



# Washington State

## Cascadia Rising Exercise Series

### Critical Transportation Tabletop Exercise

Situation Manual – June 13, 2022



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This Situation Manual (SitMan) provides exercise participants with all the necessary tools for their roles in the exercise. Some exercise material is for the exclusive use of exercise planners, facilitators, and evaluators, but players may view materials necessary to their performance. All exercise participants may view the SitMan.

## Table of Contents

<b>Exercise Overview</b>	<b>1</b>
<b>General Information</b>	<b>3</b>
Exercise Objectives and Core Capabilities.....	3
Exercise Assumptions and Artificialities.....	3
Participant Roles and Responsibilities.....	4
Exercise Structure.....	5
Breakout Rooms.....	5
Exercise Guidelines.....	7
Exercise Evaluation.....	8
<b>Tabletop Scenario Overview</b>	<b>9</b>
<b>Module 1: Reconnecting Locally</b>	<b>11</b>
Module Concept.....	11
Module 1 Question Topics.....	11
Scenario and Focus Area Updates.....	11
Coastal.....	11
I-5 Corridor.....	12
East of the Cascades.....	13
Module 1 Primary Questions.....	15
<b>Module 2: Reconnecting Adjacent Jurisdictions</b>	<b>17</b>
Module Concept.....	17
Module 1 Question Topics.....	17
Scenario and Focus Area Updates.....	17
Coastal.....	17
I-5 Corridor.....	18
East of the Cascades.....	19
Module 2 Primary Questions.....	20
<b>Module 3: Reconnecting the Geographic Regions</b>	<b>22</b>
Module Concept.....	22
Module 1 Question Topics.....	22
Scenario and Focus Area Update.....	22
Major Events.....	22
Coastal.....	22

I-5 Corridor.....	23
East of the Cascades.....	24
Focus Areas.....	24
Module 3 Primary Questions.....	25
<b>Module 4: Input to the Statewide Reopening Plan</b> .....	<b>27</b>
Module Concept.....	27
Module 1 Question Topics.....	27
Scenario and Focus Area Update.....	27
Major Events.....	27
Focus Areas.....	28
Module 4 Primary Questions.....	28
<b>After-Action Process</b> .....	<b>30</b>
Lessons Learned and Continuous Improvement.....	30
Facilitator Debriefing.....	30
Participant Feedback Forms.....	30
Hotwash.....	30
After Action Review.....	31
Roles and Responsibilities.....	31
Hotwash Agenda.....	31
Hotwash Rules.....	32
<b>Appendix A: Exercise Schedule</b> .....	<b>33</b>
<b>Appendix B: Exercise Participants</b> .....	<b>34</b>
<b>Appendix C: Maps</b> .....	<b>37</b>
<b>Appendix D: Geographically Aligned Scenario Placemats</b> .....	<b>42</b>
<b>Appendix E: Community Lifelines</b> .....	<b>46</b>
<b>Appendix F: Relevant Plans and Reports</b> .....	<b>48</b>
<b>Appendix G: References and Footnotes</b> .....	<b>49</b>
<b>Appendix H: Acronyms, Abbreviations, and Key Terms</b> .....	<b>50</b>
<b>Appendix I: Notes</b> .....	<b>54</b>

## Table of Figures

<b>Figure 1.</b>	Critical Transportation TTX Module Structure.....	<b>5</b>
<b>Figure 2.</b>	Breakout Room #1: WA HLS Regions 2, 3 and 4 – <i>Coastal Region</i> .....	<b>6</b>
<b>Figure 3.</b>	Breakout Room #2: WA HLS Regions 1, 5, 6 – <i>I-5 Corridor</i> .....	<b>6</b>
<b>Figure 4.</b>	Breakout Room #3: WA HLS Regions 7, 8 and 9 – <i>East of the Cascades</i> .....	<b>7</b>
<b>Figure 5.</b>	Continuous Improvement process.....	<b>30</b>
<b>Figure 6.</b>	WA. State Map with topography, seismic activity layer, routes, and logistical nodes.....	<b>37</b>
<b>Figure 7.</b>	Breakout Room 1 with topography, seismic activity layer, routes, and logistical nodes.....	<b>38</b>
<b>Figure 8.</b>	Breakout Room 2 with topography, seismic activity layer, routes, and logistical nodes.....	<b>39</b>
<b>Figure 9.</b>	Breakout Room 3 with topography, seismic activity layer, routes, and logistical nodes.....	<b>40</b>
<b>Figure 10.</b>	WSDOT assessment priorities with topography, seismic activity layer, logistical nodes, and Tribal lands.....	<b>41</b>
<b>Figure 11.</b>	Cascadia Rising 2022 Base Scenario – 1st Page is Common to All Geographically Aligned Regions.....	<b>42</b>
<b>Figure 12.</b>	Coastal Geographically Aligned Region – Page 2.....	<b>42</b>
<b>Figure 13.</b>	Coastal Geographically Aligned Region – Page 3.....	<b>43</b>
<b>Figure 14.</b>	I-5 Corridor Geographically Aligned Region – Page 2.....	<b>43</b>
<b>Figure 15.</b>	I-5 Corridor Geographically Aligned Region – Page 3.....	<b>44</b>
<b>Figure 16.</b>	East of the Cascades Geographically Aligned Region – Page 2.....	<b>44</b>
<b>Figure 17.</b>	East of the Cascades Geographically Aligned Region – Page 3.....	<b>45</b>
<b>Figure 18.</b>	Lifeline Condition Determination Process.....	<b>47</b>

## Exercise Overview

<b>Exercise Name</b>	<b>Washington State Cascadia Rising 2022 Critical Transportation Tabletop Exercise</b>
<b>Exercise Date</b>	June 13, 2022
<b>Scope</b>	This is a tabletop exercise (TTX), planned for an estimated 6.5 hours and will be held virtually using the Microsoft Teams platform hosted by Washington (WA) Emergency Management Division (EMD). Exercise play begins at 96 hours post rupture, and is limited to critical transportation infrastructure assessment, critical decision making, operational coordination, and identify the elements needed to develop a plan to reopen inclusive priority routes affecting tribes, nations, counties, cities, and the state following a Cascadia Subduction Zone (CSZ) earthquake.
<b>Mission Area(s)</b>	Response
<b>Core Capabilities</b>	<b>Primary focus is on</b> Critical Transportation (CT) <b>Secondary efforts supporting CT include, and not limited to,</b> Operational Coordination, Operational Communication, Situational Assessment, Logistics and Supply Chain Management, Infrastructure Systems
<b>Objectives</b>	<ol style="list-style-type: none"> <li>1. Examine and assess the coordination of response phase transportation activities between state, tribal, and local transportation entities.</li> <li>2. Discuss how initial damage assessments of transportation infrastructure will be coordinated across all impacted jurisdictions.</li> <li>3. Assess and discuss the procedures for the coordination of prioritized critical transportation needs across all jurisdictions.</li> <li>4. Discuss the elements needed as input to develop a plan for reopening the statewide transportation system.</li> </ol>
<b>Threat or Hazard</b>	Earthquake
<b>Scenario</b>	Magnitude 9.0 Earthquake along the Cascadia Subduction Zone
<b>Sponsor</b>	Washington State Emergency Management Division (EMD)

<b>Exercise Name</b>	<b>Washington State Cascadia Rising 2022 Critical Transportation Tabletop Exercise</b>
<b>Participating Organizations/ Jurisdictions</b>	This is a Washington State EMD-hosted event with attendees from tribes, state agencies, counties, cities, the private sector, non-profit, non-governmental organizations and federal agencies. The full list of participating agencies is listed in Appendix B.
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## General Information

### EXERCISE OBJECTIVES AND CORE CAPABILITIES

The objectives below describe the expected outcomes for the exercise. The objectives are linked to core capabilities: distinct critical elements necessary to achieve specific mission area(s). The objectives and aligned core capabilities are guided by elected and appointed officials and selected by the exercise planning team.

Exercise Objectives	Core Capability	Mission Area
<p>1. Examine and assess the coordination of response phase transportation activities between state, tribal, and local transportation entities.</p>	<p>Critical Transportation; Operational Coordination; Situational Assessment</p>	<p>Response</p>
<p>2. Discuss how initial damage assessments of transportation infrastructure will be coordinated across all impacted jurisdictions.</p>	<p>Critical Transportation; Operational Coordination; Situational Assessment</p>	
<p>3. Assess and discuss the procedures for the coordination of prioritized critical transportation needs across all jurisdictions.</p>	<p>Critical Transportation; Operational Coordination; Logistics and Supply Chain Management</p>	
<p>4. Discuss how to determine the elements needed as input to develop a plan for reopening the statewide transportation system.</p>	<p>Critical Transportation; Operational Coordination</p>	

### EXERCISE ASSUMPTIONS AND ARTIFICIALITIES

In any exercise, assumptions and artificialities are necessary to complete play in the time allotted and/or account for logistical limitations. Exercise participants should accept that assumptions and artificialities are inherent in any exercise and avoid letting these considerations negatively impact their participation. During this exercise, the following apply:

- This exercise will be held in an open, low-stress, no-fault environment. Varying viewpoints, even disagreements, are expected.
- Participants may need to balance exercise play with real-world emergencies. Real-world emergencies take priority.
- The exercise scenario is plausible, and events occur as they are presented.
- All players receive information at the same time.
- The scenario does not provide players with answers to all their questions, which may be challenging. Real-world incidents often require response in the absence of information or answers.
- The scenario assumes certain player actions as it moves through each phase. Players should first discuss the actions stipulated by the scenario. However, players are welcome to engage in “what if” discussions of alternative scenario conditions.
- The scenario includes assumptions based on modeling, research, and dedicated projects to anticipate potential impacts. Artificialities may be included to facilitate exercise play; players are encouraged to avoid contesting the scenario and focus on exercise conduct.

## PARTICIPANT ROLES AND RESPONSIBILITIES

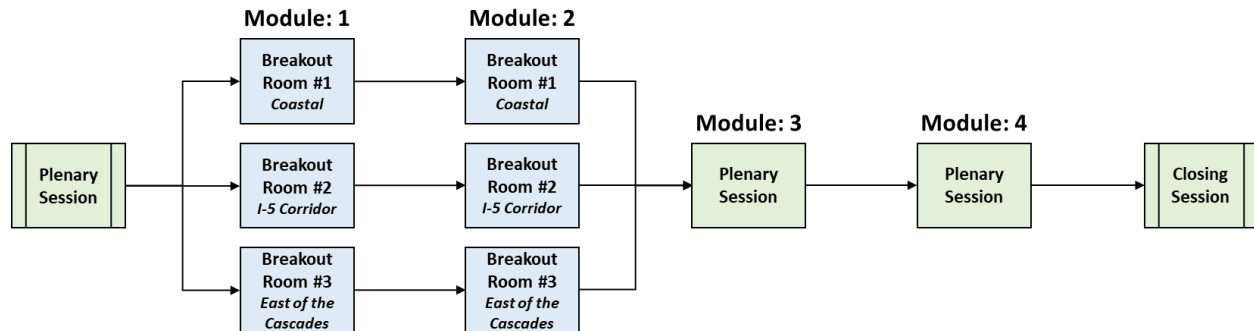
The term “participant” encompasses many groups of people, not just those playing in the exercise. Groups of participants involved in the exercise and their respective roles and responsibilities include:

- **Players** actively discuss or perform their regular roles and responsibilities during the exercise. Players discuss or initiate actions in response to the simulated emergency.
- **Observers** do not directly participate in the exercise. However, they may help develop player responses to the situation during the discussion by asking relevant questions or providing subject matter expertise.
- **Facilitators** provide situation updates and moderate discussions. They also provide additional information or resolve questions as required. Key exercise planning team members also may assist with facilitation as subject matter experts (SMEs) during the exercise.
- **Continuous Improvement Moderators** observe, collaborate, and document potential improvement planning items during the exercise. During exercise, hotwash and After-Action Review (AAR) facilitate player discussions to identify best practices and areas needing improvement.

## EXERCISE STRUCTURE

This exercise is a scenario supported, facilitated discussion exercise. Players participate in the following four modules. These modules are further detailed in the next section.

**Figure 1. Critical Transportation TTX Module Structure**



Following Modules 1 and 2, participants will engage in a moderated plenary discussion in which tribal spokespersons and a local jurisdiction spokesperson from each breakout room presents a synopsis of the breakout room’s actions during those first two modules.

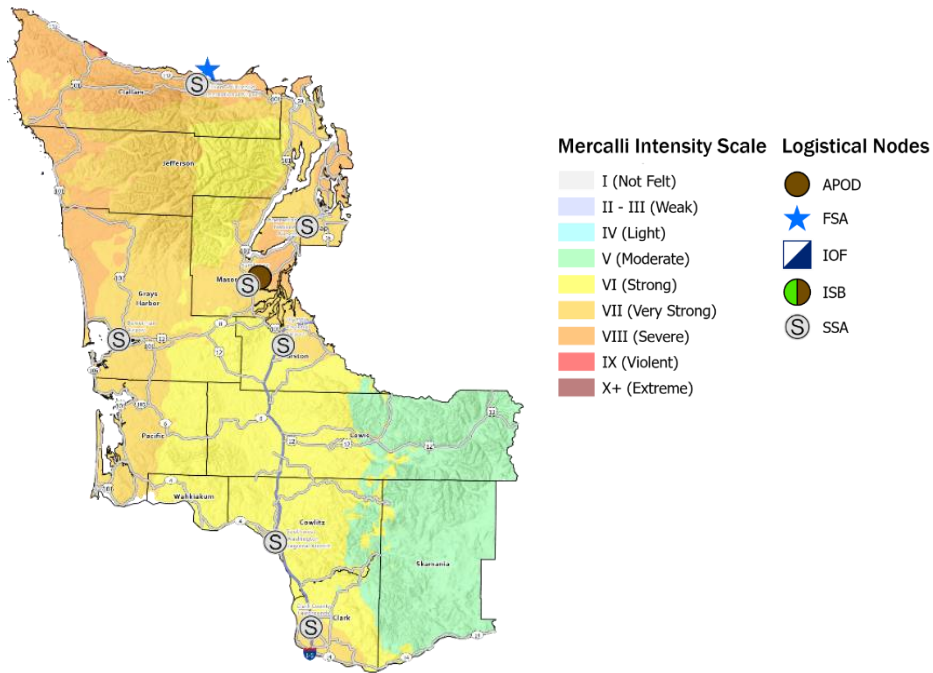
Following the regional breakout room brief backs, the remainder of module 3 will focus on reconnecting the geographic regions.

