Catastrophic Incident Annex

Record of Changes

Change Number: YR-XXX	Date of Change: MM/YYYY	Change Summary/Sections Affected	Position Name/Initials
22-001	09/2022	Added Introduction section; moved purpose section into Introduction section; added Scope section to Introduction section; various minor additions/changes throughout for clarity; unused definitions removed from Terms and Definitions section; minor grammar corrections.	Catastrophic Planner/SM

Executive Summary

In the first hours or days following a catastrophic disaster, individuals throughout the disaster area will act in decisive, possibly critical ways. Depending on the specific catastrophic incident, communications may be severely impaired or inoperable, and knowledge of how others are responding may be vague, incomplete, or unknown. Pre-incident planning involving specific capabilities, anticipated impacts, and resource management is required to overcome the lack of situational awareness that will follow. This Incident Annex to the Washington State Comprehensive Emergency Management Plan (CEMP) attempts to establish a general understanding of key state objectives and actions among executives, agency staff, elected officials, stakeholders, partners, and responders. This planning will establish the framework for our overall response and coordinate our actions specific to the unique nature of catastrophic incidents.

The extensive impacts that can be experienced during a catastrophic incident will involve elected leaders at all levels of government. The number of personnel and agencies involved in these incident types will require extensive cooperation and coordination to maintain a unity of effort and meet operational objectives in a time sensitive environment. This all-catastrophes incident annex, together with federal, state, Tribal, regional, and local plans, is part of a broad effort to share planning assumptions and considerations, response priorities, roles and responsibilities, essential elements of information, and resource management methodologies about response activities.

This plan is intended to act as a supplement to the use of the CEMP when a disaster occurs whose impacts have greatly impacted, impaired, or otherwise reduced the capabilities and capacities of the state to respond as they would during other incidents. This plan can be used as an overlay to other plans so that actions and responsibilities not normally implemented can be performed until the incident has stabilized to a point where other portions of the CEMP can take effect.

Following a catastrophic incident, it will be necessary to mobilize all or nearly all of state government to act in coordinating and supporting roles to either extend the breadth of their day-to-day responsibilities or to take on new unfamiliar roles to aid and assist the people of Washington in activities which will save and sustain life. This level of coordination will necessitate that Policy Groups standup and will likely require the establishment of Multi Agency Coordination Groups or Unified Command to mobilize an extraordinary amount of resource movement from both within and outside of the state.

The continuous planning efforts surrounding the creation and maintenance of this plan utilize a select number of the National Preparedness Goal's core capabilities which were chosen for

their immediate impacts to life safety and sustainment. These core capabilities, alongside the adoption of FEMA response phases, allow this plan to vertically integrate into federal operations so that coordination can be established during pre-incident planning efforts. This annex, appendices, and attachments have been developed using previous and ongoing planning efforts conducted through the Statewide Catastrophic Incident Planning Team, the Regional Catastrophic Planning Teams, and FEMA Region 10 catastrophic plans.

As an incident becomes stabilized and begins to approach a sustained or long-term response, portions of this plan can scale down to allow for the implementation of the Washington State CEMP all-hazards plan, to also include efforts which transition to recovery and are beyond the scope of this plan.

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Introduction

Purpose

The purpose of the Catastrophic Incident Annex is to establish the framework for disaster command, control, direction, coordination, assignment of responsibilities, order of operations, information requirements, and resource management support to conduct lifesaving operations, stabilize critical infrastructure, and re-establish life sustaining functions. This annex is also intended to act as the bridge for the transition into long-term response and recovery plans.

Scope

Similar to the "All-Hazards" approach, this annex takes an "All-Catastrophes" approach to catastrophic planning by discovering what similarities exist in responses to incidents of such magnitudes, regardless of type. Additionally, catastrophic hazard- and incident-specific appendices have been developed to prioritize activities, tailored to meet the unique needs of incidents identified as possessing catastrophic potential. Incident-specific appendices concern hazards that are tied to known geographic locations and have a level of predictive results (e.g., Cascadia Subduction Zone or Columbia Generating Station). Hazard specific appendices concern incident types that have the potential to occur in various locations and will result in diverse levels of coordination and resource management (e.g., a tsunami only affecting a portion of the coast, a pandemic, or a wildfire).

Hazard-Specific	Incident-Specific
• Tsunami • Earthquake • Wildfire • Volcanic Eruption • Pandemic	• Cascadia Subduction Zone Earthquake and Tsunami • Columbia Generating Station • Grand Coulee Dam Failure

Figure 1 – Comparison of Hazard- and Incident-specific disaster types

Note: While a hazard or incident type may be listed above, plans may not be currently included in this annex. Future development of this annex will address additional disasters that can require the implementation of this plan.

For catastrophic incidents, the emphasis is on a functional approach using a select grouping of the National Preparedness Goals' core capabilities that focus specifically on life safety and sustainment and incident stabilization. In addition to the core capability structure, a phased

approach has been identified that aligns to FEMA Region 10's catastrophic response plan to facilitate better coordination throughout the levels of government involved.

Strategic Goals

The method this annex utilizes to establish and monitor incidents are the Community Lifelines. During a catastrophic incident, stabilizing Community Lifelines is vital and can represent an extraordinarily difficult challenge due to the dependencies that exist across impacted lifelines. Communities cannot meet these challenges solely by scaling up existing plans as capabilities and response capacities have become impacted. Impacts to these lifelines should be used in determining the focus areas that strategic goals will address.

This annex uses Community Lifelines to identify conditions which are indicative of a catastrophic incident and then monitor the ongoing conditions of the incident. During a catastrophic incident, stabilizing Community Lifelines is vital and challenging due to the dependencies that exist across impacted lifelines. Communities cannot meet these challenges solely by scaling up existing plans and response activities due to the catastrophic effects on response capabilities and capacity. Impacts to these lifelines should be used in determining the strategic goals to include during incident action planning.

Figure 2 - FEMA Community Lifelines

Core capabilities provide a means of ensuring a successful response and also identify a clear path to implement a transition to recovery. Making core capabilities and Community Lifelines a focus of incident management and catastrophic incident response provides response organizations and decision makers with a situation overview of the impacted segments of society and provides for targeted approaches to stabilize and re-establish services.

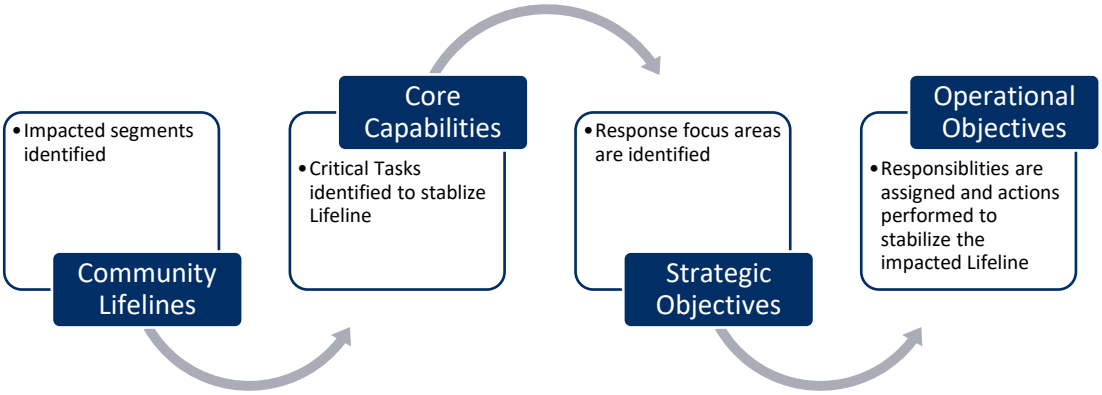

Figure 3 - Implementation of operational planning into incident management

Life Safety

Life safety depends upon the nature, magnitude, and location of the threat or hazard. For catastrophes, life safety-focused priorities can be any circumstance that threatens the life of incident survivors, as well as the safety and security of all response personnel, up to the initiation of recovery strategies. Lifesaving activities and responder safety are always the highest priorities.

Incident Stabilization

Incident stabilization represents the actions taken to prevent an incident from growing and to minimize the potential impacts on life and operations. Stabilization activities occur when immediate threats to life and property are anticipated, resourced, and managed. The provision of basic Community Lifeline services is a key metric and indicator of incident stabilization. Community lifeline stabilization is not the end state for incident response and recovery, but a construct to achieve efficacy and efficiency throughout the disaster response phase.[1]

[1] Community Lifelines represent an effective "means to an end" and represent a singular construct to unite response operations and objectives across multiple partners and stakeholders.

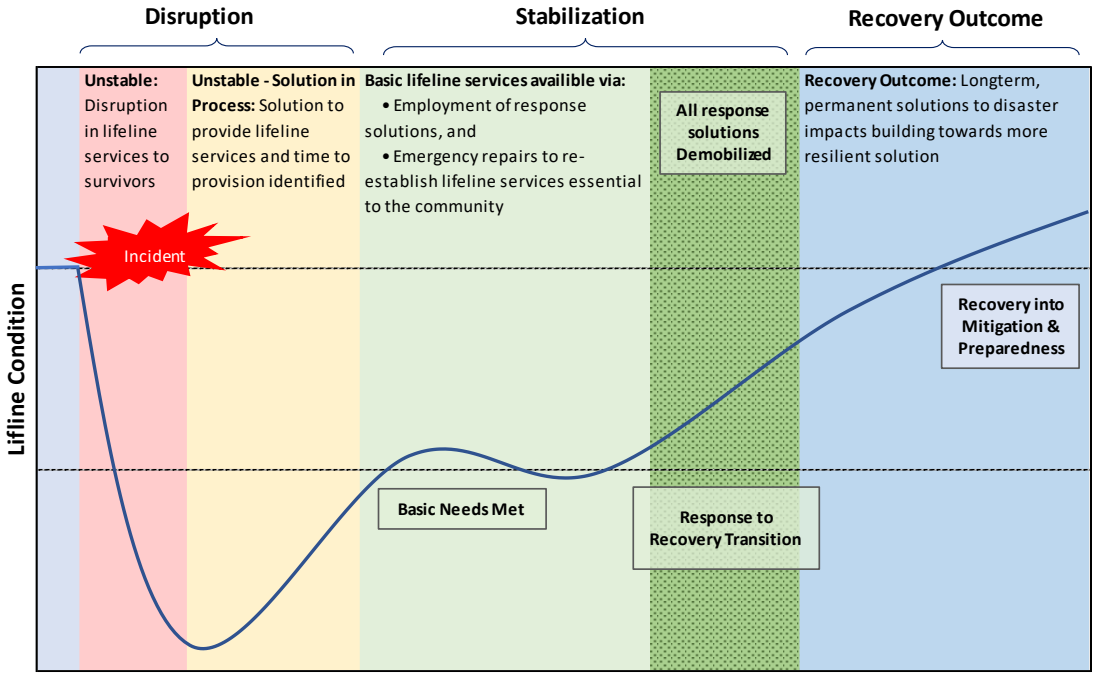

Figure 4 - Community Lifeline Continuum

Exclusion of Property and Environmental Protection

The magnitude of devastation and disruption caused by catastrophic incidents forces decision makers to prioritize resources to manage shortfalls, rather than addressing all needs at once. For this reason, the primary focus of catastrophic incident response will be saving lives and stabilizing the most pressing Community Lifelines. Only when these two priorities are achieved can decision makers broaden their focus to the all-hazards Response Plan of the CEMP for activities that apply to the protection of property and environment.

Authorities and Policies

Revised Code of Washington (RCW)

RCW 38.52: Emergency Management

Defines catastrophic incident, identifies connection of Continuity of Government planning related to catastrophic incidents, and outlines the "director's" responsibility regarding catastrophic incidents.

RCW 68.50.010: Coroner's jurisdiction over remains.

The jurisdiction of bodies of all deceased persons who come to their death suddenly when in apparent good health without medical attendance is vested in the county coroner or medical examiner, which bodies may be removed and placed in the morgue under such rules as are adopted by the coroner or medical examiner.

Washington Administrative Code (WAC)

WAC 118-30-060: Local and Joint Local Organizations for Emergency Management, Plans and Programs
Requires political subdivisions to develop Comprehensive Emergency Management Plans (CEMPs) that includes a hazard analysis listing the natural and "man-made" disasters to which the political subdivision is vulnerable. Every political subdivision in Washington State is vulnerable to catastrophes; therefore, each political subdivision [of Washington State] must incorporate catastrophic incidents into their emergency planning.

Situation Overview

General

Definition of a Catastrophic Incident
The designation of a catastrophic incidents varies based on the overall size and scale of the incident. The National Response Framework (NRF) highlights this by pointing out that a localized flood can be catastrophic to an individual family who lost their home and possessions, a severe tornado can be catastrophic to a town or city, and a hurricane can be catastrophic to a state or territory. At the national level a catastrophic incident is one of such extreme and remarkable severity or magnitude that the Nation's collective capability to manage all response requirements would be overwhelmed, thereby posing potential threats to national security, national economic security, and/or the public health and safety of the Nation.

The Post-Katrina Emergency Management Reform Act (PKEMRA) of 2006 defines the term "catastrophic incident" as "any natural disaster, act of terrorism, or other man-made disaster that results in extraordinary levels of casualties or damage or disruption severely affecting the population (including mass evacuations), infrastructure, environment, economy, national morale, or government functions in an area."

For the purposes and intent of this annex, and all related appendices and attachments, a catastrophic incident aligns with both the NRF's and PKEMRA's definitions.

Characteristics of a Catastrophic Incident
Community Lifelines are those services that enable the continuous operation of critical government and business functions and are essential to human health and safety or economic security. In serious but purely local incidents, interruptions of water service, electric power, and other community lifeline components are typically brief and easy to mitigate. However, severe and widespread incidents can halt lifeline services for many weeks or months. Such disruptions are especially extensive in catastrophic incidents and may result in mass casualties and other cascading consequences. Characteristics of these incidents include:

- Critical infrastructure is severely damaged or inoperable.
- First responders and supporting organizations cannot perform traditional initial incident response activities due to overwhelming losses of personnel, facilities, and/or equipment.
- Local capabilities and mutual aid agreements are exceeded and exhausted.
- All resource types are strained or potentially unavailable.
- Span of control is impractical during the first several operational periods.

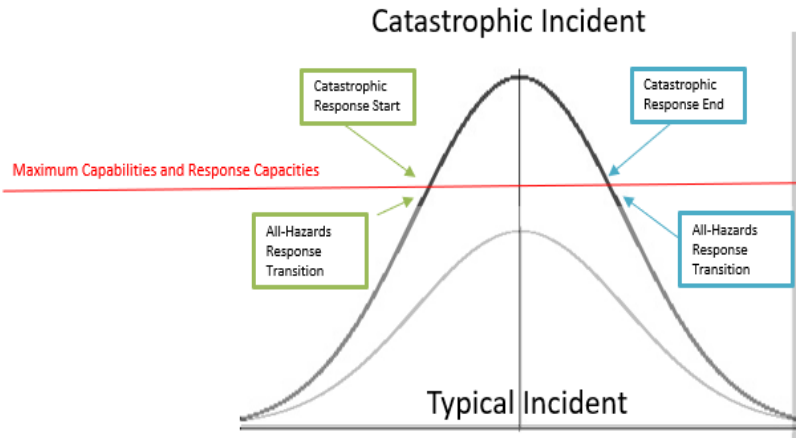

Figure 5 - Incident Thresholds

- Situational awareness takes days to acquire. There is little to no information sharing, and information received is fragmented, conflicting, and/or chaotic.
- Workforce absences will complicate restoration and operations at all critical infrastructure facilities.

Hazard-Specific Disasters

The following descriptions of methodologies and hazards are excerpts from the Washington State Enhanced Mitigation Plan. Only information pertaining to the general description of the hazard and its risk is highlighted in this base document. For more detailed information concerning impacts and concerns, refer to the hazard-specific appendices.

Washington State Natural Hazard Risk Assessment Approach

The Washington State Risk Index, displayed under the *Risk Summary* heading of each hazard, presents an adaptation of the multi-hazard view of risk, combining the natural hazards with socio-economic factors, to create a holistic understanding of the risk faced by communities. This analytical approach is similar to the ongoing initiative by FEMA at the national level to create a National Risk Index (NRI). The NRI incorporates data on social vulnerability, built environment, community resilience and natural hazards to create a baseline of natural hazards risk for the U.S. at the county and census tract level.

Washington State Enhanced Hazard Mitigation Plan

The Washington State Risk Index (WaSRI) modifies the NRI process of variable selection and statistical methods to better reflect local priorities and concerns. The risk index is

based on spatial overlays of the hazard zone with area, population distribution, vulnerable population distribution, built environment, critical infrastructure facilities, State facilities (owned and leased), and first responder facilities (fire stations, law enforcement buildings, and EMS). The proportional exposure along each of these dimensions were combined to create hazard risk indices for each county. The county indices were aggregated to create the Washington State Hazard Risk Index for each of the 10 natural hazards listed earlier.

Risk Index Creation Methodology

Figure 6 - WaSRI Methodology

Tsunami

Hazard Profile

Washington's coastline facing the Pacific Ocean has two different tsunami threats: distant-source tsunamis and local tsunamis. Tsunamis generated as far away as Alaska and Japan can cross the ocean and impact the Washington's coastline (distant source tsunami).

Tsunamis are a series of extremely long waves caused by a large and sudden displacement of water. This is usually the result of an earthquake or volcanic eruption underwater but can also be caused by landslides flowing into bays or occurring underwater. Tsunamis pose a threat to people and property located along Washington State's coastline, Strait of Juan de Fuca, Puget Sound, large lakes and rivers.

In the ocean, typical waves have a wavelength (measures from crest to crest) of about 330 feet. In comparison, tsunami waves have very long wavelengths, typically spanning tens or hundreds of miles and can move up to 600 miles per hour.

These walls of moving water go all the way down to the ocean or lake floor and the entire water column moves within it. This is different than typical waves that tend to move across the surface and leave the depths undisturbed. Out in the ocean, a tsunami wave may only register as a few inches or feet rise in the surface. But as these waves approach shorelines and shallower depths, they grow in size. The underwater topography, configuration of the shoreline, infrastructure and debris work to shape the tsunami waves and impacts.

The strength of the tsunami is determined by the magnitude of the triggering event and the proximity to shore. Powerful tsunamis can travel several miles over low-lying coastal land. The wave causes destruction as it travels across land and as it recedes back into the ocean dragging debris with it. Multiple tsunami waves can strike the coastline for hours to days following the occurrence of an earthquake.

Risk Summary

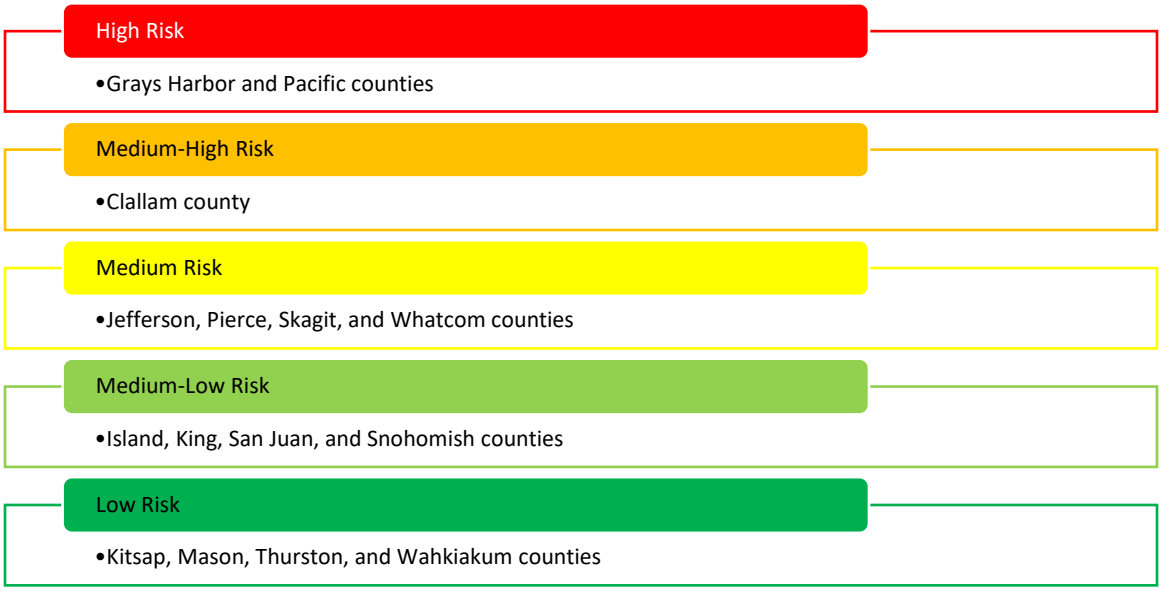

Figure 7 - Tsunami Risk by County

Geological investigations indicate that tsunamis have struck the coast a number of times in the last few hundred years as detailed within the Washington State Enhanced Mitigation Plan.

Earthquake

Hazard Profile

Washington ranks second only to California for earthquake risk in the United States. There have been 15 earthquakes greater than Magnitude 5 since 1870. Washington State experiences 3 types of earthquakes – Cascadia Subduction Zone, Crustal Shallow Zone Earthquakes and Wadati-Benioff Deep Zone Earthquakes. Each type has a different profile that may alter response plans.

According to the Washington State Department of Natural Resources, more than 1,000 earthquakes occur annually in the State. This is an average of approximately 3 per day, though most go unfelt and cause no damage. Larger magnitude earthquakes, which result in damage, occur less frequently in the State. The annual likelihood of a major earthquake is 17 percent. According to the Pacific Northwest Seismic Network, there's a 10-20 percent chance of a Cascadia subduction zone earthquake in the next 50 years.

Risk Summary

Washington has dozens of active faults and fault zones. There are several faults in Washington that could produce catastrophic effects for the state including, but not limited to, the Seattle Fault, Southern Whidbey Island Fault, Darrington-Devils mountain fault zone.

Figure 8 - Earthquake Risk by County

Pandemic

Hazard Profile

A pandemic is an outbreak of a disease that occurs over a wide geographic area and affects an exceptionally high proportion of the population. Although pandemics occur infrequently,

planning and preparing for a pandemic is important to ensure an effective response. Planning for and responding to a pandemic is complex and pandemics can affect everyone in a community.

Pandemics have been recorded as early as 430 BCE in ancient Greece. Since that time pandemics have regularly occurred with an unpredictable frequency. They occur whenever a new infectious agent appears, which can be bacterial or viral. With an estimated number of 50 million or more deaths in 1918 and 1919, The Spanish flu is the deadliest pandemic in modern history. Since then, there have been 4 pandemics severely affecting the United States[2]:

- 1957 H2N2 "Asian Flu" Pandemic
  First reported in coastal cities in the United States in the summer of 1957. The estimated number of deaths was 1.1 million worldwide and 116,000 in the United States.
- 1968 H3N2 "Hong Kong Flu" Pandemic
  First reported in the United States in September 1968. The estimated number of deaths was 1 million worldwide and about 100,000 in the United States. Most excess deaths were in people 65 years and older.
- 2009 H1N1 "Swine Flu" Pandemic
  First reported in the United State in the spring of 2009. The estimated number of deaths worldwide was between 151,700 and 575,400 in the United States was between 8868 and 18,306.
- 2019 SARS-CoV-2 "COVID-19" Pandemic
  COVID-19 is a respiratory disease caused by SARS-CoV-2, a new coronavirus discovered in 2019. The virus is thought to spread mainly from person to person through respiratory droplets produced when an infected person coughs, sneezes, or talks. Some people who are infected may not have symptoms. For people who have symptoms, illness can range from mild to severe. Adults 65 years and older and people of any age with underlying medical conditions are at higher risk for severe illness. At the time of this plan update, COVID-19 is still an active pandemic with new variants of the disease continuing to appear. The estimated number of deaths worldwide is 5.06 million as of the writing of this document, and in the United States there have been approximately

[2] The following pandemics, associated data, and information on past pandemics can be found on the Centers for Disease Control and Prevention's (CDC) website at https://www.cdc.gov/flu/pandemic-resources/basics/past-pandemics.html

753,500 deaths. Washington state has accounted for approximately 8,800 of the total deaths.

Evidence suggests that the likelihood of pandemics has increased over the past century because of increased global travel and integration, urbanization, changes in land use, and greater exploitation of the natural environment (Jones and others 2008; Morse 1995).[3]

Radiological Incident

Hazard Profile

Radiological emergencies are a significant concern due to the effects of radiation on people and the environment. The most likely causes of radiological releases are:

- Accidents involving the transportation or storage of radiological material in sufficient quantity and the location of the incident
- Release of radioactive material from a fixed facility
- Accidents involving nuclear powered military vessels
- An attack involving nuclear weapons

Transportation Accidents

Millions of packages of radioactive materials are transported in the United States annually. Most shipments consist of medical and industrial products. Other shipments include nuclear power plant fuel, nuclear weapons and weapons material, and radioactive waste generated by hospitals, laboratories, nuclear reactors, and military facilities.

Because of the sheer number of radioactive material shipments, transportation accidents are the most common type of incident involving radioactive materials. Despite their frequency, there have been no known serious nuclear radiation exposures resulting from transportation accidents[4]. This is due largely to the nature of the radioactive materials transported and the use of protective packaging commensurate with the degree of potential hazard of the radioactive material contained.

Nuclear Detonations

The end of the cold war and the dissolution of the Soviet Empire has changed, not eliminated, the nuclear threat to the United States. Other countries who previously had the weapons but did not have weapon delivery vehicles able to reach the United States now have the ability to

[3] Disease Control Priorities: Improving Health and Reducing Poverty. 3rd edition. https://www.ncbi.nlm.nih.gov/books/NBK525302/

[4] Information obtained from FEMA's IS-3 Radiological Emergency Management Independent Study Course.

do so. Improvised nuclear devices (IND) or radioactive dispersion devices (RDD) (radioactive material placed inside a conventional explosive device) are becoming increasingly possible.

Volcano

Hazard Profile

According to the USGS, Washington State is of great concern because of its several volcanoes that fall in the very high and high threat groups. The Cascade Range includes 5 very high threat volcanoes in Washington whose explosive behavior and lahar potential can impact both large populations and extensive development on the ground as well as heavily traveled air-traffic corridors.

Volcanic hazards are divided into "near-volcano" and "distant" hazards. Near volcano hazards are pyroclastic flows, lava flows, extremely heavy ash fall, avalanches, and debris flows. These mostly remain within the bounds of the Federal lands that prevent people from living by volcanoes. Volcanic Mudflows (Lahars) and Volcanic Ash (Tephra) are considered distant hazards and are the most likely to cause catastrophic incidents in a volcanic eruption for their widespread effects. Lahars can flow many miles downstream from the volcano, making this the most threatening hazard in the Cascades. Washington is home to five volcanos capable of producing a significant lahar. These include Mount Rainier, Mount Adams, Mount Baker, Glacier Peak and Mount St. Helens.

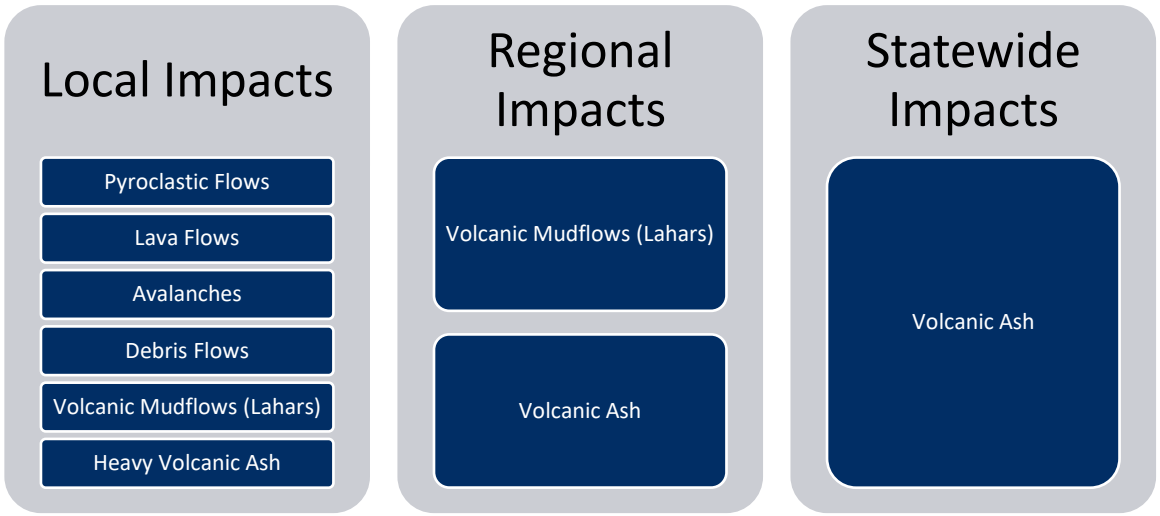

Figure 9 - Hierarchy of Expected Impacts

Mount St. Helens and Glacier peak are the two volcanos in Washington that produce significant ash. Aircraft that fly in the dense network of aviation routes across the Cascade Range carry nearly 200,000 people daily over the Cascade airspace. When it has settled on and near the ground, volcanic ash threatens the health of people and livestock, damages electronics and

machinery, and interrupts power generation, water, transportation systems, and telecommunications.

Not all counties are likely to be impacted by lahars from volcanic eruptions in the state. The lahars are likely to follow the regional topography and flow toward the Puget Sound via regional drainage channels. 13 counties in the state are likely to be directly impacted by volcanic lahars or regional lava flows. These counties include Clark, Cowlitz, Island, King, Klickitat, Lewis, Pierce, Skagit, Skamania, Snohomish, Thurston, Whatcom and Yakima. Of these, Skamania, Clark (impacted by lava flows) and Skagit are at the highest risk from volcanic lahars or regional lava flows, followed by Klickitat, Cowlitz and Pierce Counties. King and Whatcom Counties are at medium risk from volcanic lahars.

