

Blue Cascades VII  
Cascadia Subduction Zone Earthquake  
Recovery Tabletop Exercise

March 21, 2018

# Situation Manual



# Table of Contents

## Contents

Agenda.....	3
Introduction .....	4
Instructions for Participants .....	5
Purpose.....	5
Scope .....	5
Scenario.....	6
Damage Observations .....	9
Core Capabilities.....	13
Assumptions .....	13
Goals .....	15
Objectives.....	15
Discussion Questions .....	15
Terms and Definitions .....	16
Recovery Plan Crosswalk .....	19
Recovery Resources .....	22



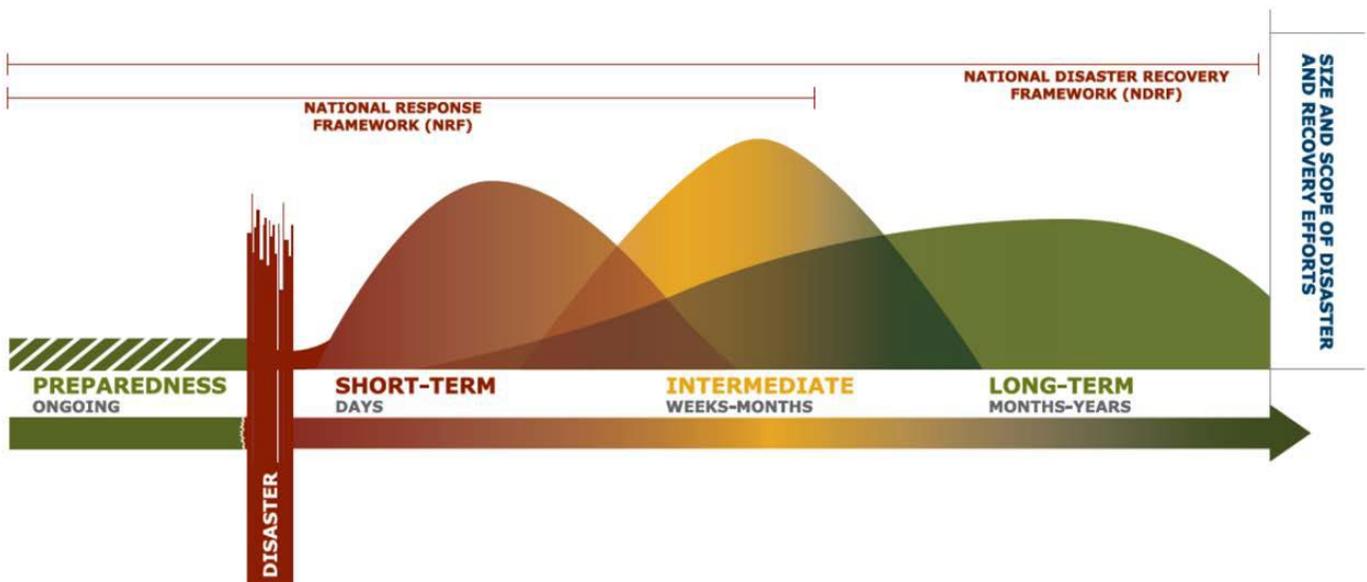
# Agenda

Time	Activity	Presenter
7:30 AM	Registration and Continental Breakfast	All
8:00 AM	Welcome and Introductions	Eric Holdeman, Director, Center for Regional Disaster Resilience Robert Ezelle , Director Washington Emergency Management Division
8:45 AM	Exercise Brief – What to expect – explain first breakout	Steve Myers, Senior Program Manager, Pacific Northwest Economic Region
9:00 AM	First table breakout – Objective 1 (roles, responsibilities and communication)	Facilitator/Recorder
10:10 AM	Group out-brief summary	Facilitators
10:30 AM	Exercise Brief – second breakout	Eric Holdeman
10:45 AM	Second table breakout – Objective 2 (infrastructure prioritization and economic recovery)	Facilitator/Recorder
11:45 AM	Group out-brief summary	Facilitators
12:00 PM	Pick up lunch	All
12:15 PM	Lunch presentation or working lunch?	Bill Steele, University of Washington, The Pacific Northwest Seismic Network
12:45 PM	Exercise Brief – third breakout	Steve Myers
1:00 PM	Third table breakout – Objective 3 (dependencies and interdependencies)	Facilitator/Recorder
2:15 PM	Group out-brief summary	Facilitators
2:30 PM	Exercise Brief – fourth breakout	Eric Holdeman

2:45 PM	Fourth breakout – Objective 4 (gaps and improvement plan)	Facilitator/Recorder
3:30 PM	Group out-brief summary	Facilitators
3:45 PM	Evaluation – hot wash	Steve Myers
4:00 PM	Close	Eric Holdeman

## Introduction

Blue Cascades VII is a disaster recovery tabletop exercise is a one-day facilitated discussion exercise designed to explore and apply skills and knowledge involving recovery issues from a catastrophic subduction zone earthquake. The timeline for the exercise begins day 30 following the event in the intermediate recovery phase.