Each module begins with a scenario update that summarizes key events. After the updates, participants review the situation and engage in a whole group discussion of appropriate response issues.

## BREAKOUT ROOMS

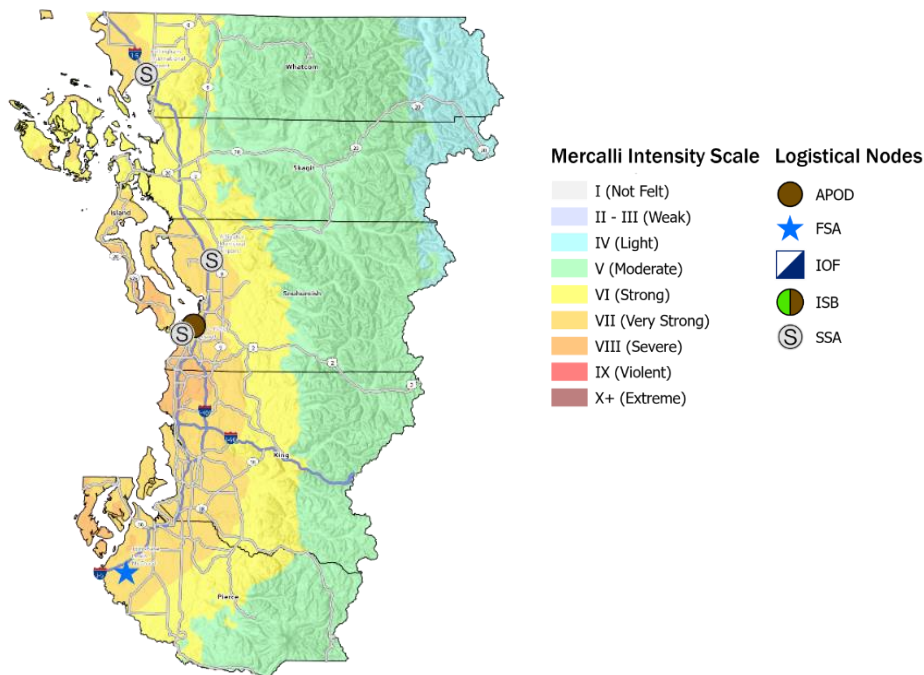
To facilitate smaller group discussion, the first two modules will be conducted using breakout rooms. These breakout rooms are organized by Homeland Security (HLS) Regions and the tribes and local jurisdictions within. The breakout rooms are detailed below:

**Figure 2. Breakout Room #1: WA HLS Regions 2, 3 and 4 – Coastal Region**



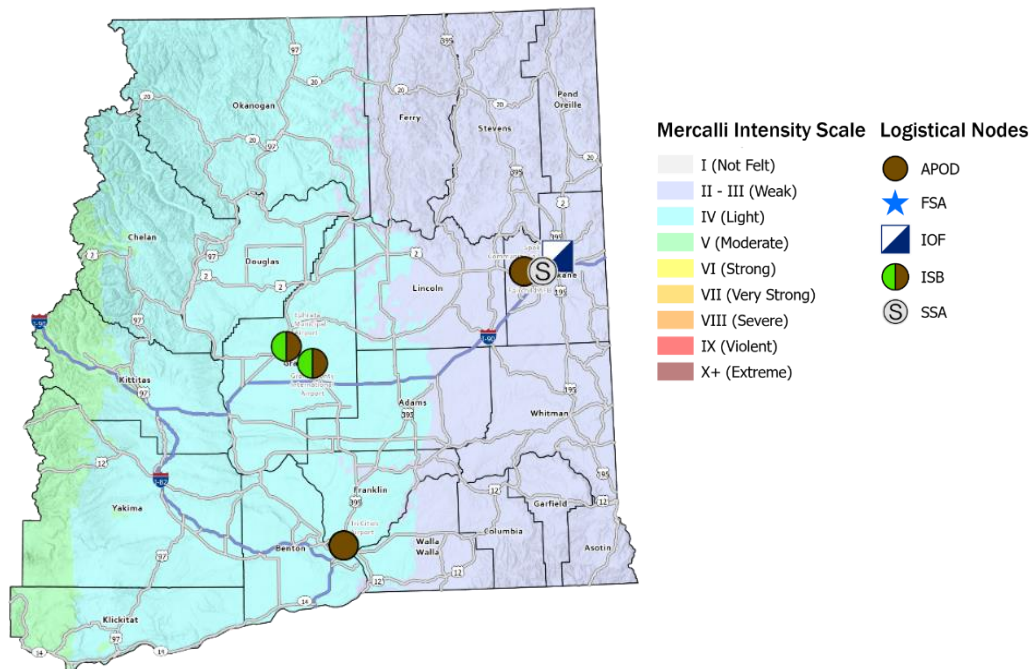
Confederated Tribes of the Chehalis Reservation; Cowlitz Indian Tribe; Hoh Indian Tribe; Jamestown S’Klallam Tribe; Lower Elwha Klallam Tribe; Makah Tribe; Nisqually Indian Tribe; Port Gamble S’Klallam Tribe; Quileute Tribe; Quinault Indian Nation; Shoalwater Bay Indian Tribe; Skokomish Indian Tribe; Squaxin Island Tribe; Suquamish Tribe; and Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Kitsap, Lewis, Mason, Thurston, Pacific, Skamania, and Wahkiakum Counties

**Figure 3. Breakout Room #2: WA HLS Regions 1, 5, 6 – I-5 Corridor**



Lummi Nation; Muckleshoot Indian Tribe; Nooksack Indian Tribe; Puyallup Tribe; Samish Indian Nation; Sauk-Suiattle Indian Tribe; Snoqualmie Indian Tribe; Stillaguamish Tribe of Indians; Swinomish Indian Tribal Community; Tulalip Tribes; Upper Skagit Indian Tribe; and Island, King, Pierce, San Juan, Skagit, Snohomish, and Whatcom Counties

Figure 4. Breakout Room #3: WA HLS Regions 7, 8 and 9 – East of the Cascades



Confederated Tribes and Bands of the Yakama Nation; Confederated Tribes of the Colville Reservation; Kalispel Tribe of Indians; Spokane Tribe of Indians; and Adams, Asotin, Benton, Chelan, Columbia, Douglas, Ferry, Franklin, Garfield, Grant, Kittitas, Klickitat, Lincoln, Okanogan, Pend Oreille, Spokane, Stevens, Walla Walla, Whitman, and Yakima Counties

## EXERCISE GUIDELINES

- The **desired outcomes** from this TTX are:
  - By the end of the exercise, participants will determine response phase transportation priorities between state, tribal, county, and city transportation entities to deliver response resources and disaster relief supplies to meet the basic needs of disaster survivors and stabilize the incident.
  - By the end of the exercise, participants will provide cross-functional input to develop a statewide reopening plan to address the transportation system needs of all ESFs after a CSZ incident and other all-hazards threats.
  - This exercise, through priority route designation shall directly inform the development of a WSDOT Transportation System Reopening Plan designed to support all tribes/nations and local jurisdictions.
- This is an open, no-fault environment – varying viewpoints, even disagreements, are expected.
- We ask that you respect other people’s viewpoints and positions.
- Consider different approaches and suggest improvements.

- Respond to the scenario using your knowledge of current plans, policies, procedures, capabilities, and resources (i.e., you may use only existing assets) and insights derived from your training and experience.
- Decisions are not precedent setting and may not reflect your final position on a given issue. This exercise is an opportunity to discuss and explore multiple options and possible solutions.

## EXERCISE EVALUATION

Exercise evaluation is based on the discussion-based activities that support completion of the exercise objectives and identifies strengths and areas for improvement relative to the core capabilities. Evaluation provides an objective review of participant's discussion and responses during the exercise.

This exercise will be evaluated using direct observation by facilitators and continuous improvement moderators, a participant hotwash moderated by facilitators and moderators, and participant feedback.

Formal Exercise Evaluation Guides will not be used, rather the exercise evaluators and observers will consolidate observations based off of the objectives and the Critical Transportation Catastrophic Incident Annex. Further analysis will inform the drafting of the After-Action Report and implement a coordinated Improvement Plan (AAR/IP). Additional information is contained in the *After-Action Process* section.

## Tabletop Scenario Overview

**Event:** On June 9, 2022, a 9.0 magnitude Cascadia Subduction Zone (CSZ) earthquake has ripped along the 700-mile CSZ fault line with no epicenter. An event of this type occurs on average once every 200 to 500 years. The last major CSZ earthquake and tsunami occurred on January 26, 1700.

**Ground Shaking:** The shaking that results from this abrupt shifting of the earth’s crust will be felt throughout the Pacific Northwest—and the ground is expected to shake for four to six minutes. Some areas along the coast may immediately drop three to nine feet in elevation. Coastal areas will experience the highest intensities and the level of shaking diminishes the farther inland; numerous aftershocks continue to disrupt response efforts.

**Tsunami:** The tsunami inundation zone in Washington is located on the coast of the Pacific Ocean and along the Strait of Juan de Fuca. Some inundation is also expected on the shorelines of counties in the upper Puget Sound and Strait of Georgia. Over 163,000<sup>5</sup> Washingtonians reside in the tsunami inundation zone. After the initial ground shaking, survivors may have as few as 10 minutes before the first wave makes landfall. Coastal areas are expected to receive as many as three waves in the first hour; subsequent waves may continue for nearly 18 hours.

**Liquefaction/Landslides:** Liquefaction-prone soils are common in river valleys, along waterfronts, and in places built on artificial fill including bridges, ports, airports, and industrial facilities. Many of the region’s most densely populated areas – such as along the I-5 corridor between Olympia and Everett and the Vancouver Metropolitan area are likely to experience the damaging effects of liquefaction. Areas on the steep slopes of Washington’s mountain ranges and the Columbia River are susceptible to landslides and rock falls.

### Lifeline Impacts 96 hours after the event:



- Government services are overwhelmed after the earthquake.
- Impacts to all other lifelines hamper the ability for government to provide basic services, like firefighting and other life-saving services.



- Over 450,000 displaced survivors are in immediate need of short-term sheltering, and over a million people need feeding and hydration – including their pets.<sup>1, 2</sup>
- 100% of Coastal and 89% of I-5 Corridor potable water facilities have sustained medium to high damage.<sup>1</sup>



- Over 19,000 survivors with varying degrees of injuries have attempted to access hospitals. <sup>1, 4</sup>
- Most hospitals have suffered medium to high damage, which has resulted in the loss of hundreds of regular and critical beds. <sup>1</sup>



- After the earthquake, large regions of Washington experienced complete blackout conditions. <sup>1</sup>
- 100% of Coastal energy infrastructure has sustained medium to high damage. <sup>1</sup>
- 78% of I-5 Corridor energy infrastructure has sustained medium to high damage. <sup>1</sup>



- Up to 6 million people have lost access to standard communication services immediately after the earthquake. <sup>1, 4</sup>
- 67% of Coastal and 21% of I-5 Corridor communications systems are likely damaged beyond repair. Facilities in eastern Washington have suffered minimal damage, but low availability of power will limit the capability of these facilities. <sup>1</sup>
- Lack of communication networks limit ongoing situational assessments.



- 5,655 miles of highway have sustained medium to high damage or are inaccessible requiring repair or clearance. <sup>2</sup>
- 30% of bridges have sustained damage, and roughly 20% have collapsed or are in imminent danger of collapse. <sup>1</sup>



- Over 1,000 facilities in impacted areas of Washington and Oregon contain extremely hazardous substances (EHS). <sup>1</sup>
- 3,000 facilities in Washington have reportable quantities of less dangerous material. <sup>1</sup>
- 100% of Coastal and 88% of I-5 Corridor wastewater facilities in Washington suffered medium to high damage. <sup>1</sup>

***Additional warm start and scenario information will be provided in geographically aligned scenario placemats (appendix F). See Appendix E for Endnotes.***



## Module 1: Reconnecting Locally

- **Module Concept:** This geographically aligned breakout room will focus on a collaborative discussion of transportation at the tribal and local level which supports lifesaving operations and access to mass care facilities such as shelters and community points of distribution. Key topics will include inspections and assessment, route clearance, and anticipated constraints, barriers, and local concerns.
- **Module 1 Question Topics:** The following question topics are suggested so that you may prepare for the discussion. These questions are not a definitive list of items to be addressed rather, overarching question themes to address the topic area. The facilitator will have questions that reside within the below-listed topics during the module conduct.

Prioritizing Transportation Needs	
Completing tribal and local inspections and assessments	Establishing tribal and local priorities across jurisdictional boundaries
Route Clearance for Lifesaving Services	
Community Safety	Law Enforcement/Safety
Search and Rescue (SAR)	Fire/Emergency Services/Emergency Medical Services (EMS)
Government Services (EOCs, PSAPs, essential services)	
Public Access to Community Lifelines	
Communications	Health and Medical
Energy	Hydration, Feeding, and Temporary Shelter
Barriers/Constraints	
Equipment	Fuel
Hazardous Materials	Personnel

### SCENARIO AND FOCUS AREA UPDATES

#### Coastal:

- **Major Events**
  - Currently, there is no coordinated common operating picture/situational awareness available in the tribes and communities regarding the impacts of the earthquake's

aftermath. Based on prior planning, most communities should have an idea of where damages have occurred; however, damage to the transportation system is limiting the ability to conduct road, highway, and bridge damage assessments.