Risk Summary

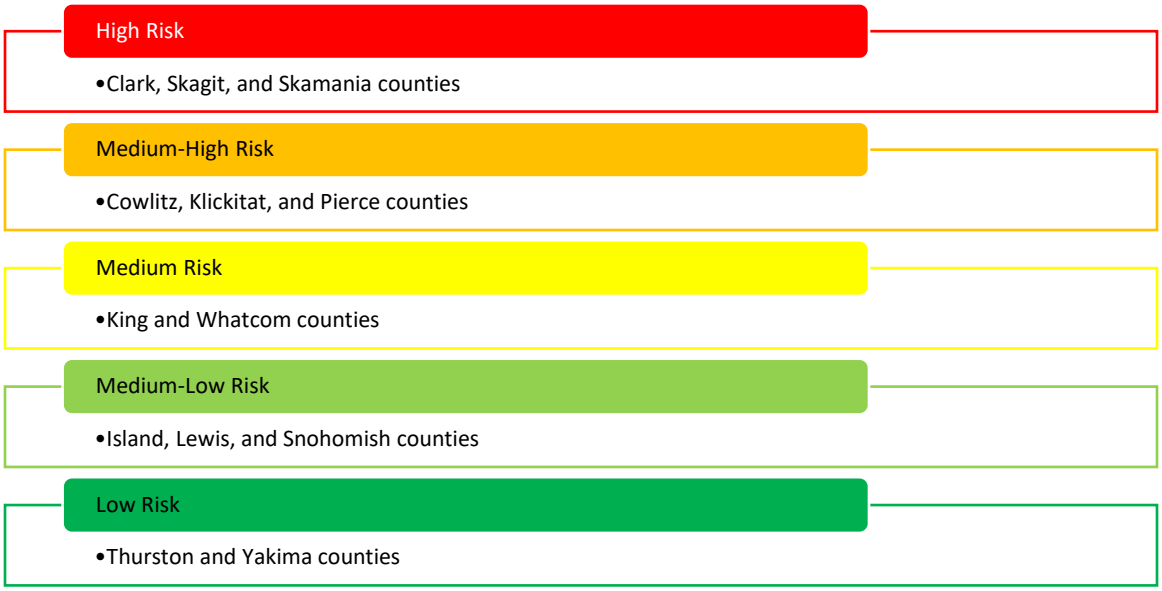

Figure 10 - Volcano Risk Summary by County

Incident-Specific Disasters

The following descriptions of hazard-specific hazards are snapshots from the Washington State Enhanced Mitigation Plan. Only information pertaining to the general description of the hazard and its risk is highlighted in this base document. For more detailed information concerning impacts and concerns, refer to the hazard's specific appendix*.

**As the Catastrophic Incident Annex continues to be developed it will address additional incident-specific disasters in future updates.*

Cascadia Subduction Zone

Hazard Profile

The Cascadia Subduction Zone (CSZ) is Washington State's hazard of greatest concern, representing both the highest risk, and "maximum-of-maximums" threat or hazard facing the State of Washington. The CSZ is an approximately 800-mile "megathrust" fault line stretching from the northern half of Vancouver Island in British Columbia to Cape Mendocino in Northern California; ranging between 50 to 80 miles off the coast of the Pacific Northwest. The CSZ fault is formed by the convergence of the Juan de Fuca Plate and North American Plate. Subduction occurs as one tectonic plate moves under another. The Juan de Fuca Plate is subsiding beneath the North American Plate, thereby creating the CSZ.

A full rupture of the CSZ fault line could generate an earthquake exceeding magnitude 9.0 that lasts for five minutes or longer, as well as subsequent aftershocks and local source tsunamis. Hundreds of thousands of people live on the outer coast near the Strait of Juan de Fuca and Puget Sound. These people are at risk of Cascadia derived tsunamis. In addition to the stable census population, Washington State experiences a massive flux during the summer tourism season with millions of additional people at risk.

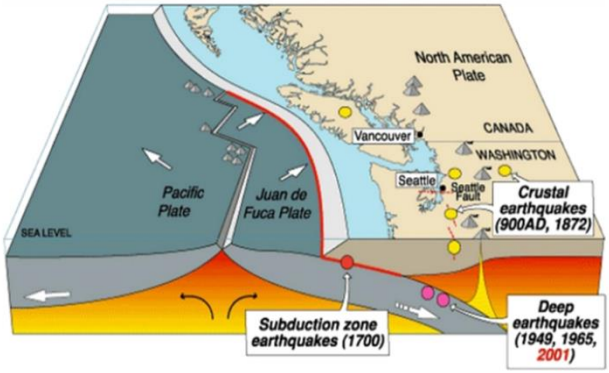

Figure 11 - Cascadia Subduction Zone Illustration

General Planning Assumptions for Catastrophic Incidents

Emergency planning for a catastrophic incident requires planners to make informed assumptions describing the affects and situations following the catastrophe. This Annex utilizes assumptions from a variety of sources that are the direct result from planning efforts centered around catastrophic planning. These assumptions include:

- Federal assistance is immediately needed as the initial response to a catastrophic incident is beyond the capabilities and capacities of the State of Washington to respond.
- There will be a Governor's Proclamation of a State of Emergency and a Presidential Major Disaster Declaration.
- Responding to the impacts of a statewide catastrophic incident becomes the first priority of Washington State government, until transition to response activities within the Comprehensive Emergency Management Plan (CEMP) and recovery begins.
- Regardless of where it is physically located, the Washington State Emergency Operations Center (SEOC) remains the statewide central coordination point for receiving

incident-related information and requesting federal or state resources during catastrophic incidents impacting Washington State.[5]

- Response personnel (to include emergency workers and volunteers), first responders, and critical infrastructure staff living or working within impacted areas will be affected by the incident and their ability to support incident response may be degraded or prevent them from participating in the response due to family emergencies, death, and damage to transportation infrastructure and systems, etc.
- Incidents which damage priority routes will necessitate that these routes be prioritized for assessment, repair, people movement, and supply movement.
- There will be competing demand for limited communications assets.
- Cyber-attacks on electronic information technology (IT) and operational technology (OT) can result in the loss of critical communications with employees, customers, and process controls; the destruction of records and networks; and the theft of valuable utility and customer data.

Concept of Operations

General

This annex identifies five primary core capabilities as critical to the lifesaving and life-sustaining response operations in a catastrophic scenario. These capabilities include:

- Critical Transportation
- Mass Care Services
- Public Health, Healthcare, EMS
- Fatality Management
- Infrastructure Systems: focusing on Information and Communication Technologies (ICT); Energy – to include fuel; Water; and Wastewater.

In addition to the five primary core capabilities, four supporting core capabilities are employed in these plans to identify specific focus areas. These core capabilities are fundamental to all aspects of response and recovery and require integrated emergency planning statewide. These supporting core capabilities include:

- Operational Coordination
- Operational Communications
- Situational Assessment
- Logistics and Supply Chain Management

[5] Incidents which require the devolution of EMD operations and Mission Essential Functions will temporarily shift coordination to other state agencies according to the EMD Continuity of Operations Plan.

Response to a catastrophe is recognized as outside of the capabilities as described in CEMP Response Plan. These capabilities take the perspective of an all-hazards incident in which the state has sufficient resources and capabilities from either internal, contractual, or mutual aid sources to respond to an incident. The CIA operates within an environment where it is assumed that these capabilities are unavailable or insufficient to respond in a timely matter to save and sustain life. Within each of the core capabilities, the state's priorities and expected outcomes are described in the following sections.

Leaderships' Intent[6]

Senior leadership will be primarily focused on those actions and activities which lead to incident stabilization and protect lives. Actions and activities to achieve these operational objectives are viewed through the lens of Community Lifelines. The Community Lifelines are stabilized through the actions and activities that are outlined within a critical task of a core capability.

It is the responsibility of the Unified Coordination Group (UCG) to relay Leaderships' Intent for each goal or objective that they establish for incident response to aid in the development of incident action planning. These statements of intent should also be in alignment with the objectives of catastrophic incident response: life safety, life sustainment, and incident stabilization.

While property protection and environmental protection are not considered as components of a catastrophic response under this plan, these two objectives can be incorporated into operational priorities

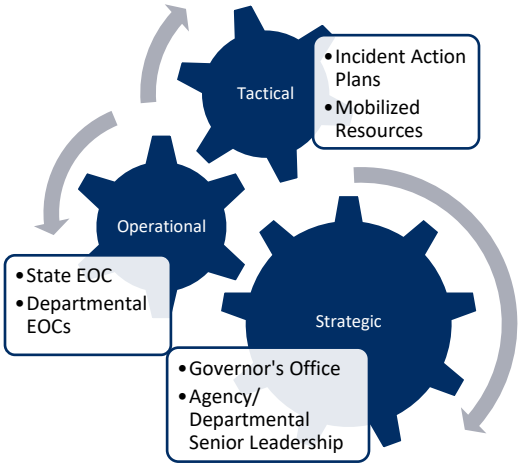

Figure 12 - Response Planning Hierarchy

[6] Leaderships' Intent determines the focus areas of a response and creates strategic goals. These focus areas can then be analyzed to determine informational needs, operational objectives, and the resource requirements to accomplish tactical tasks.

when resource prioritization for incident stabilization and life-saving actions and activities will not be impacted.

Primary Core Capabilities

Critical Transportation[7]

Objective:

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 to the affected area.

Critical Tasks:

1. Establish physical access through appropriate transportation corridors and deliver required resources to save lives and to meet the needs of disaster survivors.
2. Ensure basic human needs are met, stabilize the incident, transition into recovery for an affected area, and restore basic services and community functionality.
3. Clear debris from any route type (i.e., road, rail, airfield, port facility, waterway) to facilitate response operations.

Strategic Goals:

Priority Route Assessment

Prioritized inspection and assessment of state routes which provide connection to state and federal staging area to enable the flow of resources into impacted areas.

Temporary Repair

Remove debris and make necessary emergency repairs to reestablish at least one lane of traffic on state priority routes and establish bypass routes where necessary.

Expected Outcome:

To inspect and then enable access through those routes designated as a priority which facilitate the transportation of vital services and resources needed to save and sustain life after a catastrophic incident. Priority in this effort will be given to the WSDOT "Seismic Lifeline Corridor" and State Priority Routes[8] pre-identified by individual jurisdictions.

[7] A more in depth look on this core capability can be found within Tab A: Critical Transportation.

[8] Priority route identification for both the state and local transportation systems is a continuous process as routes may change over time due to a number of reasons.

Mass Care Services

Objective:

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

Critical Tasks:

1. Request, acquire, move and deliver resources and capabilities to meet the needs of disaster survivors, including individuals with Access and Functional Needs (AFN).

Strategic Goals:

Sheltering, Feeding, Hydration, and Bulk Resource Distribution

State actions taken to support sheltering will take place in the form of fulfilling resource requests, assisting in resource coordination, facilitating the movement of mass care resources, and maintaining situational awareness.

Expected Outcome

To assist in resource coordination to provide life-sustaining and human services after a catastrophic incident. Priority services will focus on those that enable local jurisdictions to perform hydration, feeding, sheltering, and the bulk distribution of emergency supplies.

Public Health, Healthcare, and Emergency Medical Services[9]

Objective:

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.

Critical Tasks:

1. Activate and deploy personnel, supplies, and equipment to support state-level missions, local and tribal needs, and healthcare facilities.[10]
2. Deliver medical countermeasures to exposed populations.
3. Complete triage and initial stabilization of casualties and begin definitive care for those likely to survive their injuries and illnesses.
4. Return medical surge resources to pre-incident levels, complete health assessments, identify recovery processes, and begin mitigation reviews.

[9] Statewide planning through the SCIPT has not yet addressed this Core Capability. The information presented here is general in nature and not specific to Washington state.

[10] Critical Task #1 is not listed as an activity within the guidance used for this plan; however, it is a necessary and essential step in the performance and execution of this core capability.

Strategic Goals:

Public Health

Mobilize and deploy personnel to assess public health and medical needs, including the needs of Access and Functional Needs populations. This function includes the assessment of the health care system/facility infrastructure.

Health Surveillance

Use existing surveillance systems to monitor the health and general medical needs of the population; carry out field studies and investigations; monitor injury and disease patterns and potential disease outbreaks, blood and blood product biovigilance, and blood supply levels.

Medical Surge

Respond appropriately to mass-casualty incidents, whether due to bioterrorism, natural disaster, or other public health emergencies. Health systems must deploy a disaster medical capability that is rapid, flexible, sustainable, integrated, and coordinated, and that can deliver appropriate treatment in the most ethical manner with the resources and capabilities available.

Patient Movement and Tracking[11]

Patient Movement is comprised of the following functions:

- Patient evacuation (to include patient reception and management)
- Medical regulating
- En-route medical care
- Patient tracking
- Re-entry

In the event of a catastrophic incident, local emergency responders will be faced with the challenge of identifying, categorizing, triaging, and tracking large numbers of patients. As the scale of the event increases, so does the need for expanded assistance—from the local, state, regional, and federal levels, including health care coalitions and other health systems. Organizing appropriate transport and matching appropriate patients to the transportation can be challenging. Patient tracking takes a coordinated effort with all involved to identify a system that works in specific jurisdictions.

Behavioral Health Services

Following a disaster, it is common for individuals and families in and around the affected communities to experience distress and anxiety about safety, health, and recovery. Previous

[11] Information on this function was obtained from the Federal Patient Movement NDMS Definitive Care Program Fact Sheet.

exposure to large scale events, such as a severe hurricane or flood, may place residents and responders who experience a new disaster at greater risk for adverse stress reactions.

Veterinary, Medical, and Public Health Services

Assess behavioral status and provide medical care for companion animals (including pets, service animals, and assistance animals), livestock (including food or fiber animals and domesticated equine species), wildlife animals, captive wildlife, zoo animals, and laboratory animals. State actions taken to support this goal will be limited to addressing immediate public health concerns.

Expected Outcome:

Susceptible populations are protected from health threats; morbidity and mortality among survivors is minimized; adequate behavioral health services are provided to responders and victims; all public health and medical needs are met, including for those with access and functional needs; conditions are met to initiate recovery of public health and healthcare systems.

Fatality Management

Objective:

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.

Critical Tasks:

1. Establish and maintain operations to recover a significant number of fatalities over a geographically dispersed area.
2. Mitigate hazards from remains, facilitate care to survivors, and return remains for final disposition.

Strategic Goals:[12]

Tracking of Human Remains

In a mass-fatality incident, medical examiners and coroners play pivotal roles that cannot be transferred to federal entities or expanded to untrained personnel. For example, the issuing of death certificates is not a federal capability or transferable authority.

Care of Human Remains after Death

Medical examiners are also responsible for the accurate and efficient identification of victims. They interact with surviving family members, providing them with information and support—often working through family assistance centers. The medical examiner is also responsible for the rapid return of the decedents' remains to their legal next of kin.

To carry out these responsibilities in a mass-fatality environment, surge support needs to be in place. Two critical needs are the ability to develop a victim manifest in an efficient manner and to communicate with the public quickly after a mass-fatality incident.

Post-mortem care is largely the province of the private sector. Once someone has died and their cause of death has been determined, they move out of the healthcare system and into the realm of funeral directors (under normal conditions this may occur over a week or more). This private industry deals not only with burial or cremation arrangements, but in many cases also provides grief counseling and support for families.

Funeral homes, cemeteries, crematories, and morgues and their suppliers should be included in any kind of priority for logistical or workforce support. These facilities need to be functioning and well supplied, especially if a quarantine situation arises.

Remains may have to be left in place to await the personnel from the medical examiner's office, or they may have to be carefully documented, tagged, tracked, and placed into a central morgue location in the region. Unless communications are completely down, local jurisdictions may be required to get approval from the medical examiner's office prior to moving bodies from the incident location. [13]

[12] Information outlined in Strategic Goals for the Fatality Management core capability referenced from the Institute of Medicine (US) Forum on Medical and Public Health Preparedness for Catastrophic Events. Medical Surge Capacity: Workshop Summary. Washington (DC): National Academies Press (US); 2010. Fatality Management Strategies. Available from: https://www.ncbi.nlm.nih.gov/books/NBK32851/

[13] There is also temporary burial or temporary internment. This is an option for immediate storage where no other method is available or where longer term temporary storage is needed; however, this method should only be used in the most extreme settings, when no other resources are available.

Communication with Families

A family assistance center is not a one-size-fits-all entity, and the scope and location of the incident dictates what types of services and staffing levels are needed and where they can be provided. They have the capacity to provide a large variety of services, including spiritual care, grief support, information hotlines, child-care/play space, and food and drinks.

Expected Outcome:

To activate public health fatality management operations and assist in the collection and dissemination of antemortem data, participate in survivor mental/behavioral health services, participate in fatality processing and storage operations, and assist with the reunification process.

Infrastructure Systems

Objective:

Stabilize critical infrastructure functions, minimize health and safety threats, and efficiently restore and revitalize systems and services.

Energy

Facilitate the strategic restoration of electrical grid and fuel resources to affected population, critical services, and critical infrastructure.

Water

Facilitate the strategic restoration of water supply and distribution systems to affected population, critical services, and critical infrastructure.

Wastewater

Facilitate the strategic restoration of wastewater collection and treatment systems to affected population, critical services, and critical infrastructure.

Information Communications Technology

Facilitate the strategic restoration of information communications technology systems to affected population, critical services, and critical infrastructure.

Critical Tasks:

1. Decrease and stabilize immediate infrastructure threats to the affected population, to include survivors in the heavily damaged zone, nearby communities that may be affected by cascading effects, and mass care support facilities and evacuation processing centers with a focus on life-sustainment and congregate care services.
2. Re-establish critical infrastructure within the affected areas to support ongoing emergency response operations, life sustainment, community functionality, and a transition to recovery.

3. Provide for the clearance, removal, and disposal of debris.

Expected Outcome:

Facilitate the coordinated effort of multiple dependent and interdependent critical infrastructure sectors to stabilize internal operations and system restoration.

Supporting Core Capabilities

Operational Coordination[14]

Objective:

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

Critical Tasks:

1. Mobilize all critical resources and establish command, control, and coordination structures within the affected community, which may no longer be defined by established jurisdictional boundaries as needed throughout the duration of an incident.
2. Enhance and maintain command, control, and coordination structures (C3), consistent with the National Incident Management System (NIMS), to meet basic human needs, stabilize the incident, and facilitate the integration of restoration and recovery activities.

Expected Outcome:

Facilitate a coordinated response that encompasses federal, state, Tribes, local jurisdictions, the private sector and private non-profits through identified strategies and objectives.

Operational Communication

Objective:

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.

Critical Tasks:

1. Ensure the capacity to communicate with both the emergency response community and the affected populations and establish interoperable voice and data communications between the federal, tribal, state, and local levels through primary and redundant communications technology and protocols.
2. Re-establish sufficient communications infrastructure within the affected areas to support ongoing life-sustaining activities, provide basic human needs, and facilitate the integration of recovery activities.

[14] Information on the implementation of a vertically integrated direction, control, and coordination system can be found within Tab F: Operational Coordination.

3. Re-establish critical information networks, including cybersecurity information sharing networks, to inform situational awareness, enable incident response, and support the resilience of key systems.

Strategic Goals:

Responder Communications

Provide and sustain the capabilities for responders to receive and send communications which enable initial and ongoing response operations.

911 and Dispatch

Public Safety Answering Points (PSAPs) serve as an essential node for information flow and coordinating response operations. Restoring this service is a necessary step to meet life safety and incident stabilization goals.

Expected Outcome:

Reestablish stable and reliable wireless, wireline and broadcast communications networks for public information and warning, and first responders.

Situational Assessment[15]

Objective:

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

Critical Tasks:

1. Deliver information sufficient to inform decision making regarding immediate lifesaving and life-sustaining activities, and engage governmental, private, and civic sector resources within and outside of the affected area to meet basic human needs and stabilize the incident.
2. Deliver enhanced information to reinforce ongoing lifesaving and life-sustaining activities, cascading impacts, and engage governmental, private, and civic sector resources within and outside of the affected area to meet basic human needs, stabilize the incident, and facilitate the integration of recovery activities.

Strategic Goals:

Common Operating Picture and Situational Awareness

Community Lifelines are the mechanism that will be used and maintained to track incident impacts, inform incident objectives, and provide senior leadership, government officials, decision makers, and FEMA.

[15] Information on the use of Community Lifelines can be found within Tab G: Situational Assessment.

Expected Outcome:

Support and inform decision making through the organized and timely collection, processing, analysis, and dissemination of situational intelligence.

Logistics and Supply Chain Management[16]

Objective:

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.

Critical Tasks:

1. Mobilize and deliver governmental, nongovernmental, and private sector resources within and outside of the affected area to save lives, sustain lives, meet basic human needs, stabilize the incident, and facilitate the integration of recovery efforts, to include moving and delivering resources and services to meet the needs of disaster survivors.
2. Enhance public and private resource and services support for an affected area.

Strategic Goals:

Resource Management

Resources managed by local, tribal, state, and federal partners to support and ensure effective and efficient response and recovery operations. Resource management provides visibility at all levels of the resource request process, reduces duplication, enhances capabilities, and establishes common terminology for resources.

Movement Control

Manage transportation resources efficiently and effectively utilizing air, land, and waterway to provide logistical support to response and recovery missions.

> Movement Control will be a joint endeavor between the SEOC and FEMA. A Movement Coordination Center (MCC) will be established at a national level to manage flow into and out of the state. A Movement Coordination Group will be established within the SEOC and will receive input from all Essential Support Functions, impacted jurisdictions, and the MCC. The UCG will set priorities and the MCG will manage movement of resources into and out of the impacted area.

[16] Information on the locations and use of Federal and State Staging Areas is found within Tab H: Logistics and Supply Chain Management.

Distribution Management

Manage delivery of resources via nodes operated by government, private and nonprofit partners required for timely and accurate distribution, reallocation, and redistribution to field sites and the general public. Distribution management is required at all levels of government; the system is managed individually yet coordinated through EOC/ECCs at all levels.

Any resource that is committed to the incident in Washington State will be moved from the ISB to a Federal Staging Area (FSA) or to the end user through the CPOD if it is feasible. If movement from the ISB to the CPOD is not feasible then the resource will transfer to the State at a State Staging Area (SSA). The transfer of resources will then be moved to a County Logistical Staging Area or to the local CPOD.

Joint federal and state planning has predetermined the locations listed in the figure below for Incident Support Bases (ISB), Federal Staging Areas (FSA), Aerial Points of Debarkation (APOD), and State Staging Areas (SSA):

Expected Outcome:

Increase the ability to support lifesaving and life-sustaining operations with sustained and well-coordinated supply chain of resources so that the right personnel, equipment, supplies and support are in the right place, at the right time, and in the right quantities, in alignment with current priorities for response and recovery operations.

Phases

Washington State's catastrophic plan aligns with FEMA Region 10's catastrophic response plan through the adoption of FEMA Phases. This approach involves three phases; however, Phase 2 is additionally broken down into three focus areas. Phase 1 is the preparedness-focused phase, while Phase 2 concentrates response and transitional recovery-related activities, leaving Phase 3 to emphasize long term recovery operations. These phases apply to catastrophic incident planning for government entities in FEMA Region 10 and do not extend vertically to the local levels.

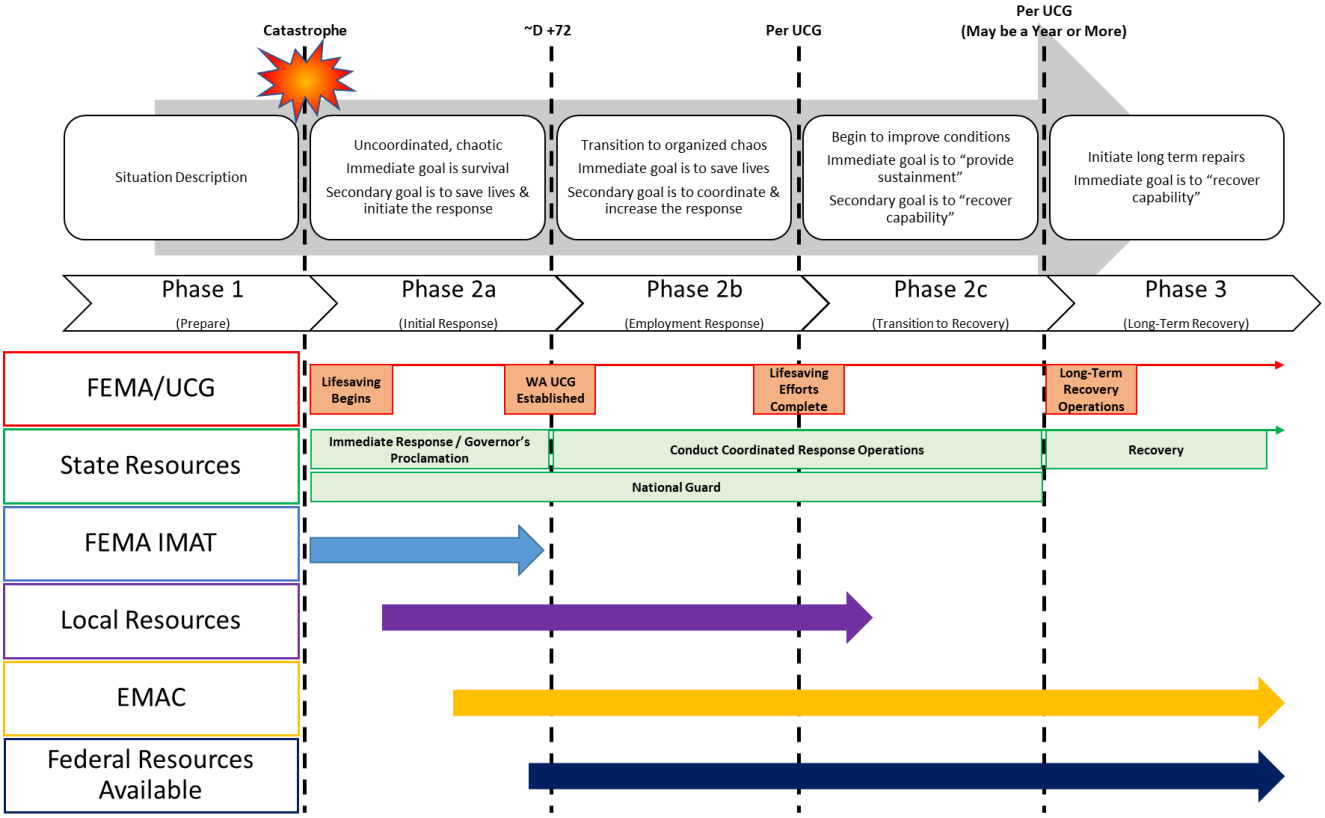

Figure 13 - Catastrophic Phases

Phase 1 (Prepare)

Phase 1 begins pre-incident, when private, nonprofit, local, state, tribal, and federal stakeholders coordinate to prepare for a catastrophic incident. Priorities of effort for this phase include socializing a catastrophic scenario to develop a common operating picture, plus planning, organizing, training, equipping, exercising, evaluating, and implementing corrective actions to prepare for a rapid response. This phase includes all the preparatory actions necessary for response operations once the incident occurs.

