After-Action Report & Improvement Plan

[2020 Novel CoV] – [20-0265]

Completed: March 29, 2022

Contents

Incident Overview

Incident Name	2020 Novel CoV
Mission #	20-0265
Date & Time	3/29/2022
Scope	WaTech's COVID Response activities
Mission Area(s)	Mitigation, Response, and Recovery
Core Capabilities	- Planning - Intelligence and Information sharing - Operational communications - Operational Coordination - Critical Infrastructure
Objectives	- Aspects of the COVID-19 response that may inform future pandemic and all-hazards responses. - Emergency responses that would benefit the business community and workers during a pandemic. - Standards regarding flexible rent and repayment plans for residential and commercial tenants during a pandemic. - Whether establishing regional emergency management agencies would benefit Washington state emergency response to future pandemics. - Gaps and needs for volunteers to support medical professionals in performing their pandemic emergency response functions within Washington state. - Gaps and needs for tools to measure the scale of an impact caused by a pandemic and tailoring the pandemic response to affected regions based on the scale of the impact in those regions. - Gaps and needs in health care system capacity and case tracking, monitoring, control, isolation and quarantine, and deploying medical supplies and personnel. - Implementing guidelines for school closures during a pandemic.
Threat or Hazard	Continuity of Government
Scenario	N/A
Points of Contact	Wesley Chandler, WaTech – Wesley.Chandler@watech.wa.gov

Executive Summary

In accordance with Sec. 144(9)(c) SB 5092, the Military Department's Emergency Management Division (EMD) and the Washington State Department of Health (DOH) were tasked to co-chair the Pandemic After-Action Review Task Force to conduct a comprehensive after-action review of the statewide pandemic response and recovery.

On Nov. 24, 2021, WaTech received an official joint letter along with other executive cabinet agencies from Secretary Shah (DOH) and General Daugherty (MIL) to produce an illustrative but not exhaustive after-action report. After attending both the Jan. 11 and Feb. 8 virtual listening sessions for agencies, the task for each agency is to highlight their role in supporting the state's response and recovery activities, particularly challenges and recommendations.

COVID-19 forced unprecedented response from WaTech and state agency technology organizations to enable the state workforce to work efficiently, continue to serve the public, and respond to the unique COVID-related digital challenges. Some of this involved taking existing technology and applying it in new ways, accelerating the implementation of innovative technology solutions such as chatbots to help meet increased demand for services while strongly considering the needs of Washington residents.

The information provided in this After-Action Report was compiled through WaTech pandemic situation reports, the FY20-21 IT Biennial Report, internal news publications on agency COVID accomplishments, and interviews with assistant directors and their subordinates. This report was reviewed by WaTech's executive team and approved by the agency director and deputy director of Administrative Services, who oversees WaTech's emergency management and preparedness.

WaTech Activities

Emergency Support Function Mobilization

On Feb. 27, 2020, the WaTech Emergency Management & Preparedness (EMP) team was summoned to the State Emergency Management Division (EMD) building to assist in the development of the state's nonpharmaceutical interventions (NPIs), forecast and provide feedback on potential impacts, and develop mitigations for state government, its residents and its services. These NPIs were later provided to the governor to prepare the first round of response efforts to curb further spread of the COVID virus.

After development of the NPIs, EMP worked with our internal accounting team to procure emergency supplemental provisions (cots, blankets, surgical/cloth masks, food, etc.) for the State Data Center (SDC). These supplemental provisions were intended to ensure 24/7 operational readiness support within the SDC, in case the supply chain further degraded, and it became necessary to quarantine within the facility for a long duration. While these provisions went largely unused, they did improve employee morale for those workers who did not have the option to telework during the worst days of the pandemic knowing that if they were stuck there would be supplies to keep them safe and fed. An added benefit is that this supply of provisions expedited alignment with emergency management best practices for critical infrastructure sites.

