, 2020, through the end of hurricane season, three additional hurricanes and one tropical storm made landfall in the United States,[139] adding to a record-breaking season of 30 named storms with 12 making landfall along the U.S. coastline. Concurrently, at the conclusion of the report's timeframe, the FEMA National Watch Center was tracking 11 active wildfires that had burned over 2 million acres from the West Coast to the Rocky Mountains.[140] On the frontlines of the public health response, the availability of PPE for essential workers is still constrained.[141, 142] Many businesses are operating at a reduced capacity. Schools across the nation are operating in a hybrid virtual and in-person capacity, with almost 20% of states and territories mandating partial or full closure,[143] and nationally almost half of enrolled students attending in a non-traditional manner.[144] With all these factors still in effect for the nation, including

FEMA personnel, FEMA must continue its mission to help people during disasters and anticipate new hazards and disasters.

FEMA demonstrated over the last year that the agency and its people are resilient and can learn, adapt, and innovate when faced with the demands of any disaster, including a pandemic, and that they can work with their state, local, tribal, and territorial partners to meet the needs of the nation and its people.

Though the initial assessment report is an important milestone, the implementation of recommended actions to address the findings is where the hard work is done; this effort should be properly resourced and funded. Continuous improvement remains a cornerstone of our work, and FEMA is committed to evolving and growing as an agency. This report drives FEMA to better help people before, during, and after disasters.

# Abbreviation List

**Table 28. Abbreviation List**

| | |
|---|---|
| AAR | after-action report |
| ACF | alternate care facility |
| ASPR | Office of the Assistant Secretary for Preparedness and Response |
| BIA | Biological Incident Annex |
| CAP | Collection Analysis Plan |
| CARES Act | Coronavirus Aid, Relief, and Economic Security Act |
| CBP | Customs and Border Protection |
| CBTS | community-based testing site |
| CCP | Crisis Counseling Program |
| CDC | Centers for Disease Control and Prevention |
| CFO | Chief Financial Officer |
| CIAL | Continuous Improvement Advisor Lead |
| CIP | Continuous Improvement Program |
| CISA | Cybersecurity and Infrastructure Security Agency |
| COA | course of action |
| CONOPS | concept of operations |
| COOP | Continuity of Operations |
| COP | common operating procedure |
| CSNIC | Community Services National Integrated Policy and Implementation Cell |
| D/As | departments and agencies |
| DATF | Data Analytics Task Force |
| DEC | Disaster Emergency Communications |
| DHS | Department of Homeland Security |
| DOC | Department of Commerce |
| DOD | Department of Defense |
| DOT | Department of Transportation |
| DPA | Defense Production Act |
| DRC | Disaster Recovery Center |
| DRF | Disaster Relief Fund |
| DRRA | Disaster Recovery Reform Act |
| DTS | Deployment Tracking System |
| EAP | Employee Assistance Program |
| EMI | Emergency Management Institute |
| ERG | Emergency Relocation Group |
| ESF | Emergency Support Function |
| ESG | Executive Steering Group |
| ESFLG | Emergency Support Function Leadership Group |
| FCO | Federal Coordinating Officer |

| | |
|---|---|
| FEMA | Federal Emergency Management Agency |
| FIMA | Federal Insurance and Management Administration |
| FIOP | Federal Interagency Operational Plan |
| FIT | FEMA Integration Team |
| FOD | Field Operations Directorate |
| FQS | FEMA Qualification System |
| GAO | Government Accountability Office |
| GSA | General Services Administration |
| HHS | U.S. Department of Health and Human Services |
| HMGP | Hazard Mitigation Grant Program |
| HQ | Headquarters |
| HUD | U.S. Department of Housing and Urban Development |
| IA | Individual Assistance |
| ICS | Incident Command System |
| ICU | intensive care unit |
| IHS | Indian Health Service |
| IMAT-A | Incident Management Assistance Team – Advance |
| LDTF | Lab Diagnostics Task Force |
| LFA | lead federal agency |
| LNO | liaison officer |
| LOE | line of effort |
| LSCMS | Logistics Supply Chain Management System |
| LWA | Lost Wages Assistance |
| MA | mission assignment |
| MCM | medical countermeasure |
| MEF | mission essential function |
| MOA | memorandum of agreement |
| MOU | memorandum of understanding |
| NBEOC | National Business Emergency Operations Center |
| NDRF | National Disaster Recovery Framework |
| NG | National Guard |
| NGO | non-governmental organization |
| NIMS | National Incident Management System |
| NISM | National Incident Support Manual |
| NJIC | National Joint Information Center |
| NLE | National Level Exercise |
| NRCC | National Response Coordination Center |
| NRF | National Response Framework |
| NRPC | National Resources Prioritization Cell |
| NSC | National Security Council |
| NSP | National Support Plan |
| OB3I | Office of Business, Industry, and Infrastructure Integration |
| OCAO | Office of the Chief Administrative Officer |

| | |
|---|---|
| OCC | Office of Chief Counsel |
| OCFO | Office of Chief Financial Officer |
| OCIO | Office of the Chief Information Officer |
| ODIC | Office of Disability and Integration Coordination |
| OEA | Office of External Affairs |
| OER | Office of Equal Rights |
| OMB | Office of Management and Budget |
| ONA | Other Needs Assistance |
| OPM | Office of Personnel Management |
| OPR | Office of Primary Responsibility |
| OPS | Operations |
| ORR | Office of Response and Recovery |
| PA | Public Assistance |
| PAHPA | Pandemic and All-Hazards Preparedness Act |
| PAHPAIA | Pandemic and All-Hazards Preparedness and Advancing Innovation Act |
| PanCAP | Situation and Planning Assumptions of Pandemic Crisis Action Plan |
| PANCAP-A | Adapted Pandemic Crisis Action Plan |
| PDAT | Procurement Disaster Assistance Team |
| PEIDWPP | Pandemic and Emerging Infectious Disease Workforce Protection Plan |
| PHE | public health emergency |
| PHEP | Public Health Emergency Preparedness |
| PHS | Public Health Service |
| PKEMRA | Post-Katrina Emergency Management Reform Act |
| PMO | Program Management Office |
| POC | point of contact |
| PPD-40 | Presidential Policy Directive 40: National Continuity Policy |
| PPD-44 | Presidential Policy Directive 44: Enhancing Domestic Incident Response |
| PPE | personal protective equipment |
| PSS | Planning Support Section |
| RA | Regional Administrator |
| RAD | Recovery Reporting and Analytics Division |
| RISM | Regional Incident Support Manual |
| RIT | Regional Integration Team |
| ROC | Response Operations Cell |
| RRCC | Regional Response Coordination Center |
| RRF | Resource Request Form |
| RSF | Recovery Support Function |
| RSFLG | Recovery Support Function Leadership Group |
| RSS | Resource Support Section |
| SAS | Situational Awareness Section |
| SBA | Small Business Administration |
| SCTF | Supply Chain Task Force |
| SITREP | situation report |

| | |
|---|---|
| SLB | Senior Leadership Brief |
| SLTT | state, local, tribal, and territorial |
| SNS | Strategic National Stockpile |
| SOP | standard operating procedure |
| SPR | Stakeholder Preparedness Review, or State Preparedness Report |
| SRIA | Sandy Recovery Improvement Act |
| THIRA | Threat and Hazard Identification and Risk Assessment |
| TSA | Transportation Security Administration |
| UCG | Unified Coordination Group |
| USACE | U.S. Army Corps of Engineers |
| USDA | Department of Agriculture |
| USPS | United States Postal Service |
| VA | Department of Veterans Affairs |
| VPN | virtual private network |
| VTC | video teleconference |
| WebEOC | Web Emergency Operations Center |
| WHO | World Health Organization |
| WHTF | White House Coronavirus Task Force |

# Appendix A: Key Findings and Recommendations Tables

FEMA analyzed an extensive amount of data, conducted hundreds of interviews and hotwashes (including with the FEMA Administrator and senior executives) across FEMA HQ and all 10 FEMA regions. FEMA also sent surveys to those deployed in the National Response Coordination Center (NRCC), to those deployed and working within the Regions, and throughout the agency that garnered 7,358 responses. The analysis of this data collection effort resulted in 32 key findings and 57 recommendations, which are detailed below in five evaluation areas: Coordinating Structures and Policy; Resources; Supporting State, Local, Tribal, and Territorial (SLTT) Partners; Preparedness and Information Analysis; and Organizational Resilience.

## Section 1: Coordinating Structures and Policy

To respond to the COVID-19 pandemic, FEMA leveraged existing federal policies and structures in non-typical ways and adapted its processes to coordinate the response. In this evaluation area, FEMA identified five key findings and 11 recommendations for improvement (see Table 29).

**Table 29. Key Findings and Recommendations for Section 1. Coordinating Structures and Policy**

| Key Findings and Recommendations |
|---|
| Finding 1.1: The global scope of the pandemic outstripped assumptions made in existing policies, plans, and procedures, which did not account for FEMA taking a lead agency role during a pandemic; this affected the agency's ability to coordinate an effective response.<br>*Recommendations:*<br>▪ 1.1.A: Clarify FEMA's authorities during a federal response to a pandemic and refine FEMA's role in such national-level incidents. Assess and revise national-level doctrine to ensure that it provides clarity and specifics about FEMA's role and authorities during incidents there is a response by the entire federal government. This includes establishing a funding plan to clarify which agencies are financially responsible for which aspects of a response.<br>▪ 1.1.B: Assess the integration of Lead Federal Agencies (LFAs) and their organizational structures into NRCC and Unified Coordination Group (UCG) operations and incorporate appropriate requirements. Future responses should ensure that federal guidance is understood and applied consistently across all non-Stafford Act incidents involving a federal response and requiring FEMA support. FEMA's assessment should include needed documentation and protocols for a non-Stafford Act federal response. This may include revising existing frameworks and FIOPs to incorporate PPD-44 and the use of multiple agency authorities during a response and revising or creating more operational and tactical documents. |

| Key Findings and Recommendations |
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| ▪ 1.1.C: Conduct training on updated guidance, as well as exercises to validate the guidance, to establish understanding of and familiarity with the roles and responsibilities articulated in Recommendation 1.1.B. Opportunities should be explored to incorporate this guidance into ongoing or upcoming exercises related to COVID-19 operations, including how to integrate non-Stafford Act incidents into exercises, including the regions. |
| Finding 1.2: FEMA consistently and effectively engaged with the White House Coronavirus Task Force during COVID-19. While the level of engagement with the Task Force was unplanned, FEMA adapted its traditional disaster communication and coordination mechanisms to meet requirements.<br>*Recommendation:*<br>▪ 1.2.A: Ensure that FEMA is well-equipped for a future event involving extensive cooperation with another agency and substantial engagement from the White House at an operational level. To do so, FEMA should apply lessons learned from the COVID-19 response to develop internal best practices for interactions with the White House and develop approaches to accommodate enhanced White House engagement beyond regular interaction with the NSC. FEMA HQ should develop procedures to ensure that the FEMA regions are informed in a timely manner of decisions and communications from the White House. |
| Finding 1.3: The UCG effectively adapted to manage resource shortages during COVID-19 operations despite the challenges posed by the group's novel role in the response.<br>*Recommendations:*<br>▪ 1.3.A: Standardize and establish interagency UCG protocol and revise applicable doctrine. FEMA should consider revisions that could include: (1) updating the FIOPs to reflect more accurately the role of a UCG in an interagency, nationwide catastrophic response; (2) outlining the triggers that may require UCG activation and defining the intent of the group in each scenario; (3) identifying scenarios in which urgent decision-making may require interactions that deviate from normal UCG operations; and (4) providing guidance for future incidents that offers information on other non-traditional means of fulfilling resources if Direct Federal Assistance is unavailable.<br>▪ 1.3.B: Codify the UCG charter and standard operating procedures (SOPs), and clearly outline the role(s) of the UCG and the criteria for engaging with the UCG in formal doctrine to eliminate confusion and to promote adherence to UCG protocol. This should include the staffing and resources required for the UCG and a strategic communications plan to support cohesive messaging around the role, function, and engagement of the UCG. |
| Finding 1.4: The operational task forces successfully managed lines of effort for COVID-19 operations; however, FEMA faced challenges integrating task forces into the existing NRCC structure, leading to undefined or unknown roles, responsibilities, lines of authority, and organization, which resulted in coordination and communication challenges throughout the operation.<br>*Recommendations:*<br>▪ 1.4.A: Promote the National Incident Management System/Incident Command System (NIMS/ICS) use throughout other federal agencies and SLTT partners to help facilitate better integration into future efforts. |