Activities

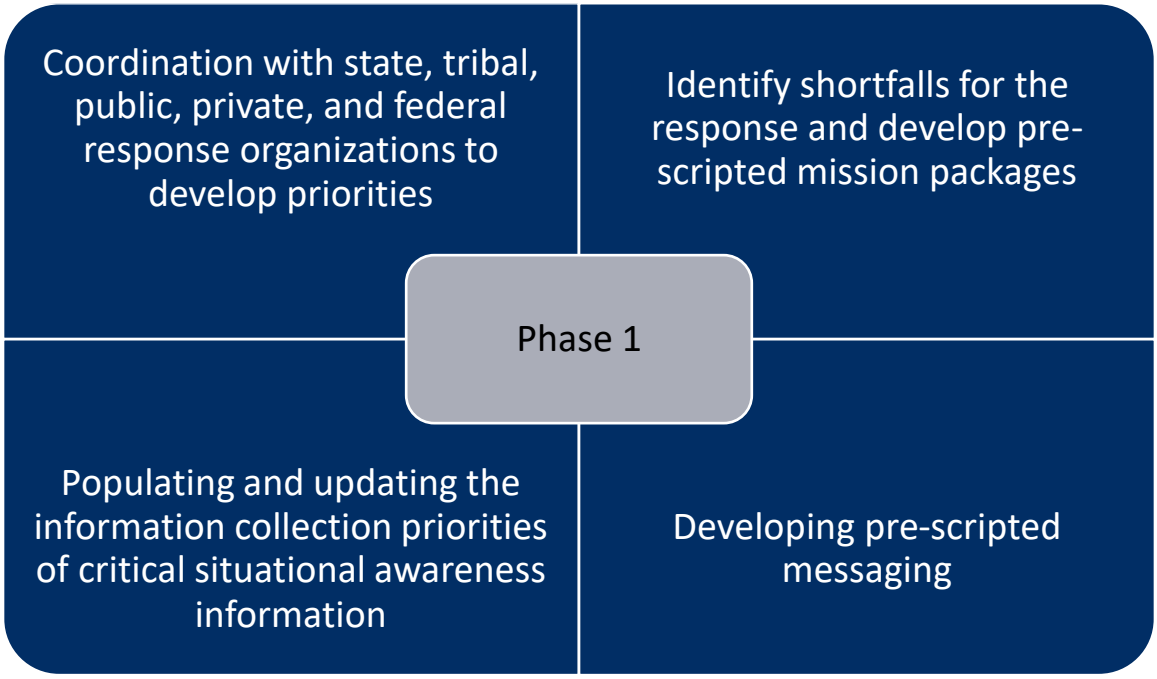

Figure 14 - Phase 1 Activities

Phase 2a (Initial Response)

Phase 2a begins at the time of the incident in conjunction with notification that an incident has occurred. In many cases, the magnitude of the incident itself may initiate the beginning of this phase. Phase 2a ends when the Unified Coordination Group (UCG) in Washington are established. The following traits characterize this phase:

- Attempting to establish coordination and unity of effort
- Focus on personnel accountability and family welfare status
- Incident goals are centered on initiating the response and saving lives

Activities

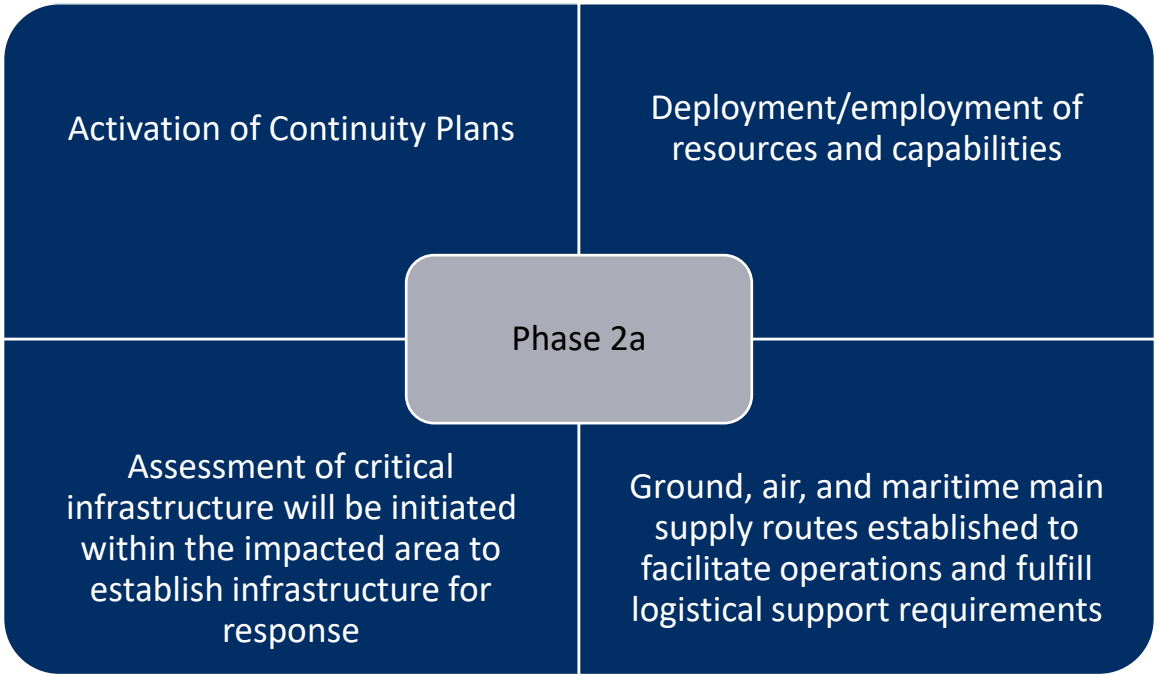

Figure 15 - Phase 2a Activities

Phase 2b (Employment Response)

Phase 2b begins with the establishment of a UCG. Phase 2b ends when lifesaving activities have been completed. The following traits characterize this phase:

- Initial transition into “organized chaos”
- Immediate goal is to save and sustain lives
- Secondary goal is to coordinate and increase the response

Activities

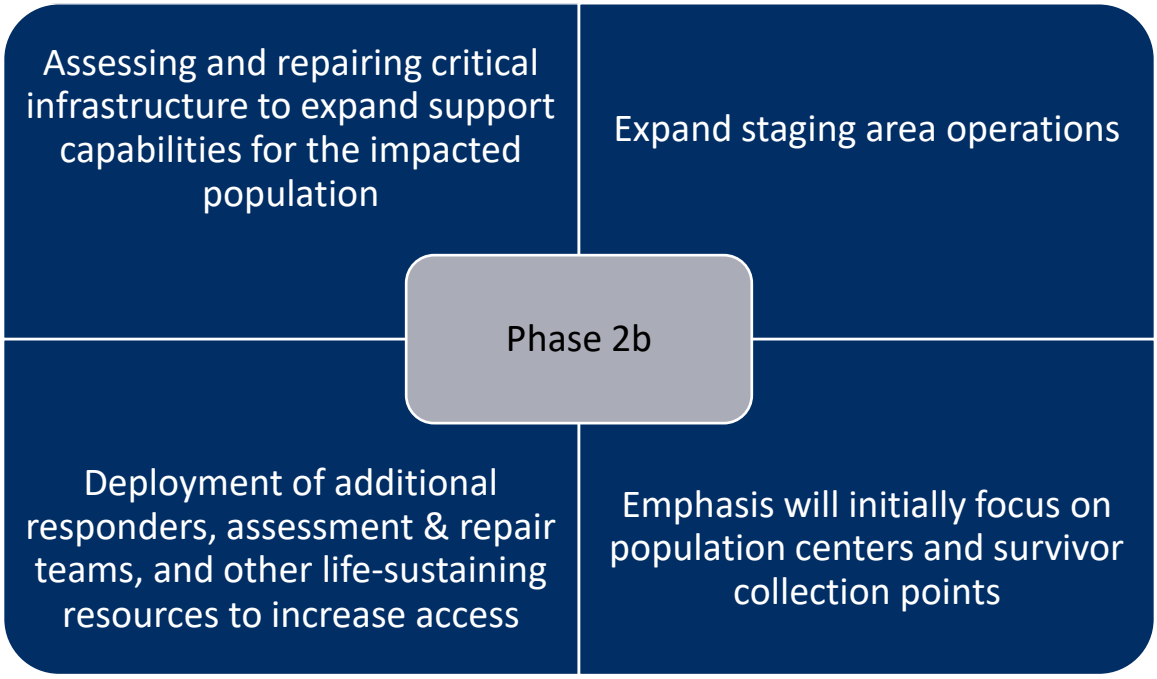

Figure 16 - Phase 2b Activities

Phase 2c (Transition to Recovery)[17]

Phase 2c begins with the completion of lifesaving operations. Essential public services will expand, including the provision of food, water, power, fuel, communications, transportation routes, transportation modes, relocation, and long-term shelter options for those displaced by the incident. In this phase, temporary and permanent restoration efforts will expand, as will the continued stabilization of critical infrastructure. Phase 2c ends when all response operations have been completed and the conditions are set for the transition to long-term recovery. The following traits characterize this phase:

- General improvement of conditions
- Immediate goal is to “provide sustainment”
- Secondary goal is to “recover capability”

[17] Phase 2c marks the first phase in which All-Hazards plans can be transitioned back into as the capabilities and resources begin to become sufficient to continue the response. This may become evident through decreased activation levels and the need to continue ICS staffing at extended and expanded levels.

Activities

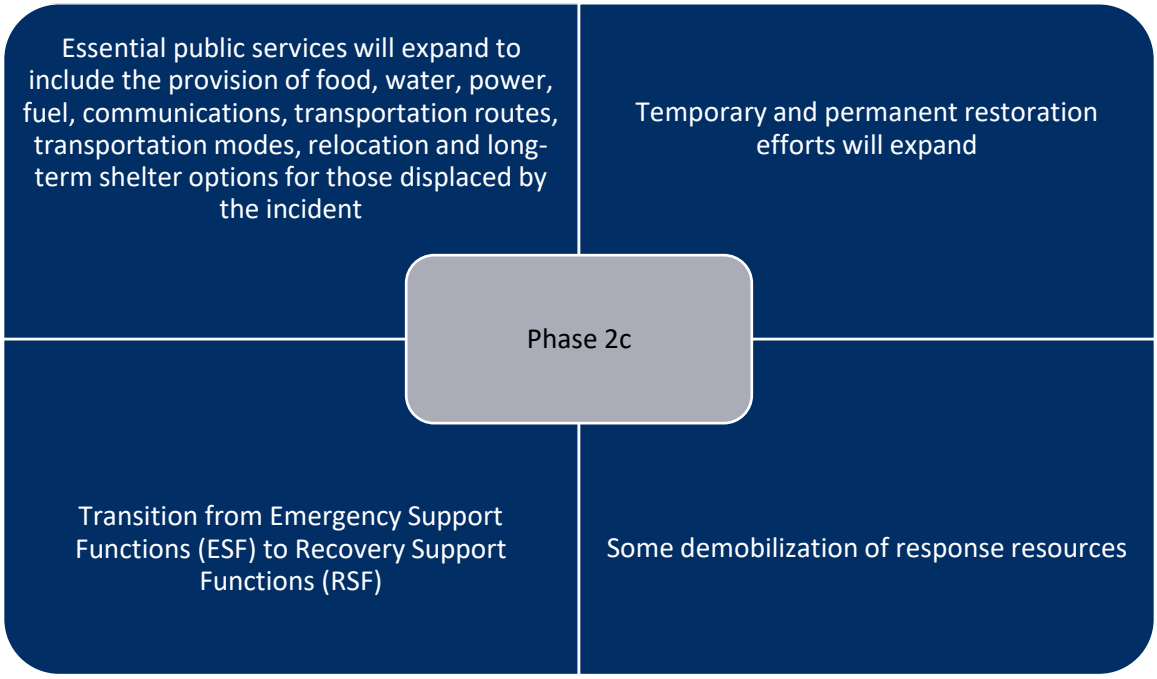

Figure 17 - Phase 2c Activities

Phase 3 (Long-Term Recovery)

Phase 3 begins with support for the private sector and local, state, and tribal jurisdictions in which federal actions are engaged to restore services, continue governmental operations, and promote economic recovery. All lifesaving activities will be completed, and the groundwork will be laid to support long-term recovery by assisting individuals, restoring critical infrastructure and essential governmental and commercial services.

- Initiate long term repairs
- Immediate goal is to “recovery capability”

Activities

This phase was included in this plan to provide continuity for the preceding phases only. Nearly all activities in this phase should consist of those found within All-Hazards plans and the Washington Restoration Framework (WRF).

Organization

Statewide Catastrophic Incident Planning Team (SCIPT)

The mission of the SCIPT is to facilitate collaborative engagement between states, state agencies, tribes, and local jurisdictions, together with the communities they serve, in developing emergency plans to prepare for, respond to, and recover from catastrophic

incidents. The SCIPT supports catastrophic incident planning conducted by, or between, emergency management organizations in Washington State, initiates catastrophic incident planning efforts where presently absent, and provides guidance to all emergency managers in Washington State. SCIPT functions represent those found in Phase 1 activities.

Homeland Security Regions

Due to both the geographic expanse of Washington State, and number of established emergency management organizations, statewide coordination of response and recovery activities following a catastrophe requires a region-based structure. For this structure, the Framework will use the boundaries of the Homeland Security Regions for planning purposes. Operational coordination for these regions is a state government-led effort, wherein no tribal nation or local government would assume any operational responsibility for or on behalf of another tribal nation or local government, respectively.

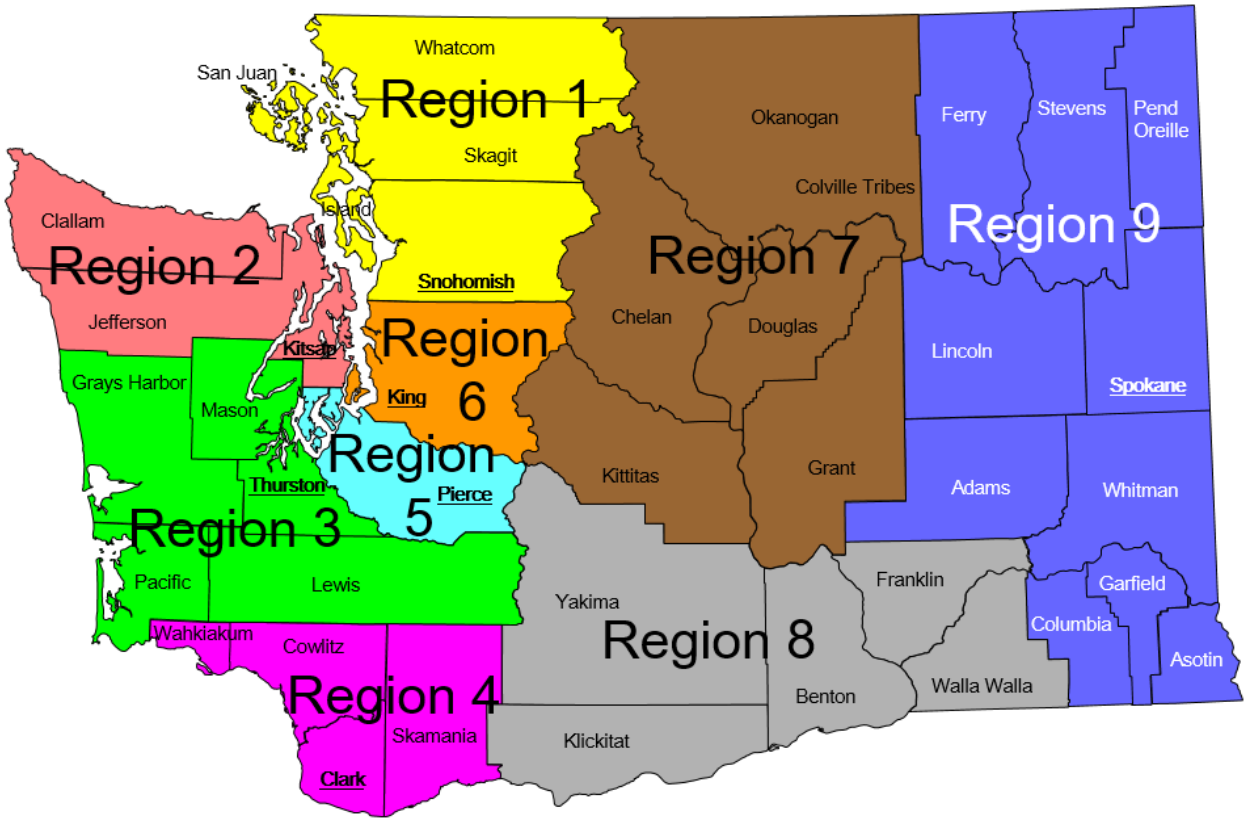

Figure 18: Washington Homeland Security Regions

Unified Coordination Group

Despite the unique and widespread characteristics of a catastrophe, emergency management of a catastrophic incident impacting Washington State follows established national doctrine; that is, overall statewide strategic emergency management coordination responsibility residing with the Unified Coordination Group (UCG). As described in the *National Response Framework*, the membership of the UCG comprises "senior leaders representing state, tribal, and federal interests and, in certain circumstances, local jurisdictions, the private sector, and NGOs. UCG members must have significant jurisdictional responsibility and authority."[18] In the circumstance of a catastrophe affecting Washington State, the UCG membership includes representation from impacted tribal nations and local governments. Furthermore, state and federal partners establish a UCG in every impacted state receiving federal assistance.

Under the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act), once the governor of a state, including the District of Columbia, Puerto Rico, the U.S. Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands, requests federal assistance, the requesting governor appoints a State Coordinating Officer (SCO) to oversee state-level response and recovery efforts.

A Federal Coordinating Officer (FCO), appointed by the President in a Stafford Act declaration, coordinates federal activities in support of the state requesting assistance. The SCO and FCO co-lead the UCG, and the UCG provides leadership within the JFO see figure below for an illustration of the UCG organizational structure within the JFO (NOTE: Consider "Unified Coordination Staff" synonymous with the JFO in this instance).

[18] U.S. Department of Homeland Security. (2019). *National Response Framework, Fourth Edition* (p. 19). Washington, DC: U.S. Government Publishing Office.

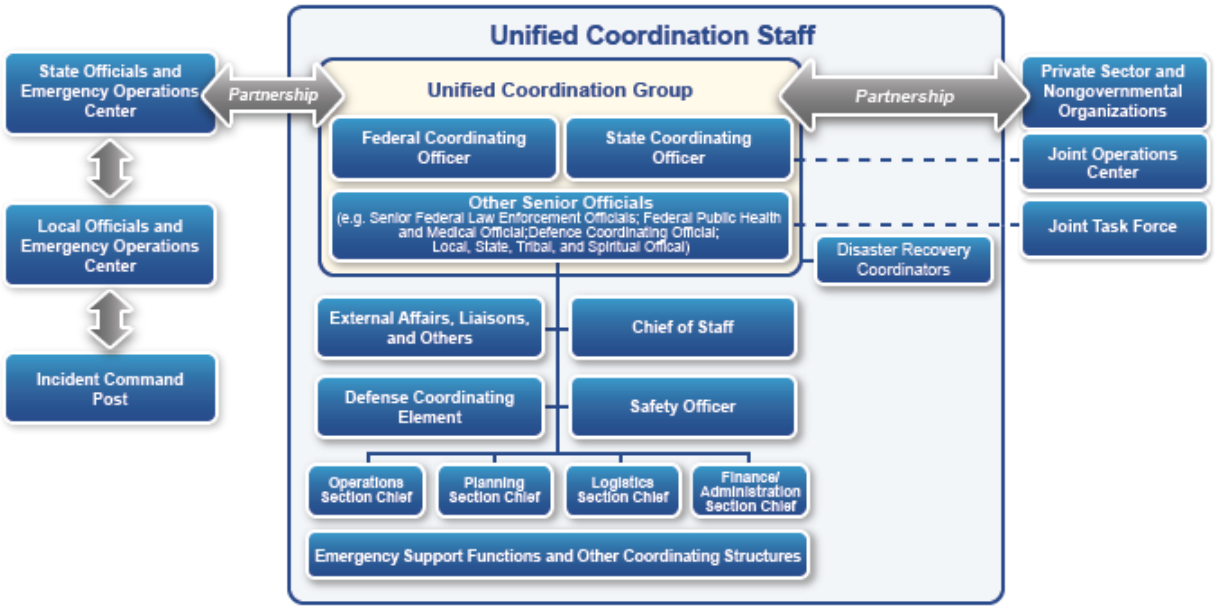

Figure 19: Organization chart titled "Unified Coordination"

Mobilization

Mobilization of response resources following a catastrophe vary depending on the nature and magnitude of the incident. In many cases, the catastrophic incident will be of such severity that it inherently initiates the response itself. For example, the CSZ earthquake will be of such a great magnitude that responders immediately begin mobilizing as soon as it is safe to do so.

State Staging Areas

State Staging Areas are located at various airports across the state and are often co-located with Federal Staging Areas (FSA), Incident Support Bases (ISB), and Aerial Points of Debarkation (APOD). Co-locating staging areas within proximity to federal operations allows for a more rapid transition of resources.

External Resource Branch

The External Resource Branch, part of the SEOC Logistics Section, oversees and coordinates all mutual aid requests, federal requests, procurement or contracting of resources and the tracking of all resources provided.

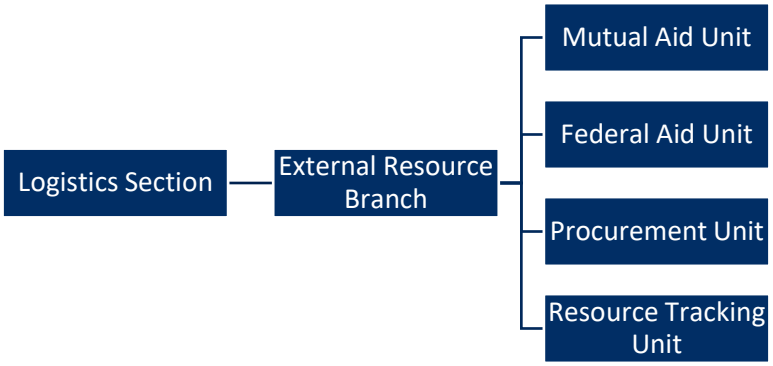

Figure 20 - SEOC External Resource Branch

Structure

Once activated to Level 1 (Full Activation), the SEOC is staffed with the subject matter experts needed to support and [in the instance of a catastrophic incident] direct response and recovery operations. As assisting federal personnel arrive, the SEOC becomes an Initial Operating Facility (IOF). Superseding the IOF is the Joint Field Office (JFO), which may or may not reside at the same physical location as the IOF. The JFO is a temporary facility that provides a central location for coordination of response efforts by the private sector, NGOs, and all levels of government. The personnel that staff the JFO are sometimes called the "Unified Coordinating Staff," and the JFO itself is sometimes referred to as an [or using an] "unified coordinating structure." Once state and federal partners establish a JFO in response to a catastrophic incident, the SEOC remains physically integrated in partnership with the JFO, while maintaining its own organizational structure.

Figure 21 – Catastrophic Organizational Structure

Example Activation Scenarios

There are a number of scenarios based on notice and no-notice incidents and their current impacts that will determine the initial structure of the SEOC activation.

SCENARIO 1: The initial structure of the SEOC will comprise a limited ICS structure due to staff availability. A limited ICS structure will comprise of an SEOC Supervisor and Command and General Staff. If the catastrophic incident is an escalation of already occurring incident with limited to no transportation impacts, then staffing can be easily expanded.

SCENARIO 2: The initial structure of the SEOC will comprise a limited ICS structure due to staff availability. A limited ICS structure will comprise of an SEOC Supervisor and Command and General Staff. If the catastrophic incident is an escalation of already occurring incident with

moderate to significant impacts (bridge failures and interstate/highway damage), then staffing cannot be easily expanded. This will result minimal staffing for 24-48 hours[19].

SCENARIO 3: The incident has not occurred yet, but there is a warning time of several hours before impacts are experienced (e.g., distant-sourced tsunami, some nuclear incidents, etc.).

SCENARIO 4: An incident has already been occurring and is now elevated to a catastrophe based on increased impacts (e.g., wildfire, flooding, pandemic, etc.). Additional staffing can be easily expanded as needed to fill a more robust ICS structure.

SCENARIO 5: Incident impacts prevent the use of the SEOC facilities on Camp Murray and operations must be reconstituted in another location outside of the impacted areas.

Regardless of the incident type, all catastrophic incidents will require the activation of state employees that are not regular participants in emergency management programs to fill the multitude of required positions and provide for a rotation of personnel over multiple operational periods (to include considerations for day and night shifts). To compound this, many experienced emergency management personnel may be required to provide support to their Department Operations Centers (DOCs) to facilitate internal mobilization of resources, accomplish objectives outside of the scope the SEOC activation, and to support their Mission Essential Functions (MEFs).

[19] This is a planning assumption, as the actual recall time of staff for a full activation of SEOC positions has never occurred with an impacted transportation system; however, as staff make contact with the local EOCs within their home areas and as the transportation system recovers enough to enable access, it is assumed that staff will be able to either drive to the SEOC or arrangements can be made to transport staff.

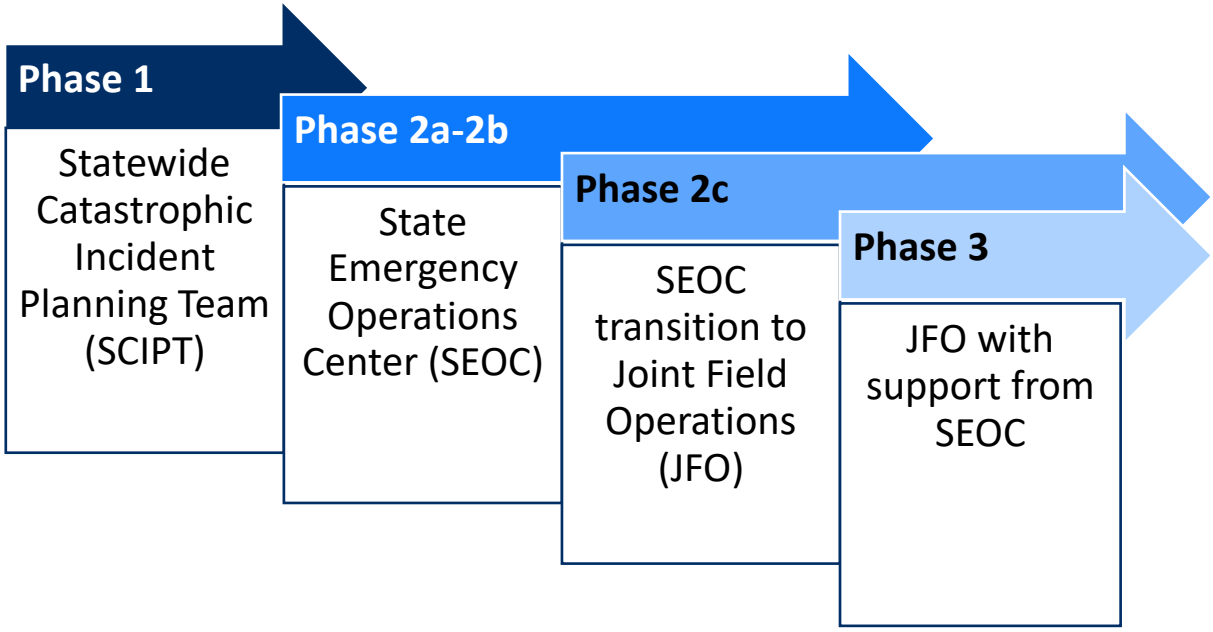

Figure 22 - Organizational Associations by Phase

Direction, Control & Coordination

Policy Group and the Unified Coordination Group

During the initial stages of a catastrophic incident, it will become necessary to establish a mechanisms for senior leadership to provide guidance and direction (Leadership's Intent) for the activities taking place. As the response becomes more organized it will be necessary to move through the various coordination structures to integrate response personnel from across state government and establish unity of effort. Washington EMD maintains the use of a UCG for incident response and a Policy Group who advises them and acts to determine policy guidance and resource allocation and distribution. State emergency operations and structures will integrate into the federal UCG model when it is established, but still maintain the use of the Policy group to advise the state participants within the UCG.

Unified Coordination Group (UCG)

The Unified Coordination Group (UCG) will have oversight and coordination responsibility for actions throughout the State of Washington.

Initial federal operational coordination will be accomplished at the National Response Coordination Center (NRCC). The Regional Response Coordination Center (RRCC) at FEMA Region 10 provides operational support for field-deployed resources to ensure the synchronization of federal response and recovery operations, and to resolve regional resource requirements. The RRCC is responsible for coordinating and maintaining awareness of federal

field activities, including those of the deployed Incident Management Assistance Teams (IMAT). The IMAT then assumes direction and control of the interagency federal response and recovery effort in support of the state requesting federal assistance.

"When catastrophic incidents put a premium on the restoration of complex supply chains (especially for essential products and services needed for response efforts and stabilizing the economy), private sector coordination and assets are vital for public health and safety, the economy, and national security. The private sector can also help government agencies prioritize support missions (e.g., debris removal) to facilitate business and infrastructure response operations." (NRF, 2019).

State Agencies and Departments

Following a catastrophic incident, agencies will first implement their Continuity of Operations Plans to assess their resource impacts, reestablish command and control, and determine the effects on Mission Essential Functions. Before these entities can turn to the task of supporting the SEOC, they will need to reestablish an effective organizational posture. For an effective response to occur following severe impacts it is required that plans are coordinated and implemented at all levels of government.

Information Collection, Analysis, & Dissemination

Information management is a continuous process of intelligence collection, analysis, and dissemination to inform those responsible for decision making. Throughout the process, leadership and stakeholders provide guidance to ensure that information outputs describe situations, provide predictions, or recommend decisions.[20]

Information Collection

Information is collected by core capability for the impacted community lifeline(s) associated with the core capability. Community Lifelines are the most fundamental services in the community that, when stabilized, enable all other aspects of society to function. FEMA developed the Community Lifelines construct to increase effectiveness in disaster operations and better respond to catastrophic incidents by allowing emergency managers to characterize the incident and identify the root causes of priority issue areas and distinguish the highest priorities, and most complex issues, from other incident information. While response processes do not necessarily change, framing the incident around Community Lifelines creates solutions that address root causes and better stabilize the incident impacts.

[20] Additional information on this subject can be found within the FEMA Incident Stabilization Guide, Appendix D: Lifelines Information Management and Planning.

Essential Elements of Information (EEIs)

A baseline list of information should be collected to inform the common operating picture and meet decision making needs. Please refer to each Core Capability's Tab for specific Core Capability to Community Lifeline and EEI for a list of EEIs or see table below for a quick reference tool. Tabs may not include all relevant EEIs, as the impact of a given disaster may require unique information collection needs, and not every incident will impact all of the lifelines' EEIs.

Primary Core Capability	Community Lifeline
Critical Transportation	*Transportation*
Mass Care Services	*Safety and Security*
	Health and Medical
	Food, Water, Sheltering
Public Health, Healthcare, EMS	*Health and Medical*
Fatality Management	*Health and Medical*
Infrastructure Systems	*Safety and Security*
	Food, Water, Sheltering
	Hazardous Material
	Energy

Figure 23 - Abbreviated Primary Core Capability to Community Lifeline Matrix

Information Analysis

The following graphics illustrates the relationship between core capabilities and the ESFs who both provide EEIs and also require information feedback and analysis from the other associated ESFs.

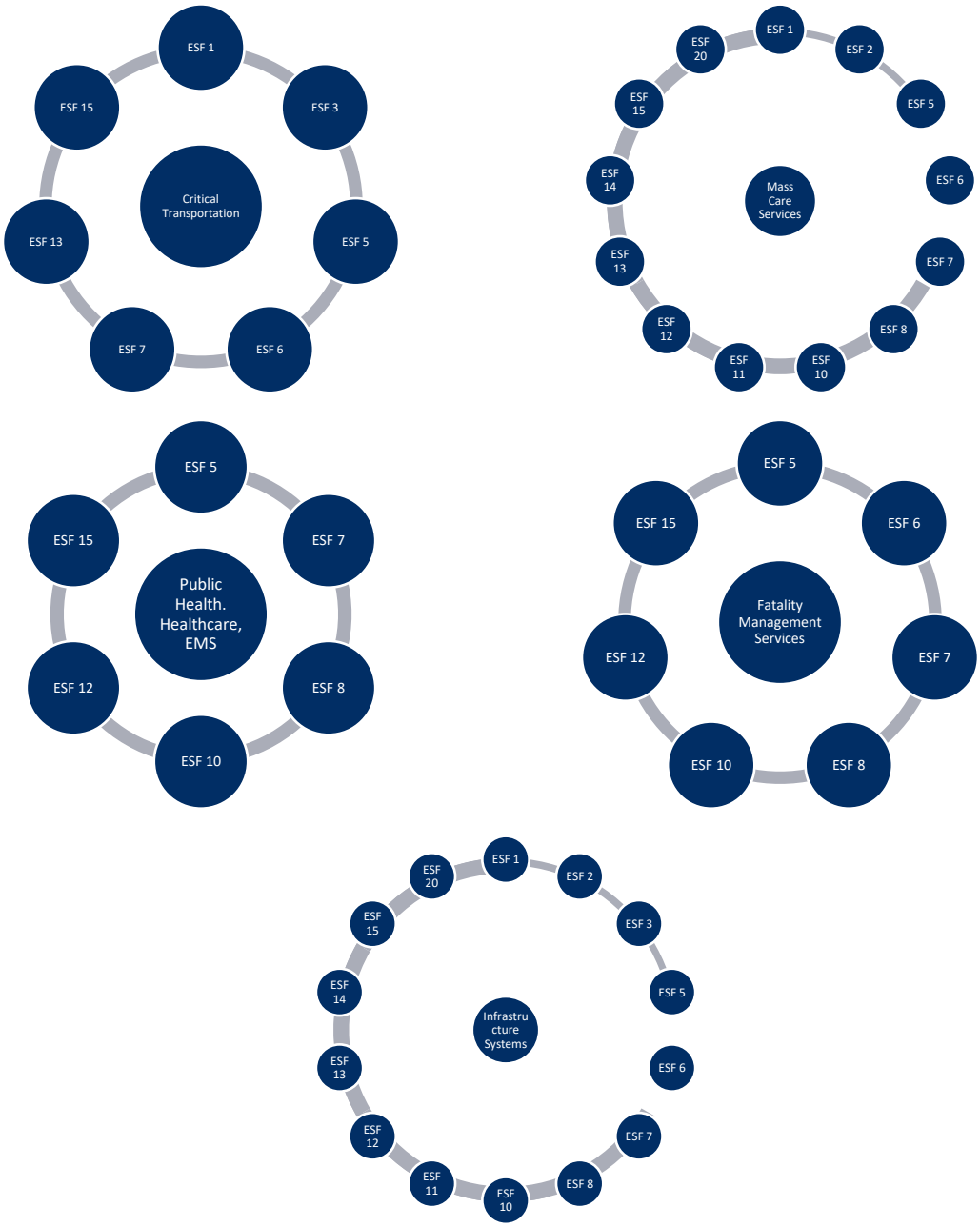

Figure 24 - Core Capability Relationship to Emergency Support Function

Information Dissemination

By implementing the Community Lifelines during response, the Senior Leadership Briefing (SLB) format for communicating Community Lifeline status can be utilized. This format can be used to effectively communicate the conditions and needs of the response and anticipated timelines associated with ongoing activities. This format can be effective in communicating macro conditions in the response that require policy modifications or implementation; redirection and reassignment of state-owned resources; and can be used to inform the media. Tier I Disaster Summaries consist of the following:

- Executive Summary
- Significant impacts, limiting factors, and actions to address lifeline services
- Reported only at the Lifeline level (no subcomponents)

While the Tier I SLB is appropriate for briefing senior leadership and elected officials, it does not address the micro-level needs of response personnel. Additionally, some information that is beneficial to response personnel may not be present in the SLB due to the high chance that this information could be easily misinterpreted by those not active in operational and tactical level activities.