Mitigation of Supply Chain Constraints

For most of 2020, Washington state struggled with supply chain constraints. To ease this burden following Gov. Inslee's State of Emergency Proclamation, the Department of Enterprise Services (DES) responded by issuing a COVID-19 Purchase Exception providing an exemption to competitive solicitation laws and policies. While WaTech was uniquely positioned under its own exemption (RCW 39.26.100) to continue its emergency procurement activities to support continuity of government and enhance service delivery during COVID, other state agencies continued to rely on the DES exemption, which impacted planning as it was uncertain if purchase exceptions would continue as they approached the expiration date. This could be simplified in the future by anchoring purchasing exemptions in the beginning to emergency proclamations, tethering them to the state's need rather than static expiration dates that require periodic reassessment and potential slowdowns in agency planning.

During this time, WaTech Customer Account Managers observed in their conversations with state partners and customers that in addition to pervasive supply chain constraints, state agency service and procurement fulfillment was still being met on a first-come, first-serve basis. This meant state agency requests during the pandemic were being triaged largely as regular business and contending with other non-government entities for service. Corrective actions may mitigate this risk going forward by ensuring agency essential services that rely on private sector support include language within their contracts for "Emergency Provisions" or "most favored nations/customers" clause to prioritize the continuity of government.

In April 2020, WaTech embarked on a project to create a tracking solution to approve and triage offers from private sector technology organizations to state agencies requiring their assistance. The nature of the project was to identify private sector outreach opportunities to state government (i.e. server support, website development, VPN solutions, etc.) during the height of the pandemic as part of the public-private partnership initiative. WaTech kicked off the project without a project manager, business or executive sponsor being identified, which considerably impacted the project's success. This effort started with

leveraging the Formstack tool used by WaTech's Web Services team, which was soon abandoned due to resource capacity challenges before transitioning to WaTech's Agency Technology Services (ATS) team. ATS attempted to build on the work started by the Web Services Team, but was hindered by several challenges that threatened its success, including:

- Lack of formal stakeholder engagement and decision-making authority.
- Lack of project direction and clarity regarding the business need.
- Disengagement of third-party business partnerships that were essential for project success.

Microsoft, a key business partner supporting the effort, initially agreed to provide knowledge-worker expertise such as coding and configuration support for the chosen platform (MS Dynamics). Microsoft later withdrew this level of support essential to the success of the project and instead provided only guidance for ATS. Due to receiving decreased levels of support with our external partner and having neither the necessary training nor experience in MS Dynamics development, the project was ultimately abandoned after producing a prototype that was no longer needed.

State Guidance and Human Resources Support

WaTech's Human Resources Team has been an invaluable resource these past two years, ensuring the most pertinent information was available and expeditiously disseminated to leadership and employees. They were able to meet the needs of the agency sufficiently to ensure WaTech remained in compliance with safety and reporting rules during the height of the pandemic.

From Feb. 23 to March 1 of 2022, WaTech conducted interviews with assistant directors and their direct reports to collect feedback about communications regarding COVID-related guidance. The feedback initially indicated they received late or insufficient information from WaTech HR. After further analysis it was discovered that WaTech HR was very active in OFM State HR subcommittees and regularly provided additional guidance. Furthermore, they reported that OFM State HR feedback sessions were designed to expedite the development of guidance and standards for state workers, but the six to eight subcommittees and steering groups established either never met or met only sporadically, resulting in months of delay on actionable guidance.

The result was WaTech employees felt the information they needed to plan their employment decisions around the COVID vaccination mandate was late, resulting in compounded challenges, last-minute decisions with healthcare providers and a negative impact on morale.

Another factor contributing to employee feedback was WaTech's heavy reliance on timely responses from the Attorney General's Office. Due to the broad, sweeping guidance issued by OFM's State HR, the AG's office had to interpret many case-by-case issues that were left unaddressed by OFM's broader guidance. The general feeling by WaTech HR was that both the Attorney General's Office and OFM State HR, although their efforts were incredible, they were insufficiently staffed to turnaround the actionable guidance needed to process and follow up on employees' concerns, particularly union issues as expeditiously as employees expected.