| Key Findings and Recommendations |
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| ▪ 1.4.B: Develop a summary report on the task forces and COVID-19 operations. Assess how the task forces follow NIMS/ICS principles and would integrate into the NRCC or other operational structures; establish clear vision, end states, analytical goals and requirements, tasks, and objectives from an early stage; and develop a concept of operations outlining the roles of task force leadership. FEMA should ensure task forces incorporate civil rights and equity into their decision-making, especially given the disproportionate effects of COVID-19 on protected groups. Task force members should receive training on relevant civil rights requirements and equity, including data collection considerations. Task force members should also consult civil rights subject matter experts before, during, and after implementation.<br>▪ 1.4.C: Update the Emergency Support Function 14 (ESF-14) SOP and Pandemic Crisis Action Plan (PanCAP) to articulate a cohesive approach for industry engagement and operational integration for clarity across the operational enterprise through the National Business Emergency Operations Center (NBEOC) during NRCC activations. FEMA must coordinate across the agency to ensure ESF-14 and the efforts of the NBEOC are included into doctrinal and planning updates to ensure unity of effort between the NRCC, RRCC, and the field. Office of Business, Industry, and Infrastructure Integration (OB3I), as the agency's ESF-14 lead, should explore approaches to more effectively integrate interagency counterparts into the NBEOC structure for consistent coordination of authorities, data, analysis, and engagement with the private sector to serve as the centralized clearinghouse (as it was originally designed). This includes developing pre-scripted mission assignments and developing new interagency agreements. |
| Finding 1.5: FEMA Office of External Affairs was able to establish the National Joint Information Center with HHS and other federal partners; however, the lack of clarity about FEMA's and the UCG's role created confusion around the external messaging clearance process designed for this response.<br>*Recommendations:*<br>▪ 1.5.A: Revise ESF-15 SOP and PanCAP to include clear messaging approval and distribution procedures when there are multiple federal agencies under the decision-making role of the White House. ESF-15 SOP revisions should include defining set lines of authority for the review and final clearance of each product type—FEMA internal and external documents—with appropriate branding for external documents.<br>▪ 1.5.B: Develop a new product tracker for NRCC operations with a standardized labeling system that provides real-time visibility to follow each product through the clearance process and keep stakeholders informed of the status of their requests and include an inquiry tracking capability. |

## Section 2: Resources

COVID-19 was not only the first time the entire country was under a Presidential Emergency Declaration, but it also presented the first globally resource-constrained incident that FEMA responded to. For most disasters, FEMA moves supplies and resources domestically from unaffected areas to affected areas. COVID-19, however, affected all of the United States and most of the world. FEMA had to navigate international supply chains to procure and manage resources that were insufficient to meet national and global demands. This required FEMA to adapt its approach to logistics management. In this area, FEMA identified eight key findings and 16 recommendations for improvement (see Table 30).

**Table 30. Key Findings and Recommendations for Section 2. Resources**

| Key Findings and Recommendations |
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| Finding 2.1: The COVID-19 pandemic stressed the resource request process and systems, which resulted in FEMA having an incomplete understanding of the resources needed and required significant time to manually process requests.<br>*Recommendations:*<br>▪ 2.1.A: Build on the lessons learned during the COVID-19 operations and invest in developing a long-term strategy to evaluate the efficiency of resource and incident management systems in maintaining the common operating picture during a disaster and, based on the results of the evaluation, develop a plan for implementing the development and refinement of those systems to create a more complete common operating picture and enable more timely and effective decision-making.<br>▪ 2.1.B: Assess the standard resource request submission processes for consistency of application and identification of causes for variance from the process. Implement a plan for reducing the process variances. Where applicable, FEMA should provide the funds and resources for appropriate and sufficient training for personnel with roles requiring their use of the resource and incident management systems to ensure those personnel have operational capability. All Incident Management FEMA personnel should receive WebEOC accounts and undergo training prior to their deployment in a disaster response role. |
| Finding 2.2: FEMA addressed resource shortages with new analytical tools and collaboration with the private sector to make data-driven allocation decisions.<br>*Recommendation:*<br>▪ 2.2.A: Develop a coordinated strategy for data-driven operations. FEMA should learn from the approaches and methodologies developed to identify their broader application to other disaster and catastrophic scenarios. This strategy should include the skills required to design and develop the tools needed, and an implementation plan to building capability within existing staff or recruiting staff with the capabilities required. As part of deliberate planning, FEMA should identify datasets that would be required during a catastrophic incident and develop a process to access those data when needed. The identification of data gaps and negotiation of data access would be more effectively addressed as a preparedness activity. Having the needed information at the start of an incident would a allow for a faster and more informed response. |

| Key Findings and Recommendations |
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| Finding 2.3: The NRCC coordinated the national mobilization and distribution of billions of dollars' worth of PPE and other resources, but the lack of an initial centralized system to integrate non-FEMA resources supporting mission requirements affected visibility of the resources shipped and the estimated delivery dates for SLTT partners.<br>*Recommendations:*<br>▪ 2.3.A: Assess resource coordination and distribution operations at the HQ and regional levels to revise and refine plans and ensure integration with SLTT partners. Nationally, FEMA should identify practices that should be incorporated for future operations. Activities that may be applied for future operations should be incorporated by updating planning documents and procedures. Operational planning should be coordinated with SLTT partners to ensure a comprehensive approach. FEMA should leverage pre-existing relationships between regions and their states to help logistical and supply chain efforts and take advantage of systems already in place, while continuing to facilitate a stabilized supply chain and operations.<br>▪ 2.3.B: Identify and implement a business intelligence tool for resource tracking in the NRCC, which would create a centralized system to incorporate FEMA and non-FEMA resources. The system should maintain situational awareness by aggregating, visualizing, and sharing data in the NRCC and with partners. |
| Finding 2.4: FEMA executed an unprecedented number of mission assignments to federal partners in innovative ways to support state, tribal, and territorial requirements, but the nature of the incident revealed insufficient policies and procedures for handling the duration and complexity of the operations.<br>*Recommendation:*<br>▪ 2.4.A: Evaluate the policy adaptions to mission assignments during the COVID-19 operations, and revise or develop policy and procedures that are required to enable FEMA to provide consistent support to partners in future incidents. |
| Finding 2.5: FEMA coordinated with private sector partners to expand domestic manufacturing of scarce resources but lacked a consistent strategy across the operation for involving the private sector, which resulted in inconsistent communication, guidance, and direction.<br>*Recommendations:*<br>▪ 2.5.A: Articulate a long-term strategy for engaging the private sector and coordinating across HQ, the regions, and the field in future disaster responses. The strategy should be consistent with ESF-14 and build on the lessons learned from the pandemic. FEMA should identify the desired outcomes and national resources required, integrate preparedness activities, and enhance the NRCC's understanding of private sector capabilities and processes to obtain support for stabilizing lifelines and providing resources. This strategy should lead to operational tools and integration of private sector data to support operations through the NBEOC.<br>▪ 2.5.B: Invest in continued application of the Supply Chain Analysis Network (SCAN), Platform for Understanding the Lifeline Stabilization of the Economy (PULSE), and other methods of understanding marketplace capacities and capabilities to improve operational understanding, resource management, and alignment of effort with industry before, during, and after disasters. The Office of Business, Industry, and Infrastructure Integration (OB3I) should also have resources to conduct analysis and manage information that provides ongoing national economic, business operational resilience, and supply chain assessment capabilities for the FEMA enterprise. |

| Key Findings and Recommendations |
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| ▪ 2.5.C: Develop a plan for integrating the private sector comprehensively in preparedness across the agency to include planning, organization, equipment, training, and exercises at HQ and the regions. Invest in staffing for OB3I capability at HQ and the regions to liaise with and coordinate on behalf of private sector partners to implement the plan. |
| Finding 2.6: Although donations are traditionally managed at the SLTT level, the national scope of the disaster led FEMA to solicit donations through the NRCC for the first time and implement several actions over the course of the response that resulted in more RRFs being fulfilled.<br>*Recommendation:*<br>▪ 2.6.A: Identify appropriate documentation to capture donations management practices for the future, taking into account the difference between directing domestic and foreign offers of assistance and when FEMA accepts donations versus coordinating the direct donation to SLTT partners. FEMA should standardize policies and processes and ensure that NRCC leadership has full visibility on issues relating to donations management that cross agency or international boundaries. |
| Finding 2.7: Project Airbridge expedited essential supplies from the global market to domestic supply chains to respond to shortages, and the deficit revealed limitations in FEMA's identification of mission critical resources and understanding of the related complexities and interdependencies in the end-to-end supply chain.<br>*Recommendations:*<br>▪ 2.7.A: Build capability for monitoring and understanding business and industry supply chains and develop plans for aligning the resource management required for national catastrophic events to build greater pre-incident insight and inform awareness of gaps or trends that require mitigation. FEMA should continue to engage the private sector, and coordinate with other federal agencies regarding supplies, surge capacity, and supply chain information on critical equipment during emergencies. This information should drive the development of courses of action for addressing resource and supple shortfalls, and the implementation of steady-state actions to address the identified gaps.<br>▪ 2.7.B: Continue engaging the private sector and facilitating interagency coordination of supply chain risk assessment, surge capacity, and resources available via procurement or visibility into commercial distribution, and with consideration of relevant DPA authorities. FEMA, as co-primary lead for both ESF-7, Logistics, and ESF-14, Cross-Sector Business and Infrastructure, should lead coordination on supply chain stabilization outcomes.<br>▪ 2.7.C: Commit resources to assign a dedicated private sector coordinator for each region to build state and private sector capability. FEMA should build this capability based on the region's risk and economic composition and ensure that it is integrated into the agency-wide efforts of OB3I's Business, Industry, and Infrastructure Integration Program. |
| Finding 2.8: The Defense Production Act (DPA) was used in novel ways that could prove useful for future catastrophic incidents, but implementation was difficult due to the complexity of issues and limited trained staff.<br>*Recommendations:*<br>▪ 2.8.A: Identify the Incident Support personnel required that would be able to support the FEMA DPA Office when rapid scale-up during an incident is necessary. Building personnel and capability could include: (1) FEMA should coordinate to develop a plan to recruit and train the identified positions; (2) FEMA should also develop and conduct training for offices, to include |

| Key Findings and Recommendations |
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| OCPO, OCFO, and Logistics, that have roles supporting DPA activities; and (3) formalize an interagency process allowing for staff familiar with DPA from other agencies to readily support operations.<br>▪ 2.8.B: Assess existing staffing and funding levels to implement the guidelines and processes established in Executive Order 13603 §103-104VI, and other related requirements found in other statutes or executive orders, such as EO 12656, Assignment of Emergency Preparedness Responsibilities, and all other requirements, such as those in CFR Title 44, including Subsection F, Preparedness. To do this, FEMA should (1) approach DPA as a readiness-focused mission and have staff, plans and systems in place before an event occurs; (2) leverage National Exercise Program exercises and after-action review findings with clear follow-up DPA action recommendations; (3) ensure sufficient staffing to service the DPA authorities, responsibilities, and requirements defined for DHS/FEMA in CFR 44; and (4) create an annex or section in the DPA Committee report to Congress that identifies key items (or item groups) that would likely be a critical gap for a federal response to an incident.<br>▪ 2.8.C: Evaluate relevant authorities, such as Executive Orders and statutory text, and assess the current administrative requirements for implementing the Act to propose updates to the DPA. Congress should update the Act to enable a more efficient application of the authorities to the operational requirements in disasters. |

## Section 3: Supporting State, Local, Tribal, and Territorial (SLTT) Partners

FEMA's response and coordination with SLTT partners were generally well executed, new relationships were fostered, and best practices emerged. However, the complexity and magnitude of the response led to challenges coordinating with some SLTT partners and contributed to inconsistent provision of support, difficulty in allocating resources, ambiguity in cost share obligations, and delays in some SLTT engagements. In this area, FEMA identified five key findings and eight recommendations for improvement (see Table 31).