The more appropriate informational product to share with response personnel within the SEOC, DOCs, and local emergency management organization is the Tier II: Lifeline Overview. This product provides the following:

- Assessment report on lifeline and component condition
- Analysis of component condition, impacts, actions, limiting factors, estimated time to change in condition/current status, with consideration to reestablishment requirements

To inform response personnel throughout operational periods in between the production of Tier II reports, Tier III reporting methods can be utilized, which include:

- GIS products
- Internal and external dashboards
- Charts, graphs, and other supplemental materials

References and Supporting Guidance

State Seismic Safety Committee

The Washington State Seismic Safety Committee (SSC) initiated a project to study and prepare a policy paper with the purpose of providing a framework for improving Washington's resilience when earthquakes occur. Such a framework includes more effective seismic mitigation policies and recommendations for legislation and policy changes to improve and enhance statewide seismic safety. The document will be used to facilitate long-term implementation of seismic risk reduction policies across the state with the goal of making the state resilient in a 50-year time frame."

Resilient Washington State: Final Workshop Report

In 2012, the Washington State Seismic Safety Committee published the Resilient Washington State: Final Workshop Report which provides the framework for improving Washington's resilience when earthquakes occur by proactively reducing critical vulnerabilities. Following that framework, WSDOT established a vision to refine its Phase three tier and create an interconnected lifeline of highways with built in redundancy to provide alternate routes if a segment of highway becomes impassable after an earthquake.

Regional Catastrophic Preparedness Grant Program (RCPGP)

This program is a group of 10 cities that have come together to think differently about planning and preparedness for catastrophes. The sites have developed a number of products – plans, tools, trainings, and exercises – that bolster the ability of their communities to respond to and recover from catastrophic emergencies.

Supply Chain Project

> The main objectives of the project were to develop a supply chain resilience working group consisting of transportation and supply chain stakeholders across the 8 county RCPGP. A series of workshops conducted by the working group researched the designation of community points of distribution (CPODs), identification of alternate means of delivery, and transition plan from government to private sector."

Washington State Coast Resilience Assessment – Final Report

The majority of participants listed earthquake and tsunami as the top hazard for the coast and frequently talked about the potential devastating impact of a Cascadia Subduction Zone Earthquake (CSZE). This 9.0+M earthquake would cause a number of other potentially catastrophic incidents, including a large tsunami, landslides and liquefaction (a phenomenon in which soil loses its strength and ability to support structures and buildings). In addition to the challenges and opportunities that are brought on by changing conditions there is a sobering reality that the coastal communities and environment face potentially catastrophic impacts

from a Cascadia earthquake and tsunami. To prepare for and to mitigate against these life-threatening hazards will be a critical component of coastal resilience efforts.

Resiliency Assessment - Washington State Transportation Systems
The Washington State Transportation Systems project assessed the resilience of Washington State's surface transportation systems to a Cascadia Subduction Zone (CSZ) earthquake, and the ability of those systems to support post-disaster response and recovery activities. Also referred to as the Transportation RRAP.

Terms and Definitions

Capability Target
The level of capability that the community plans to achieve over time in order to manage the threats and hazards it faces. Each core capability with have one or more capability target(s) based on the desired level of capability.

Cascadia Subduction Zone
A 1,000 km long dipping fault that stretches from northern Vancouver Island to Cape Mendocino California. It separates the Juan de Fuca plate and North America plates.

Catastrophic Incident
Any natural or manmade incident, including terrorism, which results in extraordinary levels of mass casualties, damage, or disruption severely affecting the population, infrastructure, environment, economy, national morale, and/or government functions.

Community Lifeline
Priority issue areas that provide indispensable service that enable the continuous operation of critical business and government functions, and is critical to human health and safety, or economic security.

Core Capability
32 activities that address the greatest risks to the nation first identified and defined in the National Preparedness Goal. Each Core capability will further create capability targets based on the desired level of capability.

Critical Task
Activities that must be performed for a wide variety of threats and hazards and are based on the activities that emergency managers plan for. Each Capability Target describes a critical task, that when completed, helps communities successfully manage a threat or hazard.

Information and Communication Technology

An extensional term for information technology that stresses the role of unified communications and the integration of telecommunications (telephone lines and wireless signals) and computers, as well as necessary enterprise software, middleware, storage, and audiovisual systems, which enable uses to access, store, transmit, and manipulate information.

Seismic Lifeline Corridor

The Pacific Northwest section of I-5, the I-5 Urban Corridor, extends from Eugene, Oregon to the Vancouver, Canada. The State, county and cities in the Puget Sound area have a 10-year plan for seismic retrofitting for emergency response and economic recovery to build a usable route around the I-5 section through downtown Seattle via SR 99 and I-405.

Primary and Supporting Core Capability Tabs

Catastrophic Incident Annex

Appendix 1:
Cascadia Subduction Zone

Table of Contents

Record of Changes

Change Number: YR-XXX	Date of Change: MM/YYYY	Change Summary/Sections Affected	Position Name/Initials
22-001	09/2022	Added Introduction section. Moved Purpose and added Scope section under Introduction. Edits for grammar and clarity throughout document. Removed planning assumptions and response considerations that were not specific to a CSZ incident.	Catastrophic Planner/SM

Introduction

Purpose

This appendix provides detailed information concerning a Cascadia Subduction Zone incident and subsequent response and reflects the catastrophic planning that has taken place across the state for its associated Critical Tasks.

Strategic Goals

Life Safety

Priority Routes

1. Identify the routes critical for response including routes to hospitals, emergency services, mass care shelters, CPODs, staging area, and points of entry including connections to adjacent communities, the states "Seismic Lifeline Routes" and air and water ports.
2. Coordinate the deployment of resources that can assist local jurisdictions with assessment and inspection of transportation infrastructure needed for response operations.
3. Coordinate debris clearance from priority routes needed for response operations.
4. Align routes used to move resources with Priority Route planning.

Priority Activities[1]

5. Provide assistance with local and Tribal sheltering needs through available state resources and facilities.
6. Provide assistance with feeding and hydration for local and Tribal needs through procurable resources[2].
7. Provide assistance with the bulk distribution of disaster supplies to impacted communities through existing government programs and services.
8. Facilitate the movement of mass care resources from donated, procured, and federal sources into local and Tribal staging areas.

Water Services

9. Provide sufficient and sustained support for water services to meet life-sustainment incident objectives.

[1] Priority Activities should emphasis those activities and locations which are along state and local Priority Routes.
[2] The state does not maintain these resources and would have to procure resources using contracts and private vendors to support impacted communities.

Water Systems

10. Assist local jurisdictions with the prioritization of water system restoration by those critical consumers who are needed to respond to and stabilize the incident.
11. Identify local jurisdiction resource needs for system restoration and assist to the extent possible under legal guidelines for providing resources to public and private entities.

Vertical Integration

12. Response operations involving some or all of the jurisdictions and Tribal partners in the state will require an extraordinary level of coordination. This coordination will require the vertical integration of all levels of government to effectively respond and stabilize from the results of a catastrophic incident.
13. Communicate with all levels of government during a catastrophic incident to effectively gain situational awareness through assessment and reporting.
14. Establish sufficient communication to enable timely and coordinated assistance to local jurisdictions.
15. Establish a shared situational awareness and understanding of the communications operating environment.
16. Integrate state-owned and private sector communications equipment with local jurisdictional communications systems to facilitate interoperable communications between the state and local response resources.

Horizontal Integration

17. Communicate key findings which directly threaten or affect life safety and sustainment across agencies and partners to inform overall response efforts and identify potential policy decisions.
18. Establish or reestablish communication systems between state agencies, private sector entities, critical infrastructure sectors, and other responding organizations to facilitate operational coordination.

Information Analysis

19. Facilitate a rapid assessment capability immediately following an incident and determine life-threatening situations and imminent hazards.
20. Facilitate the collection of information and other activities such as predictive modeling, remote sensing, and reconnaissance.

Evacuation

21. Provide resource support for local evacuations from heavily impacted areas and other areas which threaten life safety.

Incident Stabilization

Situational Awareness

22. Assess the condition of the transportation network starting with priority routes and situational requirements.
23. Determine resource shortfalls.
24. Determine effects to the Community Lifelines due to impacted transportation infrastructure.
25. Monitor shelter conditions across all activated shelters.
26. Monitor and assess sheltering shortfalls for capacity, personnel, equipment, supplies, accessibility, and specialty needs.
27. Continuously assess sheltering needs, food and hydration availability, and bulk distribution through local and Tribal situation reports, the shelter manager or the regional shelter manager/supervisor[3].
28. Monitor supply chain deficiencies for mass care resources (as reported by local and Tribal jurisdictions, vendors involved in state procurement, and federal logistics support).

Water Services

29. Sustain water resource assistance to protect life and safety of the Whole Community.

Water Systems

30. Assist local jurisdictions with mutual aid resource requests to restore the functionality of community systems.
31. Assist local jurisdictions with meeting approved water quality standards.
32. Assist local jurisdictions by addressing environmental impacts degrading water source impacts.

Direction, Control, and Coordination

33. Facilitate a coordinated response that encompasses federal, state, Tribes, local jurisdictions, the private sector and private non-profits through identified strategies and objectives.
34. Sustain the collection, analysis, and dissemination of essential elements of [assessment] information which support decision makers situational assessment to guide incident direction, control, and coordination.
35. Coordinate operational communications response planning among whole community partners.
36. Provide State Emergency Operations Center responders with mission-critical communications systems.

[3] This could include the Red Cross liaison or mass care lead at the local level.

37. Monitor for communications support requests aimed at providing support for essential services.
38. Identify infrastructure barriers preventing the reestablishment or sustainment of communications systems and functionality.
39. Establish primary, alternate, contingent, and emergency (PACE) backup communications capabilities and share the status of an agency's capabilities with partner organizations.

State Staging Areas

40. Establish and sustain State Staging Areas.
41. Establish connections with Federal Staging Areas and Local Staging Areas.

Resource Requests

42. Establish prioritization methodology for the distribution of limited and scarce resources.
43. Identify supply chain disruptions for requested resources.

Scope

Through the incorporation of the response considerations outlined throughout the Catastrophic Incident Annex and core capability Tabs[4], this appendix incorporates the unique assumptions, considerations, and actions that will be involved during this catastrophic incident.

[4] Statewide planning has not yet addressed the Public Health, Healthcare, and EMS; and Fatality Management Services core capabilities yet. These core capabilities will be integrated into this appendix when complete.

Situation Overview

General

The Cascadia Subduction Zone (CSZ) is an approximately 800-mile "megathrust" fault stretching from the northern half of Vancouver Island in British Columbia to Cape Mendocino in Northern California; ranging between 50 to 80 miles off the coast of the Pacific Northwest. A full rupture of the CSZ fault line could generate an earthquake exceeding magnitude 9.0 that lasts for five minutes or longer, as well as subsequent aftershocks and local source tsunamis.

The CSZ fault is formed by the convergence of the Juan de Fuca Plate and North American Plate. Subduction occurs as one tectonic plate moves under another. The Juan de Fuca Plate is subsiding beneath the North American Plate, as seen in Figure 1, thereby creating the CSZ (illustrated with a red line).

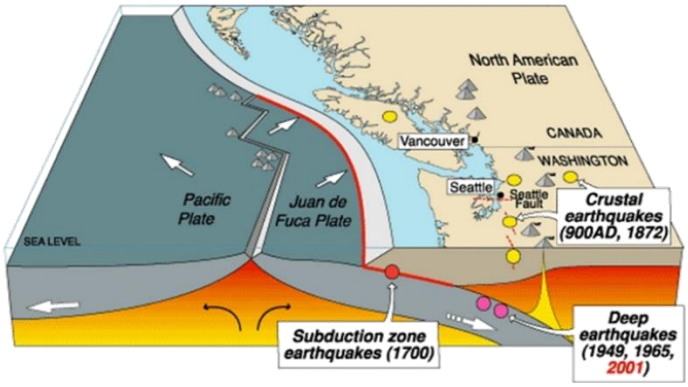

Figure 1 - Simplified Cross Section of the Earth's crust through Washington State titled "Cascadia earthquake source" (adopted from USGS)

Scientific research and consensus indicate an earthquake along the CSZ megathrust fault will occur with little or no advance notice. While analytical modeling of such an incident predicts devastating and disruptive affects throughout the entire state: both the western and eastern sides. Further, a full rupture of the CSZ has a national impact in terms of economic disruption and cessation of commercial supply chains.

Due to the extent and severity of damage anticipated, the CSZ is Washington State's hazard of greatest concern; representing both the highest risk, and "maximum-of-maximum" threat or hazard facing the State of Washington.

Geography

The diverse geography of Washington State compounds isolation and limited access problems during disasters, posing challenges to planning and response efforts. Mountain ranges act as natural barriers to ingress and egress from impacted areas. The most densely populated areas are found between the Cascade Mountains and the coastal regions. The Columbia River, the Pacific Ocean, and Puget Sound will create additional geographic obstacles due to the number of bridges which will be affected by the earthquake.

Isolated Communities
A CSZ incident will create isolated communities that are characterized by pockets of populations which have severely damaged transportation infrastructure and a degraded or non-operational public services which can provide lifesaving or life-sustaining support.

Estimated Impacts
This section serves as a placeholder until the latest HAZUS run has been completed.

Critical Transportation

A CSZ incident will cause the failure of transportation on the west side of the side in many places. Many communities will find themselves cut off from interior and exterior access due to damaged roads, bridges, train lines, ferries, and ports. These transportation impacts will degrade or prevent the movement of resources into impacted areas.

Due to the large area of the state that will be impacted, it is expected that this incident will exceed the capacity of state and local transportation resources and require a significant amount of time for response efforts to make progress. There will also be specialized resources that are either not available in significant quantities (temporary bridges) or require a systematic approach to conduct initial response (repairing one bridge to access another).

There will be an immediate need to prioritize and deconflict resource requests across the state to meet the immediate needs of life safety and sustainment operations taking place. State agencies, local jurisdictions, and Tribal partners will need to prioritize their transportation infrastructure assessment, inspection, repair, and restoration activities in relation to their immediately available resources. This initial focus will enable access along priority routes which connect to emergency services, critical infrastructure, mass care sites, logistical sites, and key access points in and out of jurisdictions.

Mass Care Services

Mass Care activities post-CSZ will be one of the greatest challenges facing the state, Tribal partners, and local jurisdictions. These challenges are centered on the following factors:

- Limited availability of durable and consumable goods post-incident
- Limited capacity to store and manage mass care resources (i.e., food, water, supplies) before an incident which will place a tremendous and unprecedented demand on these resource
    - Coordination with the private sector to procure mass care goods and services will require personnel, communications, and transportation resources which will likely be unavailable or severely limited during the initial days following the incident

- Limited internal personnel with training and experience to manage mass care incidents
    - Resources to provide just-in-time training for responders and volunteers may be scarce.
- Reliance on NGOs and VOADs to perform mass care functions
    - Traditional mass care providers and partners will be unavailable for many days and weeks as those located within impact areas will be victims themselves
        - All volunteer mass care resource types will take days to weeks to organize and move into affected areas
- Transportation impacts will degrade or prevent the movement of both internal and external resources into affected areas to provide and support mass care
- Specialized resources necessary to support AFN populations will have difficulty addressing the full need and accessing impacted areas
- Damage to communications will limit the ability to gather situational awareness and assess jurisdictional needs

A CSZ incident will very quickly exceed the capacity for impacted jurisdictions to respond and sustain mass care functions. Even with support from vertical partners and mutual aid, the need for services will outweigh the capabilities at all levels to support initial operations.

There will be an immediate need to conserve, prioritize, and deconflict resource requests across the state to both meet the immediate needs of life safety and sustainment operations taking place. Many requestors will be unaware of their reliance on the same resource vendors and will request assistance from the state for mass care activities very early after the occurrence of the incident.

Mass care sheltering activities require a specialized set of planning to identify multiple locations for:

- Sheltering
- Facilities capable of providing a wide range of services (e.g., AFN, service animals & pets, basic first aid, etc.)
- Trained staff that can be provided to support operations, communications support for facilities
- Infrastructure support (i.e., power and water)
- Fuel support for generators
- Transport access for both population access and resource support.

Mass care bulk distribution also require a specialized set of planning to identify multiple locations for setting up Community Points of Distribution (CPODs) and other sites where communities may need to access to receive food, water, and supplies. Larger sites such as

CPODs need to account for transportation access for both the population and for the resources moving into the area, which are in turn supported through either local staging access or state staging areas.

The state does not maintain a supply of mass care food, water, or sheltering resources available to support local jurisdiction resource requests and if a request is made for these resources, a combination of private sector contracts, intrastate mutual aid through the Washington Intrastate Mutual Aid System (WAMAS), state to state mutual aid through the Emergency Management Assistance Compact (EMAC), and federal support (if a federally declared disaster) will need to be employed to meet the need. Acquiring and moving of these resources will take several days to reach disaster areas and will require that local jurisdictions to address immediate needs by utilizing every appropriate local resource in the surrounding areas.

Infrastructure Systems

Water

Water will be an immediate need following a CSZ incident. Utilities that have infrastructure components which are in liquifiable soils, river valleys, or utilize non-seismically retrofitted pipe bridges are highly vulnerable to disruption. Impacts experienced to water infrastructure may negatively impact other Critical Infrastructure and Lifeline Sectors involved in immediate response operations. Conversely, impacts to other Critical Infrastructure or Lifeline Sectors may adversely impact or impair the ability of water utilities to function. For example:

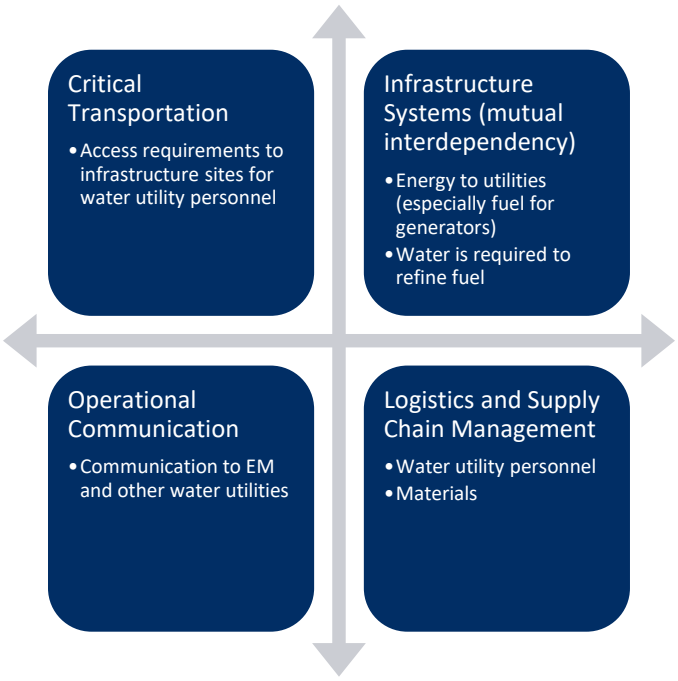

Figure 2 - Infrastructure Dependencies and Interdependencies

Public Health, Healthcare, and EMS

This core capability is part of long-term planning objectives for catastrophic and has not yet been addressed.

Fatality Management Services

This core capability is part of long-term planning objectives for catastrophic and has not yet been addressed.

Planning Assumptions and Response Considerations

Generalized assumptions concerning or applying to multiple catastrophic incidents are covered within each Core Capability Tab of this plan. This appendix addresses only those assumptions which are unique or most concerning for a CSZ incident.

General

- There will be limited to no capability for supporting out-of-region resources and staff; temporary billeting will be required immediately post-event for survivors and responders.
- Local and regional supply chains and infrastructure will be significantly disrupted, destroyed, or over-extended.

Roadways and Bridges[5]

- Potential impacts to transportation infrastructure are heightened along the coast, in the coastal mountains, and along the Interstate 5 (I-5) corridor due to ground shaking (liquefaction), and all types of slides.
    - If many road segments and bridges sustain damage, the potential for viable alternate routes exists, enabling some degree of movement, but with longer travel times and more congestion.
    - Some road systems will be impassable due to damage or secondary effects (e.g., landslides, liquefaction, subsidence, hazardous materials, flooding, etc.)
- Assessments are required for all transportation infrastructure in affected areas.
    - The extent of damage and debris limit access to conduct assessments and repair.
    - Assessment resources for transportation infrastructure will be insufficient, requiring prioritization of this resource type.
    - Repair times may not accurately reflect the situation when there are many segments in need of repair.

[5] See Tab A: Critical Transportation for a listing of all planning assumptions and response considerations.

  - The number of significantly damaged and blocked roads, railways, airports, and seaports may overwhelm the limited number of personnel available to conduct assessments and inspections.
- Local capabilities are likely inadequate to repair transportation infrastructure.
  - Any resources brought in to assist with temporary repair and restoration operations will need to be self-sufficient.
  - Fuel requirements for assessment and repair crews may exceed local capabilities.

Airports, Maritime, and Rail[6]

- Airports that can be used to move and deliver resources are limited to those that can accommodate larger aircraft, sustain limited damage, have useable and repairable connections to the ground transportation systems, and have the capacity for multiple large aircraft to be on the ground at one time.[7]
  - Airport functionality is dependent on the ability to provide necessary support and wraparound services (e.g., power, water, sanitation, fuel, and communications).
  - Helicopters will be needed to meet the transportation needs of isolated communities where landing areas are too small for fixed-wing aircraft. Compared to fixed-wing aircraft, helicopters carry fewer supplies, are slower, and have a shorter range.
- Seaports will sustain major or complete damage.
  - Maritime resource movement will be unavailable to many locations due to damage to ports, debris in the water, and changes to underwater topography.
  - Processes for re-establishing maritime routes will be entirely dependent on the state of the waterway and ports; and the specialized resources needed to make it navigable.
- Ferries are critical links between the east side of Puget Sound, to the Kitsap and Olympic Peninsulas, and the San Juan Islands.
  - Ferries and their supporting infrastructure will be unavailable for an unknown amount of time post-incident.
- If key rail bridges in Seattle, Tacoma, Vancouver, and Portland sustain significant damage, then rail transportation is not possible along the I-5 corridor or spurs to the west.

[6] See Tab A: Critical Transportation for a listing of all planning assumptions and response considerations.
[7] Although the qualification listed in this statement are the most desirable, there may instances of using other airfields if options are limited and life safety and sustainment is at risk.

- The majority of rail facilities in (train stations, dispatch facilities, and fuel facilities) are along the I-5 corridor and are on liquefiable soils.
- Rail lines coming from the east may be significantly impacted by landslides.

Mass Care[8]

- Pre-designated mass care sites may suffer damage and require cleaning and repairs before being utilized.
  - Major aftershocks may result in the need for additional building inspections or re-inspections before a facility can be used or continue operations
  - Some designated shelter facilities may be retrofitted and/or have emergency backup power.
  - Some sheltering locations (official and ad-hoc) which were ADA compliant, may not be compliant after sustaining damage from an incident.
- Fires or aftershocks may require the relocation of shelters that become threatened.
- There is the potential that disaster survivors will be afraid to seek shelter in buildings after a catastrophic earthquake.
  - It will be necessary to ensure the public knows the buildings have been inspected for structural integrity.
- The inability to get messages to the public about mass care resources and services; and communication between response stakeholders will decrease the ability for the state to perform mass care
- Tourists and visitors staying in hotels or other accommodations that become uninhabitable utilize evacuation centers until transportation systems can support their evacuations.

Feeding, Hydration, and Bulk Distribution[9][10]

- Mass care service providers will be challenged to acquire and receive food to serve shelter populations and to prepare it without continuous coordination and support. Additional challenges include:
- Disruption of water, power, communications, transportation and other critical infrastructure sectors will impact people's ability to move to sheltering locations and receive or go to goods and services.

[8] See Tab B: Mass Care Services for a listing of all planning assumptions and response considerations.
[9] See Tab B: Mass Care Services for a listing of all planning assumptions and response considerations.
[10] Bulk Distribution is also referred to as Commodities Distribution. Bulk distribution is a functional area within the MCS core capability, while Commodities Distribution is a federal LOE. For the purposes of this plan, they are complimentary.

- Resources to support household pets and service and assistance animals in the impacted area will be insufficient (e.g., appropriate vehicles, cages, food, and veterinary care).
- The scarcity of appropriate vehicles (e.g., ambulances, paratransit, canteens, box trucks, refrigerated trucks, passenger vans/buses) to provide mass care services will hamper the delivery of life-sustaining services and the coordination of response and recovery activities to disaster survivors.

Water/Wastewater[11]

- The resources available post-incident may be insufficient to concurrently provide services and restore systems.
  - Essential water utility personnel will likely not be available in sufficient numbers to operate, maintain, repair, and restore significant portions of the water system for the first few weeks of the incident.
  - There may be insufficient personnel, equipment, and materials (both specialized and general) to accomplish incident objectives due to resource competition with other response activities.
- Water systems in dense urban settings may be out of water within 24 hours if significant damage is experienced to the infrastructure.
- Communities that are located at the "end of line" or on peninsulas may need immediate assistance to provide outside or alternative water resources.
- Smaller utilities may be more vulnerable than larger utilities due to:
  - Fewer materials and equipment available on hand
  - Less seismic planning
  - Less seismic retrofits
- Water reservoirs may be quickly depleted of water following a significant incident that causes damage to the system.
- Inoperable pumps at a wastewater utility can lead to sewage overflows that damage the environment, wastewater treatment technologies and threaten public health.

Energy[12]

- Aftershocks will continue for months after the main incident, potentially degrading any repair work already done.
- Unrationed fuel use is expected to exceed supply (prioritized rationing required)
- Bulk fuel deliveries will require significant coordination to move throughout the regions
- Fuel Points of Distribution (F-POD) may be implemented to facilitate deliveries within local jurisdictions

[11] See Tab C: Infrastructure Systems for a listing of all planning assumptions and response considerations.
[12] See Tab C: Infrastructure System for a listing of all planning assumptions and response considerations.

- Initial system safe shutdowns (breakers tripping due to shorts) may cause statewide blackouts that could impact transmission throughout the region covered by the Western Electricity Coordinating Council
- Short term distributed generation (generators) will be required to provide energy to critical facilities
- Large scale above ground and underground storage can experience structural damages, impacting seasonal natural gas availability
- Pipelines may experience breaks and leaks, impacting product availability in the western US
- Restoration of fuel refinery operations will require both water and electricity (to include replacement of components)
- Damage to petroleum ports and rail may impact crude stock for refineries
- Damage to refined product pump stations will impact end consumers
- Fuel stations with generators are limited and consumers may not be able to easily access gasoline for evacuation or small generators[13]
- Damage to transportation corridors may reduce the overall demand for petroleum products, however fuel demand for response and recovery efforts will increase significantly and be a high priority for the first weeks and months of a catastrophic incident.

Information and Communications Technology[14][15]

- Movable and deployable resources capable of establishing and providing immediate communications infrastructure using ICT will be necessary to facilitate a response in which communications has become disrupted.
- Social media and communications applications available to the general public can become a primary source of information when situational awareness has become severely affected. These platforms can be utilized to allow community members to feed information to response personal to provide situational assessment.

Communications[16]

- Operational communications hub relay damage reduces Regional communications capabilities.

[13] There should also be secondary considerations made for impacts to payment systems as many individuals rely on electronic payment, which may be inoperable.
[14] Some information on this topic was retrieved from: Hu, Qian & Kapucu, Naim. (2014). Information Communication Technology Utilization for Effective Emergency Management Networks. Public Management Review. 18. 1-26. 10.1080/14719037.2014.969762.
[15] See Tab C: Infrastructure Systems for a listing of all planning assumptions and response considerations.
[16] See Tab I: Operational Communications for a listing of all planning assumptions and response considerations.

- Many tower-based systems fail or otherwise are unavailable post-incident due to misalignment, tower collapse (full or partial), interconnectivity failure, loss of redundant systems, power failures, loss of fuel supplies, or overutilization.
- The earthquake causes landslides and uncontrolled fires that damage wire and fiber along roads, railroads, and bridges and affect connections between repeaters.
- Wireline (copper and fiber) systems continue to be damaged by debris removal, cleanup, and repair operations; active communications links—both overhead and underground—get damaged or are severed

Safety and Security

- There will be significant populations that will have no law enforcement presence.
- Correctional facilities in the shake zone sustain significant damage and may require evacuation.

Capability Targets[17]

Evacuation:

- Within (#) (time) notice of an incident, complete the evacuation of (#) people requiring evacuation, including (#) people with access and functional needs (requiring evacuation).

Debris Removal and Establishing Access:

- Within (#) (time) of an incident, clear (#) miles of road affected, to enable access for emergency responders, including private and non-profit.

Phase 2a (Initial Response)

- Within (X) (days) of an incident, provide emergency sheltering, food, and water for (XXX) people requiring shelter and (XXX) people requiring food and water, including (XXX) people with access and functional needs (requiring accessible shelter) and (XXX) people with access and functional needs (requiring food and water), and (XXX) animals requiring shelter, food, and water. Maintain for (XX) (days).

Phase 2c (Transition to Recovery)

- Within (#) (time) of an incident, move (#) people requiring temporary, non-congregate housing, including (#) people with access and functional needs (requiring accessible, temporary, non-congregate housing), from congregate care to temporary housing.

Situational Assessment

[17] The Capability Targets outlined within this section are FEMA's standardized targets. While certain activities listed within these sections may not apply to the actions and activities addressed within this plan, they are presented here to maintain a consistent connection with the Stakeholder Preparedness Review (SPR) and federal planning. For modified versions more applicable to catastrophic planning, refer to the Non-Standardized Targets below.

- Within (#) (time) of incident, and on a (#) (time) cycle thereafter, provide notification to leadership and (#) partner organizations involved in incident management of the current and projected situation. Maintain for (#) (time).