- Communication systems have the potential to be significantly degraded with limited or intermittent contact through state including local emergency radio networks. Due to the lack of consistent communications, the state has limited information on the status of the coastal communities and tribes.
  - Tribes and local jurisdictions are responding with internal resources; however, the severity could rapidly exhaust local capabilities.
  - Medical and health care capabilities are severely disrupted. Healthcare facilities in coastal communities are severely damaged. Some providers may be able to operate from tents; some of the hardest hit areas may only be accessible by helicopter – a very limited resource.
  - Supplies like drinking water, food, hygiene, and other necessary household items are scarce.
  - Major highways and bridges have the potential to be damaged, destroyed, or impassable, including US 101 where almost all bridges are suspected to have failed. Furthermore, US 12, SR 4, SR 6, SR 8, SR 103, SR 104, SR 105, SR 109, SR 112, and SR 113 may not be usable.
  - Major river valleys have the potential to have damaged or destroyed bridges along their lengths, including I-5 at the Columbia and Nisqually Rivers.
  - Damages to the transportation system may create isolated communities within impacted jurisdictions.
- **Focus Areas**
    - Reestablishing connections within tribes and counties
    - Route Clearance for Lifesaving Services
    - Public Access to essential Community Lifelines
    - Reducing potential barriers and constraints

### **I-5 Corridor:**

- **Major Events**
  - Tribes and local jurisdictions are beginning to develop a common operating picture/situational awareness in their communities regarding impacts in the aftermath of the earthquake.

- Communication systems in local communities may be degraded with intermittent capabilities throughout the area. Surviving systems relying on battery power could begin going off-line. Remaining radio communications may be limited due to a lack of operable repeaters, and communications with surrounding jurisdictions are limited.
  - Tribes and local jurisdictions are responding with internal resources; however, the severity could rapidly exhaust local capabilities.
  - Supplies like drinking water, food, hygiene, and other necessary household items may become scarce.
  - The medical and health care capabilities may be disrupted; damaged transportation infrastructure could limit access to trauma and critical access hospitals.
  - Major highways and bridges have the potential to be destroyed, damaged, or impassable. I-5 is believed to be useable in places, but significant gaps exist. I-405, SR 99, SR 18, SR 16, and other large connectors may be impassable.
  - I-90 over the pass is open to one lane in both directions (using the eastbound lanes), but traffic is moving very slowly – less than 10 MPH. Stevens Pass is closed and may not reopen for multiple weeks. White Pass may reopen in the next few days but will struggle to connect with I-5.
  - Major river valleys may have damaged or destroyed bridges along their lengths, including I-5 at the Columbia and Nisqually Rivers.
  - Damages to the transportation system may have created isolated communities within impacted tribes and jurisdictions.
- **Focus Areas**
    - Reestablishing connections within tribes and counties
    - Route Clearance for Lifesaving Services
    - Public Access to essential Community Lifelines
    - Reducing potential barriers and constraints

### **East Of the Cascades:**

- **Major Events:**
  - Currently, there is no common operating picture/situational awareness of the response west of the Cascades available in the aftermath of the earthquake.
  - Communities have responded to local impacts internally as they arise.

- Power is in the process of being restored in impacted communities east of the Cascades.
- Yakima, Ellensburg, and Wenatchee are accessible, but many local roads are still closed:
  - I-90 is open through Kittitas County with some bypasses in place.
  - US 97 North of Wenatchee is closed due to landslide activity and fallen rocks. The closure is impacting the Confederated Tribes of the Colville Reservation lands near Lake Chelan.
  - US 97 through Satus Pass is also closed due to landslide activity, impacting access into portions of the Yakama Nation and preventing travel between Goldendale and Toppenish.
  - I-82 bridges between Ellensburg and Yakima need complete inspections before being reopened, and SR 821 through Yakima Canyon is closed.
  - Most of the Columbia River Basin Bridges are accessible and undamaged; Vantage Bridge has been reduced to one lane in each direction.
  - SR 14 has sustained minimal damage east of US 97 near Maryhill; SR 14 degrades rapidly west of US 97. Portions of the Yakama Nation that depend on access from SR 14 are isolated.
  - The Dalles/Dallesport Bridge is the last operational bridge across the Columbia River Gorge west of Maryhill/Biggs Junction. Weight restrictions are in place until inspections are completed.
  - I-82 Bridges into Oregon are undamaged and open, providing a route to I-84 east and west.
- An Initial Operating Facility (IOF) has been established in Spokane as well as an Aerial Port of Debarkation at Fairchild Air Force Base. FEMA has established an Incident Support Base (ISB) at Moses Lake. The response is causing a mass influx of federal and state resources into the area.
- Airfields at Yakima, Tri-cities, and Wenatchee may be operational, but power is intermittent at times.
- Some isolated communities may exist, potentially along the eastern slopes of the Cascades.
- **Focus Areas:**
  - Every region could see impacts from a CSZ earthquake, but the severity diminishes rapidly east of the Cascades.

- Electrical power is slowly being reestablished in communities east of the Cascades as the power grid stabilizes.
- Some communities east of the Cascades are becoming logistical support hubs and staging areas for relief resources and supplies.

## MODULE 1 PRIMARY QUESTIONS

The following questions are suggested so that you may prepare for the discussion. These questions are not a definitive list of items to be addressed rather, overarching questions to address the topic area. The facilitator will have follow up questions to the below list during the module conduct.

### Reconnecting Locally

1. What is your tribe's or jurisdiction's priorities at this point in the response, and how are they determined?
2. What effects will the pre-identified state priority routes have on tribal and/or local priority routes?
3. What resources (types of assessment teams) do you have for completing assessment and inspections of the tribal and/or local transportation system?
4. What are some of the isolated tribes/communities impacts within the Coastal geographic area?
5. How will the isolated tribes / local jurisdiction priority routes be prioritized for route clearance?
6. How is emergency public information and education being conducted?
7. What evacuation routes have been established, documented, and communicated with the public?
8. How are mass transit and/or emergency services being organized and coordinated to expedite the movement of displaced survivors to shelters, health and medical locations, etc.?
9. How will transportation system issues impact other community lifelines ability to restore: Communications, Energy, Sheltering, Food and Water?
10. What are your major barriers and constraints?
11. How are the priorities, gaps, barriers, constraints, and localized communications with responders and the public shared with regional partners and the State Emergency Operations Center (SEOC) for coordination, support and to share vertically with federal partners and laterally with adjacent states?

12. *Eastern Washington Only*: How does your tribe's or jurisdiction's transportation or emergency operations plans support the influx of federal/state and logistical resources to support western Washington?

## Module 2: Reconnecting Adjacent Jurisdictions

- **Module Concept:** This geographically aligned breakout room will focus on a collaborative discussion of the coordination for prioritized critical transportation needs connecting tribes and jurisdictions by establishing viable multi-jurisdictional routes, links to logistics nodes, and resource sharing. A critical topic of discussion will be the discussion of prioritization across jurisdictions with critical interdependencies.
- **Module 2 Question Topics:** The following question topics are suggested so that you may prepare for the discussion. These questions are not a definitive list of items to be addressed rather, overarching question themes to address the topic area. The facilitator will have questions that reside within the below-listed topics during the module conduct.

Prioritizing Transportation Routes	
Protocols for deconfliction of route prioritization	
Establishing Viable Multi-Jurisdictional Routes	
Coordinating between tribal and local jurisdictions	Supply chain restoration
Route Clearance for Outside Assistance	
Health and Medical Support	Commodities distribution
Evacuations	Fatality management support
Barriers/Constraints	
Mutual aid between neighboring jurisdictions	

### SCENARIO AND FOCUS AREA UPDATES

#### Coastal:

- **Major Events**
  - As isolated tribes and local jurisdictions begin to be connected, using available local resources, limited movement within the tribes and local jurisdictions is becoming possible but is severely limited.
  - Immediate resource needs are becoming a paramount concern; food, water, and other life-sustaining commodities are nearing depletion.
  - External resources and supplies are desperately needed to begin to stabilize the situation before cascading events develop and worsen existing conditions.

- As displaced survivors begin to seek medical attention, the healthcare system is in dire need of resources. Local healthcare has limited ability to move critical patients and relieve local resources – a route to JBLM and the National Disaster Medical System capability is a critical concern.
- Rotary wing air movement may be the only viable option to reach many isolated tribes and local jurisdictions.
- **Focus Areas**
  - Establishing viable multi-jurisdictional routes; the routes from the Coastal Region to the I-5 Corridor and JBLM are critical for survival.
  - Route clearance for outside assistance; opening, reinforcing, and restoring these routes is essential for resource sharing and for ingress of external supplies and resources.
  - What communication has occurred, and agreements or systems may be in place for resource sharing?

### **I-5 Corridor:**

- **Major Events**
  - As isolated tribes and local jurisdictions begin to be connected, using available resources, limited movement within tribes and local jurisdictions is becoming possible but is limited – many may still be isolated.
  - As tribes and local jurisdictions begin to exhaust local supplies and resources, there is an immediate need for life-sustaining commodities – especially within large urban areas.
  - As viable routes are expanded, more survivors are beginning to seek healthcare services – further impacting an already stressed system. Trauma centers are over capacity, in dire need of resources, and lack the ability to decompress local facilities.
  - Reopening a viable lifeline within the I-5 Corridor to connect state and federal logistical nodes is essential to stabilizing the situation before cascading events develop and worsen existing conditions.
- **Focus Areas**
  - Establishing viable multi-jurisdictional routes.
  - Route clearance for outside assistance; opening and reinforcing these routes is essential for resource sharing and ingress of external supplies and resources.



- What communication has occurred, and agreements or systems may be in place for resource sharing?

### **East Of the Cascades:**

#### **▪ Major Events**

- As resources begin to arrive in western Washington, situational awareness is beginning to develop into a common operating picture – increasing the capability to deliver additional resources into the area.
- The surge of displaced survivors, support and service personnel, and resources could lead to the depletion local supplies and resources. This could create a competitive environment for food, fuel, lodging, and other supplies to support responders and the community.
- To decompress the ISB at Moses Lake, FEMA coordinated, activated, and began staging supplies and resources at a second Incident Support Base (ISB) in Ephrata. This addition will allow Grant County International Airport to focus on the ingress of supplies and resources, while Ephrata Municipal Airport serves as the staging point for supplies and resources moving westward.
- Trucks with coordinated and uncoordinated relief supplies, and spontaneous volunteers are beginning to arrive, causing congestion and blocking routes in Spokane and the Tri-Cities.
- As additional logistical nodes are activated, bottlenecks develop along I-90 where convoys originating from distant nodes conflict with those originating closer to the impacted area, including Moses Lake, George, and Ellensburg.

#### **▪ Focus Areas**

- Establishing viable multi-jurisdictional routes with isolated/rural communities along the East slope of the Cascades.
- Route clearance, reopening, and reinforcement of critical routes and mountain passes to get supplies and resources moving into the western Washington regions.
- Coordination and deconfliction with state and federal logistics nodes to support transportation needs.
- What communication has occurred, and agreements or systems may be in place for resource sharing?
- Recognize and accommodate the influx of displaced survivors transiting out of the impacted area.

- Managing, coordinating, and addressing local needs while supporting the response needs of western Washington.

## MODULE 2 PRIMARY QUESTIONS

The following questions are suggested so that you may prepare for the discussion. These questions are not a definitive list of items to be addressed rather, overarching questions to address the topic area. The facilitator will have follow up questions to the below list during the module conduct.

### Reconnecting Connecting with Adjacent Jurisdictions

1. Based on updated and ongoing situational assessment information, what updates to your tribal and jurisdictional priorities are there?
2. How are route priorities being deconflicted within and/or among the jurisdiction?
3. What additional resources may be needed to clear priority roadways, highways, and bridges of not only debris, but traffic congestion/bottlenecks to connect the jurisdictions?
4. How are these resources for clearing and potentially restoring the transportation infrastructure being coordinated and shared?
5. How will factors for re-opening transportation routes be prioritized and coordinated within: your jurisdiction; adjoining jurisdictions?
6. How are tribal and local jurisdictional priorities, gaps, barriers, constraints, and localized communications with responders and the public shared with geographic regional partners and the State Emergency Operations Center (SEOC) for coordination, support and to share vertically with federal partners and laterally with adjacent states?
7. For a CSZ event, how have priority routes for logistical movement and displaced survivors been identified, coordinated, and communicated with officials and the public?
8. From a transportation system lens, what are the short and long-term impacts of the staging of response resources on your community?
9. How are tribal and local jurisdictional priorities, gaps, barriers, constraints, and localized communications with responders and the public coordinated with geographic regional partners and the State Emergency Operations Center (SEOC) for support?

10. *Eastern Washington Only:* As the roads open to Western Washington, what are some anticipated concerns?
11. *Eastern Washington Only:* How have the tribes and jurisdictions prepared localized damage assessment team(s) and route clearance resources to be mobilized to support impacted tribes and local jurisdictional communities in western Washington?

### Module 3: Reconnecting the Geographic Regions

- **Module Concept:** This plenary session will discuss the coordination of prioritized critical transportation needs to connect the coastal, I-5 corridor, and East of the Cascades tribes and jurisdictions. Discussion and knowledge sharing will explore critical transportation interdependencies, infrastructure vulnerabilities that connect ground transportation (critical bridges, ferries, and links to logistics nodes), and the broader scope of resource sharing to re-connect the state.
- **Module Topics:** The following question topics are suggested so that you may prepare for the discussion. These questions are not a definitive list of items to be addressed rather, overarching question themes to address the topic area. The facilitator will have questions that reside within the below-listed topics during the module conduct.

Prioritizing Transportation Needs	
Establishing tribal, local, and state priorities across jurisdictional boundaries	Protocols for deconfliction of route prioritization
Coordination of Critical Transportation Resources	
Staging of resources before anticipated reopening	Supply chain restoration
Route Clearance for Outside Assistance	
Road (passes), Rail, Air, Ports	Fuel tanks
Tsunami debris (including floating debris and sunken vessels)	Liquefaction
Barriers/Constraints	
Mutual aid between neighboring jurisdictions	

#### SCENARIO AND FOCUS AREA UPDATE

##### Major Events:

- **Coastal Region**
  - Movement of resources and supplies is severely limited to impacted tribes and local jurisdictions along the coast; additional alternate routes will need to be coordinated due to additional constraints including congestion, lane width, and weight restrictions.