**Table 31. Key Findings and Recommendations for Section 3. Supporting SLTT Partners**

| Key Findings and Recommendations |
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| Finding 3.1: FEMA's approach to incident management—including organizational structures, communications, and personnel mobilization—was largely effective in supporting SLTT partners based on pre-existing relationships, established coordination systems and practices, and a proven history of past engagements.<br>*Recommendations:*<br>▪ 3.1.A. Review and update communications plans for multi-regional and national events based on COVID-19 operations and practices. In novel events or when there are new and innovative response approaches being applied, communications plans should ensure there are regular communications with regional leadership as well as key interagency personnel. |

| Key Findings and Recommendations |
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| ▪ 3.1.B. Building on the HHS-sponsored Crimson Contagion 2019 series of exercises, FEMA should continue to plan and conduct training and exercises focused on how federal agencies coordinate and communicate with SLTT partners during response operations, especially with partners not traditionally involved in natural disasters, encouraging all of the federal government to actively participate in these events. |
| Finding 3.2: FEMA Integration Teams (FITs) and Incident Management Assistance Teams – Advance (IMAT-As) provided valuable planning and resource coordination support to SLTT partners; however, the engagement of these members varied by region because of SLTT needs, differences in personnel expertise, and the lack of standard agency roles and responsibilities for the positions.<br>*Recommendations:*<br>▪ 3.2.A. Continue the rollout and resourcing of FITs—including embedding FITs within all states and territories—ensuring the full rollout of multiple FITs for each state and territory and consider how FITs can be used to support tribal partners. Regions may also want to consider cross-training with IMAT positions to increase flexibility in the event of another multi-regional emergency.<br>▪ 3.2.B. Codify in policy and doctrine the deployment of regional support personnel to their SLTT partners, encompassing regional Incident Management Assistance Teams (IMATs), IMAT-As, FITs, and liaison officers (LNOs). This documentation should include roles for each type of team, guidance for interacting with each other, required training, Deployment Tracking System positions, naming conventions, hierarchy in steady-state operations and disasters, and necessary equipment, including technology, safety equipment, and PPE. Communications plans from the region to the teams should also be established to maintain situational awareness and ensure the teams have the information necessary to support SLTT partners. Determine whether documentation is sufficient and requires greater training and education of staff, or if the current documentation needs to be updated or developed. As part of this effort, develop formal policies and procedures for when and how FITs should assume an LNO role with SLTT partners, how FITs should integrate into an IMAT or IMAT-A when deployed, and how to ensure FITs receive formal LNO and IMAT training as part of their onboarding. Regions may also want to consider including FITs in exercises and meetings with SLTT and regional leadership. Upon completion of this concept of operations (CONOPs), all relevant systems, policies, and procedures should be updated to codify the CONOPs into FEMA doctrine. |
| Finding 3.3: Relationships between tribal nations and FEMA differed across regions, which led to variation in response efforts in an already unprecedented event.<br>*Recommendation:*<br>▪ 3.3 A. Develop a tribal nation engagement strategy, supported by consistent staffing and training, that includes the desired outcomes and resources required to appropriately support the tribal nations, with flexibility for regional application. The strategy should identify an approach for the equitable distribution of personnel throughout each region dedicated to program delivery for all 574 tribal nations. FEMA should provide additional training and funding to internal staff and external stakeholders to establish and improve tribal emergency management programs related to low-frequency, high-impact events such as pandemics. The strategy should also include how to increase education and awareness among tribal nations regarding FEMA and federal resources by identifying existing knowledge and capacity gaps and strengthening tribal emergency managers' understanding of the resources and mechanisms available to access federal disaster assistance. |

| Key Findings and Recommendations |
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| Finding 3.4: The federal government expedited funding to SLTT partners, deferring the determination of funding sources that led to varying, and often unclear, cost-share requirements when those resources were provided.<br><br>*Recommendation:*<br><br>▪ 3.4.A. Continue developing and expanding roadmaps, searchable libraries, and comprehensive funding matrices, complete with respective cost-sharing schemes, to allow SLTTs to determine the best approach to cost recovery, while helping FEMA staff provide guidance and support effectively like those produced during the COVID-19 operations. Consider incorporating the Catalog of Federal Domestic Assistance, Disaster Financial Management Guide, and other FEMA planning guides into the searchable library. This should include documented processes for engaging and involving parties with funding authorities and policy decisions (e.g., OCFO, NRCC, and other federal agencies) to capture their knowledge of the existing authorities and communicate it to regions and SLTT partners. These processes should include coordination with other federal agencies regarding additional appropriations to determine what funding and funding authorities might be needed, and work with Congress to appropriate against the agreed-upon language. |
| Finding 3.5: Communications support from Office of External Affairs across FEMA HQ and the regions effectively adapted to the constantly changing dynamics of COVID-19 operations; however, vague SLTT engagement guidance and product clearance protocols hindered the regions' ability to successfully convey accurate and timely information to SLTT partners.<br><br>*Recommendations:*<br><br>▪ 3.5.A. Ensure that a strategic communications plan is developed and released for every disaster response when the NRCC is activated or when significant coordination between government agencies is required. FEMA should consider (1) developing a methodology to assess the needs of stakeholders and codify it into existing procedural documentation for future large-scale emergency responses, (2) including guidance on tailoring messaging and delivery to audiences with the goal of answering questions or addressing concerns specific to the needs of that group, (3) identifying and clearly communicating which messaging can be shared with which groups and who is authorized to speak on behalf of the agency, and (4) conducting stakeholder assessments to understand engagement with distributed content.<br><br>▪ 3.5.B. Employ a knowledge management system and database to track engagements and inquiries to provide real-time insights into the needs of stakeholder groups. This should include maintaining a repository of cleared information and content that can be quickly retrieved and used to engage with media, stakeholders, survivors, and the general public. |

## Section 4: Preparedness and Information Analysis

FEMA engages in a wide range of activities to prepare for and respond to disasters. As the scale and scope of the COVID-19 pandemic became clear, FEMA faced challenges at both the national and regional levels to collect data and information relevant to decision-making and the prioritization of resources. Sharing essential information among response partners at all levels to maintain situational awareness required FEMA to adapt conventional communication means, technologies, and platforms. COVID-19 operations revealed areas in which the agency can improve planning and information sharing to inform future operations. In this evaluation area, FEMA identified seven key findings and eight recommendations for improvement (see Table 32).

**Table 32. Key Findings and Recommendations for Section 4. Preparedness and Information Analysis**

| Key Findings and Recommendations |
|---|
| Finding 4.1: Federal pandemic planning did not account for the large-scale interagency operations, resource shortages, and integrated federal approach to supporting SLTT partners required to respond to this pandemic.<br>*Recommendation*:<br>▪ 4.1.A: Establish an interagency planning working group to review the COVID-19 incident and update the PanCAP for a whole-of-government response. The plan should build on the 2020 COVID-19 operations, with updated modeling and simulation to build out the scenario, develop assumptions, and identify the courses of action for operational requirements. |
| Finding 4.2: Federal plans did not envision FEMA leading the federal response for national pandemic operations, and neither headquarters nor the regions had current, comprehensive plans for a leading role, limiting the efficiency of applying the agency's operational capability.<br>*Recommendation*:<br>▪ 4.2.A: Based on the role Congress and the Administration direct FEMA to play in pandemic operations, and the authorities granted, the agency should review, revise, and develop plans for HQ and the regions, commensurate to their roles, that account for learning from the COVID-19 operations. |
| Finding 4.3: FEMA's ability to anticipate SLTT requirements was affected by insufficient understanding of SLTT projected consequences and capabilities.<br>*Recommendations*:<br>▪ 4.3.A: Institutionalize an integrated and coordinated approach to the development and maintenance of pandemic plans at all levels of government with SLTTs, public health partners, emergency management agencies, and the private sector, and exercises to validate those plans.<br>▪ 4.3.B. Improve consequence analyses at all levels of government and in coordination with non-governmental partners. There is a shared responsibility to conduct consistent and comprehensive modeling and simulation of data that realistically assess risk and response capabilities in order to better develop realistic planning and understanding of the effects of a catastrophe and the resulting critical resources demands. These data enhance the effectiveness of locally executed, state-managed, federally supported operations. FEMA should update |

| Key Findings and Recommendations |
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| guidance to ensure planning and data from other federally funded efforts are incorporated into FEMA requirements like the THIRA/SPR. |
| Finding 4.4: Although current pandemic plans identify information requirements, they lack the specificity and guidance to establish data collection and reporting mechanisms for effective decision-making.<br>*Recommendation*:<br>▪ 4.4.A: Update national and regional pandemic plans with the data points decision-makers require to make informed decisions. These plans should identify the sources of those data points and the partners who maintain those data and should include information collection plans that incorporate the data sources (both government and non-government). Federal interagency data sources should be considered and pursued for integration across the whole of government. FEMA should, where appropriate, establish memorandums of understanding and data sharing agreements with these partners to increase operational readiness for future disaster operations. |
| Finding 4.5: Without refined data requirements, independent approaches to data collection and analysis increased the number of requests to FEMA regions and SLTT and private sector partners.<br>*Recommendation:*<br>▪ 4.5.A: Develop an implementation plan for improved data application to disaster operations that considers non-governmental data management and applications and allocate resources to pursue identified courses of action to improve data-driven operations. Examine the planning approach to data management and analytics based on preparedness-driven requirements and lessons learned from past disasters. FEMA should assess existing data systems, analysis, and products for their usability and effectiveness in informing and guiding senior leadership decision-making before, during, and after disasters. |
| Finding 4.6: FEMA's current situational awareness reporting products limit data sharing and data-driven decision-making.<br>*Recommendation:*<br>▪ 4.6.A: Develop an agency intelligence unit that works across the enterprise at HQ and in the regions in preparedness and operations to gather data, analyze information, build tools, and advise leadership. FEMA should develop a strategy, commit resources, and implement a plan to build this capability that can inform policy and planning, understand threats and risk, assess vulnerabilities, and enhance operations. This would include the following steps: (1) evaluate the situational awareness processes for data collection, analysis, and reporting, and the systems used to manage the information; (2) identify reporting requirements from leadership at HQ and the regions; (3) collect insight from HQ efforts and regional data analytics to inform updates; and (4) consider dynamic collection, reporting, and presentation methods to reduce the time it takes to enter the data and the timeliness and validity of information being reported. |
| Finding 4.7: The lack of a shared common operating picture (COP) limited situational awareness and stakeholder collaboration on mission objectives.<br>*Recommendation:*<br>▪ 4.7.A: Evaluate the ability of existing systems to serve as a comprehensive COP for situational awareness at all levels and invest resources in developing WebEOC or a similar platform to provide real-time data insight, customizable across the levels of operations based on common |

| Key Findings and Recommendations |
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| datasets, and that can integrate additional data from other federal agencies and other partners. Provide the staff and resources to maintain and update WebEOC, and to educate, train, and equip the workforce at all levels of government. |

## Section 5: Organizational Resilience

The COVID-19 pandemic tested FEMA's workforce. As they responded to the crisis as part of their job responsibilities, FEMA's workforce also faced the same pandemic conditions as the rest of the country. The agency focused its efforts on preserving its workforce while ensuring continuity of agency programs and mission execution. In this evaluation area, FEMA identified seven key findings and 14 recommendations for improvement (see Table 33).