Communications

- Within (#) (time) of an incident, establish interoperable communications across (#) jurisdictions affected and with (#) partner organizations involved in incident management. Maintain for (#) (time).

Non-Standardized Targets

Route Assessment

- Within (#) (time) of an incident, assess and report the status of damage to the transportation system and critical infrastructure that may need physical access.
- Within (#) (time) of an incident assess and report on the damages sustained to priority routes
    - Within (time) of an incident implement a coordinated review and approval of the sequence of priority routes to repair and restore to enable access.
    - Within (#) (time) of an incident assess and report on the ongoing recovery efforts and alternatives planned or implemented by others to restore the priority routes.
- Within (#) (time) of an incident, identify temporary alternative transportation solutions to be implemented when primary systems or routes are unavailable or overwhelmed.
- Within (#) (time) of an incident, coordinate regulatory waivers and exemptions to allow safe and effective continuation of response
- Within (#) (time) of an incident, work with ESF 15 to maintain notification systems to support emergency/disaster response including evacuation orders, bridge and road closures, suspension of State construction or maintenance operations, contra-flow and the suspension of State tolls, as appropriate.

Route Clearance

- Within (#) (time) of an incident, prioritize the routes to be repaired/restored/cleared, and made transversable for incident response resources to gain access to demand points or critical infrastructure.
- Within (#) (time) of an incident, position equipment and resources for the response and recovery debris clearance and removal operations.
- Within (#) (time) of an incident, perform initial debris clearance activities to eliminate life and safety threats, facilitate search and rescue efforts, allow access to critical facilities, and to prevent tertiary effects (such as to prevent flooding).

Emergency Repairs

- Within (#) (time) of an incident, assign minimum and maximum restoration times to closed road segments and prioritize restoration based on operational priorities of life safety and life sustainment.
- Within (#) (time) of an incident, work with ESF 15 to distribute information and educate the population on the debris management operations and develop a process for answering the public's questions concerning debris removal.

Shelter

- Within (XXX) days of an incident, assess (XXX) pre-identified shelter facilities within each zone for survivability and potential shelter facility requirements, including minor facility repairs or unsuitability of use based on damage or resource shortfalls. After an earthquake, reassess after each aftershock greater than (XXX) Magnitude.
- Within (XXX) days of an incident, acquire (XXX) additional credentialed workers to staff the shelter; add (XXX) additional shifts; or provide temporary relief for (XXX) shelter workers for (XXX) shifts/weeks/rotations. Review staffing needs every (XXX) days/every (XXX) Operational Period.

Food and Water

- Within (XXX) days of an incident establish bulk distribution of emergency relief items for (xxx) people to meet urgent needs through POD sites established within the affected area(s). Maintain for (XXX) months.
- Within (XXX) hours/days of incident/(XXX) hours of shelter establishment, assess feeding needs at shelter, including cultural and age-appropriate meals for (XXX) sheltered. Reassess feeding needs every (XXX) days/operational period.
- Within (XXX) hours of shelter establishment procure the supplies necessary for shelter feeding using standard procurement practices.

Animal Response

- Within (XXX) days/hours of evacuation, register and track (XXX) household pets and animals and provide disaster welfare information. Maintain for (XXX) months.

Evacuation

- Within (XXX) days/hours of an incident assist jurisdictions in providing an organized, phased, and supervised withdrawal, dispersal, or removal of (XXXXX) disaster victims from dangerous or potentially dangerous areas. Reassess evacuation needs every (XXX) operational period or every (XXX) days.
- Within (XXX) days/hours of evacuation, register and track (XXX) evacuees and provide disaster welfare information. Maintain for (XXX) months.
- Within (XXX) days/hours of evacuation identify the location of (XXX) alternate fuel vehicle sites along mapped routes and communicate these alternative fuel sites as part

of the evacuation response. Review these sites every (XXX) operational period or every (XXX) days.

- Within (XXX) days/hours of evacuation perform an assessment of the evacuee population to identify specific individual or family group needs. Maintain an accurate population assessment every (XXX) operational period or every (XXX) days.

Reunification

- Within (XXX) days/hours of an incident assist (XXX) displaced disaster survivors, including (XXX) children, in voluntarily reestablishing contact with family and friends who have been separated. Maintain for duration of incident or until sheltering operations have ceased.

Disaster Assistance Programs

- Within (XXX) (months) of an incident, implement and offer disaster program services to (XXX) people including programs to repair or replace damaged personal property, assistance with disaster loans, food, cash, and medical assistance, crisis counseling, disaster unemployment, and disaster legal services support and to (XXX) people with access and functional needs. Maintain for duration of recovery or maintain for (XXX) months.

Rapid Assessment

- Within (#) (time) of an incident, perform a rapid assessment on the (7) Community Lifeline areas for life threatening situations and imminent hazards that may cause a break in the continuous operation of government functions and critical businesses that are essential to human health and safety.
- Within (#) (time) of an incident, work with the Logistics Section to determine requirements for critical resources needed to support emergency response activities and any obstacles to the effective delivery of supplemental resources using the information collected through the rapid assessment.

Data Analysis

- Within (#) (time) of an incident, collect essential elements of information from all available sources across the (7) community lifeline sectors.
- Within (#) (time) of an incident, analyze essential elements of information assessment data collected for the (7) Community Lifeline Sectors and develop actionable information to prioritize response actions based on the immediate lifesaving and life sustaining activities for each sector.

Information Sharing

- Within (#) (time) of an incident, deliver actionable information sufficient to inform decision making regarding immediate lifesaving and life sustaining activities to decision makers.

    - On a (#) (time) cycle, deliver enhanced information to reinforce ongoing lifesaving and life sustaining activities to decision makers for determination of strategic direction.
    - On a (#) (time) cycle, deliver identified gaps to information collection that pose a disruption to the decision-making process, or that present an unknown risk.
- Within (#) (time) of an incident, and in coordination with ESF 15, provide timely and accurate information based on comprehensive situational assessments to responders and survivors within the impacted area and deliver public messaging to meeting the immediate needs of responders and the general public.

<u>Communications</u>

- Within (#) (time) of an incident, assess the status of (#) state emergency operations center communication systems to receive and send information to (#) jurisdictions.
- Within (#) (time) of an incident, re-establish SEOC communication to external partners through utilization of the Primary, Alternate, Contingent, and Emergency systems, and relay the status of SEOC communication systems to (#) local jurisdictions.
- Within (#) (time) of an incident, gather assessment information on the status of jurisdiction communication systems to receive and send incident information.
    - Including contacting (#) Public Safety Answering Points if local jurisdiction EOCs are unreachable within (#) (time) of incident or loss of communication.
- Within (#) (time) of an incident, assist local jurisdictions in the establishment of two way communication between the SEOC and jurisdiction.

Concept of Operations[18]

General

This plan identifies five primary core capabilities as critical to the life-saving and life-sustaining response operations in a catastrophic scenario. Each capability includes specific tasks within the FEMA Region X Phases by state and local responsibility. These capabilities include:

- Critical Transportation
- Mass Care Services
- Public Health, Healthcare, EMS
- Fatality Management
- Infrastructure Systems: focusing on Information Communication Technologies (ICT), Energy – to include fuel, Water, and Wastewater.

In addition to the five primary core capabilities, four supporting core capabilities are used to identify essential considerations. These core capabilities are fundamental to all aspects of a catastrophic response and require integrated emergency planning statewide. These capabilities include:

- Operational Coordination
- Operational Communications
- Situational Assessment
- Logistics and Supply Chain Management.

Primary Core Capabilities

Critical Transportation

Objective:

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 to the affected area.

Critical Tasks:

1. Establish physical access through appropriate transportation corridors and deliver required resources to save lives and to meet the needs of disaster survivors.
2. Ensure basic human needs are met, stabilize the incident, transition into recovery for an affected area, and restore basic services and community functionality.
3. Clear debris from any route type (i.e., road, rail, airfield, port facility, waterway) to facilitate response operations.

[18] The Figures displayed within this section (WSDOT Seismic Lifeline, WSDOT Priority Routes, and Local Priority Routes are available for use in GIS.

A CSZ incident will cause widespread and significant damage to the transportation system and necessitate the prioritization of both local and state routes to facilitate a timely response with limited resources in a time sensitive environment. Response operations conducted by the state should utilize the Priority Routes that have been established during pre-incident planning to both gain situational awareness of local impacts but to also prioritize the assessment and repair of routes that enable access to impacted jurisdictions. When state or other outside resources are able to divert activities away from state infrastructure, they will begin to assist local jurisdictions in temporary repairs and other actions that aid in the reconnection of routes that allow the movement of resources and services into and out of the impacted areas.

CSZ Response Components:[19]

- WSDOT Seismic Lifeline
- WSDOT Regional Operations
- State Priority Routes
- Local Priority Routes

Mass Care Services

Objective:

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

Expected Outcome:

To assist in resource coordination to provide life-sustaining and human services after a catastrophic incident. Priority services will focus on those that enable local jurisdictions to perform hydration, feeding, sheltering, and the bulk distribution of emergency supplies.

Critical Tasks:

1. Request, acquire, move and deliver resources and capabilities to meet the needs of disaster survivors, including individuals with Access and Functional Needs (AFN).

A CSZ incident will cause significant damage to homes, communities-at-large, and limit/impair access to life-sustaining resources will necessitate the immediate coordination of state resources at all levels to prevent loss of life. At local levels, mass care resources will need to be assessed (public and private) and begin to be deployed to some degree within 24 hours to locations accessible to impacted populations. At the state level, agencies and departments will need to assess the availability of resources that have not been impacted by the incident and can be deployed to assist in local jurisdiction's operations. Federal resource located within the state will require time to deploy to disaster areas and establish operations. Federal resources

[19] For specific information and maps, refer to Tab A: Critical Transportation.

not located within the state are anticipated to take several days before they begin to arrive.[20] A CSZ incident is significant enough to require the establishment of Federal Staging Areas (FSA) and the immediate movement of pre-planned mass care resources[21]. Resource will flow from FSAs into State Staging Areas (SSA) before being sent to Local Staging Areas (LSA).

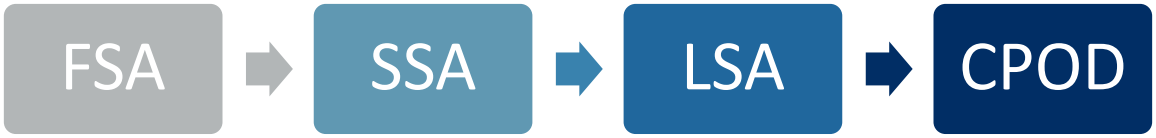

Figure 3 - Resource movement from Federal to Local

Any vertical movement of resources into local jurisdictions will require a high level of coordination and time, thus requiring local jurisdictions to provide the maximum level of support until outside resources begin to enter affected areas.

Many of the actions undertaken by state agencies and departments will represent an amplification of existing services that will require policy decisions to provide authorities, additional funding, and resource support to accomplish.

CSZ Response Components:[22]

- Priority Functions of Mass Care for Life Sustainment
- American Red Cross National Shelter System Database
- WebEOC Shelter Status Dashboard

[20] Whether or not the resources are located in the state or not, there is no assumption that a non-state resource is available for deployment until they have been released to the state. This process is outlined within Tab H: Logistics and Supply Chain Management and within the ESF 7 Annex to the CEMP.
[21] Information related to federal pre-planning for a CSZ incident can be found within FEMA Region 10's Cascadia Subduction Zone (CSZ) Earthquake and Tsunami Plan.
[22] For specific information, refer to Tab B: Mass Care Services.

Infrastructure Systems

Objective:

Stabilize critical infrastructure functions, minimize health and safety threats, and efficiently restore and revitalize systems and services.

Energy

Facilitate the strategic restoration of electrical grid and fuel resources to affected population, critical services, and critical infrastructure.

Water

Facilitate the strategic restoration of water supply and distribution systems to affected population, critical services, and critical infrastructure.

Wastewater

Facilitate the strategic restoration of wastewater collection and treatment systems to affected population, critical services, and critical infrastructure.

Information Communications Technology

Facilitate the strategic restoration of information communications technology systems to affected population, critical services, and critical infrastructure.

Expected Outcome:

Facilitate the coordinated effort of multiple dependent and interdependent critical infrastructure sectors to stabilize internal operations and system restoration.

Critical Tasks:

1. Decrease and stabilize immediate infrastructure threats to the affected population, to include survivors in the heavily damaged zone, nearby communities that may be affected by cascading effects, and mass care support facilities and evacuation processing centers with a focus on life-sustainment and congregate care services.
2. Re-establish critical infrastructure within the affected areas to support ongoing emergency response operations, life sustainment, community functionality, and a transition to recovery.
3. Provide for the clearance, removal, and disposal of debris.
4. Formalize partnerships with governmental and private sector cyber incident or emergency response teams to accept, triage, and collaboratively respond to cascading impacts in an efficient manner.

A CSZ incident will result in a significant disruption to all infrastructure system and will presenting life safety issues which exceed the capabilities of local response and the typical coordination used through activated ESFs to deploy resources and services. Response personnel will need to perform the following actions within the initial response:

- Coordinate with impacted jurisdictions and the appropriate activated Sections to coordinate the delivery of resources and services
- Identify state resource gaps in meeting resource requests
- Identify barriers and limitations in deploying state resources
- Provide information on impact effects over time to assist in the identification of sustainment or degradation in Community Lifelines.

Water

For the purposes of this plan, water infrastructure is comprised of 2 elements: water systems and water services. Water systems include treatment facilities, distribution pipelines, transmission pipelines, storage facilities and locations, dams (as a component of a reservoir/water supply), and source water. Water Services include providing water to the public, providing water for critical infrastructure, providing water for emergency services, and providing water for Mass Care Services.

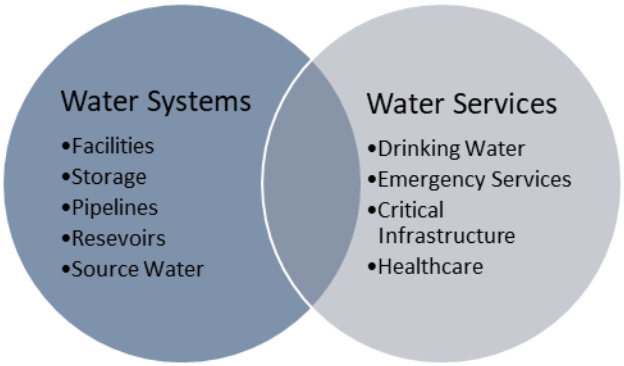

Figure 4 - The components of water system which enable essential services and functions.

The commitment of resources to one response objective will diminish the capabilities to meet other response objectives that utilize like resources. Incident objectives that include both water restoration and providing water services will compete for similar resources. Early incident objectives should focus on providing water services until operations have been established and similar/conflicting resources can be redirected towards restoration.

Fuel prioritization must include water utilities that are essential in providing services to large populations or that do not have access to alternative water services. Fuel prioritization should also reflect the assessment of evacuation potential based on water availability as fuel may not be required for areas that are [temporarily] deemed unable to support life based on other planning factors (i.e., availability of resources and essential services.

Response Objectives

Short-Term	Provide potable water to impacted jurisdictions which meet immediate life safety needs.
Incident Stabilization	Coordinate the restoration of water quality to approved standards
	Provide potable water to impacted juridictions which address life sustainment gaps
Long-Term Response	Identify long-term solutions for jurisidictions anticipating extended outages in service
	Coordinate and faciliate mutual aid for the restoration of systems
	Monitor for and address supply chain disruptions
Transition to Recovery	Identify triggers and other conditions needed for a transfer to a Recovery Support Function.
End State	Provide sufficient and sustained water services to meet life-sustainment incident objectives.

CSZ Response Components:[23]

- Water Systems
- Water Services
- WARN
- Debris Clearance and Removal

Supporting Core Capabilities

Operational Coordination

Objective:

The National Preparedness Goal defines operational coordination as the ability to establish and maintain a unified and coordinated operational structure and process that appropriately integrates all critical stakeholders and supports the execution of core capabilities.

Critical Tasks:

1. Mobilize all critical resources and establish command, control, and coordination structures within the affected community, which may no longer be defined by established jurisdictional boundaries as needed throughout the duration of an incident.
2. Enhance and maintain command, control, and coordination structures (C3), consistent with the National Incident Management System (NIMS), to meet basic human needs, stabilize the incident, and facilitate the integration of restoration and recovery activities.

[23] For specific information and maps, refer to Tab C: Infrastructure Systems.

Following a CSZ incident, the SEOC will be activated at Level 1 Full Activation. This incident will trigger the automatic implementation of federal plans and necessitate the need for a structure of multi-level coordination to be established to facilitate response operations spanning large geographical areas. When the determination is made to establish geographic branches and divisions to coordinate statewide efforts alongside federal efforts, then this part of the plan will be in effect.

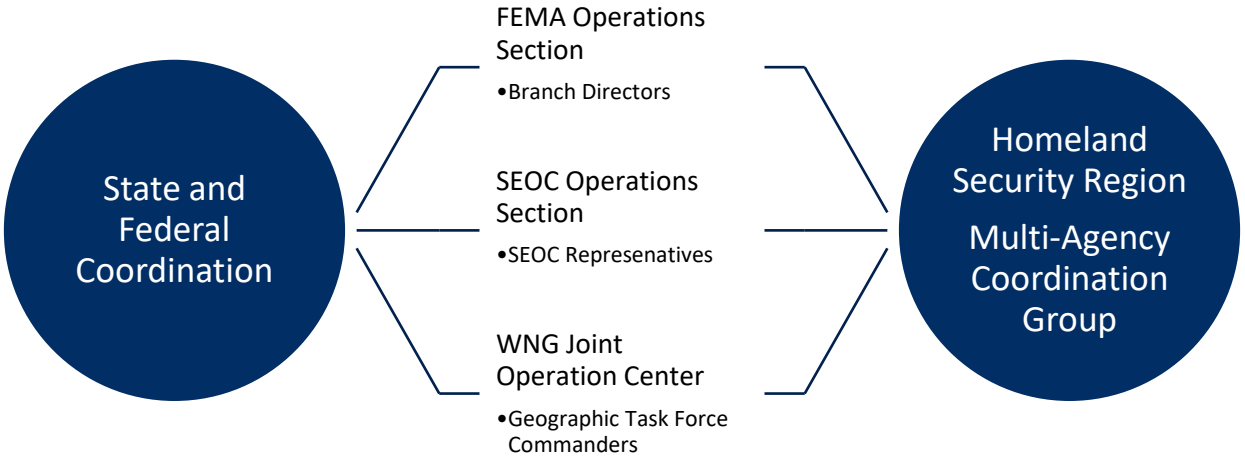

Figure 5 - Coordination Structure for Federal-State-Tribal-Local Response

CSZ Response Components:[24]

- Washington EMD
- Washington National Guard
- FEMA Region 10

Situational Assessment

Objective:

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

Critical Tasks:

1. Deliver information sufficient to inform decision making regarding immediate lifesaving and life-sustaining activities, and engage governmental, private, and civic sector resources within and outside of the affected area to meet basic human needs and stabilize the incident.
2. Deliver enhanced information to reinforce ongoing lifesaving and life-sustaining activities, cascading impacts, and engage governmental, private, and civic sector resources within and outside of the affected area to meet basic human needs, stabilize the incident, and facilitate the integration of recovery activities.

[24] For specific information and how coordination is established, refer to Tab F: Operational Coordination.

The Situational Assessment phase in a catastrophic incident follows immediately after activation. Assessment of an incident is critical within the first hours to deploy time-sensitive services and resources. Reassessment of the initial conditions throughout the incident is essential in determining changes in conditions, the identification of new threats and hazards, the status of and need for resources. Information gathered immediately after the occurrence of an incident establishes the initial activation environment and deployment of resources to sustain and protect life and stabilize the incident.

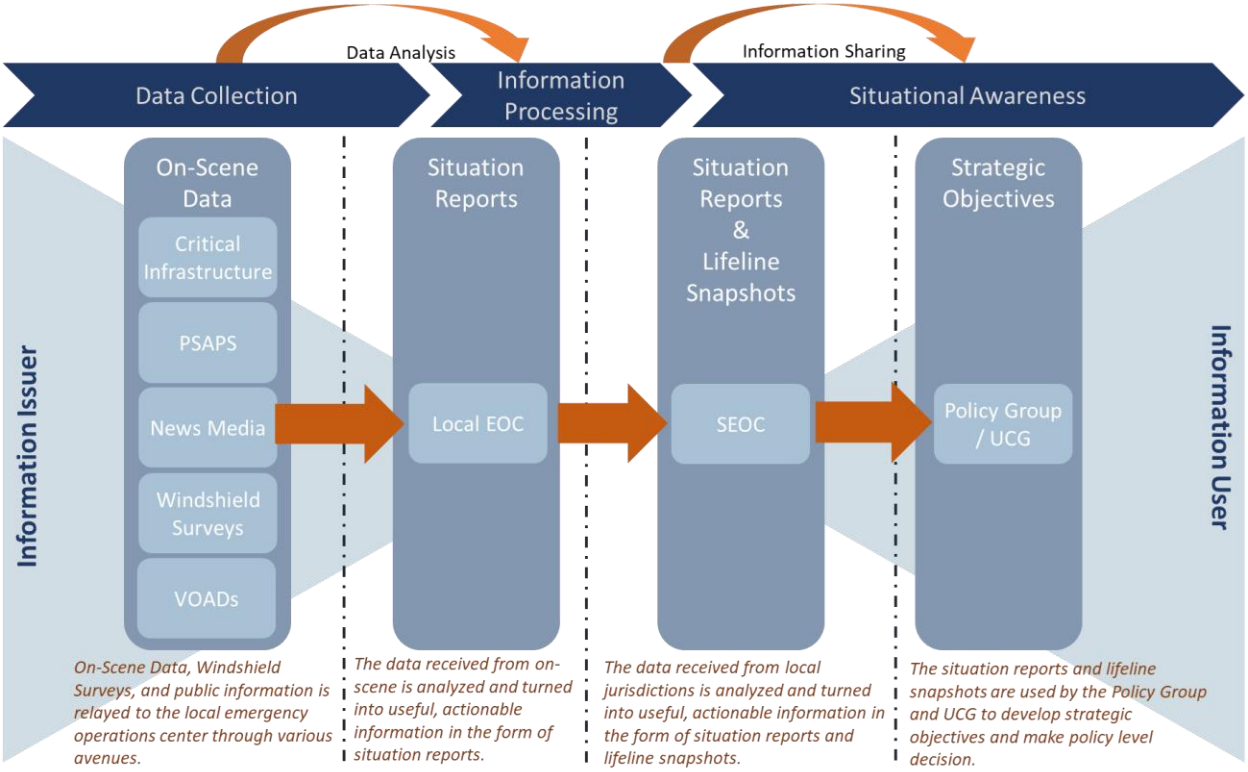

Figure 6 - Information Sharing Process

CSZ Response Components:[25]

- Situational Awareness
- Information Sharing
- Community Lifelines

[25] For specific information and information products, refer to Tab G: Situational Assessment.

Operational Communication

Objective:

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.

Critical Tasks:

1. Ensure the capacity to communicate with both the emergency response community and the affected populations and establish interoperable voice and data communications between the Federal, tribal, state, and local levels through primary and redundant communications technology and protocols.
2. Re-establish sufficient communications infrastructure within the affected areas to support ongoing life-sustaining activities, provide basic human needs, and facilitate the integration of recovery activities.
3. Re-establish critical information networks, including cybersecurity information sharing networks, to inform situational awareness, enable incident response, and support the resilience of key systems.

As mentioned in the Situation Overview portion of this Tab, an organization's PACE or their Primary, Alternate, Contingent, and Emergency communication systems or methodologies are essential to the continuity of operations during a catastrophic response. It is necessary for local, state, federal, Tribal, critical infrastructure, and private sector and business organizations to develop a robust communications continuity plan. Communication continuity will be necessary for all other aspects of response, especially Operational Coordination, Situational Assessment, and Logistics and Supply Chain Management. Every Core Capability relies on consistent, reliable communication.

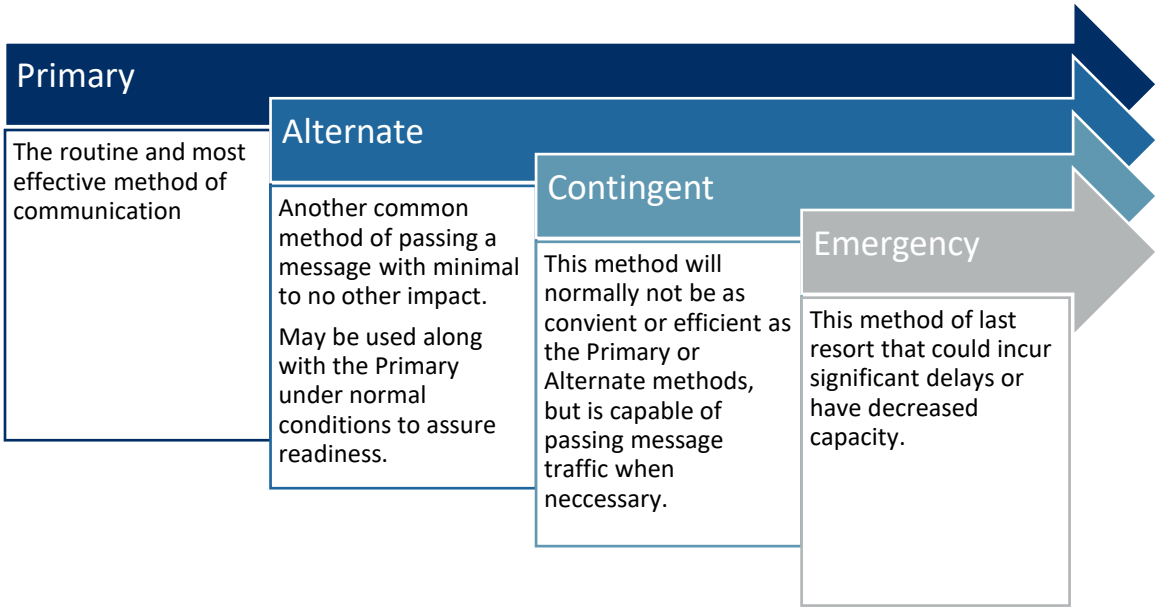

Figure 7 - Primary, Alternate, Contingency, and Emergency Communications Process

CSZ Response Components:[26]

- PACE and Communications COOP
- Local Integration into PACE

Logistics and Supply Chain Management

Objective:

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.

Critical Tasks:

1. Mobilize and deliver governmental, nongovernmental, and private sector resources within and outside of the affected area to save lives, sustain lives, meet basic human needs, stabilize the incident, and facilitate the integration of recovery efforts, to include moving and delivering resources and services to meet the needs of disaster survivors.
2. Enhance public and private resource and services support for an affected area.

[26] For specific information and how coordination is established, refer to Tab I: Operational Communications.

The state resource request process is sufficient to handle All-Hazards incidents which involve incident types that are routinely experienced in Washington State (e.g., seasonal weather, flooding, localized fires, etc.); however, a CSZ incident will require resource support beyond the traditional methods typically employed (i.e., EMAC, minor agency-to-agency coordination, etc.). CSZ will not only present extreme resource requirements but will also likely have an huge impact on the ability to move resources. This situation necessitates a more complex level of coordination from internal SEOC operations, state agency partners, and local jurisdictions to effectively provide the right resources at the right time to the right locations.

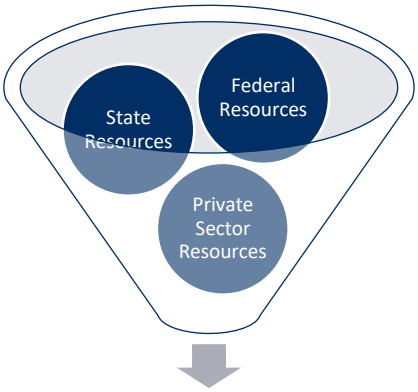

Figure 8 - Logistics Coordination and Movement

CSZ Response Components:[27]

- Priority Routes
- WebEOC
- Contracts
- Federal Request Process
- Staging Areas

Organization

Mobilization

Following a CSZ incident the SEOC Alert and Warning Center will issue immediate recall of all EMD staff. This recall will heavily rely on the operability of communications system and both the A&WC ability to transmit and staff ability to receive. Due to the frequent training and education around this incident, EMD staff will likely assume a recall would be in effect without the confirmation of a recall notice. While it is an assumption, it is assumed with a high confidence that the first actions any staff member would take is to conduct welfare checks on family and loved ones before becoming available for duty. If staff or their families are injured or require care, it may be likely that they will not be able to report for duty. This assumption will apply to all staff who serve in any position (to include those in leadership positions and SEOC

[27] For specific information and how coordination is established, refer to Tab I: Operational Communications.

Command Staff positions). The condition of the transportation will prevent many staff from being able to quickly reach the SEOC or may prevent them altogether due to impassable obstacles. The condition of the SEOC will also affect the ability to initiate response operations and require the activation of the EMD COOP plan to begin Devolution to other state agencies and Reconstitution to offsite locations accordioning to current plans[28].

Staff availability, the condition of the transportation system, and the condition of the SEOC will determine the initial composition of response operations. It is highly likely due to the scope and impact of this disaster that several days will pass before SEOC operations are able to be effective. This situation will likely be the same throughout state and local governments whose staff and facilities are within significantly affected areas. Those filling initial response roles within Command and General staff positions may not be those with the training and experience who would typically be in those positions and plan review and Just-in-Time training will need to occur to establish command and control and to facilitate mobilization.

Critical Transportation
The Washington Department of Transportation holds significant authorities and responsibilities for the activities that will occur under the Critical Transportation core capability. Following the occurrence of a catastrophic incident it will become necessary to coordinate activities through each of the WSDOT regions depicted in Figure 6. These regions will be required to marshal scattered (and potentially) cut-off resources to work towards accomplishing the incident objectives and priorities established through the UCG. Resource may be required to accomplish secondary tasks in order to accomplish primary tasks.

Mass Care Services
Following an incident in which it is determined that mass care functions will need to be coordinated, the SEOC Supervisor will activate ESF 6 in accordance with the established ESF 6 Annex and SOP. Should the need exceed the standard operating procedures, then this portion of the CEMP should be employed to reduce loss of life and sustain impacted communities which are experiencing degraded or damaged mass care response capabilities.

Unlike many other emergency management functions, there is no one state agency that is responsible for, or has the capability to, lead all tactical level operations and activities associated with mass care. Rather, there are agencies and departments which can lead the operational coordination of activities for those participating.

[28] Further information on Devolution and Evolution is contained within the EMD and WMD COOP Plans.