## **Instructions for Participants**

The following instructions are provided to exercise participants to allow for structured free-flowing discussion without reworking or challenging prepared information. Please accept these instructions during the exercise:

- Accept the scenario
- Accept assumptions as the present reality
- Accept the damage observations
- Accept the limits on objectives and questions
- Accept the limits on core capabilities for the exercise
- Allow all input, do not judge
- Keep your input short and concise

## **Purpose**

The primary purpose of this exercise is to improve knowledge and understanding of recovery issues building on the following principles:

- Engaged partnerships
- Unity of effort
- Timeliness and flexibility
- Dependencies and Interdependencies

## **Scope**

The scope of the exercise is focused on the Puget Sound region divided into the following geographic regions:

- North Sound (Everett North)
- Central Sound (Everett South, Tacoma North, Bellevue West)
- South Sound (Tacoma South)
- East Sound (Bellevue East)

The scope of exercise is focused on four of the sixteen critical infrastructures. There may be discussion regarding dependencies and interdependencies of other critical infrastructures, however, the focus will revolve around these:

- Communications
- Energy
- Transportation Systems
- Water and Waste Water



**Scenario** (from the Cascadia Rising 2016 scenario)

A large magnitude Cascadia Subduction Zone (CSZ) fault earthquake and tsunami is perhaps one of the most complex disaster scenarios that we face in the Pacific Northwest. Due to this complexity, recovery operations will hinge on the effective coordination and integration of governments at all levels – cities, counties, state agencies, federal departments, the military, and tribal nations – as well as non-governmental organizations and the private sector. It is this joint-operational whole community approach that we seek to discuss during the Blue Cascades VII recovery tabletop exercise.

The Cascadia Region is comprised of the area west of the Cascade Mountains stretching from Northern California, through Oregon and Washington and into British Columbia.

Lying mostly offshore, the CSZ plate interface is a giant fault—approximately 700 miles long (1,130 km). Here, the set of tectonic plates to the west is sliding (subducting) beneath the North American Plate. The movement of these plates is neither constant nor smooth: the plates are stuck, and the stress will build up until the fault suddenly breaks.

The scenario assumes an epicenter approximately 95 miles west of Eugene, Oregon.

The entire fault zone ruptures from end to end, causing one great earthquake measuring magnitude 9.0. 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 go on shaking for four to six minutes.

See the following two graphics for the impact areas and severity during this event.