**Table 33. Key Findings and Recommendations for Section 5. Organizational Resilience**

| Key Findings and Recommendations |
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| Finding 5.1: FEMA headquarters was delayed in establishing clear coordination on internal workforce guidance and communications in the early stages of the COVID-19 incident, resulting in messaging being perceived as untimely, unclear, or both by the FEMA workforce.<br>*Recommendations*:<br>▪ 5.1.A: Update the Pandemic and Emerging Infectious Disease Workforce Protection Plan (PEIDWPP) in partnership with subject-matter experts from across the agency and with HHS to address workforce coordination and communication processes learned from FEMA's COVID-19 experience. Include the timely collapse, closure, and return to home station for telework-supported continuation of duties to document staff mobility and safety as local and state support systems are closed or restricted to field staff.<br>▪ 5.1.B: Formalize the roles and responsibilities for internal communications within the agency, especially for events requiring coordination between FEMA components that are responsible for protecting the workforce. Use the COVID-19 Coordination Team approach or a similar structure to develop future internal communications strategy for the workforce.<br>▪ 5.1.C: Exercise and validate updated agency documentation on protective measures with a focus on decision-making and implementation of guidance for the workforce; operationalize more of FEMA's mission-enabling functions that are not traditionally exercised at HQ and in the regions. |
| Finding 5.2: FEMA investments in mobility enabled the implementation of an agency-wide shift to telework, with 95% of FEMA employees reporting high productivity.<br>*Recommendations*:<br>▪ 5.2.A: Continue investing in cloud computing, information technology infrastructure, and software to meet FEMA's mission with flexibility and adaptability.<br>▪ 5.2.B: Continue assessing how to integrate telework throughout FEMA and develop courses of action for future operations. These courses of action should incorporate the agency's operations during the COVID-19 pandemic with the associated long-term implications for space requirements, physical layout of buildings, noise management, and automation. They must also |

| Key Findings and Recommendations |
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| maintain accessible technology and reasonably equip employees who are working from home. In the assessment, the agency should also evaluate VPN capacity, work to ensure staff have sustainable internet access, and use an agency-wide accountability tool during the initial and long-term implementation of alternate or telework scenarios. All options should ensure employee performance plans are able to assess workforce efficiency and success while working remotely. |
| Finding 5.3: Even though FEMA did not activate its Continuity of Operations (COOP) plan, the agency leveraged its Pandemic Annex and continuity tactics for workforce protection; however, using continuity nomenclature in agency messaging caused confusion about how programs and resources should be prioritized.<br>*Recommendations*:<br>▪ 5.3.A: Identify a FEMA component or office responsible for analyzing steady-state programmatic work and recommending a process for FEMA leadership to prioritize agency activities when COOP is not activated and the effects do not require only conducting MEFs, but the steady-state resources must be adjusted to support significant operational response or recovery requirements. Perform the associated analysis for what this situation entails for agency staffing steady-state and prioritized activities.<br>▪ 5.3.B: Update the agency's COOP plan to allow for more flexible and adaptable application of continuity tactics to events when the COOP plan is not activated. Develop an updated approach to training, exercising, and educating FEMA personnel about FEMA's COOP plans to improve the culture of continuity, per PPD-40. |
| Finding 5.4: Through a shift in resources and workforce innovation, FEMA was largely able to adapt, deliver programs, and carry out the mission while operating in the COVID-19 environment.<br>*Recommendation*:<br>▪ 5.4.A: Institutionalize successful program and policy adaptations and build implementation plans to ensure efficiencies are not lost in the return to steady-state agency operations. FEMA should continue to embrace workforce flexibility and the use of virtual platforms that have received positive feedback (e.g., virtual town halls, damage assessments) and enable a creative and innovative workforce culture that facilitates organizational improvements and increased resiliency. |
| Finding 5.5: FEMA faced challenges staffing its National Response Coordination Center (NRCC) for a long-duration pandemic incident of national scale, and the need for employees with specialized skillsets presented challenges, as did FEMA's workforce management practices.<br>*Recommendations*:<br>▪ 5.5.A: Determine a cadre management structure for Incident Support personnel and use FEMA's Deployment Tracking System (DTS) to help manage and operationalize resources. FEMA should (1) formalize the concept of "deployment readiness," requiring staff maintain their availability in DTS and reinforce that "every employee is an emergency manager" by ensuring the entire workforce is assigned with the incident workforce title they are willing and able to deploy in; (2) designate staff based on skills and requirements; and (3) provide opportunities for staff to volunteer for NRCC duties and receive training.<br>▪ 5.5.B: Analyze NRCC facility requirements for national-level incidents requiring interagency operations and the integration of non-governmental partners to ensure appropriate and adequate space is available for the personnel required. |

| Key Findings and Recommendations |
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| Finding 5.6: FEMA implemented and enhanced protective measures over time to protect its workforce's health and safety; however, the agency experienced challenges implementing and ensuring compliance with these measures nationwide.<br><br>*Recommendation*:<br><br>▪ 5.6.A: Develop a comprehensive agency-wide strategy and guidance for workforce protection. FEMA should ensure it (1) documents and incorporates the workforce protection strategies successfully implemented during COVID-19 operations into plans for future pandemics or outbreaks of infectious diseases with respiratory transmission dynamics; (2) accounts for FEMA's various work locations (e.g., HQ, regions, and the field), and ensure consistent and near-simultaneous implementation of the measures, even if it is phased for resource reasons; (3) incorporates what protective measures FEMA employees should follow when working at non-FEMA facilities, especially ones with different measures than FEMA. FEMA leaders should reinforce the importance of compliance with COVID-19 protective measures by leading through example to demonstrate the agency's commitment to keeping the workforce safe. |
| Finding 5.7: FEMA's restoration planning efforts have provided its workforce COVID-19 guidance and resources, but pandemic conditions will continue to have behavioral and mental health implications.<br><br>*Recommendations*:<br><br>▪ 5.7.A: Determine how restoration planning and COVID-19 workforce adaptations can inform long-term planning for agency operations and other efficiencies, and designate a responsible FEMA component or entity to own this process.<br><br>▪ 5.7.B: Maintain consistent two-way communications with the workforce about when employees should consider returning to the workplace, considering factors such as childcare and transportation. This promotes a consistent approach to decision-making and creates a comprehensive understanding among all employees of the phased approach detailed in FEMA Forward Framework Interim Guidance. Establish feedback channels for FEMA employees to share experiences and perspectives on returning to the workplace during the pandemic. Consider separate surveys for fixed-site and deployed staff, who have unique concerns and requirements.<br><br>▪ 5.7.C: Develop a strategy for employee well-being with an emphasis on mental health. Revise management and staff training resources, reference guides, and messaging to include methods to identify indicators of, and appropriately respond to, mental health and stress-related concerns. Provide additional stress counselor options for FEMA staff at HQ, at the regions, and in the field, since EAP counseling resources are limited to six sessions. Make mental health and available resources topics for all-hands and town hall discussions to emphasize the importance of mental health and well-being, and to reinforce FEMA's support of help-seeking. |

# Appendix B: Timeline Tables

The following tables present the information used to build the graphic timelines the in the document.

## Data for Figure 3. COVID-19 Pandemic Timeline in the United States

| Timeline Date | Category | Event Description |
|---|---|---|
| 12/31/2019 | Health | WHO Country Office in the People's Republic of China obtained open-source information indicating several cases of “viral pneumonia” in Wuhan |
| 1/07/2020 | Health | Chinese authorities indicated that the reported outbreak was attributable to a “novel coronavirus" |
| 1/17/2020 | Health | CDC and CBP implemented advanced health screening for travelers coming from Wuhan at three airports |
| 1/21/2020 | Health | 1st U.S. COVID-19 case in WA confirmed |
| 1/21/2020 | Health | WHO reported the human-to-human transmission of the novel coronavirus |
| 1/28/2020 | Health | CDC advised travelers to avoid all nonessential travel to China |
| 1/29/2020 | Health | U.S. began to evacuate citizens from China |
| 1/30/2020 | Health | WHO declares a Public Health Emergency |
| 1/31/2020 | Health | HHS declares national Public Health Emergency |
| 2/28/2020 | Socioeconomic | Stock markets reported the largest single week declines since the 2008 Financial Crisis |
| 2/29/2020 | Health | WA declares state of emergency |
| 3/11/2020 | Health | WHO declares COVID-19 a pandemic |
| 3/13/2020 | Health | National emergency declared |
| 3/16/2020 | Health | NYC Mayor signed an executive order requiring all city hospitals to cancel elective surgeries |
| 3/16/2020 | Socioeconomic | President establishes 15-day social distancing guidelines |
| 3/16/2020 | Socioeconomic | New York City public schools shut down |
| 3/18/2020 | Disaster | FEMA designated lead for federal operations coordination |
| 3/19/2020 | Socioeconomic | California issues stay-at-home order for 40M residents |
| 3/27/2020 | Socioeconomic | CARES Act signed |
| 3/31/2020 | Health | U.S. has highest case count in world; 140,640 |
| 4/16/2020 | Socioeconomic | National Guidelines for Reopening America released |
| 5/16/2020 | Disaster | Tropical Storm Arthur forms |
| 5/19/2020 | Disaster | COVID-19 Pandemic Operational Guidance for the 2020 Hurricane Season released |
| 5/27/2020 | Disaster | Tropical Storm Bertha forms |
| 5/27/2020 | Health | U.S. death poll surpassed 100,000, Approx. 1.7M confirmed cases as reported by the CDC |

| Timeline Date | Category | Event Description |
|---|---|---|
| 6/05/2020 | Socioeconomic | Paycheck Protection Program Flexibility Act of 2020 signed |
| 6/07/2020 | Disaster | Tropical Storm Cristobal makes landfall in LA |
| 7/25/2020 | Disaster | Hurricane Hanna makes landfall TX |
| 7/29/2020 | Health | U.S. surpassed 150,000 COVID-19 deaths, as reported by the CDC |
| 9/04/2020 | Health | Halt on residential evictions through 2020 |
| 9/14/2020 | Socioeconomic | National Restaurant Association estimates 100,000 restaurants closed permanently; 3M workers unemployed |