Accomplishing the tasks and functions outlined in this section of the plan will require that the Human Services Branch of the Operations Section be activated to manage the activities taking place across multiple ESFs.

Infrastructure Systems

Water

Upon notification of an incident significant enough to disrupt an infrastructure system capable of presenting life safety issues that exceed the capabilities of local response and the typical coordination used through activated ESFs to deploy resources and services, then the Operations Section will establish the Business and Infrastructure Branch. These activated ESFs will:

- Coordinate with impacted jurisdictions and the appropriate activated Sections to coordinate the delivery of resources and services
- Identify state resource gaps in meeting resource requests
- Identify barriers and limitations in deploying state resources
- Provide information on impact effects over time to assist in the identification of sustainment or degradation in Community Lifelines.

Structure

The activation structure following a CSZ incident should focus on staffing the Command staff positions to establish initial operations with limited available personnel. General staff positions should be highly concentrated on positions which establish Situational Assessment[29].

As situational awareness and communications are established, positions should be filled as needed to conserve limited staff and allow for the flexibility to shift General Staff resources to those positions which are needed most for an operational period. Refer to each respective Tab's Structure section and the SEOC SOP for additional information.

[29] An initial staffing of other positions within the SEOC will highly concentrate those tasked with coordinating tactical operations before the situational awareness is established and result in a delay in eventually providing support, coordination, and resource deployment.

Critical Transportation

The response structure typically employed for incidents involving transportation will need to be expanded beyond the standard ESF 1 structure to include additional ESFs and logistical functions involving the request for federal resources. This includes the activation of operational branches under the SEOC Operations Section for each mode of transportation, to include Air Operations. The structure below depicts one possible configuration, although the inclusion of the Business and Infrastructure Branch may be insufficient to accommodate the complete needs of multiple functions within ESF 1. In which case, additional Branches may be established to coordinate the efforts of these functions (i.e., Rail, Ferries, Bridges, etc.).

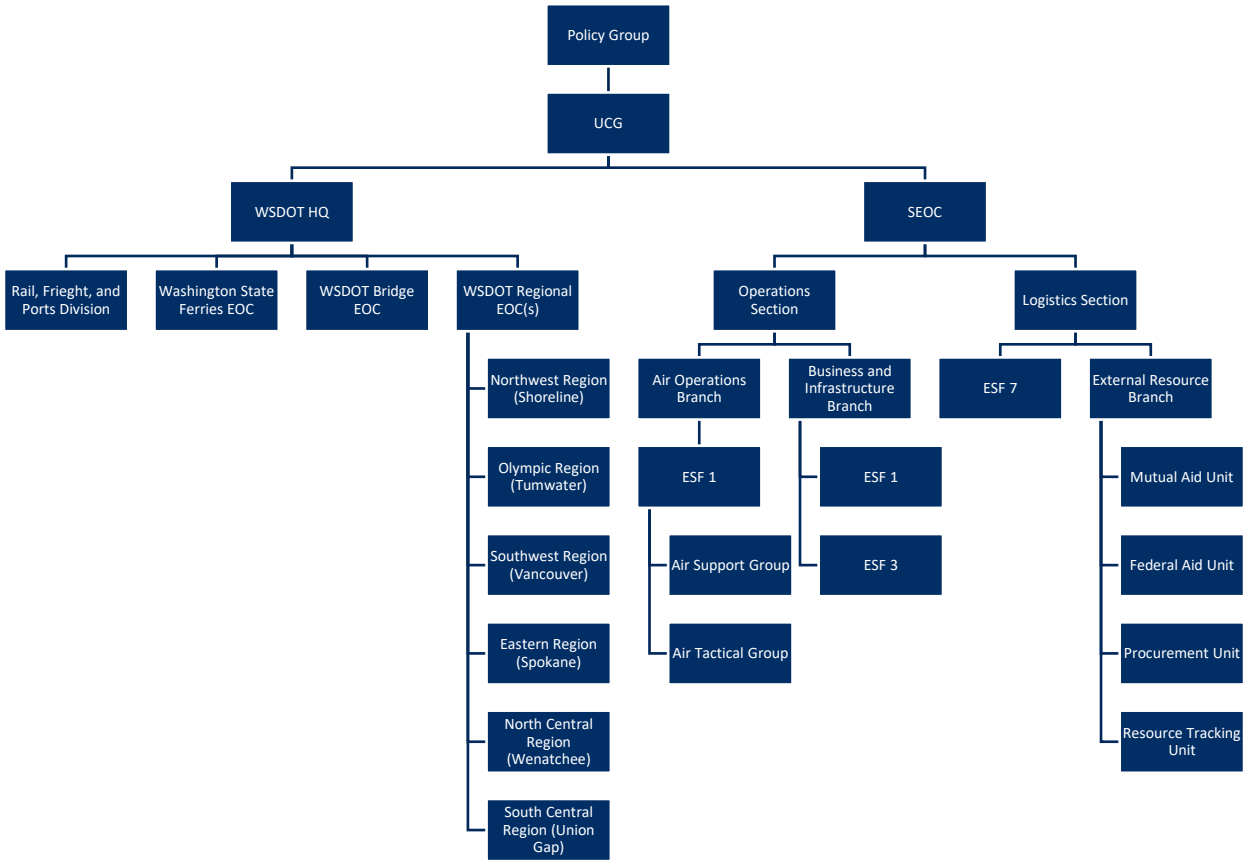

Figure 9 - ICS structure depicting an expanded activation of ESFs supporting Critical Transportation

Mass Care

Mass Care Services is a collection of functions that directly influences and supports community health and wellbeing. The success of mass care operations relies on the coordination of many public and private organizations and partners. The organizational structure displayed in the Mass Care Services Tab shows at a high level where this structure begins, but as situational awareness is established and sustained, it will change to reflect the current conditions of communities. While the figure below does not display the coordination with the other ESFs and response sections, this coordination is essential to the accomplishment of incident objectives, as mass care activities can occur under many conditions and during a catastrophic incident will likely require the collaboration with every ESF at some point.

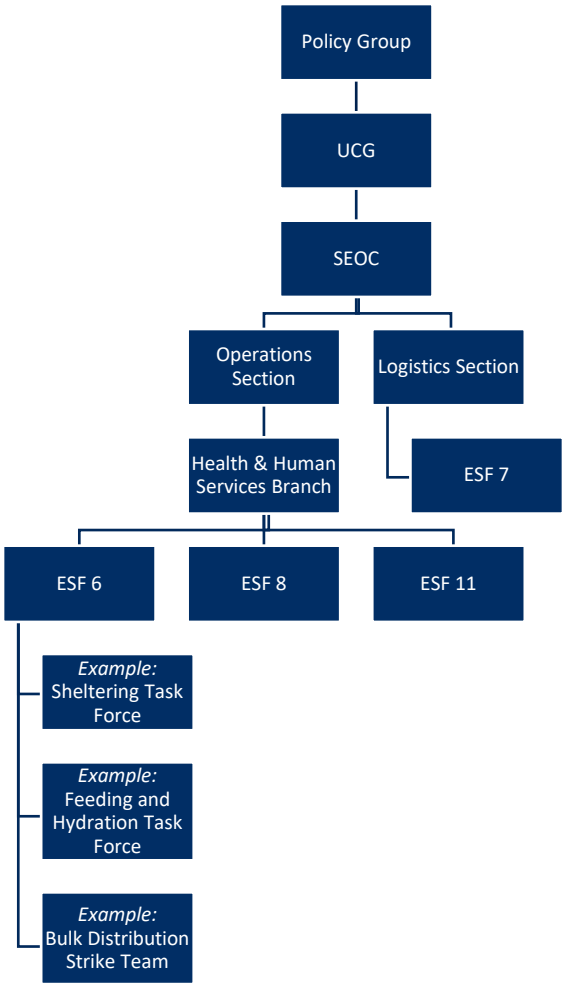

Figure 10 - ICS structure depicting an activation of ESFs supporting Mass Care Services

Infrastructure Systems

Water

Infrastructure Systems response operations fall within the Business and Infrastructure Branch of the Operations Section. The appropriate ESFs should be activated based on all-hazards response and should also include and make space for the local groups and organizations who possess resources or offer unique collaboration.

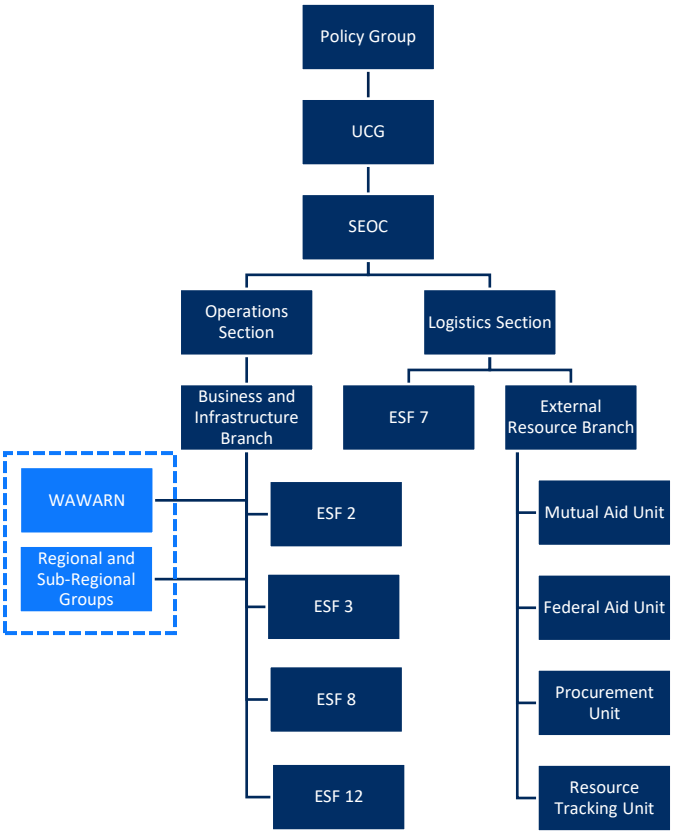

Figure 11 - ICS structure depicting an activation of ESFs supporting Infrastructure Systems

Direction, Control & Coordination

General

A CSZ incident will have dramatic impacts and effects on the entirety of state's transportation system.

Policy Group and the Unified Coordination Group

During the initial stages of a catastrophic incident, it will become necessary to establish a mechanisms for senior leadership to provide guidance and direction (Leadership's Intent) for the activities taking place. As the response becomes more organized it will be necessary to move through the various coordination structures to integrate response personnel from across state government and establish unity of effort. Washington EMD maintains the use of a UCG for incident response and a Policy Group who advises them and acts to determine policy guidance and resource allocation and distribution. State emergency operations and structures will integrate into the federal UCG model when it is established, but still maintain the use of the Policy group to advise the state participants within the UCG.

Unified Coordination Group (UCG)

The Unified Coordination Group (UCG) will have oversight and coordination responsibility for actions throughout the State of Washington.

Initial federal operational coordination will be accomplished at the National Response Coordination Center (NRCC). The Regional Response Coordination Center (RRCC) at FEMA Region 10 provides operational support for field-deployed resources to ensure the synchronization of federal response and recovery operations, and to resolve regional resource requirements. The RRCC is responsible for coordinating and maintaining awareness of federal field activities, including those of the deployed Incident Management Assistance Teams (IMAT). The IMAT then assumes direction and control of the interagency federal response and recovery effort in support of the state requesting federal assistance.

"When catastrophic incidents put a premium on the restoration of complex supply chains (especially for essential products and services needed for response efforts and stabilizing the economy), private sector coordination and assets are vital for public health and safety, the economy, and national security. The private sector can also help government agencies prioritize support missions (e.g., debris removal) to facilitate business and infrastructure response operations." (NRF, 2019).

State Agencies and Departments

Following a catastrophic incident, agencies will first implement their Continuity of Operations Plans to assess their resource impacts, reestablish command and control, and determine the

effects on Mission Essential Functions. Before these entities can turn to the task of supporting the SEOC, they will need to reestablish an effective organizational posture. For an effective response to occur following severe impacts it is required that plans are coordinated and implemented at all levels of government.

Critical Transportation

Many hazard and incident types pose great risk to the transportation system and will greatly reduce the ability to move resources and potentially conduct evacuations out of impacted areas. As out-of-state resources begin moving into state, transportation will represent the first barrier to responding to an incident and beginning lifesaving and sustaining activities. The barrier or challenge will then be to identify how resources can begin to move into staging areas at all levels to initiate the response. Once the resources are able to move into these staging areas, they will require direction in order to proceed to their areas of operation.

Mass Care Services

Any hazard and incident types can put communities at risk and present the opportunity for loss of life beyond the initial impact of the hazard itself. State-led mass care operations will rely heavily on coordination between other agencies and departments, as well as federal resource support.

The primary concern for mass care operations is the time delay that will occur from the occurrence of the incident to when outside aid can meaningfully enter the affected areas to offer support and provide mass care resources. Resources on-hand, gathered or procured by the state, may take several days before they are able to enter impacted areas. Other outside resources may take longer.

As resources become available, the challenge at all levels will be to maintain situational awareness to address resource needs for shelters, feeding and hydration, and bulk distribution. CPODs and shelters are the appropriate mechanism at local levels to directly provide assistance to the public, but local emergency management may require assistance with establishing and maintaining the operational coordination required to ensure they are able to continuously operate with the appropriate resources.

Infrastructure Systems

Water Infrastructure

Vertical and horizontal coordination for infrastructure will present challenges for emergency response due to the jurisdictional levels it is located within, the ownership of the infrastructure (i.e., public vs. private), the type of assistance required, and the level of responsibilities and resources the state can use to assist. Catastrophic incidents impacting the critical infrastructure

sectors addressed in this plan will rely heavily on private sector participation and federal resource assistance to stabilize the incident.

Coordination between local emergency management will be essential in providing the input for a restoration plan following a significant disruption to water infrastructure. Water infrastructure must be repaired to not only meet incident stabilization goals but the primary driver for coordination should center in the fact that a disruption also presents a constant threat to the life safety and sustainment of impacted communities.

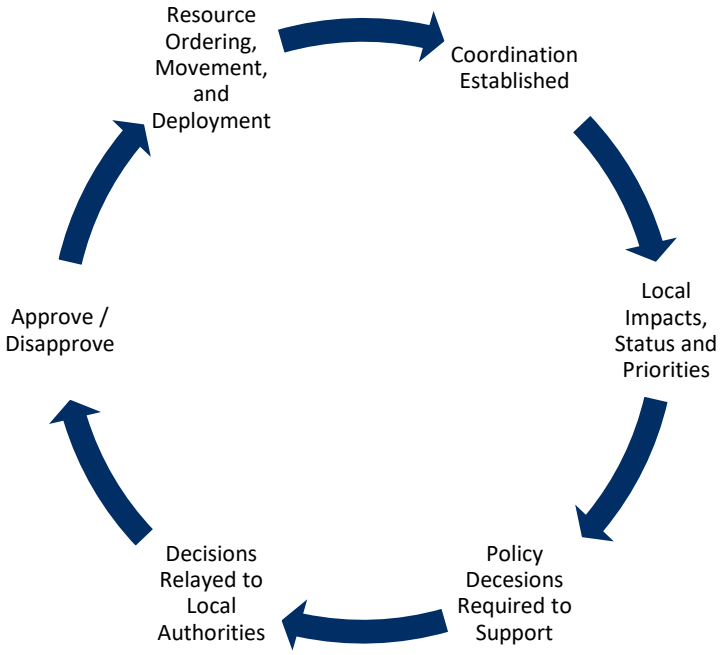

Figure 12 - Coordination process involving water infrastructure requesting assistance.

Through the information collection of local emergency management, WAWARN, and regional groups the UCG and Policy Group can be presented with the policy decisions necessary to allow restoration and support options to proceed. This information will then need to flow back down through local levels for approval on any direct support being provided.

Utility Ownership Structures

There are many different ownership structures for water providers across the state. Communities may not be provided water directly from the jurisdiction they reside in. Structures may fall into several categories:

- Water District
- Special purpose district
- Non-profits/For Profit
- Tribal
- Municipal
- Counties
- Public Utility Districts
- Government/Non-government

Logistics and Supply Chain Management

Staging Areas

In partnership with FEMA Region 10, the following list of sites will be utilized to receive resources into the state following a CSZ incident. Once resources are received through federal sites, they will be transferred to state sites and then moved into local jurisdictions to support incident resource requirements and requests.

Incident Support Base (ISB)	Grant County International Airport Ephrata Municipal Aiport
Federal Staging Areas (FSA)	Joint Base Lewis McChord (JBLM) William R. Fairchild International Airport
Aerial Point of Debarkation (APOD)	Bellingham International Airport Fairchild AFB Paine Field Airport Sanderson Field Tri Cities Airport
State Staging Areas (SSA)	Arlington Municipal Airport Bellingham International Airport Bremerton National Airport Bowerman Airport Clark County Fairgrounds Olympia Regional Airport Paine Field Airport Sanderson Field Southwest Washington Regional Airport William R. Fairchild International Airport
Joint FSA/SSA	William R. Fairchild International Airport
Joint APOD/SSA	Bellingham International Airport Paine Field Airport Sanderson Field

Federal Lines of Effort[30]

Line of Effort	Purpose	End State
Airfield Opening	Provide federal assistance to open major and secondary airfields impacted by the event.	All major airfields are open; majority of secondary airfields are operational, and tertiary airfields are supported, as identified.
Commodities Distribution	Coordinate support for the distribution of resources at appropriate sites (State Staging Areas [SSAs], points of distribution [PODs], etc.)	Commodity distribution is no longer required; private sector distribution systems are re-established
Damage Assessment	State or tribal governments request joint Preliminary Damage Assessments (PDAs).	Decision is made as to whether to request a disaster declaration.
Debris Removal	Provide federal assistance to support clearance, removal, and disposal of debris that impacts the emergency response and community functionality.	Debris no longer poses an immediate threat to lives, public health, or safety; the immediate threat of significant damage to public or private property has been eliminated; debris does not impact the economic recovery of affected areas.
Emergency Repairs or Augmentation to Infrastructure	Provide federal assistance for the temporary support of eligible critical facilities that are degraded and where alternative sites are insufficient.	Temporary repairs or alternate approaches are in place, stabilizing critical infrastructure and providing minimum required functionality; a plan for permanent repairs is in place.
Emergency Route Clearance	Provide federal assistance for immediate clearance of routes and access points to prioritized logistical nodes supporting ground routes and impacted communities.	Primary routes and access points for logistics nodes and impacted communities are opened to allow for lifesaving and life-sustaining support.
Evacuation, Reception, Re-Entry, and Return	Assist individuals in need of general evacuation support in departing the disaster area through whole-of-government coordination.	Safe evacuation and subsequent re-entry of survivors are complete, and federal resources are no longer required

[30] Federal Lines of Effort are presented here to provide a linkage between state response activities and federal response activities. The listed LOEs are those identified in FEMA Region 10's Cascadia Subduction Zone Earthquake and Tsunami Plan.

Fatality Management	Provide decedent remains recovery, processing, and temporary storage as well as victim identification and counseling to the bereaved.	All disaster-related fatalities are recovered, identified, and provided temporary mortuary solutions; information to reunify family members and caregivers with decedents is shared; counseling is provided to the bereaved
Hazardous Waste	Provide federal assistance to oil or HAZMAT discharges or releases that pose a threat to human health, safety, or the environment.	Oil and HAZMAT cleanup operations are complete; debris is segregated and disposed of properly.
Healthcare Systems Support	Provide federal assistance to support healthcare systems that are unable to provide patient services.	Healthcare delivery systems are able to meet community patient care needs without the support of federal resources.
Housing Solutions	Provide temporary housing solutions to eligible survivors.	All eligible survivors are provided relocation assistance and/or interim housing solutions.
Mass Care – Food and Water	Support food and water operations for the impacted populations.	Federal assistance is no longer required to support food and water distribution.
Medical Transportation	Provide federal assistance for the support of Emergency Medical Services (EMS) transport.	Medical system can meet patient transportation requirements without federal support
Natural and Cultural Resource Protection and Restoration	Ensure compliance with pertinent laws, regulations, and executive orders.	Natural and cultural resources and historic properties are evaluated, protected, and/or restored
Operational Communications	Establish interoperable communications among federal, SLTT, and private sector partners while reestablishing public information and warning infrastructure.	Responders have capacity to communicate within the impact area, and survivors are receiving updates about the incident.
Port Opening	Provide federal assistance to support the repair and restoration of critical ports.	Critical ports are capable of sustained operations.
Private Sector Coordination	Provide federal assistance in support of private sector operations; help infrastructure owners and operators,	Private sector is supporting survivor-centric requirements without federal intervention; collaboration and information sharing is established

	businesses, and their government partners coordinate cross-sector operations.	with the private sector, allowing for business-led restoration and long-term recovery efforts
Public Information and Warning	Share coordinated, timely, precise, and actionable information with survivors and partners.	Federal assistance is no longer required to support states and/or tribes in informing the public.
Resource Staging	Coordinate support for the sourcing and staging of federal resources at Federal Staging Areas (FSAs) and Incident Support Bases (ISBs).	Resources are sourced and positioned in staging areas; commodities are ready for distribution.
Responder Security and Protection	Provide temporary federal support to ensure the safety and security of federal responders.	Federal capabilities are no longer required to provide a safe and secure environment for responders.
Restoration of Public Infrastructure	Provide federal assistance to support the repair and restoration of critical infrastructure.	Permanent repairs to critical infrastructure have begun and estimated completion dates are established.
Search and Rescue	Provide federal assistance to support search and rescue (SAR) operations.	Survivors in impacted areas are located, rescued, and transported to medical facilities, shelters, or safe areas.
Sheltering Operations	Support sheltering operations for impacted populations.	Federal assistance is no longer required to support sheltering.
Temporary Emergency Power	Implement temporary emergency power generation to support mission-essential operations and critical facilities.	Utility power and/or facility generation has been restored to critical infrastructure; systems and services are available to the community; emergency spot power generation is no longer needed

Information Collection, Analysis, & Dissemination

The following section outlines the Essential Elements of Information (EEI) needed to determine the effects on Community Lifeline subcomponents. The status of lifeline subcomponents directly affects the condition of the main lifeline. After the lifeline conditions are assessed, they can be used to inform activated ESFs to determine impacts and develop courses of action for an operational period's objectives. The conditions of the lifelines can also be developed into Senior Leadership Briefs (Tiers 1 & 2) to inform response personnel and senior leadership/decision-makers.

Figure 13 - Information Collection and Dissemination

Information Collection & Analysis

Specific details on Information Collection and Analysis are discussed within each core capability Tab.

Information Dissemination

Information analysis will result in contributions to the Tier 1: Disaster Summary, Senior Leadership Brief (SLB) provided to the UCG. Additionally, the more detailed information not necessary for executive level response decision making will be supplied for the creation of the Tier 2: Lifeline Overview SLB for use in tracking conditions and informing response personnel.

Responsibilities

The table below outlines the responsibilities of the entities involved with this Appendix. These actions are tied to executing the Critical Tasks noted in the Concept of Operations section, which contribute to the primary and supporting Core Capabilities. This appendix only focuses on the Phase 2a (Initial Response) and Phase 2b (Employment of Resources). Both Phase 1 (Prepare) and Phase 2c (Transition to Recovery) [31]are discussed within each core capability Tab to focus this plan on the response phases which are most applicable to when this plan will be in effect.

Phase 2a (Initial Response)

Phase 2a	
Critical Transportation	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.
Operational Coordination	

• Establish contact between WSDOT HQ and the SEOC
• Determine transportation-related ICS positions needed for staffing of ESF 1
• Receive situation reports from WSDOT HQ concerning regional conditions to include damage status and available capabilities
• Identify routes that are being assessed and their priority/sequence of assessment
• Coordinate with ESF 6 for evacuation routes that will be needed
• Identify temporary bypasses to impacted infrastructure
• UCG outlines response goals based on conditions, damage, and available resources on-hand
  ○ SEOC/ESF 1 develops response objectives based on UCG goals for:
  ▪ Tracking deployment and status of assessment teams, repair teams, and debris clearance teams
  ▪ Repair priorities (to include temporary bypasses)
  ▪ Evacuation route conditions
  ▪ Evacuation transportation resources
  ▪ Establishing access for movement of resources into affected areas
• Coordinate with local emergency management and public works to determine if state transportation resources can be used to support the establishment of local priority routes which support objectives	

[31] Transition to Recovery activities are only generally discussed within the core capability Tabs, as more applicable and appropriate plans exist within the CEMP to address this phase (e.g., ESF 14 & the Washington Restoration Framework).

Operational Communications
• Ensure the capability to communicate with WSDOT HQ • Ensure that WSDOT HQ can communicate with regional offices and other field operations • Establish the ability to provide communications to SSAs • Determine capabilities needed to support communications with private airports, maritime, and rail partners which may be used during the response • Ensure the capability to communicate with local and Tribal partners for transportation response • Ensure the capability to communicate with FEMA Region 10
Logistics and Supply Chain Management
• Determine initial resource deficiencies for debris clearance and highway/bridge assessments • Push initial mission ready packages to support previously identified resource gaps • Determine initial capabilities needed to meet debris clearance operations and assessments • Determine composition of EMAC and federal requests needed for debris clearance and assessment resources • Stand-up and staff SSAs • Make preparations for resource coordination between SSAs, FSAs, APODs, and the ISB • Support requests for evacuation resources
Situational Assessment

• Map impacted state routes (roadways and bridges) into GIS using Priority Routes layer
  ○ Determine nature of impact (e.g., landslide, bridge collapse, etc.)
  ○ Map impacted local priority routes into GIS using Priority Routes layer
• Map impacted WSDOT Ferry terminals into GIS using Priority Routes layer
• Map impacted maritime ports into GIS using Priority Routes layer
• Map impacted airports into GIS using Priority Routes layer
  ○ Identify airports with impacted access that are designated as SSAs, APODs, and FSAs
• Map impacted rail lines into GIS using Priority Routes layer
• Identify areas that are inaccessible or cut-off due to damaged state routes
• Determine impacts status of Transportation Community Lifeline

Phase 2a	
Mass Care Services	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.
Operational Coordination	
• Establish contact with impacted jurisdictions to identify shelters in use ○ Identify shelter types	

- Identify sheltering staff shortfalls
- Identify shelter resource deficiencies

- Identify mass care-related ICS positions needed to staff the Human Services Branch and ESF 6 based on sheltering needs identified by local jurisdictions
- Alert and notify all mass care response partners in accordance with procedures
- Receive situation reports from activated ESFs participating in mass care activities concerning the condition and availability of their resources
- In coordination with ESF 1 and other Critical Transportation partners, determine the status of routes which align with Priority Routes
  - Assess the ability of resources to access shelters and inform local jurisdictions
- In coordination with ESF 8, identify medical support capabilities for shelters
- In coordination with ESF 12, identify energy infrastructure impacts which affect sheltering operations
- In coordination with ESF 15, assist local jurisdictions in providing or amplifying public information and warning to impacted communities
- In coordination with ESF 20, provide personnel to support local mass care operations

Operational Communications

- Assess and establish communications ability with all mass care response partners
- Assess and establish communications ability with all impacted jurisdiction's mass care operations
- In coordination with ESF 2, identify any communications barriers with state, Tribal, and local mass care operations and begin identifying solutions
- In coordination with ESF 15, monitor for community-based communications concerning mass care

Logistics and Supply Chain Management

- Coordinate with local emergency management logistics to identify anticipated resource shortfalls and needs
- Assist local jurisdictions in identifying vendors for resource requests
- Compile resource needs and identify trends to provide to policy group for resource request funding
- Identify scarce resources
- Begin to develop prioritization methodology in coordination with UCG and policy group
- Identify vendors in non-impacted areas who have water and shelf stable food inventories on-hand

Situational Assessment

- Monitor WebEOC Shelter Status Dashboard
- Conduct ongoing assessment of mass care needs
- Estimate initial mass care needs by type and capability

- Provide quantitative mass care services data to Planning and Logistics Sections, and other ESFs that require accurate data for response logistics
- Implement a daily counting and reporting system for sheltering, feeding, and bulk distribution items delivered
- Identify initial conditions of the Food, Water, Shelter & Health and Medical community lifelines

Phase 2a	
Infrastructure Systems	Stabilize critical infrastructure functions, minimize health and safety threats, and efficiently restore and revitalize systems and services to support a viable, resilient community.
Operational Coordination	
Water Systems and Services • In coordination with the SEOC Operations Section and the Business and Infrastructure Group, establish coordination between infrastructure partners who share dependencies with impacted systems (water systems require fuel/electricity; transportation repairs may require water; fuel refinement requires potable water)	
Operational Communications	
Water Systems and Services • In coordination with ESF 15, ensure the capability to provide the public with timely warning and emergency information concerning water resources.	
Logistics and Supply Chain Management	
Water Systems and Services • In coordination with the SEOC Logistics Section, identify additional water resources available to support local resources to meet needs (bottled water, RUPUs, water trailers, etc.)	
Situational Assessment	
Water Systems and Services • In coordination with ESF 1, identify impacts to the transportation system delaying or preventing the movement of water resources. • In coordination with ESF 5 and ESF 6, identify local CPODs requiring water resources	

Phase 2b (Employment Resources)

Phase 2b	
Critical Transportation	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.

Operational Coordination

- Develop a time-based plan to restore operation of lifeline routes, or alternate routes if the lifeline routes are severely damaged, and ports of entry
- Coordinate assessment of debris clearance/removal and repair efforts through WSDOT regional EOCs
  - Begin debris removal and emergency repairs necessary to reestablish transportation corridors for increased capacities[32]
- Determine repair requirements for maritime infrastructure
  - Assess the viability and requirements for establishing minimal operations
- UCG updates response goals based on conditions, damage, and available resources on-hand
  - SEOC/ESF 1 updates response objectives based on UCG goals for:
  - Tracking deployment and status of assessment teams, repair teams, and debris clearance teams
  - Repair priorities (to include temporary bypasses)
  - Evacuation route conditions
  - Evacuation transportation resources
  - Establishing access for movement of resources into affected areas
- Coordinate with Federal ESF 1 on response needs

Operational Communications

- Sustain the capability to communicate with WSDOT HQ
- Sustain communications between WSDOT HQ and regional offices and other field operations
- Sustain the ability to communication with SSAs
- Ensure the capability to communicate with Local Staging Areas
- Sustain capabilities to support communications with private airports, maritime, and rail partners which may be used during the response
- Sustain communications with FEMA Region 10

[32] Phase 2a activities concerning debris clearance and removal will likely only be concerned with establishing initial access for a single lane. This phase may allow for available resources to establish access for additional capacity.