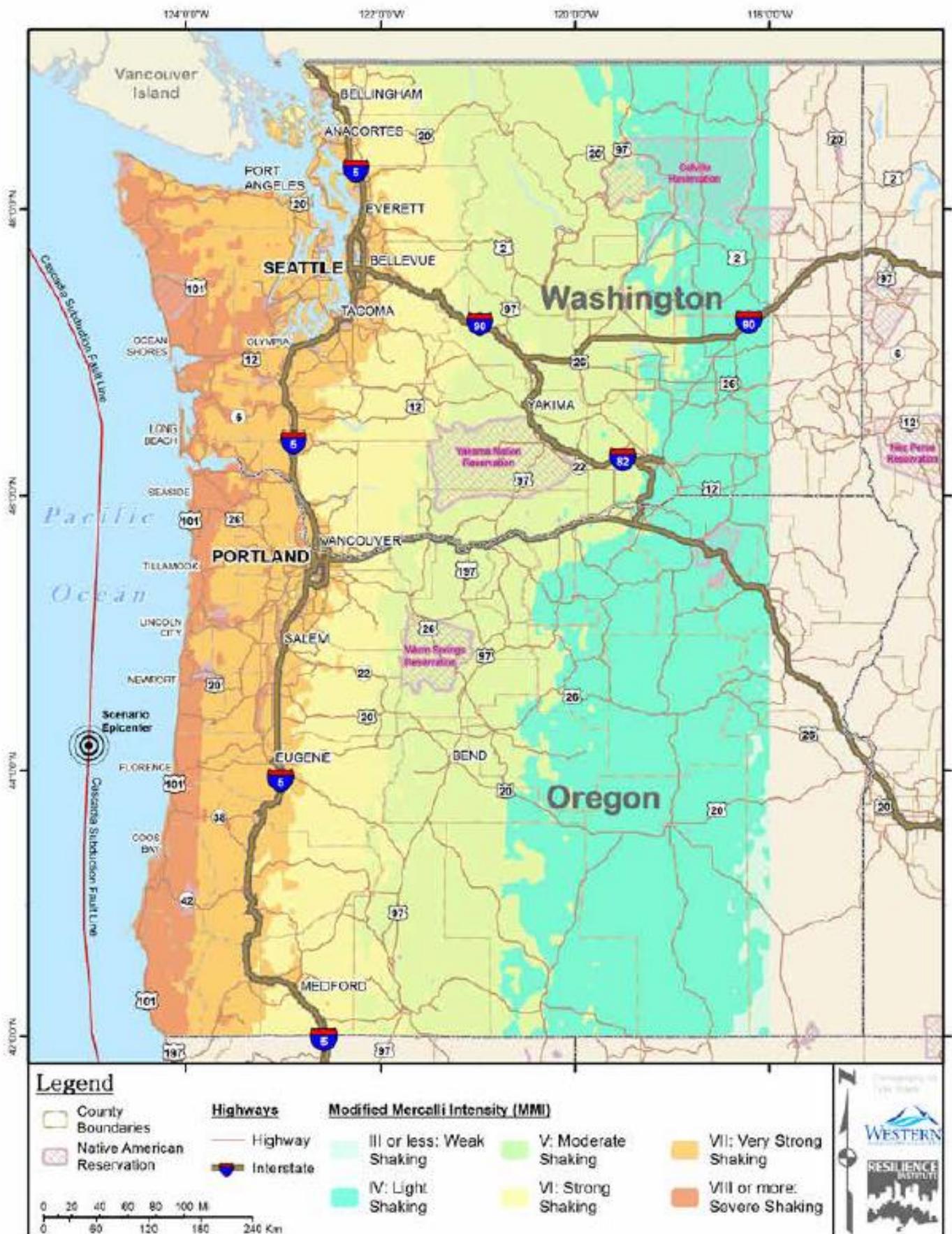


Figure 2. Expected ground shaking intensities from a M9.0 Cascadia Subduction Zone earthquake

# THE MODIFIED MERCALLI INTENSITY SCALE

Intensity	Shaking	Description/Damage
I	Not Felt	Not felt except by a very few under especially favorable conditions.
II	Weak	Felt only by a few persons at rest, especially on upper floors of buildings.
III	Weak	Felt quite noticeably by persons indoors, especially on upper floors of buildings. Many people do not recognize it as an earthquake. Standing motor cars may rock slightly. Vibrations similar to the passing of a truck. Duration estimated.
IV	Light	Felt indoors by many, outdoors by few during the day. At night, some awakened. Dishes, windows, doors disturbed; walls make cracking sound. Sensation like heavy truck striking building. Standing motor cars rocked noticeably.
V	Moderate	Felt by nearly everyone; many awakened. Some dishes, windows broken. Unstable objects overturned. Pendulum clocks may stop.
VI	Strong	Felt by all, many frightened. Some heavy furniture moved; a few instances of fallen plaster. Damage slight.
VII	Very Strong	Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable damage in poorly built or badly designed structures; some chimneys broken.
VIII	Severe	Damage slight in specially designed structures; considerable damage in ordinary substantial buildings with partial collapse. Damage great in poorly built structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned.
IX	Violent	Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb. Damage great in substantial buildings, with partial collapse. Buildings shifted off foundations.
X	Extreme	Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations. Rails bent.

Table 2. The Modified Mercalli Intensity (MMI) Scale describes the observed effects of ground shaking at each corresponding shaking intensity level, designated by Roman Numerals.

## Damage Observations

The observations are based on a combination of information from the Cascadia Rising 2016 Scenario, Resilient Washington Report 2012 and the 2013 Cascadia Subduction Zone report by the Cascadia Region Earthquake Workgroup.

### Key to the Table – Communications Systems Sector

Target timeframe for recovery:

Operational impact expectations



Under 50%



51% to 70%



71%+

Estimated Time to reach 80%-90% operational status



### State of Recovery Communications Sector

	Event Occurs	0-24 Hours	1-3 Days	3-7 Days	1 Week – 1 Month	1-3 Months	3 Months – 1 Year	1-3 Years	3+ Years
Landline Telecommunications								X	
Fiber Network							X		
Cellular Systems								X	
Internet Capacity							X		

Anticipated damages to overcome: 40% of above ground poles require replacement; 30% of fiber network using bridges is broken (bridge collapse); 20% of cell towers down; Internet capacity using fiber network or landline connectivity is reduced to 50%.



## Key to the Table – Energy Systems Sector

Target timeframe for recovery:

Operational impact expectations



Under 50%



51% to 70%



71%+

Estimated time to reach 80%-90% operational status



### State of Recovery Energy Sector

	Event Occurs	0-24 Hours	1-3 Days	3-7 Days	1 Week – 1 Month	1-3 Months	3 Months – 1 Year	1-3 Years	3+ Years
Electricity Transmission									X
Electricity Distribution (home & business)									X
Natural Gas Transmission (pipes)									X
Natural Gas Distribution (home & business)									X
Petroleum Transmission (pipes)									X
Petroleum Distribution (road, rail, water)								X	

Anticipated damages to overcome: 40% of above ground poles require replacement; 30% of high voltage towers damaged; home and business customers must be inspected before power can be restored; 25% of natural gas pipes are known damaged, system has been shut down to inspect; home and business customers must be inspected before gas can be turned on; 35% of petroleum pipelines are broken, system has been shut down; 50% of gas stations are without fuel.