- Access into Grays Harbor County, through Black Hills (SR 8) and the Chehalis Gap (US 12), is severely limited, requiring numerous detours and temporary measures. These limitations have a direct impact on access to the Confederated Tribes of the Chehalis Reservation, Shoalwater Bay Indian Tribe, Quinault Indian Nation, Hoh Indian Tribe, Quileute Tribe, Makah Tribe, Lower Elwha Klallam Tribe, and the Jamestown S’Klallam Tribe reservations and local communities.
- Access into the northern Olympic Peninsula is severely limited, with significant barriers (potential landslides, fallen trees, liquefaction, and tsunami erosion) along US 101 from Shelton to Quilcene, across the Hood Canal, and from Hoquiam through Forks to Port Angeles. Small pockets of US 101 on the Olympic Peninsula are open with significant limitations (weight, speed, vehicle access) using logging roads and other temporary measures as temporary bypasses – numerous isolated communities exist. These limitations have a direct impact on access to the Squaxin Island Tribe, Skokomish Indian Tribe, Jamestown S’Klallam Tribe, Lower Elwha Klallam Tribe, Makah Tribe, Quinault Indian Nation, Hoh Indian Tribe, and the Quileute Tribe reservations and local communities.
- Access throughout the Kitsap Peninsula is severely limited, requiring numerous detours and temporary measures along SR 3 and SR 16 with significant limitations (weight, speed, vehicle access restrictions) – numerous isolated communities exist. These limitations have a direct impact on access to the Suquamish Tribe Port Madison Indian reservation, Port Gamble S’Klallam Indian reservation, and local communities.
- Tribes and local jurisdictions continue to be isolated without access, such as Long Beach, Westport, Forks, La Push, and Neah Bay.
- **I-5 Corridor**
  - Limited movement of resources and supplies is possible along the I-5 Corridor as bypasses and temporary measures are put in place; routes need to be coordinated due to detours, lane restrictions, and congestion. Movement from Portland into Clark County is limited to the Glenn L. Jackson Memorial Bridge (I-205).
  - Major bottlenecks exist along I-5 near Woodland (20 miles north of Vancouver), Nisqually (Thurston and Pierce County Line), and major interchanges along the I-5 corridor moving north throughout Pierce, King, and Snohomish Counties.
  - I-90 is open with limitations to the I-405 interchange. I-90 west of the interchange is destroyed, near Bellefields Nature Park, by liquefaction. The damage necessitates the use of SR 520 and I-405 to reestablish a viable route into Seattle.

- These impacts have a direct impact to the Lummi Nation, Muckleshoot Indian Tribe, Nooksack Indian Tribe, Samish Indian Nation, Sauk-Suiattle Indian Tribe, Puyallup Tribe, Stillaguamish Tribe of Indians, Swinomish Indian Tribal Community, Tulalip Tribes, and the Upper Skagit Indian Tribe reservations and local communities.
- **East of the Cascades**
  - Most roads and rail lines east of the Cascades are open with some limitations; detours, lane restrictions, and other temporary measures are in place.
  - Limited movement of resources and supplies over the passes into western Washington is possible; routes need to be coordinated due to detours, lane restrictions, and congestion.
    - Work to reinforce I-90 continues, with a single lane open in each direction over Snoqualmie Pass.
    - White Pass is able to support a single lane; temporary measures have restored the connection to I-5 near Napavine (35 miles south of Olympia).
    - Stevens Pass remains closed and is not anticipated to reopen within the near-term – multiple weeks.
    - Chinook Pass and the North Cascades Highway remain closed with no estimated reopening times.
    - Limited movement along the Columbia River is possible; I-84 has reopened with severe limitations, and SR 14 is open to Klickitat County but degrades significantly further westward.

**Focus Areas:**

- Reconnecting geographic regions: coordination and resource sharing to expedite reopening, inspections, and clearing;
  - Coastal Washington
  - I-5 Corridor
  - East of the Cascade Crest
- Identification and discovery of interdependencies and vulnerabilities.
- As resources (fuel, staff, supplies, and equipment) move westward coordination is needed to ensure that transportation system resource and supply levels are maintained in eastern Washington to maintain the transportation system and reinforce priority routes in eastern Washington.

- Transportation of medical patients and displaced survivors is beginning to move East of the Cascades.
  - Not all will go through federal systems
  - Movement of people (displaced survivors/relief workers/etc.)

### MODULE 3 PRIMARY QUESTIONS

The following questions are suggested so that you may prepare for the discussion. These questions are not a definitive list of items to be addressed rather, overarching questions to address the topic area. The facilitator will have follow up questions to the below list during the module conduct.

#### Reconnecting Across Geographic Regions

1. Based on what was learned from Modules 1 and 2, what are the tribal and local jurisdiction's regional priorities at this point?
2. How are the regional priorities coordinated and communicated among the regions and is this process different than in previous modules?
3. How will you coordinate across jurisdictions, regions, and state partners?
4. What plans have identified local staging resources or C-PODs (Community Points of Distribution) and priority routes as they become available?
5. As temporary services start to come back online, what are some of the known and/or unknown infrastructure vulnerabilities tribes and local jurisdictions can anticipate, and how will they need to be addressed/prioritized?
6. How are tribal and/or localized plans supportive of the incorporation of regional, state and/or federal support resources into your response?
7. What additional mutual aid and/or interlocal governmental support will need to continue to support secondary or tertiary route clearance at this point in the response?
8. What additional mutual aid and/or interlocal governmental support will need to continue to support primary, secondary or tertiary route (road, rail and/or bridge) temporary repairs at this point in the response?
9. Not every community lifeline will be fully operational; however, please identify some of the potential short- and/or long-term transportation impacts affecting the geographic region.

10. How are mass transit resources (bus/rail/air/School Districts) used to support localized support for displaced survivors, survivors w/AFN, and pet relocations?
11. How are mass transit and/or emergency services being organized and coordinated to support the evacuation of displaced survivors from Western Washington to shelters, health and medical locations in Eastern Washington?



## Module 4: Input to the Statewide Reopening Plan

- **Module Concept:** This plenary session will capture tribal, local jurisdictional, and geographic regional (Coastal, I-5 corridor, and East of the Cascades) information, priorities, and recommendations to help shape the elements needed to develop a state ground transportation reopening, restoration, and revision plan to establish what will be a new normal.
- **Module Topics:** The following topics are suggested so that you may prepare for the discussion. These topics are not a definitive list of items to be addressed but rather, overarching themes to address the topic area. The facilitator will guide the conversation through the below-listed topics during the module conduct.

Geographical Prioritized Recommendations	
Establishing tribal, local jurisdiction, and state priorities across jurisdictional boundaries	
Capturing Local Ground Truth Input to Factor into Transportation Reopening Priorities	
Coordinating between adjacent tribes and local jurisdictions	Supply chain restoration
Geographical Route Clearance Recommendations for Outside Assistance	
How tribal, and local jurisdictional priorities are communicated	Balancing competing priorities (local, county, state, tribal, national)
Elements Needed for Developing a Reopening Plan for the Statewide Transportation System	
Critical needs assessment	Time to repair
Number of parallel restorations	Budget constraints
Availability of resources (federal, state, commercial, etc.)	

### SCENARIO AND FOCUS AREA UPDATE

- **Major Events**
  - Based on the information learned from Modules 1, 2 and 3, it will be necessary for the geographical regions to determine what prioritized recommendations are needed to inform the State Emergency Operations Center (SEOC), state Unified Coordination Group (UCG), and state Policy Group (PG).

- Recommendations should provide the “how” to effectively employ a prioritized route clearance, re-opening, and temporary restoration strategy within each of the respective areas.
- The recommendations to the SEOC, UCG, and PG will help inform the need to establish potential executive and legislative action items such as, but not limited to, a Transportation Task Force or Workgroup, led by the Secretary of Transportation, and/or other advisory committees assembled to develop the necessary plans and planning activities to re-open, and create short- and long-term restoration efforts for the transportation system.
- Some potential members could be:
  - Members from the tribes and nations;
  - Public and private members from the local jurisdictions (inclusive of all disciplines);
  - Public and private members from the air transportation community;
  - Public and private members from the rail transportation community;
  - Public and private members from the maritime transportation community;
  - Public and private federal and state partners with direct and indirect ties to short- and long-term transportation restoration efforts.
- **Focus Areas**
  - Tribal, and local jurisdictional recommendations.
  - State coordination of tribal and local jurisdiction recommendations.
  - Transportation needs/recommendations inform sharing and coordination of resources.
  - Next steps on, and timeline for, plan development for the “new normal”.

#### MODULE 4 PRIMARY QUESTIONS

The following questions are suggested so that you may prepare for the discussion. These questions are not a definitive list of items to be addressed rather, overarching questions to address the topic area. The facilitator will have follow up questions to the below list during the module conduct.

**Input to the Statewide Reopening Plan**

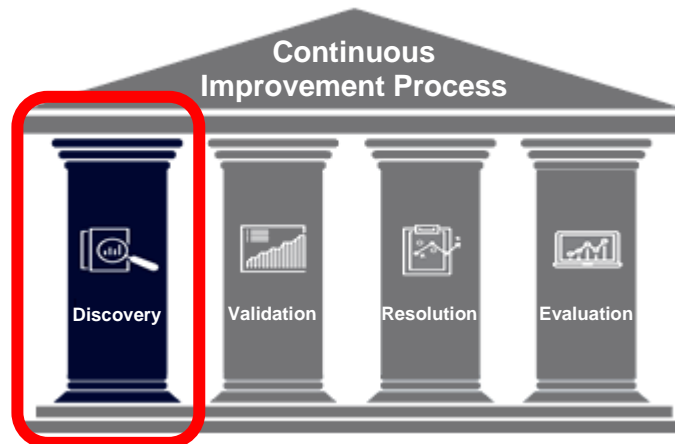
1. What are your respective tribal and local jurisdiction's recommended priorities to propose to the State Emergency Operations Center (SEOC) and the Unified Coordination Group (UCG) for clearance and re-opening?
2. How are the tribal and local jurisdiction critical transportation routes coordinated and prioritized across the geographical regions? Should they be (or do they need to be) coordinated to affect an effective re-opening plan?
3. What process and information does the SEOC and UCG use to prioritize geographical, regional, tribal and/or local jurisdictional critical transportation priority routes clearance and re-opening?
4. How are waivers for oversize/overweight vehicles, tolls, extended hours, or other measures coordinated and approved?

## After-Action Process

### LESSONS LEARNED AND CONTINUOUS IMPROVEMENT

The After-Action process combines issue identification, root cause analysis, collection of recommendations, and documentation to develop collective *Lessons Learned* and support *Continuous Improvement* at all levels.

Figure 5. Continuous Improvement Process



- **Facilitator Debriefing:** *Facilitators, moderators, and support staff will attend a facilitated debriefing following the exercise.* During this debriefing, facilitators, moderators, and support staff provide an overview of their observations and discuss trends, strengths, and areas for improvement.
- **Participant Feedback Forms:** *Participant Feedback Forms provide players with the opportunity to comment candidly on exercise activities and exercise design.* Participant Feedback Forms will be collected at the conclusion of the exercise. To increase probability of candid feedback, providing your name will be optional.
- **Hotwash:** *The combined CR22 exercise hotwash will be conducted on day four of the exercise series (June 16, 2022). All players are asked to participate in the hotwash.* The purpose of the Hotwash is to debrief the exercise and provide participants with the opportunity to discuss their general observations. At the conclusion of exercise play, facilitators, moderators, and support staff will facilitate a hotwash to allow players to discuss their observed strengths and areas for improvement and enable facilitators to seek clarification regarding player actions and decision-making processes. The information gathered during a hotwash contributes to the AAR/IP and any exercise suggestions can improve future exercises.

- **After-Action Review:** *The exercise After-Action Review will be conducted in the weeks following the exercise. The Exercise Planning Team, facilitators, continuous improvement moderators, decision and policymakers will participate in the After-Action Review process. The purpose of the hotwash and After-Action Review (AAR) is to develop findings, areas for improvement, and best practices. In an AAR, the exercise staff's goal is to determine the impact and root cause of each finding, area for improvement and best practices. The impact is "the so-what" and the root cause is the origin of the finding and how it gets resolved. An After-Action Report will be developed, and this report will be presented at an After-Action Meeting (AAM). Once the findings are validated at the AAM, an Improvement Plan (IP) will be developed to correct, update, or develop procedures or plans, reorganized the organization, purchase equipment, conduct training and/or future exercises.*
- **Roles and responsibilities**
  - **Facilitator:** Facilitators guide the hotwash discussion and are responsible for ensuring that participant discussions remain focused on the exercise objectives and making sure all issues are explored as thoroughly as possible within the available time.
  - **Player:** Input and feedback to discussion topics
  - **Scribe:** Observe and document discussion
- **Hotwash Agenda**

<b>Hotwash Agenda (June 16, 2022)</b>	
9:00 a.m. - 9:10 a.m.	Welcome and Administration
9:10 a.m. – 10:00 a.m.	Critical Transportation Hotwash
10:00 a.m. – 10:10 a.m.	Break
10:10 a.m. – 11:00 a.m.	Critical Transportation Hotwash (continued)
11:00 a.m. – 11:10 a.m.	Break
11:10 a.m. – 12:00 p.m.	Mass Care Services Hotwash
12:00 p.m. – 12:30 p.m.	Lunch
12:30 p.m. – 1:20 p.m.	Mass Care Services Hotwash (continued)
1:20 p.m. – 1:30 p.m.	Break
1:30 p.m. – 2:00 p.m.	CT, MCS, and Additional Parking Lot Items
2:00 p.m. - 2:15 p.m.	FEMA CR22 ROC Preliminary Observations
2:15 p.m. - 2:35 p.m.	Evaluator Summary of Takeaways
2:35 p.m. - Until Complete	Closing Comments

- **Hotwash Rules**

- Be respectful of other opinions and feedback
- Raise your hand for facilitator attention
- Remember the goal: Gain perspectives and best practices for continued response
- Link your responses back to the Exercise Objectives

<b>Exercise Objectives</b>
<b>1.</b> Examine and assess the coordination of response phase transportation activities between state, tribal, and local transportation entities.
<b>2.</b> Discuss how initial damage assessments of transportation infrastructure will be coordinated across all impacted jurisdictions.
<b>3.</b> Assess and discuss the procedures for the coordination of prioritized critical transportation needs across all jurisdictions.
<b>4.</b> Discuss the elements needed as input to develop a plan for reopening the statewide transportation system.