Logistics and Supply Chain Management
• Support resource requests for transportation resources • Identify external resources that can support response objectives • Track mutual aid and federal resources employed by the state • Identify barriers for the movement of resources • Identify alternative methods for the movement for resources
Situational Assessment
• Maintain map of impacted state routes (roadways and bridges) in the GIS Priority Routes layer • Assess if available priority routes are connecting staging areas, points of distribution, points of entry, hospitals, and emergency services including police and fire. • Identify areas that are inaccessible or cut-off due to damaged state routes • Determine impacts status of Transportation Community Lifeline   ○ Identify if response conditions are improving or worsening • Assist in the assessments of non-priorities routes

Phase 2b	
Mass Care Services	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.
Operational Coordination	

• Integrate with external support operations that are participating in mass care operations
  ○ Identify active external mass care participants to include in the SEOC ICS structure (to include the Private Sector)
• Assist and support local jurisdictions in coordinating safe, secure, and effective feeding and sheltering operations
• In coordination with ESF 1, prioritize assessment and repair resources which align with mass care operations and Priority Routes
• In coordination with ESF 3, identify government facilities that can be utilized for mass care activities
• In coordination with ESF 4, identify personnel resources that can be utilized to fill local mass care operations (as appropriate and feasible)
• In coordination with ESF 5,
  ○ Request resource support from mutual aid and federal sources
  ○ Ensure that meaningful reporting is occurring from local sources to aid in mass care support (i.e., EEI or Community Lifeline reporting)
• In coordination with SEOC Logistics and ESF 7, identify and procure (if approved) resources to support local mass care operations	

- In coordination with ESF 11
    - Identify feeding support available for local communities
    - Provide nutrition assistance
    - Ensure the safety of food supplies
    - Provide for the safety and well-being of pets during emergency response operations and evacuations.
- In coordination with ESF 13, identify resources available to protect mass care operations (as needed based on credible concerns)

Operational Communications

- Sustain communications ability with all mass care response partners
- Sustain communications ability with all impacted jurisdiction's mass care operations
- In coordination with ESF 2,
    - Identify communications solutions to address barriers with state, Tribal, and local mass care operations.
    - Identify available resources that can help support local jurisdiction's mass care field operations
- In coordination with ESF 15, monitor for community-based communications concerning mass care

Logistics and Supply Chain Management

- Integrate resources deployment for delivery of key supplies and response personnel alongside related activities
- Coordinate with appropriate agencies to determine bulk distribution needs of affected population
- Conduct ongoing assessment of mass care needs
- Provide quantitative mass care services data to Planning and Logistics Sections, and other ESFs that require accurate data for response logistics
- Re-evaluate system established for daily counting and reporting system for sheltering, feeding, and bulk distribution items delivered
- In coordination with ESF 1 and ESF 7, identify barriers and limitations in moving resources through transportation corridors which support mass care operations
- In coordination with ESF 7,
    - Identify state contracts for requested resources
    - Identify resources for bulk purchases that support mass care
    - Prepare to receive donations which are needed for bulk distribution
    - Support local jurisdictions with coordination and delivery of water and shelf stable food to meet immediate needs (pre-CPOD deployment)
- In coordination with ESF 11, identify needs to provide emergency supplies for pets and service animals
    - Coordinate with agencies receiving donations for service and companion animals

- In coordination with ESF 12,
  - Identify fuel support for power generation at shelters and other mass care delivery sites
  - Identify fuel support for evacuation operations
- In coordination with ESF 15, establish messaging for donations (wanted and unwanted)

Situational Assessment

- Conduct ongoing assessment of mass care needs
  - Analyze mass care operational reports for regional impacts and trends
  - Share summary information with partners both vertically and horizontally
  - Identify unmet needs
  - Identify resource deficiencies in AFN support
- Monitor on-going conditions of the Food, Water, Shelter & Health and Medical community lifelines
  - Identify impacted areas where life safety or sustainment present significant challenges and require additional actions to occur
- Sustain sheltering awareness through the WebEOC Shelter Status Dashboard
- Sustain quantitative mass care services data for the Planning and Logistics Sections, and other ESFs that require accurate data for response logistics
- Sustain a daily counting and reporting system for sheltering, feeding, and bulk distribution items delivered
  - Move to weekly reporting as appropriate

Phase 2b	
Infrastructure Systems	Stabilize critical infrastructure functions, minimize health and safety threats, and efficiently restore and revitalize systems and services to support a viable, resilient community.

Operational Coordination

Water Systems and Services

- In coordination with the SEOC Operations Section and the Business and Infrastructure Group, establish response objectives that reflect the coordination between infrastructure partners who share dependencies with impacted systems (water systems require fuel/electricity; transportation repairs may require water; fuel refinement requires potable water)
- In coordination with the Business and Infrastructure Group, Policy Group, and UCG, coordinate regulatory waivers and exemptions.
- In coordination with ESF 1, assist local jurisdictions with accessing water infrastructure sites which have experienced damage to transportation access (to include aerial support)

Operational Communications
Water Systems and Services • In coordination with ESF 2, partner with private sector providers to restore commercial voice and data communications capabilities in support of water infrastructure and water services • In coordination with ESF 2 and ESF 15, assist local jurisdictions with communications capabilities to inform the public regarding the status of water systems, available resources, and public health notices (e.g., boil water advisories, etc.)
Logistics and Supply Chain Management
Water Systems and Services • In coordination with the Business and Infrastructure Group, Policy Group, and UCG, consider waiving certification requirements for select personnel with expired(ing) credentials in order to address resource gaps or the inability to recertify • In coordination with the SEOC Logistics Section and ESF 6, identify local CPODs and staging areas which require water resource support • In coordination with ESF 12, identify and coordinate fuel needs for water infrastructure (i.e., on-site generators) • In coordination with the SEOC Logistics Section, ESF 7, and ESF 6, procure, coordinate, and request additional water resources to support local resources to meet needs (bottled water, RUPUs, water trailers, etc.) • In coordination with ESF 7, identify state contracts that can utilized to support local water system repair or to supply water services over an extended timeframe
Situational Assessment
Water Systems and Services • In coordination with ESF 3 and ESF 8, monitor and report the status of and damage to major water and wastewater providers covering large populations • In coordination with SEOC Logistics and ESF 6, monitor for portable generator requirements for sites providing water to impacted communities • In coordination with the Business and Infrastructure Group, ESF 3, and ESF 7, identify supply chain deficiencies and shortfalls in supporting water infrastructure repair (based on local feedback of supply chain bottlenecks) • In coordination with ESF 11, identify water resource needed for agriculture and livestock

Phase 2a, 2b	
Situational Assessment	Preliminary information about the incident has been collected from all available sources. An initial situational assessment of the incident has been performed.
Critical Infrastructure, Private Partners, VOADs, PSAPs, News Media	
• Provide information through appropriate state agencies, local partners, or the SEOC to inform response conditions (e.g., damage reports, 911 calls, Windshield Survey's, Field Reports, and Witness Information)	
Local EOC	
• Provide updated local response information through the SEOC Representative • Identify Community Lifeline status and barriers or limitations for reestablishment • Establish and sustain local jurisdiction situation reports to the SEOC	
Situation Unit	
• Collect data from local jurisdictions and state agency partners • Analyze data from local jurisdictions and interpret Community Lifeline status (if not already completed) • Include Community Lifeline status and analysis in Situation Report • Provide Community Lifeline analysis to the Geographic Information Unit.	
Geographic Information Unit	
• Display data that is relevant for Community Lifeline statuses to aid in situational awareness and decision making • Spotlight areas with significant disruption to Community Lifelines • Display HLS Regional damage and impact assessments • Display significant resource deployments • Inquire about non-standard GIS needs	
SEOC	
• Collation of information into the Community Lifeline Senior Leadership Briefs. • Sharing and dissemination of information to local jurisdictions, state agency partners, federal partners, and the Unified Coordination Group and Policy Group • In coordination with ESF 15, translate Community Lifeline statuses and updates for public consumption	

Phase 2a, 2b	
Logistics and Supply Chain Management	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.
Phase 2a	
• Activate any applicable memorandums of understanding (MOUs)/memorandums of agreement (MOAs) for chosen logistics sites • Initiate assessment of logistics sites • Establish and staff all logistics sites	
Phase 2b	
• Provide a joint expeditionary capability to rapidly assess, establish, repair, and operate SSAs within and outside the affected area • In coordination with the UCG and the Policy Group establish objectives and priorities for resource allocation • In coordination with ESF 13 and ESF 20, determine need for and request security for movement and staging of resources • In coordination with ESF 7, maintain coordination with the private sector to identify logistics shortfalls which the private sector can fill. • Site managers continue to maintain food, water, dumpsters, hand-washing stations, portable toilets, and fuel distribution sites at ISBs, FSAs, and RSCs. • In coordination with ESF 1, ESF 6, ESF 7, ESF 11, and ESF 20, identify resource requirements and support the transportation resource requirements for the evacuation of people, service animals, and household pets.	

Phase 2a, 2b	
Operational Communications	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 impacted area and all response forces.

SEOC

- Identify communications requirements for internal and external stakeholders, local jurisdictions, and other response partners across the whole community.
- Rebuild and/or reestablish EMD networks post-incident.
- Restore EMD system data from established backups.
- Restore communication for the SEOC with established or backup network providers.
- Coordinate the assessment of local jurisdiction communication status.
- Deliver information on the current status of SEOC communication systems to local jurisdictions
  - If direct communication to the local jurisdiction EOC is unavailable, assess the utilization of Public Safety Answering Points as a relay for communications.
- Provide communications capabilities for SEOC Representatives and other Field Forces.
- Prepare demobilization and transition plan to ensure restoration efforts continue.

Alert & Warning Center

- If necessary, relay the status of the SEOC PACE communications status to the local, regional, or city PSAPs so interoperable communication can occur.

ESF 2

- Setup and test portable network devices to provide communications between sections and ESF partners, policy group and elected officials.
- Assess potential field personnel and facility communications requirements
- Source mobile communications capability for isolated communities and other state identified priorities.

Terms and Definitions

Ad-Hoc Shelters
Unplanned or independent congregate facilities established, without coordination with local emergency management, by groups who historically have not participated in community disaster congregate care planning and/or who have not previously held a traditional disaster sheltering role. These shelters may provide surge capacity for large-scale disasters and as public accommodations must comply with applicable laws

Cascadia Subduction Zone
A 1,000 km long dipping fault that stretches from northern Vancouver Island to Cape Mendocino California. It separates the Juan de Fuca plate and North America plates.

Community Lifeline
Priority issue areas that provide indispensable service that enable the continuous operation of critical business and government functions, and is critical to human health and safety, or economic security.

Congregate Shelter
Generally provided in large open settings that provide little to no privacy in facilities that normally serve other purposes such as schools, churches, community centers, and armories.

Critical Consumers
A person or organization that produces a commodity or enables a service vital to a community's safety, security, and public health.

Critical Infrastructure
Critical infrastructure includes those assets, systems, networks, and functions—physical or virtual—so vital to the State that their incapacitation or destruction would have a debilitating impact on security, economic security, public health or safety, or any combination of those matters.

Incident Stabilization
The state where critical lifeline services necessary to alleviate immediate threats to life and property are available to support the needs of survivors and responders.

Non-Congregate Shelter
Provides alternatives for incidents when conventional congregate sheltering methods are unavailable or overwhelmed, or longer term temporary sheltering is required. Typically, facilities that are used provide a higher level of privacy than conventional congregate shelters, hotels, and cruise ships, other facilities with private sleeping spaces but possibly shared

bathroom /cooking facilities, dormitories, and/or converted buildings, or staying with friends/family.

Reunification Services
Services that provide mechanisms to help displaced disaster survivors, including children, reestablish contact with family and friends.

Seismic Lifeline Corridor
The Pacific Northwest section of I-5, the I-5 Urban Corridor, extends from Eugene, Oregon to the Vancouver, Canada. The State, county and cities in the Puget Sound area have a 10-year plan for seismic retrofitting for emergency response and economic recovery to build a usable route around the I-5 section through downtown Seattle via SR 99 and I-405.

Senior Leadership Brief (SLB)
A situational awareness product that discusses lifelines and the interdependencies between them. The goal of the SLB is to allow users at all levels to interact with each other to share and digest the most authoritative information on an incident.

Situational Assessment
The process used to collect, process, and organize ongoing situation information; prepare situation summaries; and develop projections and forecasts of future events.

Situational Awareness
The ability to identify, process, and comprehend the critical information about an incident. This requires continuous monitoring of relevant sources of information regarding actual incidents and developing hazards.

Shortfall
Resource-specific limitations which can be determined by identifying the total requirement and subtracting available (organic, mutual aid, and external support) resources from that total requirement.

EMAC
The Emergency Management Assistance Compact (EMAC) is an Inter-State mutual aid construct that can be used between members after a Governor's Proclamation of Emergency has been declared.

WAMAS
The Washington Mutual Aid System (WAMAS) is an Intra-State mutual aid mechanism, which all local jurisdictions are members. The State is not a member to this construct however it is a legal means for local emergency management to share and reimburse for resources.

Catastrophic Incident Annex

Appendix 2:
Executive Summary

Catastrophic Incident Annex (CIA)

Appendix 2: Executive Summary

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Appendix 2: Executive Summary

Purpose

This Appendix serves as an aid for decision makers and executive leadership following the occurrence of a catastrophic disaster. This resource is intended to present the most critical information contained within other portions of the Catastrophic Incident Annex (CIA) for quick reference and introduction of relevant topics. This appendix also contains resources for facilitating decision making and understanding the actions that will occur throughout statewide emergency operations.

Important topics within this document:

- Important Considerations and Assumptions for Leadership (CSZ Incident-Specific)
- Strategic Goals and Objectives
- FEMA Lines of Effort
- Statewide Operational Coordination
- PACE Communications
- State and Federal Staging Areas
- Senior Leadership Briefs

Tools and Job Aids (attachments)

- UCG Checklist and Decision Matrix
- Policy Group Checklist
- Community Lifeline Reporting
- EEI Spreadsheet
- ESF Checklists
- SEOC Section Checklists

Situation Overview

General

The following planning assumptions and response considerations involve selections from the primary[1] and supporting core capabilities referenced in each Tab of CIA. Each of these Tabs goes into greater detail than is covered in this appendix.

Important Considerations and Assumptions for Leadership

- Federal assistance is immediately needed as the initial response to a catastrophic incident is beyond the capability of the State of Washington.

[1] The Public Health, Healthcare, and EMS; and Fatality Management have not yet been planned for, so no information is presented in this document for those core capabilities. The Infrastructure Systems core capability has only addressed a few of its components in planning (primarily water infrastructure).

Appendix 2: Executive Summary

- There will be a Governor's Proclamation of a State of Emergency and a Presidential Major Disaster Declaration.
- Catastrophic incidents may limit or prevent response personnel from initialing filling roles within the SEOC.
- There will be limited to no capability for supporting out-of-region resources and staff; temporary billeting will be required immediately post-event for responders.
- A viable resource allocation and adjudication system must be immediately in place to get the maximum benefit of limited critical resources.
- There will be multi-state and multi-regional demands for the same national resources.
- Early in a catastrophic incident, critical resources will be "pushed" directly into the impacted areas via a coordinated state and federal response.
- Resources requests can be expected to exceed all available sources and will include those resources that the state does not have access to or typically utilizes in a response.
- Some physical communications infrastructure may fail or become destroyed during the incident and disable one or more methods of communication
- Some communication infrastructure sites are in difficult to reach locations and require special transportation capabilities to access to repair or refuel.

<u>Roadways and Bridges</u>

- Some road systems may be impassable due to damage or secondary effects (e.g., landslides, liquefaction, subsidence, hazardous materials, flooding, etc.).
- Assessments are required for all transportation infrastructure in affected areas.
  - The extent of damage and debris limit access to conduct assessments and repair.
  - Assessment resources for transportation infrastructure will be insufficient, requiring prioritization of this resource type.
  - Transportation impacts and limitations will delay situational assessment and early attempts to move resources.
- Local capabilities are likely inadequate to repair transportation infrastructure.
  - Any resources brought in to assist response operations will need to be self-sufficient.
  - Repairs may require that some locations be repaired first to access other locations.
  - Significant repairs and replacements to transportation infrastructure will take months and years rather than days and weeks.
  - Some bridges may require specialized resources to repair which are unavailable.

<u>Airports, Maritime, and Rail</u>

- Seaports, airports, and rail do not have the resources for 24-hour operations.

- Airports are largely limited to those that can accommodate large aircraft, have sustained minor damage, have useable and repairable connections to the ground transportation systems, and have the capacity for multiple large aircraft to be on the ground at one time.
  - Airport functionality is dependent on wraparound services (e.g., power, water, sanitation, fuel, and communications).
  - Helicopters may be needed to meet the transportation needs of isolated communities where landing areas are too small for fixed-wing aircraft.
    - Helicopters carry fewer supplies, are slower, and have a shorter range.
  - Small airports may be able to support helicopter operations.
  - Commodities may pile up at airport landing zones if shortages in supply movement capabilities occur.
- Seaports are at risk to sustain major or complete damage.
  - Maritime resource movement may be unavailable to many locations due to damage to ports, debris in the water, and changes to underwater topography.
- Ferries are critical links between the east side of Puget Sound, to the Kitsap and Olympic Peninsulas, and the San Juan Islands.
- If key rail bridges in Seattle, Tacoma, Vancouver, and Portland sustain significant damage, then rail transportation is not possible along the I-5 corridor or spurs to the west.
  - The majority of rail facilities (train stations, dispatch facilities, and fuel facilities) are along the I-5 corridor and are on liquefiable soils.
  - Rail lines coming from the east may be significantly impacted by landslides.

<u>Mass Care</u>

- There will not be enough trained shelter staff to support all operations.
  - Shelter staff will be disaster victims themselves and will require the same services and resources as those in the shelters.
  - Ad hoc and impromptu shelters will be established and will need to be identified.
- Pre-designated mass care sites may suffer damage and require repairs before being utilized.
  - Major aftershocks may result in the need for additional building inspections or re-inspections before a facility can be used or continue operations
  - Not all designated shelter facilities are retrofitted or have emergency backup power.
  - Depending upon the number and condition of shelters in the impacted area, damage to infrastructure, access to communication and life-sustaining resources and services and other factors, there will be a need to evacuate disaster survivors to host jurisdictions.
  - Within heavily impacted areas, there may not be officially managed shelter facilities if life sustaining resources cannot access the locations.
  - Some sheltering locations (official and ad-hoc) which were ADA compliant, may not be compliant after sustaining damage from an incident.

- Some shelter locations may or may not have backup generator capabilities.
- Fires or aftershocks may require the relocation of shelters that become threatened.
- Disaster survivors may self-relocate or shelter-in-place rather than stay in shelters.
  - Disaster survivors may not seek shelter in buildings after a catastrophic earthquake.
  - Mass care services will need to be provided to survivors relocating to host jurisdictions.
  - Those who have Sheltered in Place at home, may need additional care/resources.
    - These resources will run out at various times after a disaster.
    - There is the potential for those sheltering in place to have unmet needs that will need to be addressed.
  - Impacted populations may choose to stay on or close to their properties by camping in parks, RVs, or trucks located in parking lots and other open spaces
    - They will require sanitation, feeding, and medical support.
- Assistance from outside the impacted area will take time to organize and mobilize, leaving only internal community resources available for response.
- The inability to get messages to the public about mass care resources and services; and communication between response stakeholders will decrease the ability for the state to perform mass care
- There will be areas that, due to a loss of some or all of the community lifelines, mass care operations will be unable to be performed due to issues surrounding survivor and responder safety, and/or inaccessibility.
  - Disaster survivors arriving at mass care sites may present with minor injuries, pre-existing chronic or contagious diseases, or other medical conditions that require evaluation and treatment, isolation or quarantine, or referral.

<u>Feeding, Hydration, and Bulk Distribution</u>

- Mass care service providers will be challenged to acquire and receive food to serve shelter populations and to prepare it without continuous coordination and support. Additional challenges include:
  - Meeting diverse cultural and dietary needs (e.g., food allergens, medically-required limitations[2], vegetarian/vegan, halal, kosher) of the affected population
  - Providing appropriate feeding for service animals and household pets.
- Disruption of water, power, communications, transportation and other critical infrastructure sectors will impact people's ability to move to sheltering locations and receive or go to goods and services.

[2] Among others, this may include such restrictions as low sodium and low fat. This may also include those who are unable to eat or drink by mouth and require Total Parenteral Nutrition (TPN).

- Resources to support household pets and service and assistance animals in the impacted area will be insufficient.
- The scarcity of appropriate vehicles to provide mass care services will limit the delivery of life-sustaining services.

Water

- The resources available post-incident may be insufficient to concurrently provide services and restore systems.
  - Water utility personnel will likely not be available in sufficient numbers to operate, maintain, repair, and restore water systems for the first few weeks.
  - There may be insufficient resources to accomplish incident objectives due to resource competition with other response activities.
- A water provider's service area is likely not consistent with jurisdictional boundaries
  - A coordinated response involving water services may require the coordination of many different providers for a single community
- Water systems in dense urban settings may be out of water within 24 hours if significant damage is experienced to the infrastructure.
- Populations may need to be moved to areas where water infrastructure is functioning or have water services.
  - Some impacted individuals, given no alternatives, will use potentially contaminated source water.
- Damage assessments can take a week to occur.
- Water reservoirs may be quickly depleted following an incident that damage the system.
- The period between water quality testing and laboratory testing may take several days.
- Water utilities may be able to operate 2-4 weeks with treatment chemicals on hand.
- Water infrastructure (utility operators) will require the functioning of other services to maintain operations, provide additional services (community collection points), and repair and restore damaged systems.
  - The ability to repair or restore water systems and/or provide water services is directly correlated to the condition of the transportation system.

Wastewater

- Inoperable pumps at a wastewater utility can lead to sewage overflows that damage the environment, wastewater treatment technologies and threaten public health.
- There exists the potential for a higher risk of disease and illness without a working wastewater system.

Energy

- Except for some agency specific uses, the State of Washington does not own or operate any significant energy supply facilities, nor is it involved in any wholesale or retail energy transactions or businesses.

- Bulk fuel deliveries will require significant coordination to move throughout the regions
- Fuel Points of Distribution (F-POD) may be implemented to facilitate deliveries within local jurisdictions
- Initial system safe shutdowns (breakers tripping due to shorts) may cause statewide blackouts that could impact transmission throughout the region
- Generators will be required to provide energy to critical facilities and require short and long-term prioritization of fuel distribution
- Restoration of fuel refinery operations will require both water and electricity (to include replacement of components)
- Fuel stations with generators are limited and consumers may not be able to easily access gasoline for evacuation or refueling small generators[3]
- Fuel demand for response and recovery efforts will increase significantly and be a high priority for the first weeks and months of a catastrophic incident.

Information and Communications Technology

- Movable and deployable resources capable of establishing and providing immediate communications infrastructure using ICT will be necessary to facilitate a response in which communications has become disrupted.
- Collaboration with the Private Sector will be required to bring in temporary resources which can establish necessary communications.

Communications

- Operational communications hub relay damage reduces regional communications capabilities.
- Many tower-based systems fail or otherwise are unavailable post-incident due to misalignment, tower collapse (full or partial), interconnectivity failure, loss of redundant systems, power failures, loss of fuel supplies, or overutilization.
- There is limited availability of crews who can assess communications facilities.

Safety and Security

- Correctional facilities in the shake zone sustain significant damage and may require evacuation.
- The demand for law enforcement services will be higher after the incident than before and will continue to rise as panic and frustration increase in the population.

[3] There should also be secondary considerations made for impacts to payment systems as many individuals rely on electronic payment, which may be inoperable.

Concept of Operations

General

At the occurrence of catastrophic incident, the SEOC will be activated at Level 1 Full Activation. Should it become necessary to involve the assistance of federal resources following a disaster declaration, a method of coordination may need to be established to facilitate response operations spanning a large geographical area. When the determination is made to establish geographic branches and divisions to coordinate statewide efforts alongside federal efforts, then this plan will be in effect.

Strategic Goals and Objectives

Life Safety

Priority Routes

1. Identify the routes critical for response including routes to hospitals, emergency services, mass care shelters, CPODs, staging area, and points of entry including connections to adjacent communities, the states "Seismic Lifeline Routes" and air and water ports.
2. Coordinate the deployment of resources that can assist local jurisdictions with assessment and inspection of transportation infrastructure needed for response operations.
3. Coordinate debris clearance from priority routes needed for response operations.
4. Align routes used to move resources with Priority Route planning.

Priority Activities[4]

5. Provide assistance with local and Tribal sheltering needs through available state resources and facilities.
6. Provide assistance with feeding and hydration for local and Tribal needs through procurable resources[5].
7. Provide assistance with the bulk distribution of disaster supplies to impacted communities through existing government programs and services.
8. Facilitate the movement of mass care resources from donated, procured, and federal sources into local and Tribal staging areas.

Water Services

9. Provide sufficient and sustained support for water services to meet life-sustainment incident objectives.

[4] Priority Activities should emphasis those activities and locations which are along state and local Priority Routes.
[5] The state does not maintain these resources and would have to procure resources using contracts and private vendors to support impacted communities.

Water Systems

10. Assist local jurisdictions with the prioritization of water system restoration by those critical consumers who are needed to respond to and stabilize the incident.
11. Identify local jurisdiction resource needs for system restoration and assist to the extent possible under legal guidelines for providing resources to public and private entities.

Vertical Integration

12. Response operations involving some or all of the jurisdictions and Tribal partners in the state will require an extraordinary level of coordination. This coordination will require the vertical integration of all levels of government to effectively respond and stabilize from the results of a catastrophic incident.
13. Communicate with all levels of government during a catastrophic incident to effectively gain situational awareness through assessment and reporting.
14. Establish sufficient communication to enable timely and coordinated assistance to local jurisdictions.
15. Establish a shared situational awareness and understanding of the communications operating environment.
16. Integrate state-owned and private sector communications equipment with local jurisdictional communications systems to facilitate interoperable communications between the state and local response resources.

Horizontal Integration

17. Communicate key findings which directly threaten or affect life safety and sustainment across agencies and partners to inform overall response efforts and identify potential policy decisions.
18. Establish or reestablish communication systems between state agencies, private sector entities, critical infrastructure sectors, and other responding organizations to facilitate operational coordination.

Information Analysis

19. Facilitate a rapid assessment capability immediately following an incident and determine life-threatening situations and imminent hazards.
20. Facilitate the collection of information and other activities such as predictive modeling, remote sensing, and reconnaissance.

Evacuation

21. Provide resource support for local evacuations from heavily impacted areas and other areas which threaten life safety.

Incident Stabilization

Situational Awareness

22. Assess the condition of the transportation network starting with priority routes and situational requirements.
23. Determine resource shortfalls.
24. Determine effects to the Community Lifelines due to impacted transportation infrastructure.
25. Monitor shelter conditions across all activated shelters.
26. Monitor and assess sheltering shortfalls for capacity, personnel, equipment, supplies, accessibility, and specialty needs.
27. Continuously assess sheltering needs, food and hydration availability, and bulk distribution through local and Tribal situation reports, the shelter manager or the regional shelter manager/supervisor.
28. Monitor supply chain deficiencies for mass care resources (as reported by local and Tribal jurisdictions, vendors involved in state procurement, and federal logistics support).

Water Services

29. Sustain water resource assistance to protect life and safety of the Whole Community.

Water Systems

30. Assist local jurisdictions with mutual aid resource requests to restore the functionality of community systems.
31. Assist local jurisdictions with meeting approved water quality standards.
32. Assist local jurisdictions by addressing environmental impacts degrading water source impacts.

Direction, Control, and Coordination

33. Facilitate a coordinated response that encompasses federal, state, Tribes, local jurisdictions, the private sector and private non-profits through identified strategies and objectives.
34. Sustain the collection, analysis, and dissemination of essential elements of [assessment] information which support decision makers situational assessment to guide incident direction, control, and coordination.
35. Coordinate operational communications response planning among whole community partners.
36. Provide State Emergency Operations Center responders with mission-critical communications systems.
37. Monitor for communications support requests aimed at providing support for essential services.
38. Identify infrastructure barriers preventing the reestablishment or sustainment of communications systems and functionality.

39. Establish primary, alternate, contingent, and emergency (PACE) backup communications capabilities and share the status of an agency's capabilities with partner organizations.

State Staging Areas

40. Establish and sustain State Staging Areas.
41. Establish connections with Federal Staging Areas and Local Staging Areas.

Resource Requests

42. Establish prioritization methodology for the distribution of limited and scarce resources.
43. Identify supply chain disruptions for requested resources.

PACE Communications

Operational Communication plays a direct role in the successful outcome of a response to a catastrophic incident. When communications are not interoperable, are degraded, or unavailable, the ability to perform operational coordination is greatly hindered.

An organization's PACE or their Primary, Alternate, Contingent, and Emergency communication systems or methodologies are essential to the continuity of operations during a catastrophic response. It is necessary for local, state, federal, Tribal, critical infrastructure, and private sector and business organizations to develop a robust communications continuity plan.

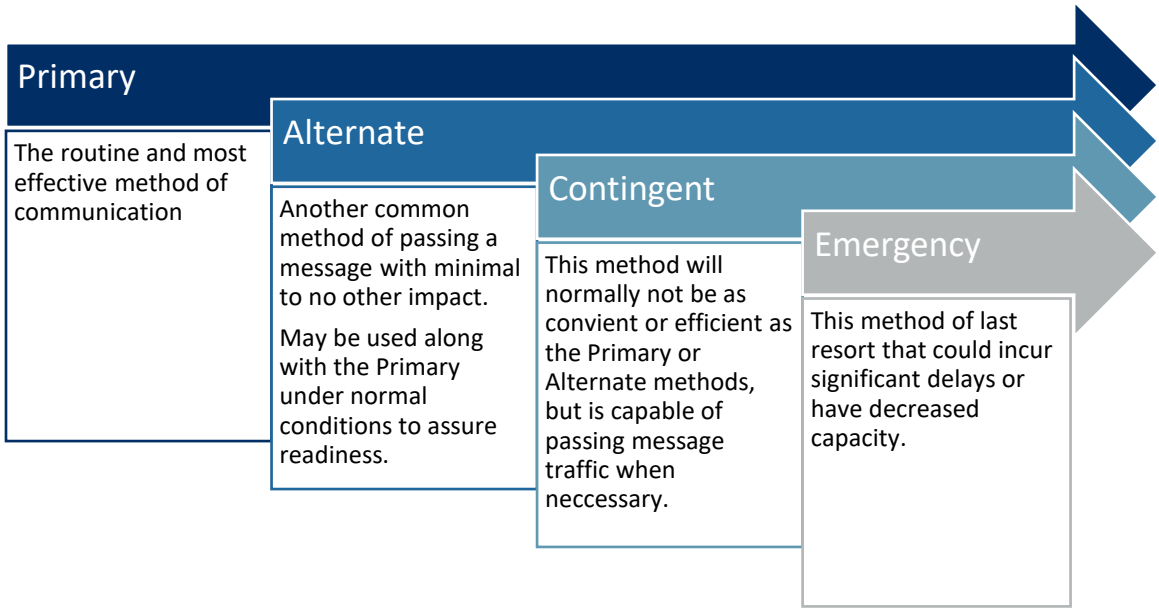

Figure 1 - PACE Communications Process

Alert & Warning Center

The Alert and Warning Center (A&WC) within the State Emergency Operations Center has direct contact with the regional, city, county PSAPs for Washington. Communication through the Alert and Warning Center about the status of a jurisdictions communication systems and what method they are communicating with will be essential for mission response.