## Key to the Table – Transportation Systems Sector

Target timeframe for recovery:

Operational impact expectations



Under 50%



51% to 70%



71%+

Estimated time to reach 80%-90% operational status



### State of Recovery Transportation Systems Sector

	Event Occurs	0-24 Hours	1-3 Days	3-7 Days	1 Week – 1 Month	1-3 Months	3 Months – 1 Year	1-3 Years	3+ Years
Interstate 5 North Sound	Red	Red	Yellow	Yellow	Yellow	Yellow	Yellow	Green	X
Interstate 5 Central Sound	Red	Red	Red	Red	Yellow	Yellow	Yellow	Yellow	X
Interstate 5 South Sound	Red	Red	Yellow	Yellow	Yellow	Green	Green	Green	X
Interstate 90	Red	Red	Red	Red	Yellow	Yellow	Yellow	Green	X
Interstate 405	Red	Red	Red	Red	Red	Yellow	Yellow	Yellow	X
Floating Bridges	Red	Red	Red	Red	Yellow	Yellow	Yellow	Green	X
SR 99	Red	Red	Red	Red	Red	Red	Red	Red	X
Ferry System	Red	Red	Red	Yellow	Yellow	Yellow	Yellow	Green	X
Port Systems	Red	Red	Red	Red	Yellow	Yellow	Yellow	Green	X
Rail Systems	Red	Red	Red	Red	Red	Yellow	Yellow	Green	X
Transit Systems	Red	Red	Red	Yellow	Yellow	Green	Green	Green	X
Aviation Systems	Red	Red	Red	Yellow	Yellow	Yellow	Green	Green	X

Anticipated damages to overcome: 40% of elevated section of I-5 from Everett to Marysville is damaged and unpassable; ship canal bridge on I-5 has partially collapsed and is unpassable; 20% of I-5 south of Tacoma has some buckling and cracking; part of Mount Baker tunnel has collapsed; approach to I-90 floating bridge has settled and cracked due to liquefaction; west bound approach to SR 520 floating bridge has buckled at Clyde Hill; SR 99 viaduct has collapsed; ferry system docks at Coleman, Edmonds, Bremerton have sustained damage, all must be inspected before routes can be resumed; ferry dock at Mukilteo has collapsed; Port of Seattle, Tacoma and Everett have sustained damage due to liquefaction with cracking and separation; 40% of container cranes have collapsed or must be inspected; 50% rail lines from Bellingham to Olympia have sustained damage due to twisting, landslides and liquefaction; 65% of public transit systems are in operable due to road closures, 15% of transit facilities have sustained damage; airports at Sea-Tac, Tacoma, Paine Field and Olympia have sustained damage and are 40% functional, runways have all sustained damage due to cracking and buckling and are 35% functional.

## Key to the Table – Water & Waste Water Systems Sector

Target timeframe for recovery:

Operational impact expectations



Under 50%



51% to 70%



71%+

Estimated time to reach 80%-90% operational status



## State of Recovery Water & Waste Water Systems Sector

	Event Occurs	0-24 Hours	1-3 Days	3-7 Days	1 Week – 1 Month	1-3 Months	3 Months – 1 Year	1-3 Years	3+ Years
Domestic Water Supply (safety)	Red	Red	Yellow	Yellow	Yellow	Green	X		
Domestic Water Supply Transmission (pipes)	Red	Red	Red	Red	Yellow	Yellow	Yellow	Green	X
Wastewater Treatment Facilities	Red	Red	Red	Yellow	Yellow	Green	X		
Wastewater Transmission (pipes)	Red	Red	Red	Red	Red	Yellow	Yellow	Green	X

Anticipated damages to overcome: 30% of water supply may be contaminated and being tested; 25% of water mains have ruptured and system shut down; all water pipes must be inspected before charging; 20% of wastewater treatment facilities have been damaged, awaiting engineering assessment; 30% of waste water transmission pipes have ruptured, all pipes must be inspected.



## Core Capabilities

The following core capabilities will be applied as the key distinct critical elements for this exercise. Other core capabilities may be considered, however, these three will be used for development of gaps and next steps.

- Operational Coordination
- Infrastructure Systems
- Economic Recovery

## Assumptions

The following assumptions are made to begin the discussion.

Assumption	Impact	Considerations
1. Recovery exercise begins earthquake +30 days	<ul style="list-style-type: none"> <li>• All Emergency Operations Centers have transitioned to long term recovery</li> </ul>	<ul style="list-style-type: none"> <li>• Communications systems are compromised and 60% functional</li> </ul>
2. All response activities have concluded	<ul style="list-style-type: none"> <li>• Fire operations routine</li> <li>• Law enforcement operations routine</li> <li>• Emergency Medical response routine</li> <li>• Fatalities recovered</li> </ul>	<ul style="list-style-type: none"> <li>• Transportation systems compromised at 70% functional or detours operating</li> <li>• Traffic control stretching personnel</li> <li>• Debris management continues</li> </ul>
3. Damage assessment started	<ul style="list-style-type: none"> <li>• Engineers required to assess structural integrity</li> </ul>	<ul style="list-style-type: none"> <li>• Qualified engineers in short supply</li> <li>• Private sector companies paying twice the normal wage</li> <li>• Government agencies losing some engineers</li> </ul>
4. FEMA recovery operations continue	<ul style="list-style-type: none"> <li>• Individual assistance is ongoing (residents)</li> <li>• Public assistance is ongoing (government buildings and infrastructure)</li> <li>• Debris management is being coordinated and funded by FEMA</li> <li>• Points of Distribution for supplies of food, water and other supplies remain open</li> </ul>	<ul style="list-style-type: none"> <li>• Disaster Recovery Centers are open in 35 municipalities for Individual Assistance (personnel impact)</li> <li>• Deadlines for Public Assistance grants having personnel impact</li> <li>• Points of Distribution are open in 28 municipalities (personnel impact)</li> </ul>