Expansion of VPN to Sustain Continuity of Government

Washington was not resourced to support 100% of state employees teleworking every day. WaTech served a crucial role in the state response to the pandemic – ensuring that agencies' personnel could pivot and work remotely and as securely as possible. Main priorities included keeping the state's network

in full operation, increasing capacity for connectivity through VPN and telephony services, and building security around the state's unemployment insurance portal.

As early as January-February 2020 discussions on capacity increases for user VPN were well underway but were unrelated to the pandemic. The emergence of the COVID crisis in March 2020 forced the state to reassess its strategy from decommissioning and renewing our existing VPN equipment to upgrading and ramping up our existing deployment. Prior to the pandemic, WaTech's user VPN environment could support a maximum of 8,000 concurrent connections (unique VPN users). To support the dramatic shift in customer demand, WaTech tripled the capacity of users that leveraged the service, worked with internet service providers to mitigate broadband limitations resulting from the influx of mass teleworkers taxing private providers, and leveraged private partnerships to resolve capacity challenges. Additionally, the state CIO froze the billing for state agencies through July 2020 to provide some financial relief.

VPN equipment capacity challenges were finally resolved after two phases of procurement. The first in April, which allowed up to 20,000 concurrent connections, and the final changes were implemented in May 2020. These expedited incremental upgrades made it possible for WaTech to support a maximum of 40,000 concurrent connections, however, even at the peak of the pandemic connections never exceeded 32,000. The daily average for 2021 varied between 26,000 and 28,000 concurrent connections.

Application Delivery Management experts interviewed for this AAR commented that the challenges that persist can be alleviated if the state reviews which applications and tools truly require a secure VPN connection and consider exploring other options for accessing less-than-critical applications. Additionally, while the need to ramp up VPN capacity was unavoidable, the time it took to meet the demand could have been shortened dramatically, had the state shifted away from the current physical equipment procurement model and embraced virtual appliances that leverage cloud resources instead.

Geospatial Intelligence Gathering and Dashboard Development

Geospatial information continues to be crucial in managing the COVID response and recovery effort, now and even more so in the early stages of the pandemic. Maps and applications were created in real-time to adjust to information needs. This included working with epidemiologists to map the spread of COVID-19; mapping the locations of public Wi-Fi access for people working remotely; mapping locations of childcare for first responders; and identifying supplies of personal protective equipment.

From March to Sept 2020 WaTech's Geospatial Office collaborated with the State Emergency Operations Center (SEOC) and several state agencies to develop more than 50 maps, 52 applications and 75 data sets to support emergency management operations and response. Applications included mapping locations of publicly available Wi-Fi sites to support telemedicine, remote work and distance learning, and locations of food banks and childcare services for essential workers. WaTech's State GIS Coordinator worked with their state counterparts to convert DOH statistical information to an easy-to-view geographical format with nearly real-time COVID-19 data, displayed by county. The team also assisted the Department of Military with the collection and display of other data critical to the state's response and became an integral part of the Emergency Operations Center team at Camp Murray.

The State Geospatial Office described the following challenges and opportunities for improvement. While assembling critical resources and personnel went well, it was apparent that the overall effort lacked a central strategy and was chaotic to manage. It wasn't always known who the data owner was, so a request could be made; once a data owner was identified there was confusion as to who was requesting the data; and finally once the data was received it was almost always in a format that was unusable and

required heavy reformatting and manipulation to make the data useful. To mitigate these issues in future crises, the State Geospatial Office recommends formally designating an individual with a background in data analysis to establish the strategy for gathering data, protecting privacy, defining data elements for incoming requests and prepping data sets to ensure they are in a format suitable for use.

Joint Information and Web Services

WaTech's Web Services Team rapidly designed and launched coronavirus.wa.gov, which serves as the state's central clearinghouse for information through the Joint Information Center (JIC) at Camp Murray. The site, which received 2 million visits during the first month, is the central resource for all Washington state information about the COVID-19 pandemic. The site was launched within one week of the JIC being activated and requesting the site. The Web Services team later partnered with a local user-centered design firm and the JIC to redesign and reimagine the site for long-term sustainability.