## Appendix A: Exercise Schedule

Time	Activity
June 13, 2022	
9:00 am - 9:13 am	Welcome and Administration
9:13 am - 9:25 am	Warm Start Video
9:25 am - 9:28 am	NWS Seattle Weather and Hydrology Brief
9:28 am - 9:38 am	FEMA CSZ Response Plan Overview
9:38 am - 9:40 am	Breakout Room Guidance
9:40 am - 9:50 am	Breakout Room Migration, Rules, and Warm Start Lifeline Status Update
9:50 am - 10:00 am	Break
10:00 am - 10:40 am	Breakout Session: Module 1 – Reconnecting Locally
10:40 am - 10:50 am	Break
10:50 am - 11:30 am	Breakout Session: Module 1 – Reconnecting Locally (Continued)
11:30 am - 12:00 pm	Lunch
12:00 pm - 12:40 pm	Breakout Session: Module 2 – Connecting with Adjacent Jurisdictions
12:40 pm - 12:50 pm	Break
12:50 pm - 1:30 pm	Breakout Session: Module 2 – Connecting with Adjacent Jurisdictions (Continued)
1:30 pm - 1:40 pm	Break
1:40 pm - 2:45 pm	Plenary Session: Module 3 – Reconnecting the Geographic Regions
2:45 pm - 2:55 pm	Break
2:55 pm - 3:45 pm	Plenary Session: Module 4 – Input to the Statewide Reopening Plan
3:45 pm - 3:55 pm	Break
3:55 pm – Until Complete	Closing Session

## Appendix B: Exercise Participants

<b>Registered Participating Organizations/Jurisdictions from Extent of Play Agreements</b>
<b>Federal</b>
Federal Emergency Management Agency
Federal Emergency Management Agency, Region 10
Civil Air Patrol
United States Navy, Third Fleet
<b>Tribes and Nations</b>
Lower Elwha Klallam Tribe
Nisqually Indian Tribe
Quinault Indian Nation
Shoalwater Bay Indian Tribe
Skokomish Indian Nation
<b>State</b>
Washington Emergency Management Division
Washington Military Department
Washington Department of Agriculture
Washington Department of Commerce
Washington Department of Corrections
Washington Department of Ecology
Washington Department of Employment Security
Washington Department of Health
Washington Department of Labor and Industries
Washington Department of Licensing
Washington Department of Natural Resources
Washington Department of Social and Health Services

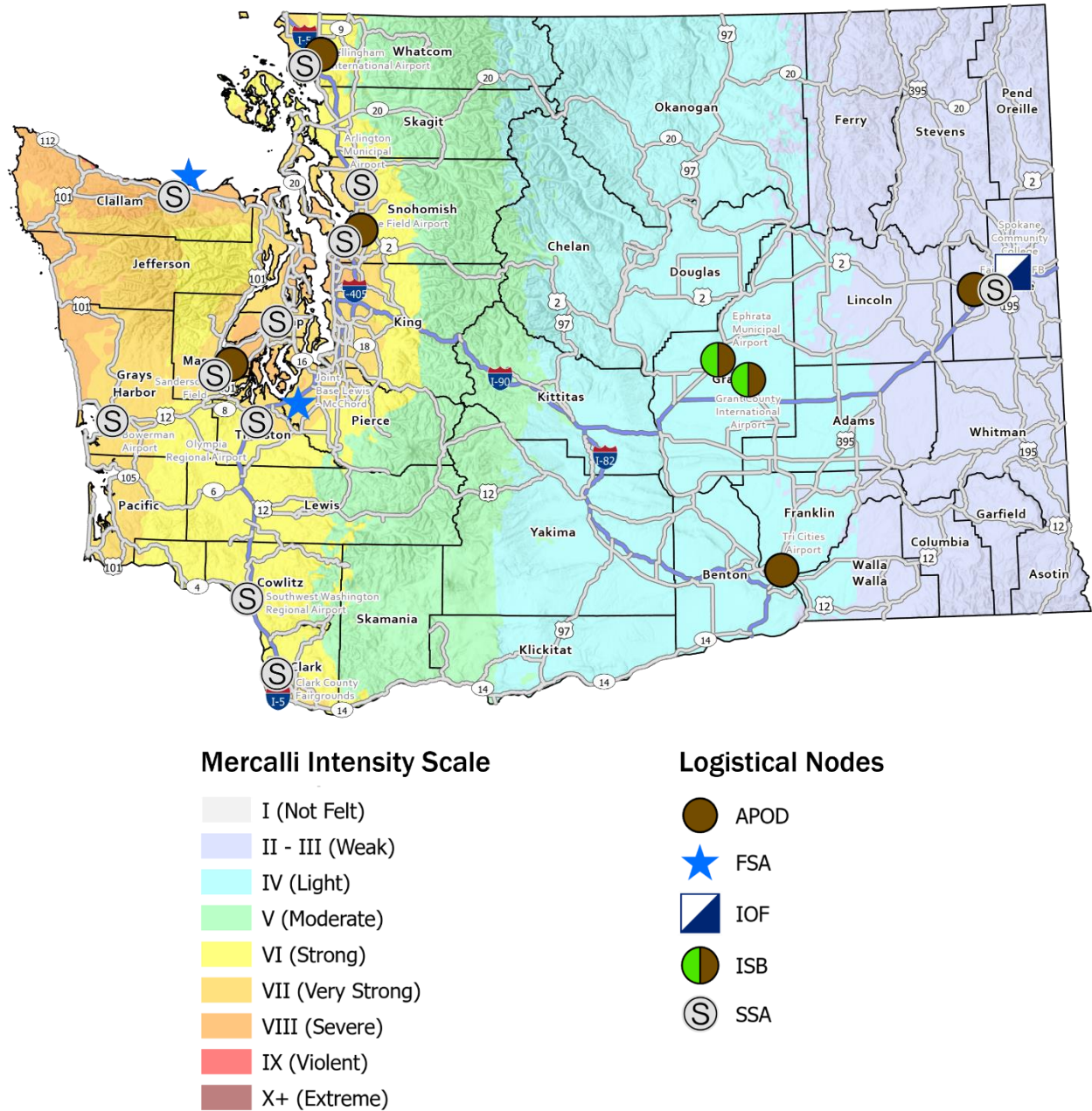


<b>Registered Participating Organizations/Jurisdictions from Extent of Play Agreements</b>
Washington Department of Transportation
Washington Department of Veterans Affairs
Washington Conservation Commission
Washington Gambling Commission
Washington Office of Energy
Washington Office of the Auditor
Washington Office of the Insurance Commissioner
Washington State Patrol
<b>Local</b>
Benton County
Chelan County
Clallam County
Clark County
Douglas County
Franklin County
Grant County
Grays Harbor County
Island County
Jefferson County
King County
Kitsap County
Kittitas County
Klickitat County
Okanogan County
Pacific County
Pend Oreille County

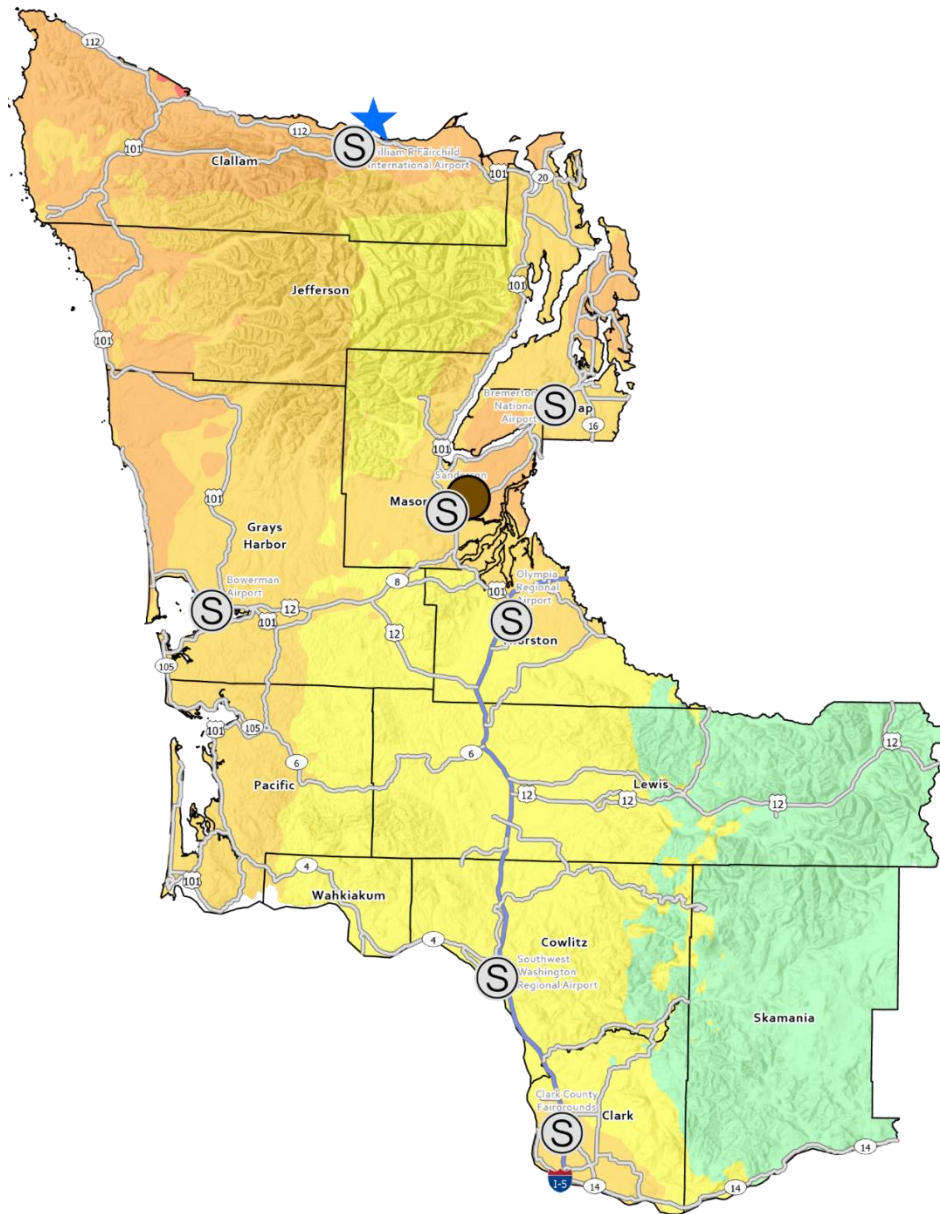
<b>Registered Participating Organizations/Jurisdictions from Extent of Play Agreements</b>
Pierce County
Skagit County
Snohomish County
Spokane County
Thurston County
Walla Walla County
Yakima County
<b>Volunteer Organizations Active in Disaster, Non-Profit and Non-Governmental Organizations, and Other Governmental Organizations</b>
American Red Cross
Salvation Army
Bainbridge Prepares
Central Washington University
Empact Northwest
Independent Living Council
WAsafe Coalition

## Appendix C: Maps

Figure 6. Washington State Map with topography, seismic activity layer, routes, and logistical nodes



**Figure 7. Breakout Room 1 with topography, seismic activity layer, routes, and logistical nodes**



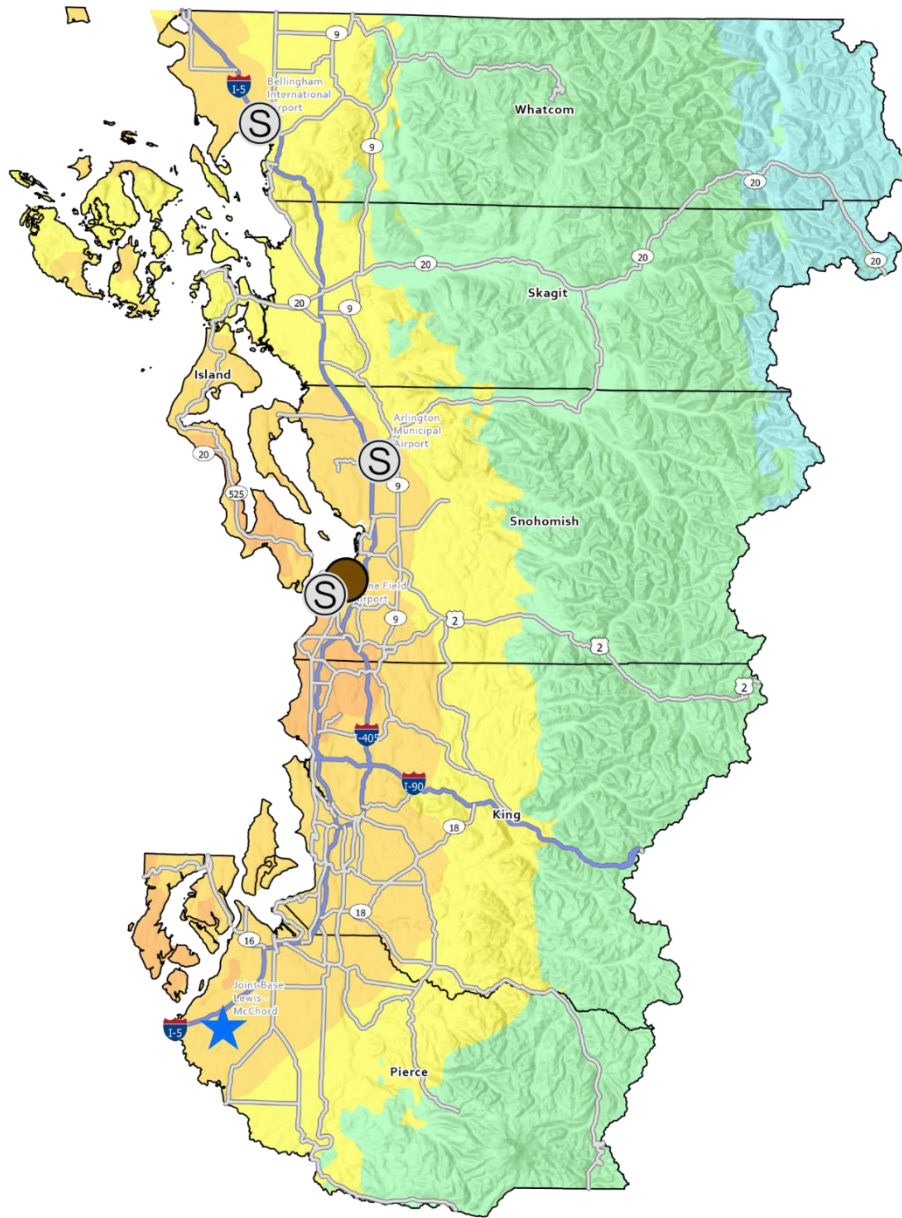
**Mercalli Intensity Scale**

- I (Not Felt)
- II - III (Weak)
- IV (Light)
- V (Moderate)
- VI (Strong)
- VII (Very Strong)
- VIII (Severe)
- IX (Violent)
- X+ (Extreme)