Assumption	Impact	Considerations
	<ul style="list-style-type: none"> <li>• Intermediate housing has been offered (mobile homes)</li> <li>• Federal Disaster Recovery Manager (FDRM) appointed</li> </ul>	<ul style="list-style-type: none"> <li>• Locations for temporary housing stock has yet to be secured</li> <li>• Impact of FDRM on State and Local recovery</li> </ul>
5. Regional Transportation Recovery Annex implementation	<ul style="list-style-type: none"> <li>• Regional coordination begins</li> <li>• Existing transportation agency actions</li> </ul>	<ul style="list-style-type: none"> <li>• Calls for separate transportation recovery organization</li> <li>• Demands on available personnel</li> </ul>
6. Jurisdictions using Recovery Support Functions	<ul style="list-style-type: none"> <li>• Organization structure</li> <li>• Functional alignment</li> <li>• Recognizable integration</li> <li>• Coordination lacking</li> </ul>	<ul style="list-style-type: none"> <li>• Level of organization (federal, state, local)</li> <li>• Personnel demand</li> <li>• Private sector availability</li> </ul>
7. Initial Congressional recovery funding bill approved	<ul style="list-style-type: none"> <li>• \$8.4B approved for Washington &amp; Oregon recovery</li> </ul>	<ul style="list-style-type: none"> <li>• Funding to be provided through the State Emergency Management Division</li> </ul>
8. Housing and Urban Development funding approved	<ul style="list-style-type: none"> <li>• \$2.0B approved for low income housing assistance</li> </ul>	<ul style="list-style-type: none"> <li>• Funding to be provided through the State Department of Social and Health Services</li> </ul>
9. Governor holds local government and private sector summit on recovery	<ul style="list-style-type: none"> <li>• Estimated recovery assessment exceeds \$100B</li> </ul>	<ul style="list-style-type: none"> <li>• Rebuild Washington initiative to capture and coordinate recovery projects statewide</li> </ul>
10. Employment/Economy	<ul style="list-style-type: none"> <li>• Unemployment continues unabated at 19%</li> <li>• Business leaders call for expedited transportation recovery</li> </ul>	<ul style="list-style-type: none"> <li>• Major employers reporting 35% absenteeism</li> <li>• Recovery jobs center to open</li> <li>• Business leaders want a say in recovery priorities</li> </ul>
11. Public Information	<ul style="list-style-type: none"> <li>• Recovery transparency expectations for public and employers</li> </ul>	<ul style="list-style-type: none"> <li>• Limited methods of communication available</li> </ul>
12. Continuity of Operations (COOP) and Government (COG)	<ul style="list-style-type: none"> <li>• Only essential functions are operational</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of functional facilities impact</li> <li>• Lack of personnel mobility impact</li> </ul>

## **Goals**

Participants should improve their collective recovery understanding by achieving the following goals.

**Goal 1:** Understand recovery relationships and cooperation.

**Goal 2:** Understand the recovery prioritization challenges, dependencies and interdependencies.

**Goal 3:** Develop an outline of the challenges and gaps in recovery.

**Goal 4:** Develop an outline of next steps for recovery system improvement.

## **Objectives**

**Objective 1:** To identify roles, responsibilities and communication between the entities involved in recovery.

**Objective 2:** To identify the process for timely and flexible prioritization of infrastructure and economic recovery (using the four infrastructures from the damage observations page 8-11 of this manual).

**Objective 3:** To identify dependencies and interdependencies in recovery planning, prioritization and structures.

**Objective 4:** To identify the gaps in recovery processes and planning for improvement.

## **Discussion Questions**

Objective 1:

1. Who is responsible for recovery? Why? What conflicts exist?
2. What are some of the specific roles in recovery? When are they determined?
3. How is recovery communicated between recovery entities? What entities?

Objective 2:

1. What is the process for infrastructure recovery prioritization? When is it done? How is it done?
2. Why is being flexible and adaptable important to recovery priorities?
3. How is the economy factored into recovery priorities? Who participates?
4. Who is the ultimate decision maker during recovery? Why?

### Objective 3:

1. Who determines the dependencies and interdependencies in recovery plans? How is it considered?
2. What are some of the dependencies and interdependencies in recovery priorities? How is it coordinated?
3. How are recovery entities dependent on each other? How are recovery entities interdependent? When does it integrate in planning for recovery?
4. Which infrastructure dependencies and interdependencies can you influence? How?

### Objective 4:

1. What are gaps in the recovery processes (plans, priorities, economy, etc.)? Why?
2. What are the gaps in recovery communication and coordination? Why?
3. What are the important next steps to close recovery gaps? Why?
4. How should the consideration of social equity and justice be incorporated?

## **Terms and Definitions**

**Capability:** The skills, knowledge and experience to accomplish a task.

**Capacity:** The quantity of people, equipment or resources available to complete a task.

**Cascadia:** The region impacted by the Cascadia subduction zone—roughly 700 mile from northwestern California, western Washington, western Oregon, and southwestern British Columbia.

**Continuity of Government (COG):** The principle of establishing defined procedures that allow a government to continue its essential operations in case of a catastrophic event.

**Continuity of Operations (COOP):** An organizations ability to continue performance of essential functions under a broad range of disruptive circumstances.