The Web Services team also developed several web forms for collection of COVID-related data for the JIC and SEOC. Those webforms then evolved into a permanent, custom, case management system where anonymous users can report COVID-19 violations (compliance.coronavirus.wa.gov). This custom case management system is used by representatives from LNI, Commerce, DSHS, HCA and other agencies to manage violation reports and document case actions and investigations.

Vaccination Lottery Incentivization Program

WaTech's Agency Technology Services and Web Services Teams started collaborating in August of 2021 with WA State Lottery (LOT), MIL, and DOH to create a web form tool to make it easier to aggregate and collect information from the public and military employees. Some of the primary challenges were where the requirements were fluid due to the access and security around medical records. The result of WaTech's involvement was a 24% increase in vaccination rates statewide. The success of the project was partly due to having high level of motivation and attention from the Governor's Office to keep activities flowing at a fast pace, the positive support and attitude of collaborators, and the ability to quickly pivot and make decisions, which was vital with a limited number of decision makers.

Acceleration of the Adoption of the Enterprise Collaboration Platform to Support Remote Work

The pandemic dramatically accelerated agency adoption of Microsoft 365 (M365) in the Enterprise Shared Tenant to improve identity management, security, access to cloud resources and enable collaboration.

Several agencies submitted Decision Package requests to fund core M365 licensing investments. Because each agency had its own enterprise agreement, they received licenses at varying rates. An enterprise approach was needed to get the best value for the state and enhance the security posture.

WaTech, the Department of Enterprise Services (DES) and the Office of Financial Management (OFM) pursued an enterprise approach to M365 licensing at the G5 licensing level. In December 2020, the state consolidated 44 individual agency agreements with Microsoft into a single enterprise agreement to fund these base-level services. Work was done with Microsoft and OFM, in consultation with DES to enhance the master agreement.

The mandatory shift to teleworking of state employees created an immediate need to onboard state agencies as quickly as possible. The state's central services provider, WaTech, onboarded more than 60

agencies and 83,000 users over the span of 60 days. The move also included the use of multi-factor authentication (MFA) to increase security for additional state teleworkers.

WaTech continues to work with agencies for onboarding. There were considerable challenges with the nearly overnight spike in demand for these services due to the pandemic that could have been mitigated had agencies been able to comply with deadlines. Prior to the pandemic, policies were in place requiring state agencies to join the enterprise shared tenant with deadlines for compliance, but there were neither enforcement nor repercussions, so adoption was slow.

Small Agency Support

Many small agencies and commissions within Washington state do not have the technical staff to manage and administer technology needs to meet business requirements. WaTech established and manages a support model that allows small agencies to focus on their primary mission with the confidence their technical needs are being met. These smaller agencies were in a particularly precarious position since they had more desktop workstations than laptops, making it difficult to be remote during the pandemic; this led WaTech to standardize workstations with laptops rather than desktops, enabling users to be mobile for situations such as the pandemic.

Performance and Corrective Actions

Core Capability	Performance	Identified Area of Improvement	Recommended Corrective Action
Planning	☒Some Challenges ☐Major Challenges ☐Unable to Perform	• Emergency SDC provisions went largely unused and were an emergency expense and therefore not budgeted for.	1. Improve logistical calculations to minimize the waste from perishables. 2. Budget this as an ongoing effort into our operational budget accounting for lifecycle of supplies.
Planning	☐Some Challenges ☒Major Challenges ☐Unable to Perform	• State agency procurements and service requests relied largely on contracts reflecting "business as usual" during times of supply chain constraints.	3. Require "Emergency Provisions" and/or "most favored nation/customer" clause in contracts related to continuity of government and other essential services.
Operational Communications	☒Some Challenges ☐Major Challenges ☐Unable to Perform	• Six to eight State HR subcommittees and steering groups were established by OFM State HR, but either never convened or convened only sporadically, resulting in a delay of actionable guidance by months resulting in declining employee morale.	4. Fund sufficient staffing for OFM State HR and Attorney General's Office to enable an expedited turnaround for state guidance development.
Operational Coordination	☐Some Challenges ☐Major Challenges ☒Unable to Perform	• WaTech tracking project for approving offers from private sector failed.	5. Ensure the application of standard project management methodology (identified sponsors, business owner, stakeholders, develop a RACI, steering committee, etc.) is applied even during times of crisis to maximize the success of more complex activities. 6. Ensure adequate training and resources are in place for state personnel to sustain the