**Logistical Nodes**

- APOD
- FSA
- IOF
- ISB
- SSA

**Figure 8. Breakout Room 2 with topography, seismic activity layer, routes, and logistical nodes**



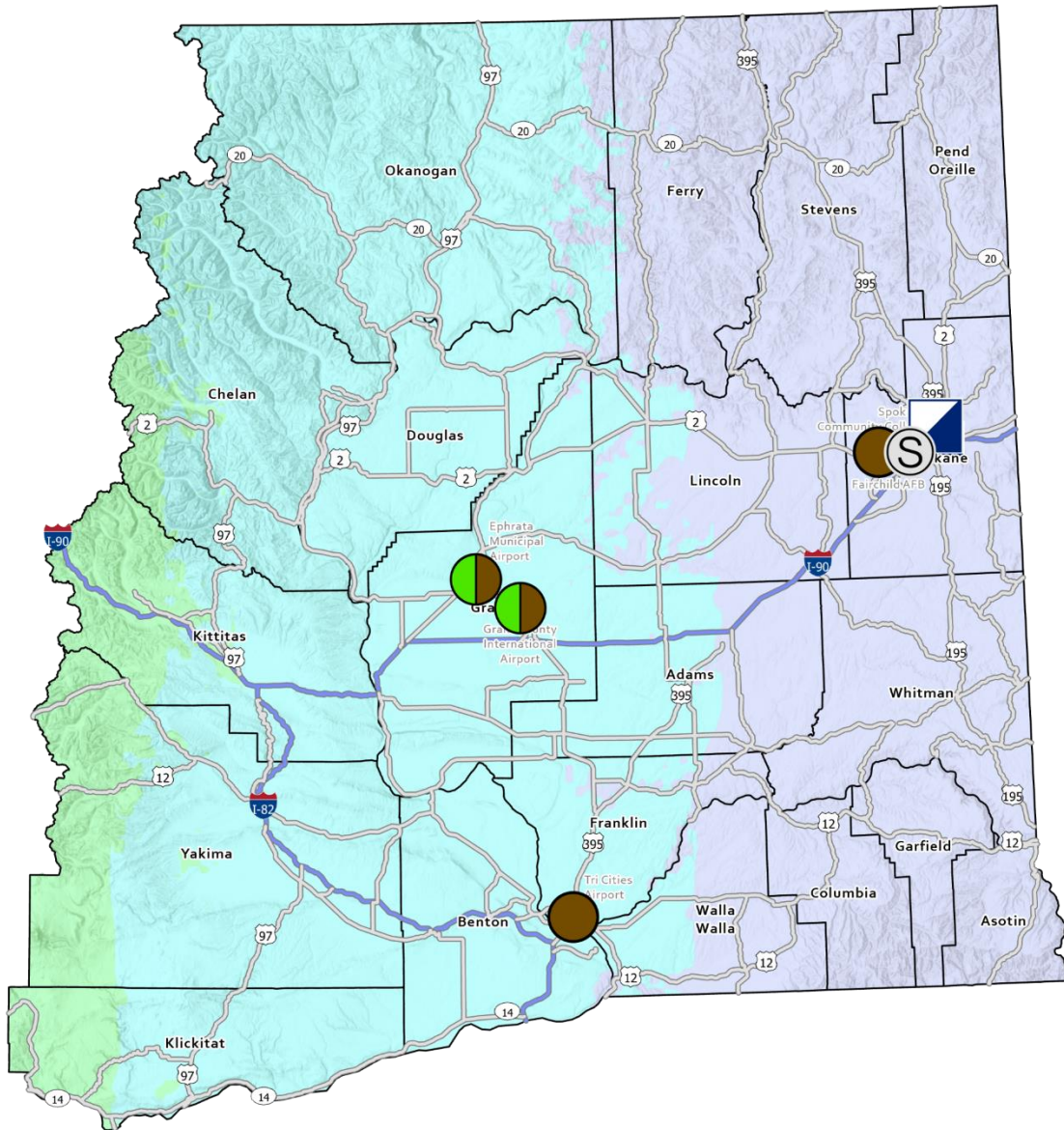
**Mercalli Intensity Scale**

- I (Not Felt)
- II - III (Weak)
- IV (Light)
- V (Moderate)
- VI (Strong)
- VII (Very Strong)
- VIII (Severe)
- IX (Violent)
- X+ (Extreme)

**Logistical Nodes**

- APOD
- FSA
- IOF
- ISB
- S SSA

**Figure 9. Breakout Room 3 with topography, seismic activity layer, routes, and logistical nodes**



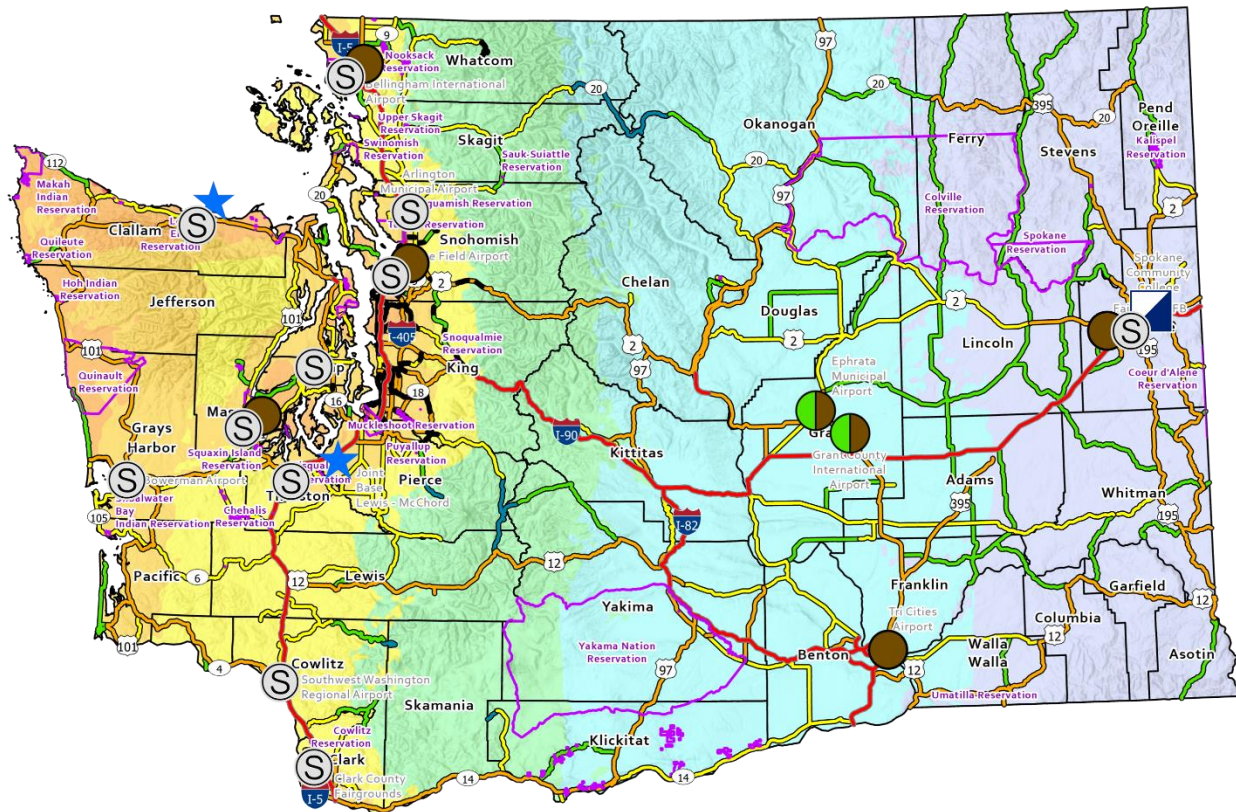
**Mercalli Intensity Scale**

- I (Not Felt)
- II - III (Weak)
- IV (Light)
- V (Moderate)
- VI (Strong)
- VII (Very Strong)
- VIII (Severe)
- IX (Violent)
- X+ (Extreme)

**Logistical Nodes**

- APOD
- FSA
- IOF
- ISB
- SSA

**Figure 10. WSDOT assessment priorities with topography, seismic activity layer, logistical nodes, and Tribal lands**



**Mercalli Intensity Scale    Logistical Nodes    WSDOT Priority Routes for Assessment**

- I (Not Felt)
- II - III (Weak)
- IV (Light)
- V (Moderate)
- VI (Strong)
- VII (Very Strong)
- VIII (Severe)
- IX (Violent)
- X+ (Extreme)

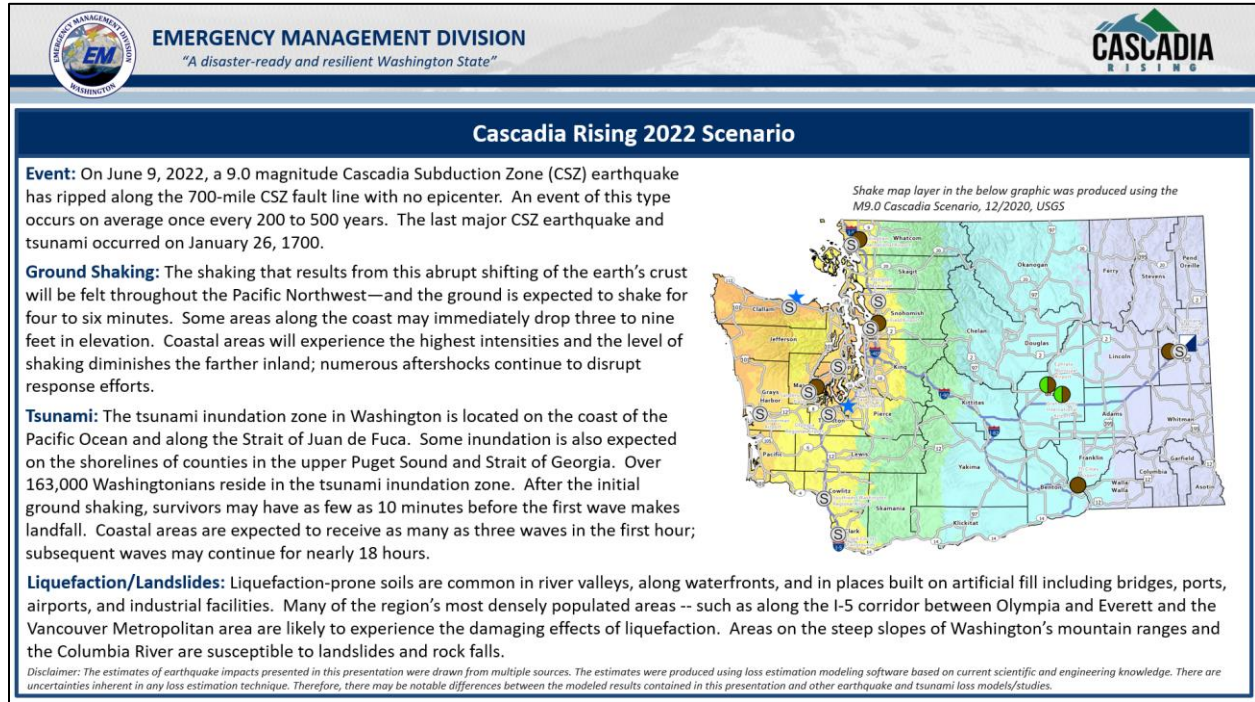
- APOD
- FSA
- IOF
- ISB
- SSA

- 1 Immediate Priority
- 2 Urgent Priority
- 3 High Priority
- 4 Medium Priority
- 5 Low Priority
- Non-Priority Designation