**Core Capabilities:** Distinct critical elements which the whole community must be able to perform. They provide a common vocabulary describing the significant functions that must be developed and executed across the whole community to ensure national preparedness.

**Critical Infrastructure:** Providing the essential services that underpin society and serve as the backbone of our economy, security, and health. We know it as the power we use in our homes, the water we drink, the transportation that moves us, the stores we shop in, and the communication systems we rely on to stay in touch with friends and family. There are 16 critical infrastructure sectors that compose the assets, systems, and networks, whether physical or virtual, so vital that their incapacitation or destruction would have a debilitating effect on security, economic security, public health or safety.

**Dependency:** A dependency is a “linkage or connection between two infrastructures, by which the state of one infrastructure influences or is reliant upon the state of the other.” (Rinaldi, Peerenboom, and Kelly, 2001)

**Interdependency:** An interdependency is a “bidirectional relationship between two infrastructures in which the state of each infrastructure influences or is reliant upon the state of the other.” (Rinaldi, Peerenboom, and Kelly, 2001)

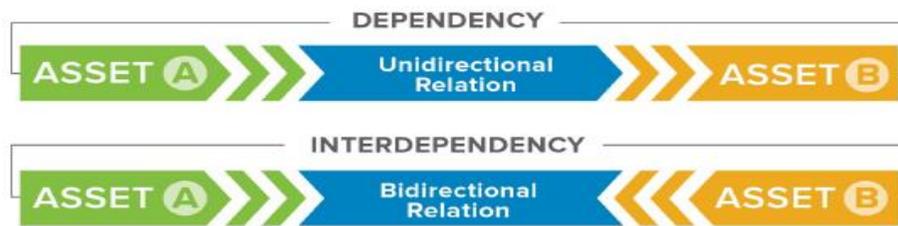


Figure 2: Dependency and Interdependency between Two Assets

**Individuals and Households Assistance Program:** IHP provides financial assistance and direct services to eligible individuals and households who have uninsured or underinsured necessary expenses and serious needs. IHP is not a substitute for insurance and cannot compensate for all losses caused by a disaster; it is intended to meet basic needs and supplement disaster recovery efforts.

**Long-Term Community Recovery:** "Long-term" refers to the need to re-establish a healthy, functioning community that will sustain itself over time.

**Public Assistance Program:** Grant program providing funds to assist communities responding to and recovering from major disasters or emergencies declared by the President. The program provides emergency assistance to save lives, protect property, and assists with permanently restoring community infrastructure affected by a federally declared incident. Eligible applicants include states, federally recognized tribal governments, local governments, and certain private non-profit (PNP) organizations.

**Recovery:** The recovery phase starts after the immediate threat to human life has subsided. The immediate goal of the recovery phase is to bring the affected area back to normalcy as quickly as possible. Recovery is often characterized as six processes, reconstruction, rebuilding, restoration, redevelopment, revitalization and reshaping. There are generally three phases of recovery: Short-Term (days); Intermediate (weeks to months); and, Long-Term (months to years).

**Recovery Support Functions (RSFs):** RSFs involve collaborative partners not typically found in the Emergency Support Functions (ESFs) but that are *critically* needed for disaster recovery. Coordination through the RSFs encourages and complements investments and contributions by the business community, individuals and voluntary, faith-based and community organizations. RSF activities assist communities with *accelerating* the process of recovery, redevelopment and revitalization.

**Social Equity and Justice:** The National Academy of Public Administration defines the term as “The fair, just and equitable management of all institutions serving the public directly or by contract; the fair, just and equitable distribution of public services and implementation of public policy; and the commitment to promote fairness, justice, and equity in the formation of public policy; taking into account historical and current inequalities among groups; fairness is dependent on this social and historical context.”



**Subduction Zone:** The zone along which one tectonic plate meets and slides beneath another. In the Pacific Northwest, this is the 684-mile-long (1,100 kilometer) Cascadia subduction zone, a thrust fault along which the Juan de Fuca oceanic plate subducts beneath the North American plate. This zone extends from Brooks Peninsula on Vancouver Island to Cape Mendocino in California (where a second oceanic plate, called the Gorda plate, subducts beneath northern California).

**Whole Community:** An approach to emergency management that reinforces the fact that FEMA is only one part of our nation’s emergency management team; that we must leverage all of the resources of our collective team in preparing for, protecting against, responding to, recovering from and mitigating against all hazards; and that collectively we must meet the needs of the entire community in each of these areas.



## Recovery Plan Crosswalk

This crosswalk is based on reading each plan and making an educated guess based on similar language regarding agencies expected to participate in the recovery processes identified in the plans.