			deliverables from projects that originated as public-private partnership initiatives.
Core Capability	**Performance**	**Identified Area of Improvement**	**Recommended Corrective Action**
Operational Coordination	☒Some Challenges ☐Major Challenges ☐Unable to Perform	• Coronavirus.wa.gov was developed with a very short turnaround time, Due to revolving staff at the JIC, recurring training of new staff was required, and requirements continually changed for the site. A central, modern website to house this type of information when the need arises (e.g. Access.wa.gov) was lacking.	7. With the reimagining of Access.wa.gov (which is currently in progress), the state will have an improved central website that can accommodate emergency- and pandemic-related information in the future, without the need for a full website build.
Operational Coordination	☒Some Challenges ☐Major Challenges ☐Unable to Perform	• Regarding web forms for JIC/SEOC and compliance.coronavirus.wa.gov site - Constantly changing requirements caused constant changes to the system. Quick turnaround time on initial development of a very complex system, priority requests that bumped other work, no direct funding (was partially billed under our contract with OFM/GOV web support).	8. Ensure that there are good requirements gathering even in an agile development environment to prevent constant changing of forms and the web forms.
Operational Coordination	☒Some Challenges ☐Major Challenges ☐Unable to Perform	Prior to the pandemic, policies were in place requiring agencies migrate to the enterprise shared tenant with deadlines for compliance, however deadlines passed, and some agencies did not comply leading to a rushed deployment and risk.	9. Stronger enforcement tools and support to drive state compliance with OCIO policy compliance.

Core Capability	Performance	Identified Area of Improvement	Recommended Corrective Action
Critical Infrastructure	☐Some Challenges ☒Major Challenges ☐Unable to Perform	• Even after optimization, VPN capacity usage remains high but has been able to support the remote workforce.	10. Consider reevaluating how state applications are made available to remote workers, and how the VPN solution can be improved to allow the solution to scale for spikes in users and capacity. 11. Shift from leveraging dedicated physical appliances to virtual instances of VPN through the cloud, which could allow for the divestment of current physical equipment and its procurement as provide a more elastic solution that can scale on demand.
Critical Infrastructure	☒Some Challenges ☐Major Challenges ☐Unable to Perform	• Due to increase in teleworkers there is limited bandwidth. As a result, WaTech must manipulate the down traffic and load balance it, due to an increase in utilization by up to 70% at the ISP.	12. Agency Transition to IPv6 and having equipment and devices that are IPv6-enabled or configure their systems to use private IP addresses rather than public addresses. 13. WaTech's current ability to support IPv6 that would enable and support the enterprise.
Operational Communications	☒Some Challenges ☐Major Challenges ☐Unable to Perform	• Some confusion and slow initial engagement due to the lack of coordination of data requests for Geospatial information.	14. Identifying or assigning a dedicated data analyst or other qualified position to develop strategy for collecting/requesting key data, and QA, and prepare it for use.

Promulgation and Signatories

This document is approved for implementation by the following authorities as of March, 29, 2022:

William S. Kehoe
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William Kehoe
Director & State CIO

Wendi Gunther
_____

Wendi Gunther
Deputy Director for Administrative Services

Appendix A: 5 Mission Areas

Prevention

Description: Prevent, avoid, or stop an imminent, threatened, or actual threat.

Protection

Description: Protect our citizens, residents, visitors, and assets against the greatest threats and hazards in a manner that allows our interests, aspirations, and way of life.

Mitigation

Description: Reduce the loss of life and property by lessening the impact of future disasters.

Response

Description: Respond quickly to save lives, protect property and the environment, and meet basic human needs in the aftermath of a catastrophic incident.