- Tribal Lands**
- Tribal Lands

## Appendix D: Geographically Aligned Scenario Placemats

**Figure 11. Cascadia Rising 2022 Base Scenario – 1st Page is Common to All Geographically Aligned Regions**



**Figure 12. Coastal Geographically Aligned Region – Page 2**

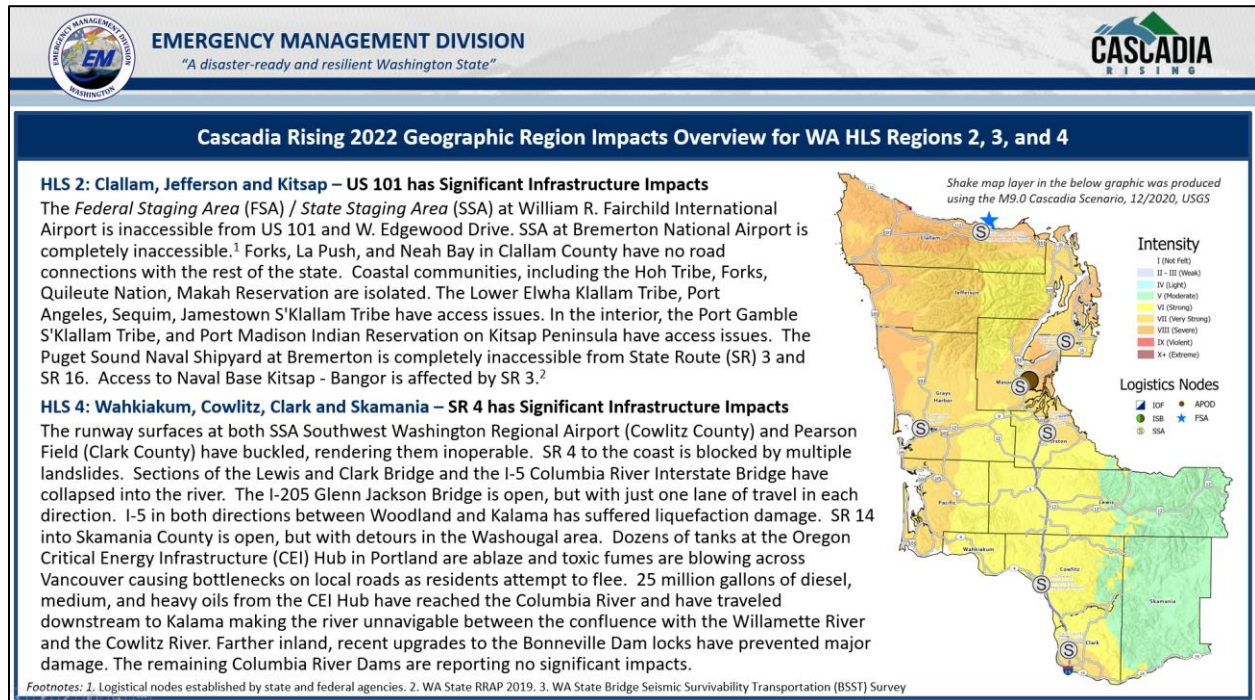




Figure 13. Coastal Geographically Aligned Region – Page 3

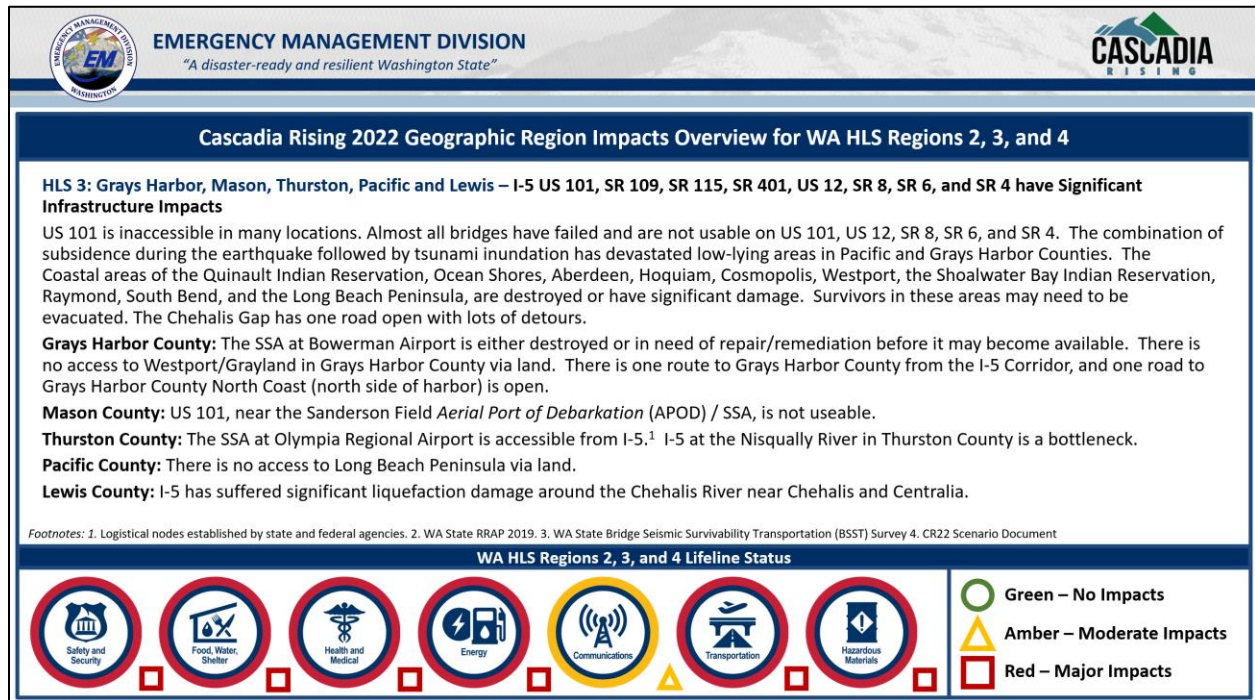


Figure 14. I-5 Corridor Geographically Aligned Region – Page 2

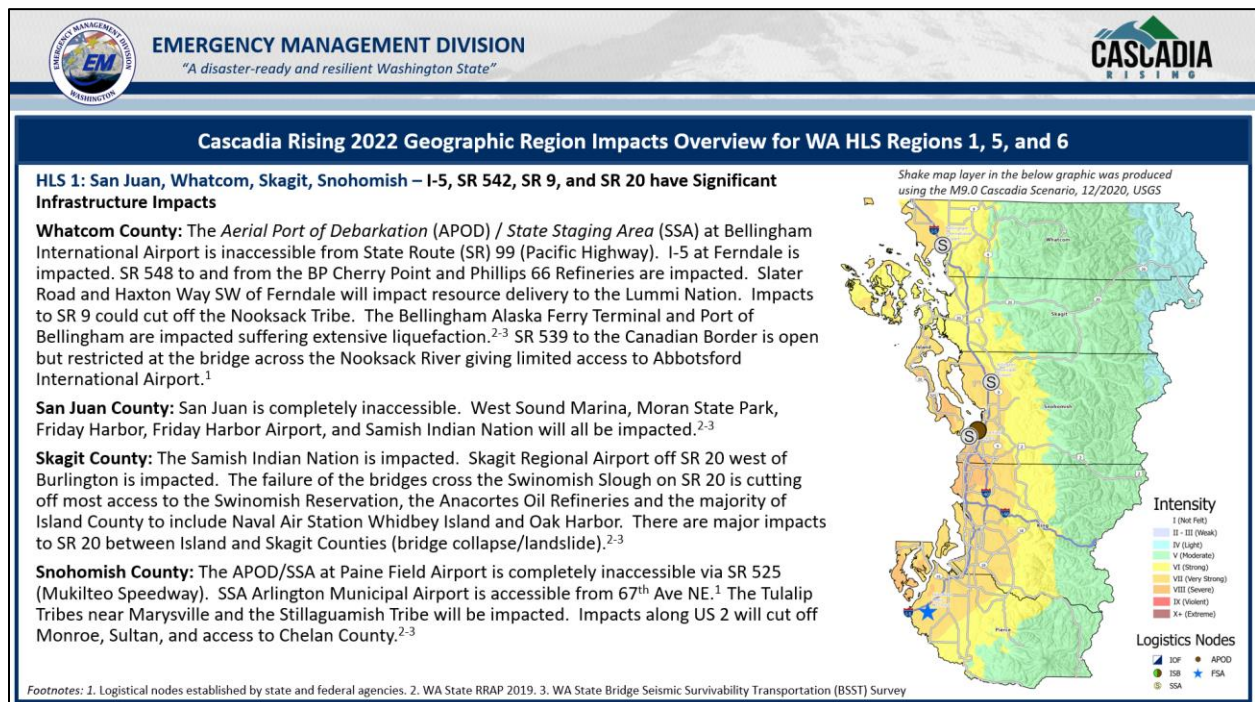


Figure 15. I-5 Corridor Geographically Aligned Region – Page 3

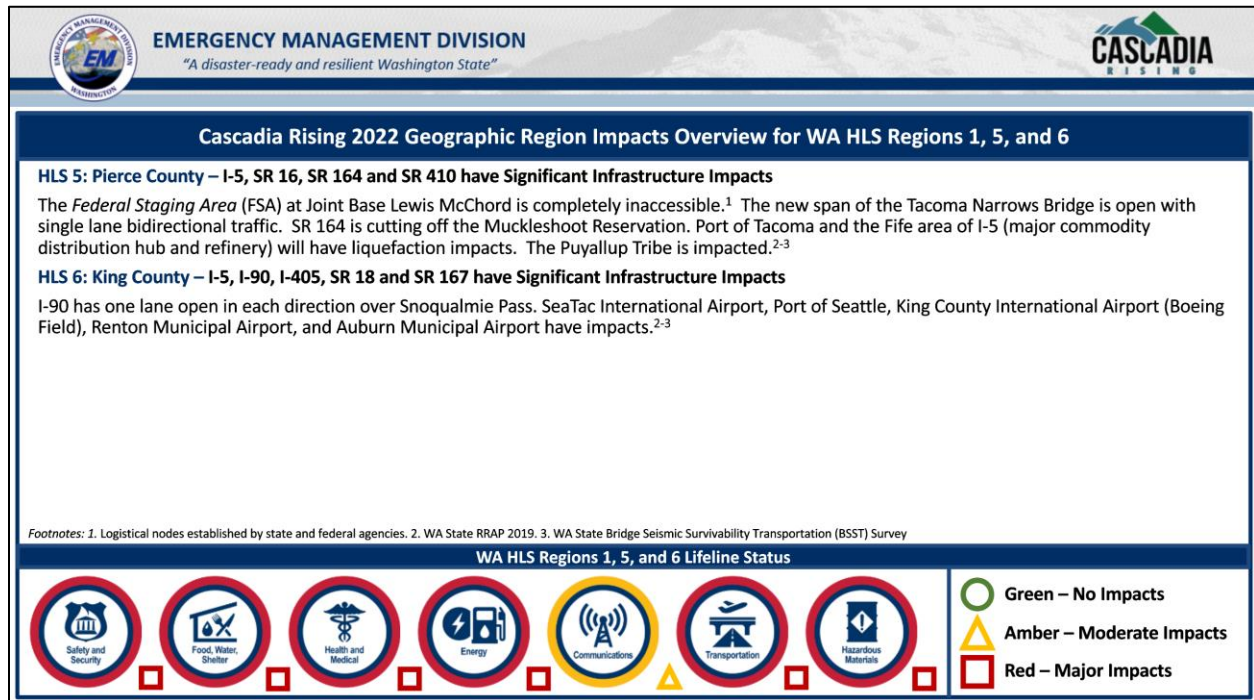


Figure 16. East of the Cascades Geographically Aligned Region – Page 2

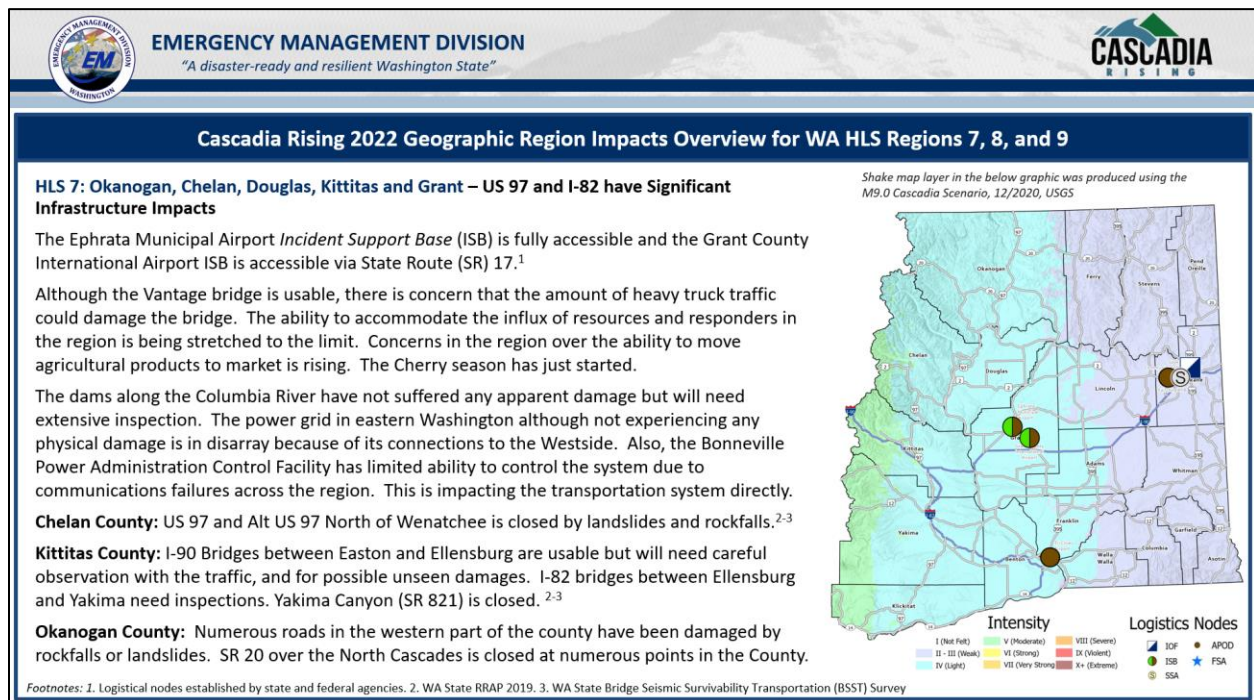
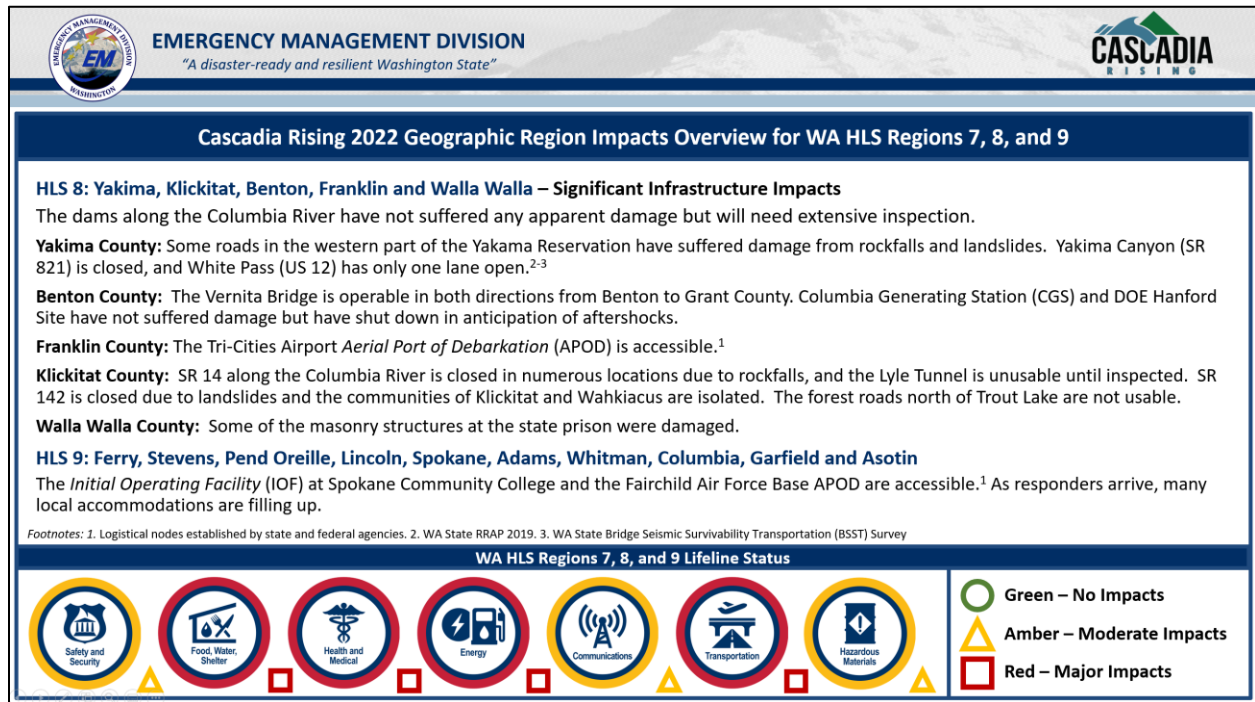