## Data for Figure 6. FEMA COVID-19 Response Overview Timeline

| Timeline Date | Category | Event Description |
|---|---|---|
| 1/21/2020 | National Event | 1st U.S. COVID-19 case in WA confirmed |
| 1/22/2020 | FEMA Operations | FEMA/HHS Planning Cell kickoff |
| 1/27/2020 | National Event | WA State EOC activated |
| 1/28/2020 | National Event | National Watch Center monitors COVID-19 |
| 1/29/2020 | National Event | White House Coronavirus Task Force (WHTF) announced |
| 1/30/2020 | Global Event | WHO declares a Public Health Emergency |
| 1/31/2020 | National Event | HHS declares national Public Health Emergency |
| 2/10/2020 | FEMA Operations | Crisis Action Planning Team requested |
| 2/19/2020 | FEMA Operations | Interagency Planning call commences on regular basis |
| 2/24/2020 | FEMA Operations | Crisis Action Planning Team activated |
| 2/26/2020 | National Event | VP to chair the White House Task Force (WHTF) |
| 3/03/2020 | National Event | PPE delivered to WA |
| 3/04/2020 | FEMA Operations | NBEOC activates |
| 3/06/2020 | National Event | CPRSA Act signed |
| 3/11/2020 | Global Event | WHO declares COVID-19 a pandemic |
| 3/13/2020 | National Event | National emergency declared |
| 3/13/2020 | FEMA Operations | Adapted PanCAP released |
| 3/17/2020 | National Event | Federal Agency Operational Alignment released |
| 3/17/2020 | Pandemic Milestone | Minimum 1 positive case in each U.S. state |
| 3/18/2020 | National Event | President invokes DPA in EO 13909 |
| 3/18/2020 | National Event | FFCRA signed |
| 3/18/2020 | FEMA Operations | FEMA designated lead of federal operations coordination |
| 3/19/2020 | FEMA Operations | NRCC Level 1 activation |
| 3/20/2020 | National Event | NY disaster declaration approved |
| 3/20/2020 | FEMA Operations | FEMA establishes UCG |
| 3/22/2020 | National Event | Title 32 authorized for CA, NY, WA |
| 3/27/2020 | National Event | CARES Act signed |

| Timeline Date | Category | Event Description |
|---|---|---|
| 3/29/2020 | Pandemic Milestone | 82,404 U.S. confirmed cases, highest in world, as reported by the CDC |
| 3/29/2020 | FEMA Operations | Project Airbridge launches |
| 3/31/2020 | FEMA Operations | NRCC Surge Task Force established |
| 4/10/2020 | National Event | WY, final state disaster declaration approved |
| 4/12/2020 | FEMA Operations | 1st DPA order from 3M arrives |
| 4/13/2020 | FEMA Operations | OER releases bulletin on civil rights |
| 4/16/2020 | National Event | Guidelines for Opening Up America Again launched |
| 4/17/2020 | National Event | Major disaster declarations for 50 states, D.C., 5 territories approved |
| 4/20/2020 | National Event | Federal Personnel Freedom of Movement released |
| 4/20/2020 | National Event | Federal operations align with Guidelines for Opening Up America Again |
| 4/22/2020 | FEMA Operations | Individual assistance for 10 states authorized |
| 4/28/2020 | Pandemic Milestone | U.S. confirmed cases surpasses 1,000,000, as reported by the CDC |
| 5/20/2020 | National Event | All 50 states authorized for Title 32 |
| 5/27/2020 | Pandemic Milestone | U.S. death toll surpasses 100,000, as reported by the CDC |
| 6/09/2020 | FEMA Operations | BEOC Quick Start Guidance released |
| 6/15/2020 | FEMA Operations | COVID-19 response transitions to HHS lead |
| 6/30/2020 | FEMA Operations | Project Airbridge phased out after 249th flight |
| 7/29/2020 | Pandemic Milestone | U.S. death toll surpasses 150,000, as reported by the CDC |
| 8/08/2020 | National Event | Federal unemployment insurance extended |
| 8/09/2020 | Pandemic Milestones | U.S. confirmed cases surpasses 5,000,000, as reported by the CDC |
| 9/04/2020 | National Event | Halt on residential evictions extended through 2020 |
| 9/28/2020 | National Event | Distribution plan for 150,000,000 rapid tests announced |
| 9/30/2020 | Pandemic Milestone | U.S. confirmed cases 7,213,419, as reported by the CDC |
| 9/30/2020 | Pandemic Milestone | U.S. confirmed deaths 206,402, as reported by the CDC |

## Data for Figure 10. Interagency Coordination Timeline

| Timeline Date | Category | Event Description |
|---|---|---|
| 1/21/2020 | Other | 1st U.S. COVID-19 case in WA confirmed |
| 1/22/2020 | HHS | FEMA/HHS Planning Cell kickoff |
| 1/29/2020 | White House | White House Coronavirus Task Force (WHTF) announced |
| 1/31/2020 | HHS | HHS declares national Public Health Emergency |
| 2/10/2020 | HHS | FEMA Crisis Action Planning Team requested |

| Timeline Date | Category | Event Description |
|---|---|---|
| 2/24/2020 | FEMA | Crisis Action Planning Team activated |
| 2/26/2020 | White House | VP designated Chair to WHTF |
| 3/09/2020 | FEMA Operations | FEMA/HHS Crisis Action Team formed |
| 3/11/2020 | Other | WHO declares COVID-19 a pandemic |
| 3/13/2020 | FEMA Operations | Adapted PanCAP released |
| 3/13/2020 | White House | National emergency declared |
| 3/18/2020 | White House | Admiral Polowczyk announced lead for Supply Chain Stabilization TF |
| 3/19/2020 | FEMA | NRCC Level 1 activation |
| 3/19/2020 | White House | FEMA designated federal response lead |
| 3/20/2020 | FEMA | FEMA establishes UCG |
| 3/21/2020 | HHS | Federal Medical Stations deployed to states |
| 3/25/2020 | Other | PPE TF initiates daily calls with FEMA SCSTF |
| 3/29/2020 | FEMA | Project Airbridge launches |
| 4/03/2020 | White House | Direction to use DPA to reserve scarce medical resources |
| 4/07/2020 | FEMA | Letter on medical supply delivery issued to distributors |
| 5/22/2020 | Other | Community Mitigation Decision Support Tool released |
| 6/15/2020 | HHS | COVID-19 response transitions to HHS |
| 7/28/2020 | FEMA | Advisory for regional medical staffing requests issued |
| 8/06/2020 | Other | 26,200 federal personnel deployed to SLTT |
| 8/28/2020 | Other | UCG daily meetings end |
| 9/14/2020 | Other | 19,831 federal personnel deployed to SLTT |
| 9/21/2020 | Other | GAO recommends HHS/FEMA clearly define supply chain roles |

## Data for Figure 13. Supply Chain Timeline

| Timeline Date | Category | Event Description |
|---|---|---|
| 1/21/2020 | Other | 1st U.S. COVID-19 case in WA confirmed |
| 1/29/2020 | Other | White House Coronavirus Task Force announced |
| 1/31/2020 | Other | HHS declares National Public Health Emergency |
| 3/11/2020 | Other | WHO declares COVID-19 a pandemic |
| 3/13/2020 | Other | National emergency declared |
| 3/18/2020 | DPA/Authorities | DPA addresses scarce resources |
| 3/18/2020 | DPA/Authorities | President invokes DPA in EO 13909 |
| 3/21/2020 | FEMA Resource Procurement/Distribution | Federal Medical Stations deployed to states |
| 3/27/2020 | DPA/Authorities | DPA Title 1 prioritizes GM ventilator production |
| 3/27/2020 | Public/Private Partnership | Private sector COVID-19 guidance published |

| Timeline Date | Category | Event Description |
|---|---|---|
| 3/29/2020 | Resource Procurement/Distribution | Project Airbridge launches |
| 4/03/2020 | DPA/Authorities | DPA Title 1 prioritizes 3M N95 masks |
| 4/06/2020 | FEMA Resource Procurement/Distribution | SCSTF news release published |
| 4/07/2020 | FEMA Resource Procurement/Distribution | Medical supply distributor letter issued |
| 4/08/2020 | DPA/Authorities | DPA invoked to reserve scarce materials for domestic use |
| 4/09/2020 | FEMA Resource Procurement/Distribution | Supply Chain Data Tower goes live |
| 4/10/2020 | FEMA Resource Procurement/Distribution | TFR allocates scarce medical resources for domestic consumption |
| 4/12/2020 | DPA/Authorities | 1st DPA order from 3M arrives |
| 4/15/2020 | FEMA Resource Procurement/Distribution | Resource Allocation Tool launched |
| 4/18/2020 | FEMA Resource Procurement/Distribution | FEMA releases fact sheet on NRPC |
| 4/21/2020 | FEMA Resource Procurement/Distribution | Field operations PPE distributed |
| 4/28/2020 | DPA/Authorities | DPA directs USDA to address meat processing plant closures |
| 4/29/2020 | DPA/Authorities | $75M announced for increased nasal swab production |
| 5/05/2020 | Public/Private Partnership | Meat processing plants directed to use CDC/OSHA guidelines |
| 5/13/2020 | DPA/Authorities | Final rule on prioritization of critical contracts issued |
| 5/13/2020 | FEMA Resource Procurement/Distribution | $134M nursing home PPE delivery contract signed |
| 5/14/2020 | DPA/Authorities | DPA Title III authority delegated to International DFC |
| 5/15/2020 | FEMA Resource Procurement/Distribution | Operation Warp Speed announced |
| 5/21/2020 | DPA/Authorities | DPA Section 708 manufacturer teleconference held |
| 6/30/2020 | FEMA Resource Procurement/Distribution | Project Airbridge phased out after 249th flight |
| 8/17/2020 | DPA/Authorities | DPA Section 708 voluntary agreement announced |

## Data for Figure 22. Regional Coordination Timeline

| Timeline Date | Category | Event Description |
|---|---|---|
| 1/21/2020 | FEMA HQ | 1st COVID-19 briefing to FEMA RAs and HHS/ASPR RECs |
| 1/24/2020 | Region 10 | 1st COVID-19 LO deployment WA EOC |
| 1/27/2020 | Region 10 | WA EOC fully activated |
| 2/03/2020 | FEMA HQ | IMAT-A teams memo to regions issued |
| 2/19/2020 | FEMA HQ | IMAT-As trained |
| 2/21/2020 | FEMA HQ | Readiness memo for Stafford Act in pandemic issued |
| 2/29/2020 | Region 10 | WA 1st state to declare State of Emergency |
| 3/10/2020 | Region 1 | R1 COVID-19 Task Force activated |
| 3/11/2020 | Region 4 | R4 transitions to virtual work |
| 3/12/2020 | Region 9 | All R9 states declare state of emergency |
| 3/13/2020 | FEMA HQ | HQ maximizes telework |
| 3/13/2020 | FEMA HQ | National emergency declared |
| 3/13/2020 | Region 2 | All R2 states and territories declare state of emergency |
| 3/13/2020 | Region 5 | All R5 states declare state of emergency |
| 3/13/2020 | Region 6 | R6 Division Directors to maximize telework |
| 3/13/2020 | Region 8 | All R8 states declare state of emergency |
| 3/14/2020 | Region 4 | All R4 states declare state of emergency |
| 3/14/2020 | Region 8 | R8 interim telework guidance issued |
| 3/15/2020 | Region 1 | All R1 states declare state of emergency |
| 3/15/2020 | Region 6 | All R6 states declare state of emergency |
| 3/16/2020 | Region 1 | R1 maximize telework transition memo issued |
| 3/16/2020 | Region 3 | All R3 states declare state of emergency |
| 3/16/2020 | Region 4 | R4 RRCC activates |
| 3/16/2020 | Region 9 | R9 maximize telework memo issued |
| 3/16/2020 | Region 10 | All R10 states declare state of emergency |
| 3/17/2020 | FEMA HQ | 41 CBTS deployed |
| 3/17/2020 | Region 5 | R5 RRCC activated Level 3 |
| 3/17/2020 | Region 7 | IA last state to declare state of emergency |
| 3/17/2020 | Region 7 | All R7 states declare state of emergency |
| 3/17/2020 | Region 7 | R7 encouraged to maximize telework |
| 3/17/2020 | Region 7 | All R7 state EOCs activated |
| 3/18/2020 | FEMA HQ | USACE assignment for ACF construction in NY issued |
| 3/18/2020 | FEMA HQ | NRCC activates to Level 1 |
| 3/18/2020 | Region 2 | R2 maximize telework memo issued |
| 3/18/2020 | Region 3 | R3 maximize telework memo issued |
| 3/19/2020 | FEMA HQ | CBTS locations initiate COVID-19 testing |
| 3/21/2020 | Region 4 | All R4 state and Seminole Tribe EOCs activated |
| 3/25/2020 | FEMA HQ | Guidance released for Tribal Assistance |
| 3/25/2020 | Region 5 | All R5 state EOCs activated |
| 3/30/2020 | Region 1 | R1 RRCC activated Level 1 |

| Timeline Date | Category | Event Description |
|---|---|---|
| 4/01/2020 | FEMA HQ | 1st FEMA-coordinated ACFs open NY, USNS Mercy, USNS Comfort |
| 4/09/2020 | FEMA HQ | Transition option from Federal CBTS to state management announced |
| 4/09/2020 | Region 2 | All R2 states and territories EOCs activated |
| 4/28/2020 | Region 5 | R5 RRCC transition to fully virtual operations |
| 4/29/2020 | FEMA HQ | USNS Comfort demobilizes as ACF |
| 5/02/2020 | FEMA HQ | USNS Mercy demobilizes as ACF |
| 5/02/2020 | FEMA HQ | Crisis counseling grants available |
| 6/08/2020 | FEMA HQ | $320m in Emergency Food and Shelter Program Funding disbursed |
| 7/28/2020 | FEMA HQ | SLTT Medical Staffing Requests guidance issued |
| 8/08/2020 | FEMA HQ | Lost Wage Assistance authorized |