Recovery

Description: Recovery through a focus on the timely restoration, strengthening and revitalization of infrastructure, facilities, housing, and sustainable economy, as well as the health, social, cultural, historic and environmental fabric of communities affected by a catastrophic incident.

Appendix B: Core Capabilities

Planning

Mission Areas: All

Description: Conduct a systematic process engaging the whole community as appropriate in the development of executable strategic, operational, and/or tactical-level approaches to meet defined objectives.

Public Information and Warning

Mission Areas: All

Description: Deliver coordinated, prompt, reliable, and actionable information to the whole community through clear, consistent, accessible, and culturally and linguistically appropriate methods to effectively relay information regarding any threat or hazard, as well as the actions being taken and the assistance being made available, as appropriate.

Operational Coordination

Mission Areas: All

Description: Establish and maintain a unified and coordinated operational structure and process that appropriately integrates all critical stakeholders and supports the execution of core capabilities.

Forensics and Attribution

Mission Area: Prevention

Description: Conduct forensic analysis and attribute terrorist acts (including the means and methods of terrorism) to their source, to include forensic analysis as well as attribution for an attack and for the preparation for an attack to prevent initial or follow-on acts and/or swiftly develop counter-options.

Intelligence and Information Sharing

Mission Areas: Prevention, Protection

Description: Provide timely, accurate, and actionable information resulting from the planning, direction, collection, exploitation, processing, analysis, production, dissemination, evaluation, and feedback of available information concerning physical and cyber threats to the United States, its people, property, or interests; the development, proliferation, or use of WMDs; or any other matter bearing on U.S. national or homeland security by local, state, tribal, territorial, federal, and other stakeholders. Information sharing is the ability to exchange intelligence, information, data, or knowledge among government or private sector entities, as appropriate.

Interdiction and Disruption

Mission Areas: Prevention, Protection

Description: Delay, divert, intercept, halt, apprehend, or secure threats and/or hazards.

Screening, Search, and Detection

Mission Areas: Prevention, Protection

Description: Identify, discover, or locate threats and/or hazards through active and passive surveillance and search procedures. This may include the use of systematic examinations and assessments, bio surveillance, sensor technologies, or physical investigation and intelligence.

Access Control and Identity Verification

Mission Area: Protection

Description: Apply and support necessary physical, technological, and cyber measures to control admittance to critical locations and systems.

Cybersecurity

Mission Area: Protection

Description: Protect (and if needed, restore) electronic communications systems, information, and services from damage, unauthorized use, and exploitation.

Physical Protective Measures

Mission Area: Protection

Description: Implement and maintain risk-informed countermeasures, and policies protecting people, borders, structures, materials, products, and systems associated with key operational activities and critical infrastructure sectors.

Risk Management for Protection Programs and Activities

Mission Area: Protection

Description: Identify, assess, and prioritize risks to inform protection activities, countermeasures, and investments.

Supply Chain Integrity and Security

Mission Area: Protection

Description: Strengthen the security and resilience of the supply chain.

Community Resilience

Mission Area: Mitigation

Description: Enable the recognition, understanding, communication of, and planning for risk and empower individuals and communities to make informed risk management decisions necessary to adapt to, withstand, and quickly recover from future incidents.

Long-term Vulnerability Reduction

Mission Area: Mitigation

Description: Build and sustain resilient systems, communities, and critical infrastructure and key resources lifelines to reduce their vulnerability to natural, technological, and human-caused threats and hazards by lessening the likelihood, severity, and duration of the adverse consequences.

Risk and Disaster Resilience Assessment

Mission Area: Mitigation

Description: Assess risk and disaster resilience so that decision makers, responders, and community members can take informed action to reduce their entity's risk and increase their resilience.

Critical Transportation

Mission Area: Response

Description: Provide transportation (including infrastructure access and accessible transportation services) for response priority objectives, including the evacuation of people and animals, and the delivery of vital response personnel, equipment, and services into the affected areas.

Environmental Response / Health and Safety

Mission Area: Response

Description: Conduct appropriate measures to ensure the protection of the health and safety of the public and workers, as well as the environment, from all-hazards in support of responder operations and the affected communities.