Figure 17. East of the Cascades Geographically Aligned Region – Page 3



## Appendix E: Community Lifelines

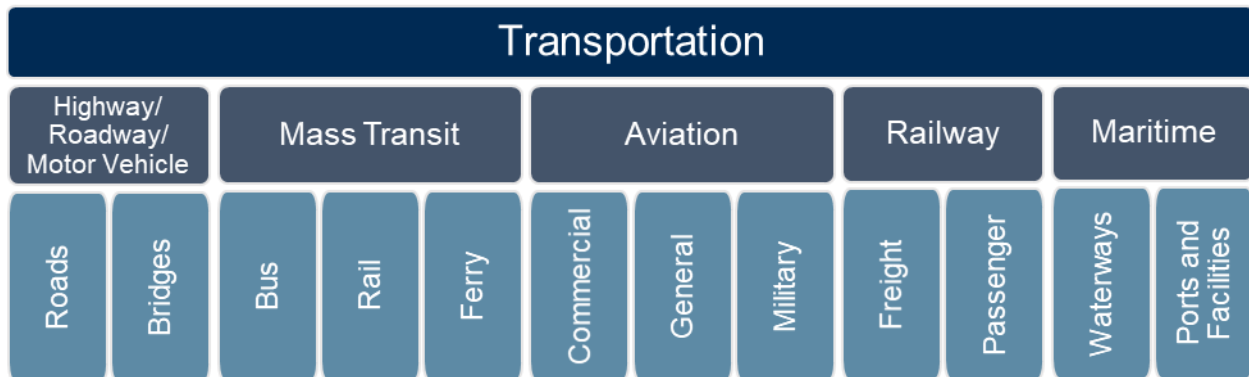
### DEFINITION

A lifeline enables the continuous operation of critical government and business functions and is essential to human health and safety or economic security. Community lifelines reframe incident information to provide decision-makers with impact statements and summarize the root causes of disruptions to lifeline services.



### COMPONENTS AND SUBCOMPONENTS

Each lifeline is composed of multiple components and subcomponents that help define the services that make up that lifeline. Components represent the general scope of services for a lifeline. The components are further divided into relevant subcomponents that provide a granular level of enabling functions for the delivery of services to a community. Lifelines and components are fixed, but the subcomponents may be adjusted as necessary.



*The graphic provides an example breakdown of the Transportation Lifeline into its relevant components and subcomponents*

### ASSESSMENT

Lifeline components can be analyzed using six assessment categories that capture essential information for response decision-makers

**Component:** Identify the component

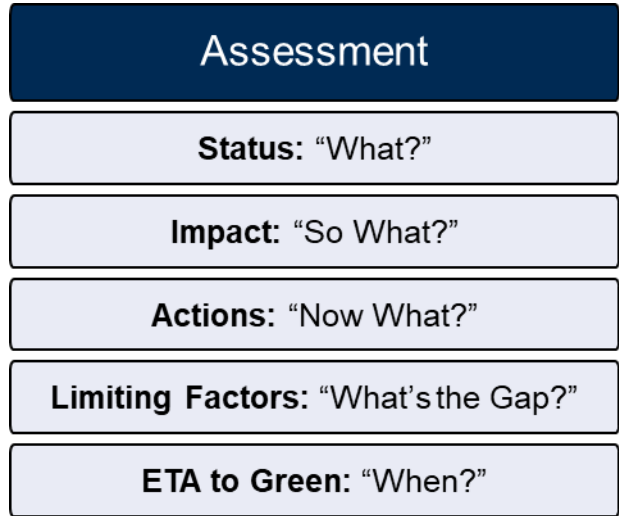
**What:** Summarize the root cause(s) of disruption to lifelines services.

**Impact:** Explain the disaster impacts to specific communities, disaster survivors, and response operations. Detail how the survivor experience or response operation will improve if this component is stabilized. Specify the impacted areas and population totals.

**Actions:** Describe the actions that are being taken to stabilize and re-establish the disrupted services. Summarize the most critical actions being taken across the Whole Community.

**Limiting Factors:** Express issues that are preventing services from being stabilized or re-established. Such issues can stem from another lifeline/component, resource shortfall, management, policy, etc.

**Estimated time to transition to Green:** Provide current component condition or an estimated timeframe for when a change in condition is expected.



**ASSIGNING A CONDITION**

Assess lifeline conditions as incident circumstances evolve and over the course of response operations.

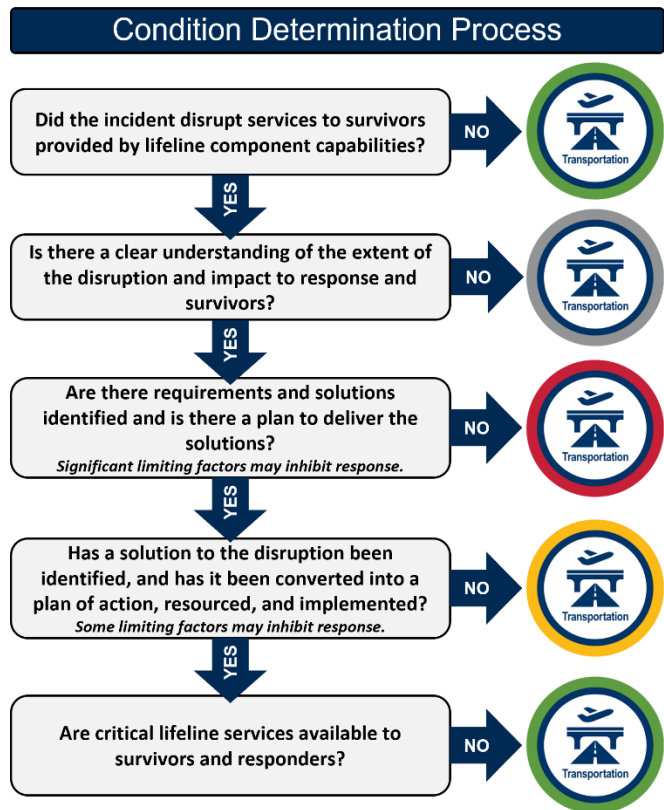
A color designation represents a snapshot in time for that response operational period.

Stabilization targets will provide the baseline against which lifelines can be compared.

The flowchart shows an example of how responders may think through assigning lifelines a color.

A Blue icon without a border does not indicate an operational status or condition; it is used for administrative purposes, such as presentations and briefings.

Figure 18. Lifeline Condition Determination Process



## Appendix F: Relevant Plans and Reports

1. Region 10 Cascadia Subduction Zone (CSZ) Earthquake and Tsunami Plan, Federal Emergency Management Agency, January 2022
2. [The Regional Resiliency Assessment Program for Washington State Transportation](#)
3. [Washington State Comprehensive Emergency Management Plan](#)
  - a. [ESF 1: Transportation](#)
4. Washington State Distribution Management Plan, December 2021
5. [Washington State Enhanced Hazard Mitigation Plan](#)
6. Washington State Catastrophic Incident Annex
  - a. Tab A: Critical Transportation
  - b. Tab B: Mass Care Services

## Appendix G: References and Endnotes

- 1 FEMA Cascadia Rising 2022 exercise scenario document
- 2 Washington State 2021 THIRA/SPR Capability Target(s)
- 3 Washington State 2021 WA State SPR Capability Reporting
- 4 Unites States Census Bureau Data (2010 and 2020)
- 5 2021 Washington State Tsunami Vertical Evacuation Structure Impact Analysis Assessment
- 6 FEMA Resilience Analysis and Planning Tool (RAPT)
- 7 Washington State Catastrophic Incident Annex; Tab A: Critical Transportation

*The above list of data sources is not an all-inclusive list of sources; however, the ones listed may include inherent limitations based on scenario modeling, self-reported data, the use of planning figure percentages of the impacted population and/or assumptions made on those metrics.*

## Appendix H: Acronyms, Abbreviations, and Key Terms

Acronym	Term
AAR	After-Action Report
AAR/IP	After-Action Report/Improvement Plan
AAM	After-Action Meeting
APOD	Aerial Point of Debarkation (logistics term)
APOE	Aerial Point of Embarkation (logistics term)
BP	British Petroleum (Placemat – Appendix D)
BSST	Bridge Seismic Survivability Transportation Survey
CEI	Critical Energy Infrastructure
CGS	Columbia Generating Station
CPOD	Community Point of Distribution
CR	Cascadia Rising
CSZ	Cascadia Subduction Zone
CT	Critical Transportation
DHS	U.S. Department of Homeland Security
DOE	Department of Energy
EEG	Exercise Evaluation Guides
EMD	Emergency Management Division
EHS	Extremely Hazardous Substances
EMS	Emergency Medical Services
EOC	Emergency Operations Center
ESF	Emergency Support Function
ETA	Estimated Time of Arrival
FEMA	Federal Emergency Management Agency
FSA	Federal Staging Area (logistics term)
HLS	Homeland Security
HSEEP	Homeland Security Exercise and Evaluation Program



Acronym	Term
I-(#)	Interstate-(#), of the Interstate Highway System
IOF	Initial Operating Facility
IP	Improvement Plan
ISB	Incident Support Base
JBLM	Joint-Base Lewis McChord
JFO	Joint Field Office
M(#)	Magnitude(#) earthquake
MPH	Miles Per Hour
NGO	Nongovernmental Organization
POC	Point of Contact
PSAP	Public Safety Answering Point
RAPT	Resilience Analysis and Planning Tool
RRAP	Regional Resiliency Assessment Program
SAR	Search and Rescue
SitMan	Situation Manual
SME	Subject-Matter Expert
SPR	Stakeholder Preparedness Review
SR	State Route
SSA	State Staging Area
THIRA	Threat & Hazard Identification and Risk Assessment
TTX	Tabletop Exercise
US	United States Route
USGS	United States Geological Survey
WA	Washington
WSDOT	Washington State Department of Transportation

Key Term:	Definition:
After Action Meeting (AAM)	A meeting that serves as a forum to review the revised AAR and the draft IP. Participants should seek to reach final consensus on strengths, areas for improvement, draft corrective actions, concrete deadlines, and owners/ assignees for implementation of corrective actions.
Access and Functional Needs (AFN)	Persons who may have additional needs before, during and after an incident in functional areas, including but not limited to: maintaining independence, communication, transportation, supervision, and medical care. Individuals in need of additional response assistance may include those who have disabilities; live in institutionalized settings; are seniors; are children; are from diverse cultures; have limited English proficiency or are non-English speaking; or are transportation disadvantaged.
Aerial Port(s) of Debarkation (APOD)	An airfield for sustained air movement at which personnel and material are discharged from aircraft. Aerial Ports of Debarkation normally serve as ports of embarkation (APOE) for return passengers and retrograde cargo shipments.
Community Point of Distribution (CPOD)	A location from which basic material assistance is provided to the public in the form of emergency food and drinking water. The CPOD may also distribute other commodities such as ice, tarps, baby food, etc. A CPOD is not the same as a point of dispensing, which distributes or administers pharmaceuticals.
Federal Staging Area (FSA)	A temporary facility in the vicinity of the affected area at which commodities, equipment, and personnel are received and from which they may be deployed upon State request. Resources at a Federal Staging Area are assigned to the disaster, awaiting tactical assignment. These resources are under the control of the FEMA Region Office, Regional Response Coordination Center, its Incident Management Assistance Team, or the Joint Field Office, and are allocated by FEMA according to specific requests by the affected State.

Key Term:	Definition:
Hotwash	A facilitated discussion held immediately following an exercise among exercise players from each functional area that is designed to capture feedback about any issues, concerns, or proposed improvements players may have about the exercise. The hot wash is an opportunity for players to voice their opinions on the exercise and their own performance. This facilitated meeting allows players to participate in a self-assessment of the exercise play and provides a general assessment of how the jurisdiction performed in the exercise. At this time, evaluators can also seek clarification on certain actions and what prompted players to take them. Evaluators should take notes during the hot wash and include these observations in their analysis.
Interim Operating Facility (IOF)	A site identified in consultation with the state—as a precursor to the establishment of a Joint Field Office (JFO).
Incident Staging Base (ISB)	A location near an impacted disaster area at which FEMA mobilizes and pre-positions commodities and other resources in response to, or in anticipation of, a state request for assistance. Resources at an ISB are national-level resources under the control of FEMA’s National Response Coordination Center and are available for deployment nationwide. FEMA considers establishing an ISB to be a valid course of action when an incident is foreseen, or for multi-state incidents
Isolated Community	A localized condition restricting the ability to move from place to place, maintain communications, or have access to services or infrastructure. Communities may become isolated due to severe and long-lasting transportation damages. <sup>7</sup>
Magnitude (earthquake)	The magnitude is a number that characterizes the relative size of an earthquake. Magnitude is based on measurement of the maximum motion recorded by a seismograph. <i>USGS</i>
State Staging Area	A temporary facility in the vicinity of the affected area at which commodities and equipment are received and from which they may be deployed. The State Staging Area is the focal point in the supply chain for resources to be delivered from multiple sources to survivors in a community. Resources staged at a State Staging Area may be distributed directly to the point of use or to a County Staging Area or Community Point of Distribution (CPOD). Co-location of state, tribal and/or local jurisdictions will provide a more efficient transfer of ownership. The goal of each staging area, once stocked, is to provide needed resources within 12 hours of receiving a request.