## Data for Figure 27. Preparedness and Information Analysis Timeline

| Timeline Date | Event Description |
|---|---|
| November 2013 | Joint HHS/FEMA PanCAP released |
| January 2018 | PanCAP revised to align with CDC disease intervals |
| August 2019 | HHS conducts joint Crimson Contagion Exercise |
| 1/21/2020 | 1st U.S. COVID-19 case in WA confirmed |
| 1/22/2020 | FEMA/HHS hold a Planning Cell kickoff |
| 1/29/2020 | White House Coronavirus Task Force announced |
| 1/31/2020 | HHS declares National Public Health Emergency |
| 2/19/2020 | Interagency Planning call commences on regular basis |
| 3/11/2020 | WHO declares COVID-19 a pandemic |
| 3/13/2020 | National emergency declared |
| 3/13/2020 | Adapted PanCAP released |
| 3/23/2020 | NRCC establishes new regional integration teams |
| 4/09/2020 | 30 daily reporting points outlined for hospital administrators |
| 4/21/2020 | SAS releases a list of recurring regional data requests |
| 5/03/2020 | National Support Plan (NSP) to establish reporting requirements |
| 5/20/2020 | COVID-19 Operational Guidance for 2020 Hurricane Season released |
| 6/09/2020 | Mass Care/Emergency Assistance Pandemic Planning Considerations released |
| 6/11/2020 | NSP development transitioned to HHS/ASPR |
| 7/11/2020 | COVID-19 wildfire response guidance released |
| 8/25/2020 | Emergency Management Best Practices released |
| 9/21/2020 | Federal Interagency Operational Plans updated |

## Data for Figure 28. Workforce Preservation Timeline

| Timeline Date | Category | Event Description |
|---|---|---|
| 1/21/2020 | Other | 1st U.S. COVID-19 case in WA confirmed |
| 1/29/2020 | Other | White House Coronavirus Task Force announced |
| 1/31/2020 | Other | HHS declares National Public Health Emergency |
| 2/05/2020 | FEMA Communications / Policy Guidance | FEMA Weekly encourages employees to stay home if ill |
| 2/29/2020 | FEMA Operations | OPM, DHS, and FEMA begin work on leave policy |
| 3/04/2020 | FEMA Communications / Policy Guidance | Administrator Gaynor releases top three COVID-19 priorities |
| 3/05/2020 | FEMA Operations | NRCC Response Operations Cell activated |
| 3/09/2020 | FEMA Operations | FEMA holds pandemic TTX |
| 3/10/2020 | FEMA Operations | 1st COVID-19 case at FEMA; contact tracing begins |
| 3/10/2020 | FEMA Operations | FEMA conducts agency-wide connectivity drill |
| 3/10/2020 | FEMA Communications / Policy Guidance | NCP amends requirements for continuity plans |
| 3/11/2020 | Other | WHO declares COVID-19 a pandemic |
| 3/11/2020 | FEMA Operations | FEMA conducts VPN drill |
| 3/12/2020 | FEMA Operations | High-touch cleaning begins |
| 3/13/2020 | Other | National emergency declared |
| 3/13/2020 | FEMA Communications / Policy Guidance | Interim Telework Guidance issued |
| 3/16/2020 | FEMA Communications / Policy Guidance | Mission-critical travel guidance update issued |
| 3/18/2020 | FEMA Operations | Visitor access to facilities restricted |
| 3/19/2020 | FEMA Operations | NRCC Level 1 activation |
| 3/19/2020 | FEMA Communications / Policy Guidance | FEMA HQ Temperature Screening Decision Matrix published |
| 3/20/2020 | FEMA Operations | HQ temperature screening begins |
| 3/20/2020 | FEMA Communications / Policy Guidance | Pre-Approved Non-Availability Policy changes announced |
| 3/23/2020 | FEMA Operations | Virtual hiring process instituted |
| 3/25/2020 | FEMA Communications / Policy Guidance | FEMA Weekly highlights employee crisis programs |
| 3/26/2020 | FEMA Communications / Policy Guidance | FEMA launches rumor control page |
| 3/26/2020 | FEMA Communications / Policy Guidance | Hiring manager fact sheet released |
| 3/27/2020 | FEMA Operations | DTS includes COVID-19 options for non-deployment |
| 3/27/2020 | FEMA Operations | Private sector COVID-19 guidance published |
| 4/01/2020 | FEMA Operations | Nightly detailed cleaning begins at select facilities |

| Timeline Date | Category | Event Description |
|---|---|---|
| 4/04/2020 | FEMA Operations | HQ assists regional offices and facilities with cleaning protocols |
| 4/05/2020 | FEMA Communications / Policy Guidance | Guidance for facial coverings released |
| 4/13/2020 | FEMA Communications / Policy Guidance | OCCHOCO guidelines for onsite employees issued |
| 4/15/2020 | FEMA Operations | Zoom now available to employees |
| 4/21/2020 | FEMA Operations | Field operations PPE distributed |
| 4/22/2020 | FEMA Communications / Policy Guidance | Voluntary self-reported tests announced on employee page |
| 4/29/2020 | FEMA Communications / Policy Guidance | Remote work; preparation for hurricane/wildfire seasons encouraged |
| 5/06/2020 | FEMA Communications / Policy Guidance | Facial coverings strongly suggested at FEMA facilities |
| 5/11/2020 | FEMA Operations | FEMA Forward Executive Steering Group established |
| 5/20/2020 | FEMA Communications / Policy Guidance | COVID-19 Pandemic Operational Guidance for 2020 Hurricane Season released |
| 5/21/2020 | FEMA Operations | FEMA Desk Reservation System launched |
| 6/01/2020 | FEMA Communications / Policy Guidance | FEMA Forward Interim Guidance shared |
| 6/05/2020 | FEMA Communications / Policy Guidance | Updated deployment operations to RAs issued |
| 6/10/2020 | FEMA Communications / Policy Guidance | FEMA Forward addresses return to facilities |
| 6/11/2020 | FEMA Communications / Policy Guidance | FEMA Forward Phase 1 released; facial coverings required |
| 6/15/2020 | FEMA Communications / Policy Guidance | FEMA Forward Phase 1 Launch |
| 6/20/2020 | FEMA Communications / Policy Guidance | Guidance on the issuance of laptops to reservists updated |
| 7/15/2020 | FEMA Communications / Policy Guidance | FEMA Forward HQ: Phase 2 Launch |
| 7/27/2020 | FEMA Communications / Policy Guidance | Emergency paid sick leave announced |
| 8/15/2020 | FEMA Communications / Policy Guidance | FEMA Forward: Phase 3 Launch |
| 8/25/2020 | FEMA Communications / Policy Guidance | Administrator Message: Protecting Mental Health |
| 8/26/2020 | FEMA Communications / Policy Guidance | Administrator Message: Employees Protect Yourself and Others |
| 8/31/2020 | FEMA Operations | FEMA establishes Medical Evaluation Program to test FEMA workforce |

| Timeline Date | Category | Event Description |
|---|---|---|
| 9/10/2020 | FEMA Communications / Policy Guidance | Flu vaccine encouraged for FEMA employees |

# Appendix C: Evaluation Approach & Methodology

## Organization of Effort

The FEMA Initial Assessment Report process covers the agency's preparations for, response to, and sustained operations during the novel coronavirus disease 2019 (COVID-19) pandemic. At the outset of COVID-19 response efforts, the FEMA Administrator established three agency-wide priorities:

- Preserve the force—take a proactive posture in informing and protecting our employees;
- Conduct mission essential functions continuously and be prepared to do so in a COVID-19 degraded environment (be prepared to suspend nonessential functions if required); and
- Lead federal operations on behalf of the White House Coronavirus Task Force.

9The Continuous Improvement Program used these three objectives to develop this report in two phases (Figure 37). In Phase One, FEMA evaluated how the agency worked to achieve its three objectives and presented internal operational- and tactical-level findings in interim assessment briefs to agency leadership.

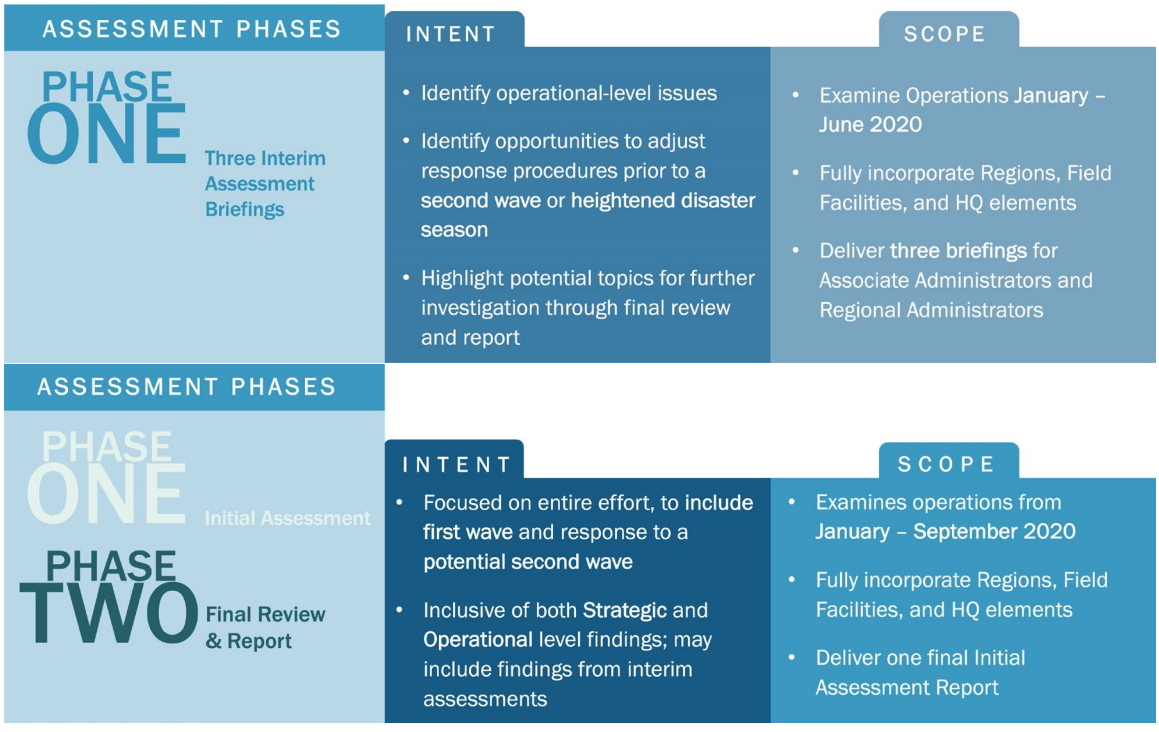


**Figure 37. Phase One and Phase Two Methodologies**

These interim assessments highlighted innovations and opportunities to improve response operations prior to a second wave and/or in advance of peak of hurricane season. In Phase Two of the report, FEMA expanded on the interim assessment briefs to consider strategic and policy considerations for the public report, which serves as an overall assessment of the agency's role in the response. Phase Two priorities were based on data collected during the review, as well as leadership feedback and direction given during the Phase One interim assessment briefings described above. Importantly, Phase Two data collection, described in this section, took place further into the COVID-19 pandemic operations and yielded a wider range of data on FEMA's experience than the Phase One assessments did. To ensure the Phase Two priorities met leadership intent, FEMA gained approval of the areas of evaluation from the FEMA Administrator, the Associate Administrators for Resilience, the Office of Response and Recovery (ORR), Mission Support, and the Regional Administrators. The five topic areas around which the final report is structured are as follows:

- Coordination of the Federal Response: How FEMA understood and implemented administrative and legal requirements as the agency coordinating the federal response.
- Resources: How FEMA managed and otherwise supported the distribution of resources in response to COVID-19.
- State, Local, Tribal, and Territorial (SLTT) Partners: How FEMA engaged with SLTT partners, including providing resources and guidance.
- Preparedness and Information Analysis: How FEMA implemented existing planning materials, supported SLTT partners in their implementation, and provided situational awareness throughout the response.
- FEMA Organizational Resilience: How FEMA implemented protections for its own workforce and maintained mission essential functions.