**Key: Y = Yes N = No L = Limited**

Note: Same Resource Requirements is an agency or organization named in one or more plans listed

Note: Unique or Special Interest Items is something in a plan noteworthy

Plan	Implemented Concurrently	Local Impact	Regional Impact	Same Resource Requirements	Observation	Unique or Special Interest Items
National Recovery Framework (June 2016)	Y	L	L	L	Federal Recovery Centers will request local, regional and state participation. Implementing Recovery Support Functions will place additional resource demands.	None
King County Recovery Plan (May 2014) (Currently under revision, for example only)	Y	Y	N	Y	Plan is based on ESF-14 Long-Term Recovery, has many expectations for resources same as other counties on private sector, volunteer organizations and state resources	Focus on FEMA programs for Individual Assistance and Public Assistance
Seattle Recovery Framework (July 2015)	Y	Y	N	Y	Modeled after National Recovery Framework. If Recovery Support Functions are implemented may conflict with Federal and	Core values is a good model. RSF-3 adds Education to the Housing and Social Services Recovery Support Function. Adds a seventh RSF to

**Key: Y = Yes N = No L = Limited**

Note: Same Resource Requirements is an agency or organization named in one or more plans listed

Note: Unique or Special Interest Items is something in a plan noteworthy

Plan	Implemented Concurrently	Local Impact	Regional Impact	Same Resource Requirements	Observation	Unique or Special Interest Items
					County needs for similar resources.	address Buildings and Land Use Planning
Snohomish County Recovery Framework (August 2016)	Y	Y	N	Y	Modeled after National Recovery Framework. If Recovery Support Functions are implemented may conflict with Federal and other County needs for similar resources	Has identified positions within the Recovery organization with good position descriptions. Has some identified templates to use in recovery.
Pierce County Recovery Framework (September 2014)	Y	Y	N	Y	Support Annex 8 to their Comprehensive Emergency Management Plan. Separates short-term and long-term recovery, implanting RSFs in long-term recovery.	None
Kitsap County Recovery Plan (December 2003)	Y	Y	N	L	Uses ESF concept throughout similar to ESF-14 Long-Term recovery.	Uses well developed checklist format.
Regional Catastrophic Disaster Coordination Plan (March 2013)	Y	Y	Y	Y	Response focus, some short-term recovery implications. Has expectation of many resources in other plans.	Synch matrix developed for a visual implementation guide.

**Key: Y = Yes N = No L = Limited**

Note: Same Resource Requirements is an agency or organization named in one or more plans listed

Note: Unique or Special Interest Items is something in a plan noteworthy

Plan	Implemented Concurrently	Local Impact	Regional Impact	Same Resource Requirements	Observation	Unique or Special Interest Items
Transportation Recovery Annex (July 2014)	Y	Y	Y	Y	Appears short-term recovery as uses ESF-1 in response phase although indicates a long-term strategy.	Uses well developed checklist and guide format.
Emergency Response Planning Guide for Public Water Systems (WA Dept of Health) (January 2017)	Y	L	L	L	Guide for recovering water systems after an emergency or disaster.	Gives interim solutions for short-term recovery.



## Recovery Resources

Resource	Website
National Disaster Recovery Framework	<a href="https://www.fema.gov/media-library/assets/documents/117794">https://www.fema.gov/media-library/assets/documents/117794</a>
Pre-Disaster Recovery Planning Guide for State Governments	<a href="https://www.fema.gov/media-library-data/1485202780009-db5c48b2774665e357100cc69a14da68/Pre-DisasterRecoveryPlanningGuideforStateGovernments-1.pdf">https://www.fema.gov/media-library-data/1485202780009-db5c48b2774665e357100cc69a14da68/Pre-DisasterRecoveryPlanningGuideforStateGovernments-1.pdf</a>
Pre-Disaster Recovery Planning Guide for Local Governments	<a href="https://www.fema.gov/media-library-data/1487096102974-e33c774e3170bebd5846ab8dc9b61504/PreDisasterRecoveryPlanningGuideforLocalGovernmentsFinal50820170203.pdf">https://www.fema.gov/media-library-data/1487096102974-e33c774e3170bebd5846ab8dc9b61504/PreDisasterRecoveryPlanningGuideforLocalGovernmentsFinal50820170203.pdf</a>
Community Recovery Management Toolkit	<a href="https://www.fema.gov/national-disaster-recovery-framework/community-recovery-management-toolkit">https://www.fema.gov/national-disaster-recovery-framework/community-recovery-management-toolkit</a>
Small Business Administration Disaster Loan Program for Individuals and Business	<a href="https://disasterloan.sba.gov/ela/Information/DisasterLoanFactSheets">https://disasterloan.sba.gov/ela/Information/DisasterLoanFactSheets</a>
Individuals and Households Assistance Program	<a href="https://www.fema.gov/media-library-data/1483567080828-1201b6eebf9fbbd7c8a070fddb308971/FEMAIHPUG_CoverEdit_December2016.pdf">https://www.fema.gov/media-library-data/1483567080828-1201b6eebf9fbbd7c8a070fddb308971/FEMAIHPUG_CoverEdit_December2016.pdf</a>
Public Assistance Program	<a href="https://www.fema.gov/media-library-data/1515614675577-be7fd5e0cac814441c313882924c5c0a/PAPPG_V3_508_FINAL.pdf">https://www.fema.gov/media-library-data/1515614675577-be7fd5e0cac814441c313882924c5c0a/PAPPG_V3_508_FINAL.pdf</a> <a href="https://www.fema.gov/media-library/assets/documents/90743">https://www.fema.gov/media-library/assets/documents/90743</a>
Long-Term Community Recovery Planning Process A Self-Help Guide	<a href="https://www.fema.gov/media-library-data/20130726-1538-20490-8825/selfhelp.pdf">https://www.fema.gov/media-library-data/20130726-1538-20490-8825/selfhelp.pdf</a>
Disaster Impact and Unmet Needs Assessment Kit	<a href="https://www.hudexchange.info/resource/2870/disaster-impact-and-unmet-needs-assessment-kit/">https://www.hudexchange.info/resource/2870/disaster-impact-and-unmet-needs-assessment-kit/</a>
Arizona State Emergency Response and Recovery Plan	<a href="https://dema.az.gov/sites/default/files/publications/EM-PLN_SERRP_Jan_2018.pdf">https://dema.az.gov/sites/default/files/publications/EM-PLN_SERRP_Jan_2018.pdf</a>
King County Long-Term Recovery Plan Note: Under revision	<a href="http://www.kingcounty.gov/~media/safety/prepare/documents/EMProfessional_Plans/CEMP/14_KC_CEMP_ESF_14_Recovery.ashx">http://www.kingcounty.gov/~media/safety/prepare/documents/EMProfessional_Plans/CEMP/14_KC_CEMP_ESF_14_Recovery.ashx</a>
Snohomish County Disaster Recovery Framework	<a href="https://snohomishcountywa.gov/DocumentCenter/View/38783">https://snohomishcountywa.gov/DocumentCenter/View/38783</a>