Fatality Management Services

Mission Area: Response

Description: Provide fatality management services, including decedent remains recovery and victim identification, working with local, state, tribal, territorial, insular area, and federal authorities to provide mortuary processes, temporary storage or permanent internment solutions, sharing information with mass care services for the purpose of reunifying family members and caregivers with missing persons/remains, and providing counseling to the bereaved.

Fire Management and Suppression

Mission Area: Response

Description: Provide structural, wildland, and specialized firefighting capabilities to manage and suppress fires of all types, kinds, and complexities while protecting the lives, property, and the environment in the affected area.

Infrastructure Systems

Mission Area: Response, Recovery

Description: Stabilize critical infrastructure functions, minimize health and safety threats, and efficiently restore and revitalize systems and services to support a viable, resilient community.

Logistics and Supply Chain Management

Mission Area: Response

Description: Deliver essential commodities, equipment, and services in support of impacted communities and survivors, to include emergency power and fuel support, as well as the coordination of access to community staples. Synchronize logistics capabilities and enable the restoration of impacted supply chains.

Mass Care Services

Mission Area: Response

Description: Provide life-sustaining and human services to the affected population, to include hydration, feeding, sheltering, temporary housing, evacuee support, reunification, and distribution of emergency supplies.

Mass Search-and-Rescue Operations

Mission Area: Response

Description: Deliver traditional and atypical search and rescue capabilities, including personnel, services, animals, and assets to survivors in need, with the goal of saving the greatest number of endangered lives in the shortest time possible.

On-Scene Security and Protection

Mission Area: Response

Description: Ensure a safe and secure environment through law enforcement and related security and protection operations for people and communities located within affected areas and for response personnel engaged in lifesaving and life-sustaining operations.

Operational Communications

Mission Area: Response

Description: Ensure the capacity for timely communications in support of security, situational awareness, and operations by any and all means available, among and between affected communities in the impact area and all response forces.

Public Health, Healthcare, and Emergency Medical Services

Mission Area: Response

Description: Provide lifesaving medical treatment via Emergency Medical Services and related operations and avoid additional disease and injury by providing targeted public health, medical, and behavioral health support, and products to all affected populations.

Situational Assessment

Mission Area: Response

Description: Provide all decision makers with decision-relevant information regarding the nature and extent of the hazard, any cascading effects, and the status of the response.

Economic Recovery

Mission Area: Recovery

Description: Return economic and business activities (including food and agriculture) to a healthy state and develop new business and employment opportunities that result in an economically viable community.

Health and Social Services

Mission Area: Recovery

Description: Restore and improve health and social services capabilities and networks to promote the resilience, independence, health (including behavioral health), and well-being of the whole community.

Housing

Mission Area: Recovery

Description: Implement housing solutions that effectively support the needs of the whole community and contribute to its sustainability and resilience.

Natural and Cultural Resources

Mission Area: Recovery

Description: Protect natural and cultural resources and historic properties through appropriate planning, mitigation, response, and recovery actions to preserve, conserve, rehabilitate, and restore them consistent with post-disaster community priorities and best practices and in compliance with applicable environmental and historic preservation laws and executive orders.

Appendix C: Performance Measures

Performed without Challenges (P)

Performance of this activity did not contribute to additional health and/or safety risks for the public or for emergency workers, and it was conducted in accordance with applicable plans, policies, procedures, regulations, and laws.

Performed with Some Challenges (S)

Performance of this activity did not contribute to additional health and/or safety risks for the public or for emergency workers, and was conducted in accordance with applicable plans, policies, procedures, regulations, and laws. However, opportunities to enhance effectiveness and/or efficiency were identified.

Performed with Major Challenges (M)

Demonstrated performance had a negative impact on the performance of other activities; contributed to additional health and/or safety risks for the public or for emergency workers; and/or was not conducted in accordance with applicable plans, policies, procedures, regulations, and laws.

Unable to be Performed (U)

The targets and critical tasks associated with the core capability were not performed in a manner that achieved the objective(s).