## Data Collection and Analysis

In both phases, FEMA adopted a mixed-methods approach to capture a broad scope of information to ensure findings were data-based, representative of multiple perspectives, and actionable. A mixed-methods approach promotes consistent findings by bringing in multiple sources of data (e.g., surveys, interviews).

To collect data for this report, FEMA created a research and analysis team comprised of agency and non-agency subject matter experts in the areas of emergency management, public health, disaster planning and response operations, qualitative and quantitative analysis, survey analysis, and data collection. A Collection Analysis Plan (CAP) guided the data collection and analysis for Phase One. The CAP outlined general topic areas and guiding questions FEMA would investigate for Phase One based on the Administrator's priorities described earlier. The CAP set the scope, evaluation areas, methods, and sources involved in the data collection. The CAP worked to ensure data collected was

directly linked to the relevant area or areas of evaluation. For the interim assessments, FEMA created one overall CAP to guide investigation of the initial COVID-19 operations, with detailed focus on the three priority areas to guide further investigation into each of the Administrator's priorities, and eventually the five report sections.

Primary data collection included the following:

- Interviews: 244 interviews conducted with FEMA personnel, ranging from staff to the Administrator and across headquarters (HQ), field offices, and all 10 regions. FEMA developed interview questions to fill data gaps and mapped those questions to FEMA staff and leadership positions based on the positions' roles relative to the information to be filled. FEMA created interview guides to facilitate and standardize these engagements.

- Surveys: 14 surveys administered at the regional and HQ levels, including an agency-wide survey in October 2020, yielded 7,358 responses. FEMA employed surveys in instances when data from a relatively larger group was needed. For example, hundreds of personnel supported the pandemic response in 2020, and targeted surveys provided insight into internal FEMA perceptions of the agency's internal and external response.

- Hotwashes: 44 hotwashes were conducted for HQ task forces, National Response Coordination Center teams, and by the regions generally when response teams were deactivated. Hotwashes are informal focus groups conducted to obtain impressions of strengths and areas for improvement, and often are administered at the end of deployments.

Secondary data collection included policy memos, operational documents, timelines, laws, intra-FEMA communications, and other credible documents; plans at the regional and national level; and electronic data systems and information sharing platforms. This information provided intent, an evaluation baseline, and key dates from which to compare other data. FEMA adopted a systematic approach for document review that used counts and coding to analyze the purposes, messages, and effects of communicated content about the response. Document review helped to identify gaps that required additional data collection and informed the design of survey and interview tools to capture those data gaps. Relevant documents were requested using data calls through program and regional action offices. For electronic data systems, FEMA included those sources that could provide context to agency decisions and highlight effects of actions. Electronic data sources that were used for the report include the Deployment Tracking System, WebEOC, Public Assistance and Individual Assistance databases, and non-disaster preparedness grant data.

An additional analytical tool was a chronological reconstruction of the pandemic event. The timeline includes elements from a model from the World Health Organization for cataloguing key milestones of a pandemic, specifically dates related to the detection of, confirmation of, intervention against, and public communication about the disease.[1] The timeline also includes key actions taken by organizations engaged in monitoring, communicating, and coordinating intergovernmental response activities to mitigate the effects of COVID-19. Three research questions helped guide the data collection and research efforts:

- What key actions did FEMA take to help coordinate the national response to COVID-19?
- What key actions did FEMA take to preserve its workforce and ensure continuity of operations? What, when, and how did FEMA communicate with its employees throughout the response?
- What external events, especially those pertaining to other federal entities—including the Department of Health and Human Services, the Centers for Disease Control and Prevention, the Assistant Secretary for Preparedness and Response, the White House, and Congress—occurred throughout the response that affected either FEMA's role or the broader federal response?

## Data Analysis

Primary data collected for the report were coded using NVivo software. This allowed for uniform tagging, collating, and management of information from the wide range of sources listed above. Because of the large volume of data analyzed, the uniform application of coding minimized erroneous linking of themes to data points. FEMA employed intercoder reliability practices to increase coding consistency across the multiple personnel coding the data and the wide variety of data sources. FEMA also developed a codebook against which data was compared, and which was designed to link specific, coded comments to Phase One and Phase Two topic areas. Two important benefits of this linkage were to identify gaps in the information collected and to define the body of evidence for each finding.

## Drafting Findings

The set of key findings was built from a combination of FEMA leadership guidance and analysis of the data described above. FEMA developed the findings using a standardized Finding Worksheet. These worksheets lay out specific elements that must frame and support all findings. These include a clear topic sentence, an assertion of positive or negative effect of the finding, citations of supporting data, and analytical backing for the finding built out to form a narrative. To the extent possible, additional data sources are included and reviewed to provide context and additional background for each finding. Relevant program offices that are responsible for the mission space or activities being discussed were engaged and reviewed each finding narrative for accuracy and additional detail.

## Validating Findings

A critical step in developing findings is ensuring that they reflect the collective qualitative and quantitative data; are evaluated against the existing policies, plans, or procedures; and have been informed by the appropriate context. Validated findings should be actionable and relevant to the responsible program office that owns the finding. Findings were validated with FEMA HQ program leadership and regional leadership through individual feedback on each finding from the program office(s) to which the finding applies or to the responsible leadership and/or oversight office. As described above, this feedback was obtained formally and informally during the drafting of the findings to ensure completeness and accuracy as early in the process as possible.

## Developing Recommendations

Recommendations are the means of the agency's continuous improvement; they must be grounded in transparent data, realistic to execute, and clearly linked to the root cause of a validated observation. Importantly, recommendations in the report arose from engagement with relevant program offices and FEMA leadership, and not solely through analysis of data. This collaborative engagement ensured that findings and recommendations were developed at the right level, identified the appropriate root cause, were directed at the right audience, and, most importantly, were grounded in the context of the office or leader managing potential implementation.

## Compiling the Report

The key findings and recommendations were compiled into a single report based on the overall goals and objectives. In compiling the document, appropriate incident background material, introductory text, and summaries were included to allow both external and internal stakeholders to understand and make use of the findings and recommendations in the report. Key findings and recommendations follow an introduction to the pandemic and response, a description of the methods used to organize the data collection and analysis, and a detailed event timeline that maps FEMA administrative actions to the progression of the pandemic and administration priorities. Recommendations are included with their respective findings to allow readers to understand the agency's plans for building on both areas of strength and areas needing improvement.

## Concurrence

Once the document was finalized, it was formally reviewed and approved for release by:

- FEMA Component Action Offices (Response and Recovery, Resilience, Mission Support), FEMA Regions
- FEMA Office of Chief Counsel; Office of External Affairs; and Office of Policy, Program Analysis, and International Affairs
- FEMA Office of the Administrator
- Department of Homeland Security Office of the Secretary

# Appendix D: Authorities & References

Authorities guide and direct actions of the federal, state, and local governments. As with every disaster event, they played a major role in shaping the response to COVID-19. This appendix provides a brief overview of major authorities that have been referenced in the report, along with a link to the originating source of these authorities. Authorities (policies, statutes, laws, legislation, executive orders) are listed in alphabetical order, with any supporting plans, annexes, and guidance listed under the relevant authority. Summaries of authorities come directly from governmental sources.

## Coronavirus Aid, Relief, and Economic Security Act (CARES Act) (2020)[145]

The CARES Act provides fast and direct economic assistance for American workers, families, and small businesses, and preserves jobs for our American industries.[146] [134 STAT. 281]

- Assistance for American Workers and Families
- Assistance for Small Businesses
- Preserving Jobs for American Industry
- Assistance for State, Local, and Tribal Governments

## Coronavirus Preparedness and Response Supplemental Appropriations Act (CPRSA Act) (2020)[147]

Division A of P.L. 116-123 provides roughly $7.8 billion in discretionary supplemental appropriations. (CBO estimates that provisions in Division B will cost roughly $490 million, but those provisions are not the focus of this report.) The funds in Division A of P.L. 116-123 are primarily intended to prevent, prepare for, and respond to the coronavirus. In addition to amounts appropriated to HHS, the supplemental provides $20 million in administrative funds for the Disaster Loans Program Account within the Small Business Administration (SBA). The supplemental also includes provisions clarifying that SBA disaster loans and economic injury disaster loans may be made in response to COVID-19. Finally, the supplemental provides nearly $1.3 billion (about 16% of all funds in Division A) to support foreign operations activities across several agencies and funding mechanisms. This includes funding to help the Department of State maintain consular operations, reimburse for evacuation expenses, and support emergency preparedness. Additional funds are provided for global health, international disaster assistance, economic support, and certain oversight activities. L. 116-123[148]

## COVID-19 Pandemic Operational Guidance for the 2020 Hurricane Season (2020)

In preparing for the 2020 hurricane season, this document provides actionable guidance to SLTT officials to prepare for response and recovery operations and encourages personal preparedness measures amidst the ongoing COVID-19 pandemic. While this document focuses on hurricane season preparedness, most planning considerations can also be applied to any disaster operation in the COVID-19 environment, including no-notice incidents, spring flooding and wildfire seasons, and typhoon response.[149]

## Defense Production Act of 1950, As Amended (DPA) (1950)

The Defense Production Act is the primary source of presidential authorities to expedite and expand the supply of materials and services from the U.S. industrial base needed to promote the national defense. DPA authorities are available to support: emergency preparedness activities conducted pursuant to Title VI of the Stafford Act; protection or restoration of critical infrastructure, and efforts to prevent, reduce vulnerability to, minimize damage from, and recover from acts of terrorism within the United States. DPA authorities may be used to:

- Require acceptance and preferential performance of contracts and orders under DPA Title I. (See Federal Priorities and Allocations System (FPAS).) (FEMA, FPAS n.d.)
- Provide financial incentives and assistance (under DPA Title III) for U.S. industry to expand productive capacity and supply needed for national defense purposes.
- Provide antitrust protection (through DPA voluntary agreements in DPA Title VII) for businesses to cooperate in planning and operations for national defense purposes, including homeland security.[150] [50 U.S.C. § 4501 et seq.]