Resource	Website
Pierce County Disaster Recovery Framework	<a href="http://www.co.pierce.wa.us/DocumentCenter/View/35772">http://www.co.pierce.wa.us/DocumentCenter/View/35772</a>
Kitsap County Comprehensive Recovery Plan	<a href="http://www.kitsapdem.org/pdfs/kc_plans/RecoveryPlan2004.pdf">http://www.kitsapdem.org/pdfs/kc_plans/RecoveryPlan2004.pdf</a>
Seattle Disaster Recovery Framework	<a href="http://www.seattle.gov/Documents/Departments/Emergency/PlansOEM/Recovery/SeattleDisasterRecoveryFramework7-7-15v2.pdf">http://www.seattle.gov/Documents/Departments/Emergency/PlansOEM/Recovery/SeattleDisasterRecoveryFramework7-7-15v2.pdf</a>
Puget Sound Regional Catastrophic Disaster Coordination Plan	<a href="https://www.mil.wa.gov/uploads/pdf/PLANS/coordinationplannew.pdf">https://www.mil.wa.gov/uploads/pdf/PLANS/coordinationplannew.pdf</a>
Puget Sound Regional Catastrophic Disaster Coordination Plan and Annexes (Plan Summary)	<a href="https://www.mil.wa.gov/uploads/pdf/PLANS/PlanSummariesMay2013.pdf">https://www.mil.wa.gov/uploads/pdf/PLANS/PlanSummariesMay2013.pdf</a>
Puget Sound Regional Catastrophic Disaster Coordination Plan (Emergency Authorities Report)	<a href="https://www.mil.wa.gov/uploads/pdf/PLANS/EmergencyAuthoritiesReport.pdf">https://www.mil.wa.gov/uploads/pdf/PLANS/EmergencyAuthoritiesReport.pdf</a>
Puget Sound Regional Catastrophic Disaster Coordination Plan (Recommendations Report)	<a href="https://www.mil.wa.gov/uploads/pdf/PLANS/RecommendationsReport.pdf">https://www.mil.wa.gov/uploads/pdf/PLANS/RecommendationsReport.pdf</a>
Puget Sound Regional Catastrophic Disaster Coordination Plan (Synchronization Matrix)	<a href="https://www.mil.wa.gov/uploads/pdf/PLANS/Synchronization%20Matrix.pdf">https://www.mil.wa.gov/uploads/pdf/PLANS/Synchronization%20Matrix.pdf</a>
Puget Sound Regional Catastrophic Disaster Coordination Plan (Transportation Recovery Annex)	<a href="https://www.mil.wa.gov/uploads/pdf/PLANS/transportationrecoveryannexnew.pdf">https://www.mil.wa.gov/uploads/pdf/PLANS/transportationrecoveryannexnew.p df</a>
Additional Regional Disaster Coordination Plan Resources	<a href="https://www.mil.wa.gov/emergency-management-division/regional-catastrophic-preparedness-grant-program-rcpgp">https://www.mil.wa.gov/emergency-management-division/regional-catastrophic-preparedness-grant-program-rcpgp</a>
Washington Catastrophic Incident Planning Framework	<a href="https://mil.wa.gov/uploads/pdf/emergency-management/catastrophic-incident-planning-framework_version-1_101217.pdf">https://mil.wa.gov/uploads/pdf/emergency-management/catastrophic-incident-planning-framework_version-1_101217.pdf</a>
Incorporating Prioritization in Critical Infrastructure	<a href="https://www.hsaj.org/articles/14091">https://www.hsaj.org/articles/14091</a>

Resource	Website
Security and Resilience Programs	
State Energy Resilience Framework Report, Argonne National Laboratory	<a href="https://www.energy.gov/sites/prod/files/2017/01/f34/State%20Energy%20Resilience%20Framework.pdf">https://www.energy.gov/sites/prod/files/2017/01/f34/State%20Energy%20Resilience%20Framework.pdf</a>