Local Integration into PACE

One of the challenges in changing from one communication method to another is getting other responders the information about which mode is being used. If your organization is utilizing the primary system, yet another organization has already moved down their PACE and is utilizing their contingent or emergency system, communication interoperability becomes a key priority. For example, response communications will need to consider how a local jurisdiction will notify the SEOC that they are now utilizing their Alternate, Contingent, or Emergency communication system and concurrently, how the SEOC will notify all local jurisdictions that they are utilizing their Alternate, Contingent, or Emergency form of communication.

It is essential that each EOC monitor redundant means of communication following an incident with likely communications impacts, as use of the Alternate, Contingency, and Emergency methods is likely to occur without warning.

Public Safety Answering Points

Public Safety Answering Points (PSAPs) are the gateways for access to emergency services for the public. PSAP operators are also often the first link that emergency management may have to the incident that is occurring in their community.

In the event of loss of communication between the local emergency operations center and the state emergency operations center, the Public Safety Answer Points could become a relay for the PACE communications to link local and state EOCs. It will be essential for the SEOC to

Figure 2: If first responders are the eyes to the incidents happening on the scene of an incident, or disaster, Public Safety Answering Points (PSAPs) are the ears. These Emergency Communication Centers gather the on-scene reports by residents, responders, and by-standers and relay that information to appropriate responders and the Local Emergency Operations Center if warranted.

know how a local jurisdiction is communicating so that incident response can be supported.

State and Federal Staging Areas

Logistics operations are not limited to the Logistics Section of the SEOC as resource coordination and movement can occur within any section and from other state agencies and departments deploying resources in accordance with their own plans and procedures that do not necessarily require the coordination or support of the SEOC.

Some jurisdictions rely on very few routes to maintain connection with the overall state transportation system, and following a disaster that breaks this connection, alternative methods of moving lifesaving and sustain resources will have to be employed until those connections are available.

Many resources which may be requested during a catastrophic incident could be out of the ability of the state and local jurisdictions to procure. Resources in high demand and in short supply will continually present themselves from the early response activities all the way through Recovery operations. It will be essential for those operating within the sphere of logistics at all levels to be aware of these resources before and throughout the incident in order to conserve available resources and to also not rely on a request to be immediately filled. While the preferred method is for resource requests to request a capability rather than an exact resource, this practice will be even more important during periods of resource deficiencies as resource may have to be adapted from the original or typical uses to fit the need of the incident.

Priority Routes

Incidents which cause widespread and significant damage to the transportation system will necessitate the prioritization of both local and state routes to facilitate a timely response with limited resources in a time sensitive environment. Response operations conducted by the state should utilize the Priority Routes that have been established during pre-incident planning to move resources.

State (SSA)

State Staging Areas are pre-determined locations (airports) across the state that are capable of receiving, storing, and moving resources to impacted areas. SSA's are vulnerable to the same impacts as the surroundings areas, and damage to the transportation system or airport facilities (to include key infrastructure) can limit or prevent some locations from being utilized. SSAs located in or near an impacted area can be expected to require additional work to be performed to make it useable, such as:

- Enabling access from the SSA to transportation networks

- Repairing onsite infrastructure (power, communications, runways, etc.)
- Moving resources to the site to establish and sustain operations
    - Notably, to include transportation resources to move outgoing resources when transportation impacts may limit the ability of large vehicles to move into and around the area

To increase the efficiency of operations, increase coordination, and reduce the delay in the transfer of federal resources to state control, whenever possible SSA's are co-located with Federal Staging Areas (FSA). Although neither party is obligated to do so, co-location provides the opportunity to share site equipment, infrastructure, and personnel during peak activity periods.

Establishing New State Staging Areas
Site selection begins by evaluating potential sites against established criteria. In order to maintain flexibility in logistics operations in Washington State, there are no minimum and maximum requirements for SSAs and any site is usable if it can support the response. The primary attribute that reflects maximum capacity for a staging area is the road network around the site. If staging area traffic interferes with local or emergency response traffic on a continuing basis, there will be consideration for opening additional sites. Site visits are necessary to assess the actual or potential for use of identified sites.

State Staging Area Activation Process
The authority for opening a SSA lies with the SEOC and UCG. Once approved, the SEOC Logistics Section coordinates activation and operation of the staging area site. Under ideal conditions, the state would require 24-hours to establish and implement the initial capability for the disaster resource movement process. The SEOC Logistics Section Chief (LSC) determines the need for one or more staging areas and selects the best potential site(s) based on the location, size of the site versus anticipated resource quantities, population of the affected area, the condition of local infrastructure, and transportation corridors for material traveling in and out of the site(s). If a site has not been prescreened and designated, then coordination with the Department of Enterprise Services (DES) must be initiated to contract a location. Once selection is finalized, the Local Emergency Management Agency (LEMA) is notified of the pending SSA activation. A catastrophic disaster is likely to require more than one SSA.

Federal (FSA and APOD)
Several sites around the state have been designated either as Federal Staging Areas or Aerial Points of Debarkation for a CSZ incident. These locations are notable because they:

- Have the capability to receive large aircrafts and capacity to have multiple aircraft on the ground at any given time

- Have the capacity to store large amounts of commodity resources (FSA ONLY)
- Are located near major transportation corridors
- Are located near an SSA

Aerial Points of Debarkation are only intended to be delivery points of resources and are not intended to stage resources. Resources delivered to APODs will be moved to FSAs or SSAs.

The establishment of a federal site would require an initial assessment of the location to determine its feasibility and functionality. For sites not already included in planning efforts, FEMA would work through the General Services Administration (GSA) to look for and contract with any other suitable location as dictated by the event.

Logistics Nodes[6]

WA Locations	Node Function
Grant County International Airport	Incident Support Base
Ephrata Municipal Airport	Incident Support Base
Joint Base Lewis McChord (JBLM)	Federal Staging Area
William R. Fairchild International Airport	Federal Staging Area
Bellingham International Airport	Aerial Point of Debarkation
Paine Field Airport	Aerial Point of Debarkation
Sanderson Field	Aerial Point of Debarkation
Fairchild AFB	Aerial Point of Debarkation
Tri Cities Airport	Aerial Point of Debarkation
Clark County Fairgrounds	State Staging Area
Paine Field Airport	State Staging Area
William R. Fairchild International Airport	State Staging Area
Bellingham International Airport	State Staging Area
Sanderson Field	State Staging Area
Olympia Regional Airport	State Staging Area
Bowerman Airport	State Staging Area
Southwest Washington Regional Airport	State Staging Area
Bremerton National Airport	State Staging Area
Arlington Municipal Airport	State Staging Area

[6] The information in the following sections directly reference the FEMA Region 10 CSZ Earthquake and Tsunami Response Plan.

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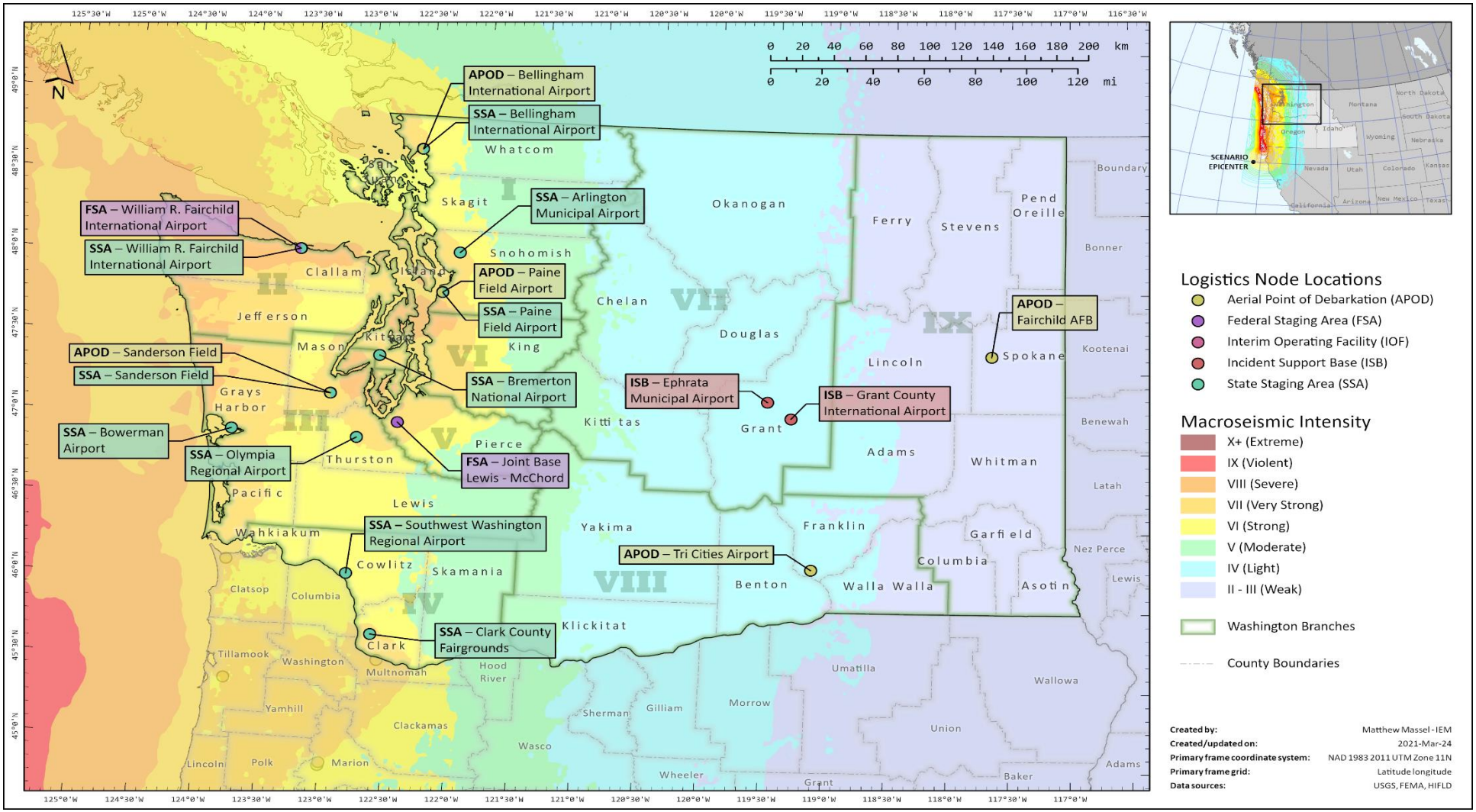
Staging Area Locations



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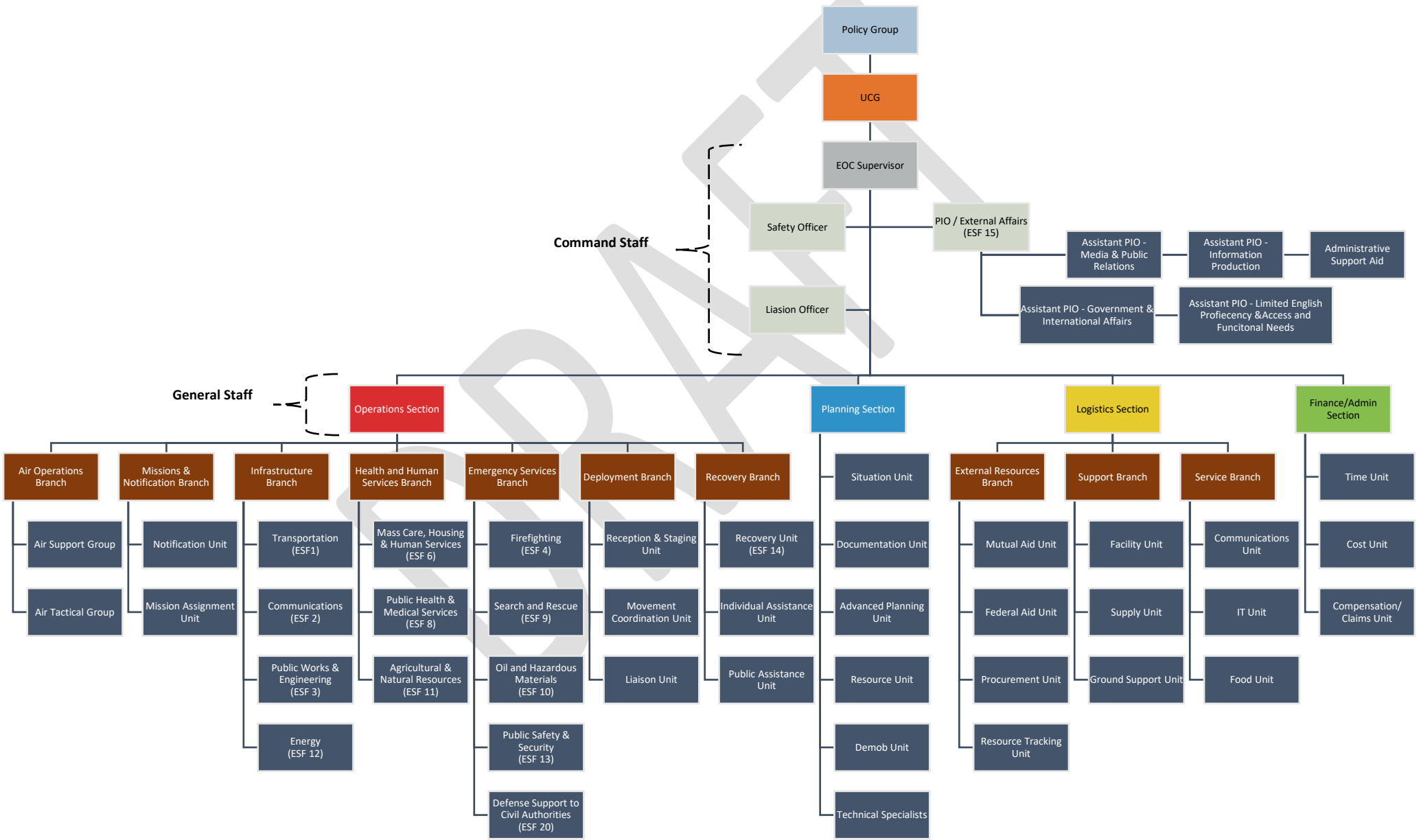
Organization



Direction, Control, and Coordination

General

Regardless of where it is physically located, the Washington State Emergency Operations Center (SEOC) remains the statewide central coordination point for receiving incident-related information and requesting federal or state resources during catastrophic incidents impacting Washington State.

Statewide Operational Coordination

The following structures depict how the Washington Emergency Management Division, the Washington National Guard, Tribal partners, and FEMA Region 10 integrate operations into a common and shared organizational structure in order to respond to a catastrophic incident. Utilizing the existing structure of the 9 Homeland Security Regions, statewide operations are divided into 9 Branches. Preferably, joint operations will consist of an:

- Local Emergency Management
- Tribal Representative
- SEOC Representative
- National Guard GTF Commander
- FEMA Branch Director

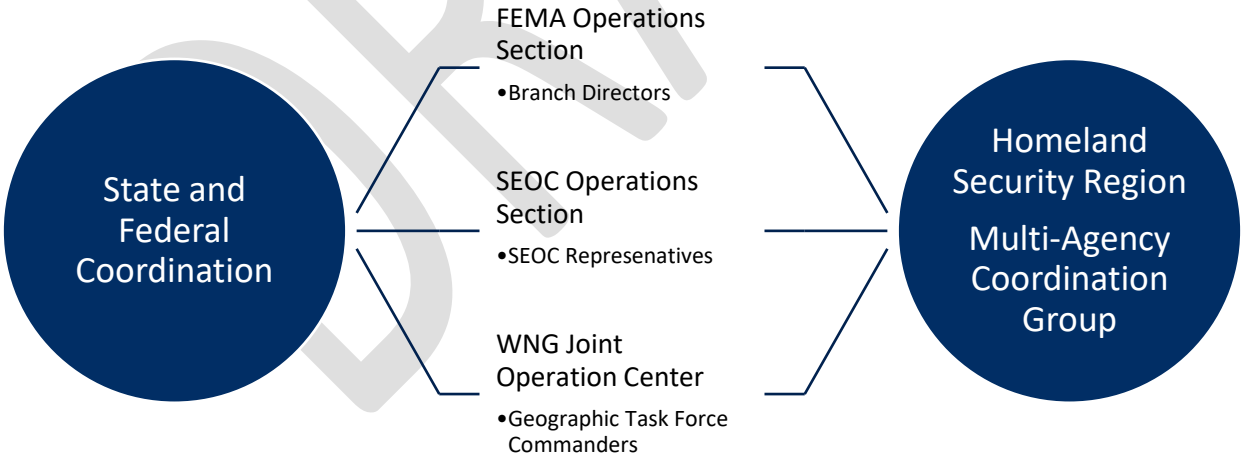


Figure 3 - Coordination Structure for Federal-State-Tribal-Local Response

Each HLS Region will employ a Multi-Agency Coordination Group (MACG) to effectively manage resource requests coming in and out of the region and share situational awareness. This MACG is not intended to replace or supplant a jurisdiction's authority or ability to directly coordinate

with the state. This structure offers the best course of action to manage large scale incidents that will require coordination, similar and competing resources, and personnel shortfalls. Each HLS Region shall determine how its own MACG operates according to their respective response plans.

Horizontal Integration

Joint EMD, NG, and FEMA Geographic Operations

Response operations involving some or all of the jurisdictions and Tribal partners in the state will require an extraordinary level of coordination. This coordination will require the vertical integration of all levels of government to effectively respond and stabilize from the results of a catastrophic incident.

Vertical Integration

FEMA Lines of Effort (LOE)

A Line of Effort (LOE) is a focused area of critical action that is required for stabilizing or restoring a specific Community Lifeline. LOEs are activities that a state or tribe can ask FEMA to support to fill their capability gaps in managing an incident. The table below identifies LOEs listed with FEMA Region 10's CSZ Earthquake and Tsunami Plan.

Line of Effort	Purpose
Airfield Opening	Provide federal assistance to open major and secondary airfields impacted by the event.
Commodities Distribution	Coordinate support for the distribution of resources at appropriate sites (State Staging Areas [SSAs], points of distribution [PODs], etc.)
Damage Assessment	State or tribal governments request joint Preliminary Damage Assessments (PDAs).
Debris Removal	Provide federal assistance to support clearance, removal, and disposal of debris that impacts the emergency response and community functionality.
Emergency Repairs or Augmentation to Infrastructure	Provide federal assistance for the temporary support of eligible critical facilities that are degraded and where alternative sites are insufficient.
Emergency Route Clearance	Provide federal assistance for immediate clearance of routes and access points to prioritized logistical nodes supporting ground routes and impacted communities.
Evacuation, Reception, Re-Entry, and Return	Assist individuals in need of general evacuation support in departing the disaster area through whole-of-government coordination.

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Fatality Management	Provide decedent remains recovery, processing, and temporary storage as well as victim identification and counseling to the bereaved.
Hazardous Waste	Provide federal assistance to oil or HAZMAT discharges or releases that pose a threat to human health, safety, or the environment.
Healthcare Systems Support	Provide federal assistance to support healthcare systems that are unable to provide patient services.
Housing Solutions	Provide temporary housing solutions to eligible survivors.
Mass Care – Food and Water	Support food and water operations for the impacted populations.
Medical Transportation	Provide federal assistance for the support of Emergency Medical Services (EMS) transport.
Natural and Cultural Resource Protection and Restoration	Ensure compliance with pertinent laws, regulations, and executive orders.
Operational Communications	Establish interoperable communications among federal, SLTT, and private sector partners while reestablishing public information and warning infrastructure.
Port Opening	Provide federal assistance to support the repair and restoration of critical ports.
Private Sector Coordination	Provide federal assistance in support of private sector operations; help infrastructure owners and operators, businesses, and their government partners coordinate cross-sector operations.
Public Information and Warning	Share coordinated, timely, precise, and actionable information with survivors and partners.
Resource Staging	Coordinate support for the sourcing and staging of federal resources at Federal Staging Areas (FSAs) and Incident Support Bases (ISBs).
Responder Security and Protection	Provide temporary federal support to ensure the safety and security of federal responders.
Restoration of Public Infrastructure	Provide federal assistance to support the repair and restoration of critical infrastructure.
Search and Rescue	Provide federal assistance to support search and rescue (SAR) operations.
Sheltering Operations	Support sheltering operations for impacted populations.
Temporary Emergency Power	Implement temporary emergency power generation to support mission-essential operations and critical facilities.

Information Collection, Analysis, & Dissemination

As a supporting core capability, Operational Coordination does not play the same role in Community Lifeline reporting as a primary core capability. The EEIs presented within this Tab are those elements which influence the primaries or assist with operational organization and incident response.

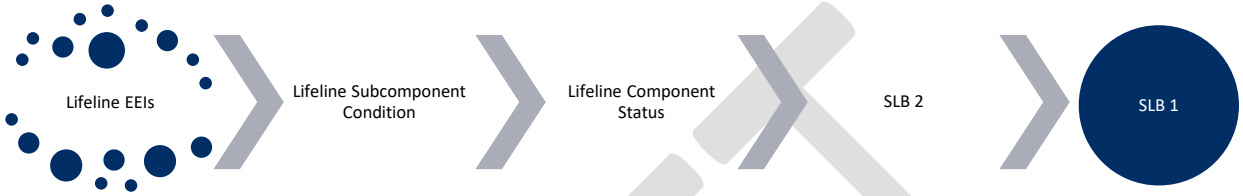

Figure 4 - Information Collection and Dissemination

Information Collection & Analysis

Community Lifeline Reporting

During a catastrophic incident, stabilizing Community Lifelines is vital and can represent an extraordinarily difficult challenge due to the dependencies that exist across impacted lifelines. Communities cannot meet these challenges solely by scaling up existing plans as capabilities and response capacities have become impacted. Impacts to these lifelines should be used in determining the focus areas that strategic goals will address.

Figure 5 - FEMA Community Lifelines

Core capabilities are the means to ensuring a successful response and a clear path is established to implement a transition to recovery. Making core capabilities and Community Lifelines a focus of incident management and catastrophic incident response provides response

organizations and decision makers with a situation overview of the impacted segments of society and provides for targeted approaches to stabilize and re-establish services.

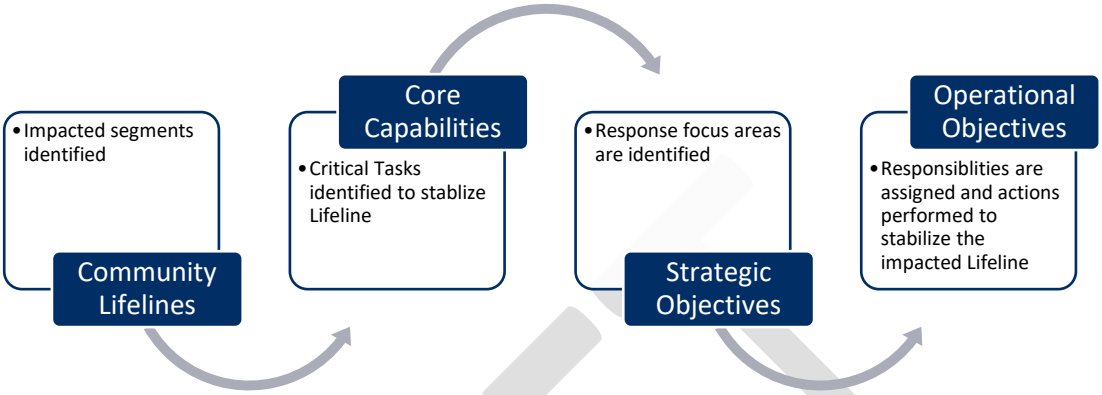

Figure 6 - Implementation of operational planning into incident management

Information Dissemination

Senior Leadership Briefs

By implementing the Community Lifelines during response, the Senior Leadership Briefing (SLB) format for communicating Community Lifeline status can be utilized. This format can be used to effectively communicate the conditions and needs of the response and anticipated timelines associated with ongoing activities. This format can be effective in communicating macro conditions in the response that require policy modifications or implementation; redirection and reassignment of state-owned resources; and can be used to inform the media. Tier I Disaster Summaries consist of the following:

- Executive Summary
- Significant impacts, limiting factors, and actions to address lifeline services
- Reported only at the Lifeline level (no subcomponents)

The strategies and incident objectives which results from using this product provides the details needed for response personnel to address incident impacts and achieve lifeline stabilization. The process asks four fundamental questions:

1. How do we move from the current state to lifeline stabilization?
2. What problems must be overcome to move from the current state to lifeline stabilization?
3. What state assistance have local jurisdictions, Tribal partners, and critical infrastructure asked for and what assistance could they ask for in the future?

4. What are the resource shortfalls or limiting factors that could prevent the achievement of lifeline stabilization?

Tier I Reporting
Tier I of the SLB includes executive-level summary information summarizing the situation, lifeline status, and critical impacts, actions, and limiting factors for the lifeline. The disaster summary provides the most pertinent information in the early stages of the response.

The lifeline statuses are based on actual impacts during that operational period and on the perspective of the disaster survivors within impacted areas. The status is not a reflection of capabilities, but rather to determine whether there are disruptions to the delivery of lifeline services to disaster survivors and where the response is in providing those services. Lifeline condition, in turn, is based on the underlying components and is informed by situational awareness reports, impact assessments, and conversing with partners across public, private, and non-profit sectors.

Additional products that may be included are:

- Incident impact maps
- Updated information on incident management teams (IMT), SEOC representative, and Washington National Guard deployment locations
- EOC statuses
- Emergency/disaster declarations

During an incident, the federal coordinating officer (FCO) and state coordinating officer (SCO)/tribal coordinating officer (TCO) collaborate to make a final determination on the status of each lifeline and component. Decision makers rely on reviewing situational awareness reports, impact assessments, and input from conversations among federal, state, Tribal, local, private sector, and non-profit and community partners to inform lifeline and component status determinations. This is a collaborative and iterative process, focusing on impacted communities and disaster survivors.

Tier 1: Disaster Summary
Tier 1 of the SLB includes executive-level information summarizing the situation, lifeline condition, and critical impacts, actions, and limiting factors for the lifeline.

Disaster Summary: Includes the most pertinent information in each stage of response.

Lifeline Assessment: Assessing and reporting on lifeline conditions is recommended by Situation Unit and validated by leadership.

Lifeline Condition: Is based on the underlaying components, and is informed by situational awareness reports, impact assessments, and conversing with partners across public, private, and non-profit sectors.

Additional Products may Include: Incident impact maps; updated information on incident management teams (IMT), SEOC representative, and Washington National Guard deployment locations; EOC statuses; and Emergency/disaster declarations.

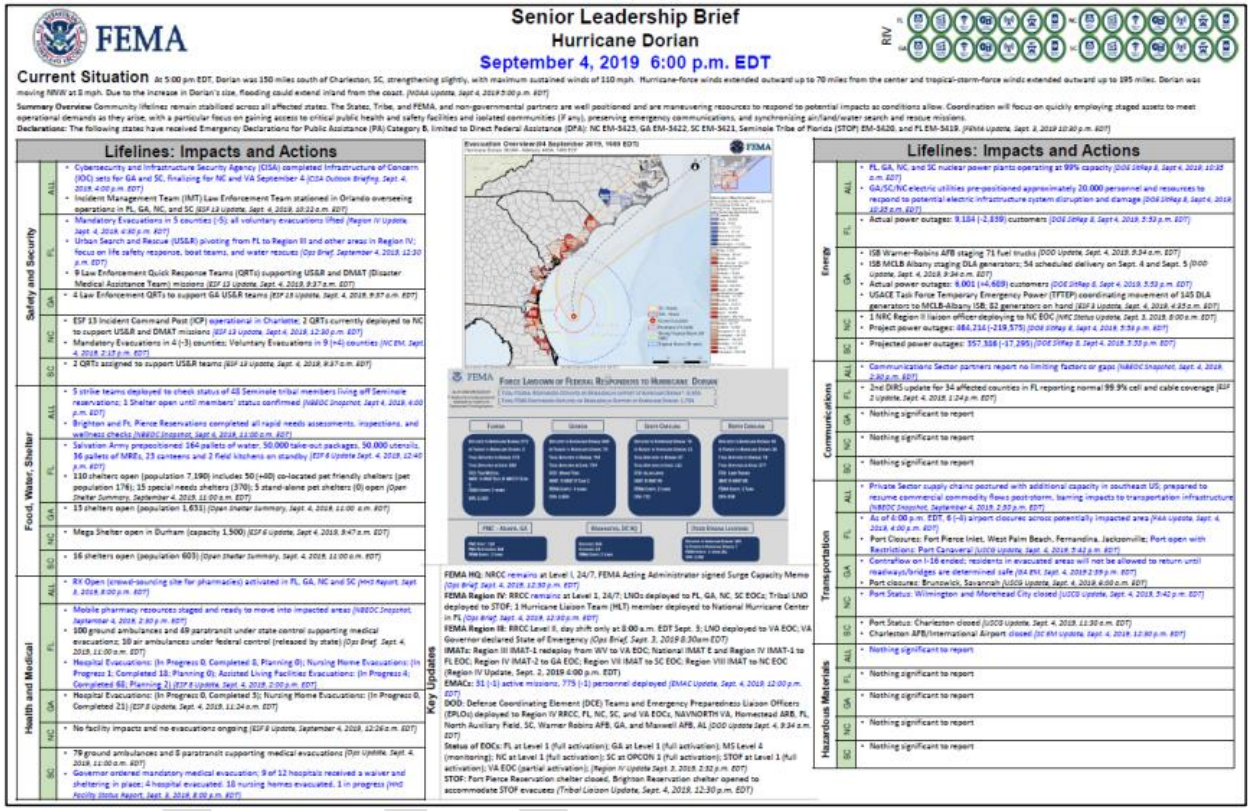

Figure 7 - Example of a SLB Tier 1 Report

Appendix 2: Executive Summary

Attachments

Attachment 1: UCG & Policy Group Checklist

Attachment 2: Community Lifeline Reporting

Attachment 3: EEI Spreadsheet

Attachment 4: ESF & SEOC Section Checklists