## Disaster Recovery Reform Act (DRRA) (2018)

The Disaster Recovery Reform Act represents the most comprehensive Emergency Management reform since the Post-Katrina Emergency Management Reform Act in 2006. It includes reforms that FEMA and the emergency management community have long sought to assist communities across the Nation, including: a larger and more reliable funding stream for pre-disaster mitigation, expanded assistance for individuals and households, and support for states, localities, tribes, and territories (SLTT) to develop their own emergency management capabilities.[151]

Many of the reforms included in the DRAA acknowledge the shared responsibility across all levels of government for disaster preparedness, response, recovery, and mitigation. The DRAA also advances FEMA's strategic goals of building a culture of preparedness, readying the nation for catastrophic disasters, and reducing the complexity of FEMA.[152] [132. STAT. 3186][153]

## Disaster Relief Fund (DRF)

The Disaster Relief Fund (DRF) is an appropriation against which FEMA can direct, coordinate, manage, and fund eligible response and recovery efforts associated with domestic major disasters and emergencies that overwhelm state resources pursuant to the Robert T. Stafford Disaster Relief and Emergency Assistance Act.[154] [129 STAT. 39][155]

## Families First Supplemental Appropriations Act156 (FFCRA) (2020)

This bill responds to the COVID-19 (i.e., coronavirus disease 2019) outbreak by providing paid sick leave, tax credits, and free COVID-19 testing; expanding food assistance and unemployment benefits; and increasing Medicaid funding. [134 STAT. 178]

## Federal Interagency Operational Plans (FIOPs) (2016–2017)

The Federal Interagency Operational Plans (FIOPs) describe how the federal government aligns resources and delivers core capabilities to implement the five National Planning Frameworks. The FIOPs provide a federal concept of operations, integrating and synchronizing national-level capabilities, for prevention, protection, mitigation, response, and recovery to support all levels of government. These plans also help federal departments and agencies develop and maintain department-level operational plans.[157]

### Response Federal Interagency Operational Plan (2016)

The Response FIOP describes the concept of operations for integrating and synchronizing existing national-level federal capabilities to support SLTT plans and is supported by federal department-level operational plans, where appropriate. The concept of operations and supporting tasks contained in the Response FIOP are scalable, flexible, and adaptable, allowing the FIOP to be used regardless of cause, size, location, or complexity. Concepts of operations and/or tasks may be modified, added, or deleted depending upon the incident.[158]

### Recovery Federal Interagency Operational Plan (2016)

The Recovery FIOP describes how the federal government delivers core capabilities for the Recovery Mission Area. It is an all-hazards plan that provides guidance for the implementation of the NDRF. The mission of the Recovery FIOP is to provide guidance to enable more effective delivery of recovery support to disaster-impacted SLTT jurisdictions. It provides a flexible structure that enables disaster recovery managers to operate in a unified and collaborative manner while preserving the civil rights and civil liberties of all community members.[13]

### Biological Incident Annex (BIA) (2017) [Response, Recovery Plans Annex]

This annex provides guidance and serves as a reference for federal agency planning efforts involving biological incidents. Other stakeholders (e.g., local, state, tribal, territorial, and insular area governments, nongovernmental organizations, voluntary agencies, and the private sector) engaged in their own planning will find this document useful in enhancing their understanding of how the Biological Incident Annex will be implemented and how their planning efforts can be complementary.[13]

## Homeland Security Presidential Directive – 5 (HSPD-5) (2003)

The purpose of this directive, which was issued on Feb 28, 2003, is to enhance the ability of the United States to manage domestic incidents by establishing a single, comprehensive national incident management system. Incidents where the NRF serves as the foundational federal response doctrine will not result in a federally declared disaster under the Stafford Act.[159]

## National Response Framework (NRF) (2019)

The NRF builds on over 25 years of federal response guidance, beginning with the Federal Response Plan, published in 1992, and the National Response Plan, published in 2004. The fourth edition of the NRF reorganizes and streamlines the previous version of the NRF, expands principles and concepts to better integrate government and private sector response efforts, and introduces the community lifelines concept and terminology. The National Response Framework (NRF provides foundational emergency management doctrine for how the Nation responds to all types of incidents. The NRF is built on scalable, flexible, and adaptable concepts identified in the National Incident Management System (NIMS) to align key roles and responsibilities across the Nation. The structures, roles, and responsibilities described in this Framework can be partially or fully implemented in the context of a threat or hazard, in anticipation of a significant event, or in response to an incident. Implementation of the structures and procedures described herein allows for a scaled response, delivery of specific resources and capabilities, and a level of coordination appropriate to each incident.[160] The NRF and Response Federal Interagency Operational Plan (FIOP) are always in effect.[161]

## Pandemic and All-Hazards Preparedness and Advancing Innovation Act (PAHPAIA) (2019)

On June 24, 2019, Congress passed, and the President signed, the Pandemic and All-Hazards Preparedness and Advancing Innovation Act (PAHPAIA), Public Law No. 116-22. The 2019 law amends the Public Health Service Act to build on work the U.S. Department of Health and Human Services has undertaken to advance national health security. Amendments include enhancing the authorities of the Secretary, Assistant Secretary for Preparedness and Response, and the Director of the Centers for Disease Control and Prevention to prepare for and respond to public health emergencies. PAHPAIA authorizes new public health and medical preparedness programs for

regional health care preparedness and military and civilian partnerships; reauthorizes funding; and enhances authorities for the Hospital Preparedness Program, the Public Health Emergency Preparedness Cooperative Agreement program, and other public health and medical preparedness programs.

PAHPAIA also authorizes uses for the Public Health Emergency Fund when the Secretary declares a public health emergency or determines that there is a significant potential for a public health emergency, and authorizes advance funding for buying medical countermeasures under the Project BioShield Act and funding to support advanced research and development of potential medical countermeasures.

PAHPAIA also amends the Federal Food, Drug, & Cosmetic Act to enhance the authority of the U.S. Food and Drug Administration to support rapid responses to public health emergencies.[162]

## Pandemic and All-Hazards Preparedness Act (PAHP) (2006)

In December 2006, Congress passed, and the President signed, the Pandemic and All-Hazards Preparedness Act (PAHPA), Public Law No. 109-417, which has broad implications for the Department of Health and Human Services' (HHS) preparedness and response activities. Among other things, the Act amended the Public Health Service Act to established within the Department a new Assistant Secretary for Preparedness and Response (ASPR); provided new authorities for a number of programs, including the advanced development and acquisitions of medical countermeasures; and called for the establishment of a quadrennial National Health Security Strategy.

The purpose of the Pandemic and All-Hazards Preparedness Act is "to improve the Nation's public health and medical preparedness and response capabilities for emergencies, whether deliberate, accidental, or natural."[163]

## Pandemic Crisis Action Plan Adapted, U.S. Government COVID-19 Response Plan (PanCAP) (2020)

This plan outlines the United States Government (USG) coordinated federal response activities for COVID-19 in the United States (U.S.). The President appointed the Vice President to lead the USG effort with the Department of Health and Human Services (HHS) serving as the Lead Federal Agency (LFA) consistent with the Pandemic and All- Hazards Preparedness Act (PAHPA) and Presidential Policy Directive (PPD) 44. Under the National Response Framework (NRF) and the Biological Incident Annex (BIA) to the Response and Recovery Federal Interagency Operational Plans (FIOP), other federal agencies will support HHS through the Emergency Support Functions (ESFs). The response will be carried out according to the NRF and in accordance with established departmental authorities and standing policies and procedures. This plan identifies anticipated roles and responsibilities of HHS, other federal departments and agencies, and supporting organizations, to establish lines of authority and avoid overlap and duplication of effort. (This Plan is not publicly available.)

## Paycheck Protection Program and Health Care Enhancement Act (PPP, HCE Act) (2020)

This bill responds to the COVID-19 (i.e., coronavirus disease 2019) outbreak by providing additional funding for small business loans, health care providers, and COVID-19 testing.[164] [134 STAT. 620]

## Post-Katrina Emergency Management Reform Act (PKEMRA) (2006)

This act "provided important provisions, including the key principle that after a major disaster or emergency declaration accelerated Federal assistance could be sent by FEMA, in the absence of a specific request by a State, to save lives and prevent suffering."[165]

The PKEMRA clarified and modified the Homeland Security Act with respect to the organizational structure, authorities, and responsibilities of FEMA and the FEMA Administrator. Enacted as part of the DHS Appropriations Act of 2007, the PKEMRA is intended to address various shortcomings identified in the preparation for and response to Hurricane Katrina. The act enhanced FEMA's responsibilities and its autonomy within DHS. Per PKEMRA, FEMA is to lead and support the nation in a risk-based, comprehensive emergency management system of preparedness, protection, mitigation, response, and recovery. Under the act, the FEMA Administrator reports directly to the Secretary of Homeland Security. FEMA is now a distinct entity within DHS, and the Secretary of Homeland Security can no longer substantially or significantly reduce the authorities, responsibilities, or functions of FEMA—or the capability to perform them—unless authorized by subsequent legislation. The Act further directed the transfer to FEMA of many of the functions of DHS's former Preparedness Directorate.[12] [120.STAT. 1355]

## Presidential Policy Directive 40 (PPD-40) (2016)

Presidential Policy Directive 40 (PPD-40), National Continuity Policy, directs the Secretary of Homeland Security through the Administrator of the Federal Emergency Management Agency (FEMA) to coordinate the implementation, execution, and assessment of continuity activities among executive departments and agencies (D/As). Specifically, the Administrator of FEMA is directed to develop and promulgate Federal Continuity Directives to establish continuity program and planning requirements for executive departments and agencies.[166]

### Federal Continuity Directive 1 (FCD-1) (2017)

This Federal Continuity Directive 1 (FCD-1) implements this requirement by establishing the framework, requirements, and processes to support the development of D/As' continuity programs and by specifying and defining elements of a continuity plan. These required elements include delineation of essential functions; succession to office and delegations of authority; safekeeping of and access to essential records; continuity locations; continuity communications; human resources planning; devolution of essential functions; reconstitution; and program validation through testing, training, and exercises. (TT&E).[21]

## Presidential Policy Directive 44: Enhancing Domestic Incident Response (PPD-44) (2016)

This Presidential Policy Directive (PPD) enhances the ability of the federal government to respond to the domestic incidents by providing for the timely identification of a lead Federal agency, when appropriate, and by ensuring that an appropriate incident management capability is available to support federal domestic incident response. (This PPD is not publicly available.)

## Public Health Service Act (1944)

The PHS Act forms the foundation of HHS' legal authority for responding to public health emergencies. Among other things, it authorizes the HHS Secretary to lead all federal public health and medical response to public health emergencies and incidents covered by the National Response Framework (section 2801);

- to direct the U.S. PHS and other components of the Department to respond to a public health emergency (sections 203A, 311);
- to declare a public health emergency (PHE) and take such actions as may be appropriate to respond to the PHE consistent with existing authorities (section 319);
- to assist states in meeting health emergencies (section 311);
- to control communicable diseases (sections 361-369);
- to maintain the Strategic National Stockpile (319F-2); to provide for the operation of the National Disaster Medical System (section 2812);
- to establish and maintain a Medical Reserve Corps (section 2813);
- and to potentially provide targeted immunity for covered countermeasures to manufacturers, distributors, certain classes of people involved in the administration of a program to deliver covered treatments to patients, and their employees (319F-3).[167]

### Public Health Emergency Declaration under Section 319 of the PHSA (2020)

The emergency declaration gives state, tribal, and local health departments more flexibility to request that HHS authorize them to temporarily reassign state, local, and tribal personnel to respond to 2019-nCoV if their salaries normally are funded in whole or in part by Public Health Service Act programs. These personnel could assist with public health information campaigns and other response activities.[168]

## Public Health and Social Services Emergency Fund (Provider Relief Fund) (2020)

To provide relief to American families, workers, and the heroic healthcare workers on the frontline of this outbreak.[169]

## Robert T. Stafford Disaster Relief and Emergency Assistance Act (1988)

This Act constitutes the statutory authority for most federal disaster response activities, especially as they pertain to FEMA and FEMA programs.[170]

The Stafford Act authorizes the programs and processes by which the federal government provides disaster and emergency assistance to state and local governments, tribal nations, eligible private nonprofit organizations, and individuals affected by a declared major disaster or emergency. The Stafford Act covers all hazards, including natural disasters and terrorist incidents. At the request of the governor of an affected state, or a chief executive of an affected Indian tribe, the President may declare a major disaster or emergency if an incident is beyond the combined response capabilities of the state, tribal, and jurisdictional governments. Among other things, this declaration allows federal assistance to be mobilized and directed in support of state, tribal, and jurisdictional response efforts. Under the Stafford Act (42 U.S.C. §5191(b)), the President can also declare an emergency without a gubernatorial request if primary responsibility for response rests with the federal government because the emergency involves a subject area for which the U.S. exercises exclusive or preeminent responsibility and authority. In addition, in the absence of a specific request, the President may provide accelerated federal assistance and federal support where necessary to save lives, prevent human suffering, or mitigate severe damage, and notify the state of that activity. (FEMA, BIA)

## Sandy Recovery Improvement Act (SRIA) (2013)

The law authorizes several significant changes to the way FEMA may deliver federal disaster assistance to survivors.[171] [127 STAT. 4][172]

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