

**MEDICAL PLANNING FOR
CATASTROPHIC DISASTERS
IN OREGON
2023 UPDATE**

Jon Jui MD, MPH

QUESTIONS

- Does Oregon have a medical plan for a catastrophic disaster?
- If, so what is the plan?
- How can I assist and be better prepared?

OBJECTIVES

- Oregon's State Medical Response to a Catastrophic disaster
 - Authority
 - Framework
 - Challenges
 - Current status
 - Cascadia Subduction Zone Earthquake
 - Wildland Fires
 - Current vulnerabilities

**WHO IS INVOLVED
IN A MEDICAL
RESPONSE TO A
DISASTER IN
OREGON?**

FRAMEWORK OF US DISASTER RESPONSE

	Local	State	Regional	Federal
Providers	All Health providers (e.g., first responders, hospital, clinic, SNF and other health care facilities), NGOs	OHA (SERV-OR, ODMT) OR National Guard	EMAC – individual state	HHS DoD
Liability	Local Agencies	State	Individual state	Federal government
Assets	Hospitals, clinics, public health, SNF, supporting agencies (e.g. dialysis)	All state assets ESF 6, ESF 8, ESF 18	Various State Assets EMACS	DMAT, Commission Corps (USPHS), National Veterinary Corps, DoD (military)
Preparedness Level	Varies with counties / region	Moderate	Untested (Varies)	Moderate to High

**LOCAL AND REGIONAL
MEDICAL EMERGENCY
PREPAREDNESS**

CITY OF PORTLAND

NEIGHBORHOOD EMERGENCY TEAM

Volunteer to be a Neighborhood Emergency Team (NET) Member

Service

Anyone who lives or works in Portland is invited to take NET training for free. Over 3,500 volunteers have completed basic training. Join them today, with the four steps below!



🕒 A few minutes for the application form, and approximately 28 hours for Basic NET Training.

Online

[NET Volunteer application](#) [↗](#)

Contact

NET Coordinator
Emergency Management

✉ NET@portlandoregon.gov

Follow on Social Media

🏠 [Nextdoor](#)

Related

[Volunteer to Staff a BEECN](#)

[Resources for NET Volunteers](#)

[NET Amateur Radio Resources](#)

Topics

[Fire and life safety](#)

**STATE MEDICAL
EMERGENCY
PREPAREDNESS**



Oregon Emergency Support Functions (ESFs)



ESF 1
Transportation



ESF 2
Communications



ESF 3
Public Works



ESF 4
Firefighting



ESF 5
Information and
Planning



ESF 6
Mass Care



ESF 7
Resource
Support



ESF 8
Health and
Medical



ESF 9
Search and
Rescue



ESF 10
Hazardous
Materials



ESF 11
Agriculture, Animals,
and Natural Resources



ESF 12
Energy



ESF 13
Law Enforcement



ESF 14
Business and
Industry



ESF 15
Public
Information



ESF 16
Volunteers and
Donations



ESF 17
Cyber and Critical
Infrastructure
Security



ESF 18
Military
Support

OREGON HEALTH AUTHORITY CIVILIAN RESPONSE



SERV-OR

State Emergency Registry of Volunteers in Oregon



SERV OR COMPONENTS

- **Volunteer Management Unit (VMU)**
- **State Managed Volunteer Pool**
- **Medical Reserve Corps**

SERV OR PROVIDERS

- physicians,
- Mid-levels
- Nurses,
- Pharmacists
- Respiratory Therapists
- Emergency Medical Technicians (EMTs),
- behavioral health providers, and others

Individual MRCs may make the determination to recruit non-licensed health care personnel and non-health care members.

MRC	Coordinator	Email	Phone
Cannon Beach	Lila Wickham	lilawickhamrn@gmail.com	503-436-8052
Clackamas County	Kirsten Ingersoll	kingersoll@co.clackamas.or.us	503-742-5954
Columbia County	Mike Paul	Michael.paul@columbiacountyor.gov	503-397-7247
Coos County	Cynthia Rodriguez	Cynthia.Rodriguez@chw.coos.or.us	541-266-6809
Eastern Oregon	Joe Johnson	jjohnson@bakercounty.org	541-566-0214
Linn County	Erik Anderson	eanderson@co.linn.or.us	541-967-3888
Lincoln County	Samantha Buckley	sbuckley@co.lincoln.or.us	541-265-0657
Marion County	Chris Henshaw	chenshaw@co.marion.or.us	503-365-3181
Multnomah County	Chris Wirth	chris.m.wirth@multco.us	971-271-2729
Nehalem Bay	Velda Handler	VeldaRN@gmail.com	740-336-2840
Wasco County	Tanya Wray	tanyaw@co.wasco.or.us	541-506-2631
Washington County	Abby Morris	abby.morris@co.washington.or.us	503-846-8292
Yamhill County	Gene Biggs	biggsge@co.yamhill.or.us	503-434-6309

COALITION OF MEDICAL RESPONDERS

- **Civilian Responders**

- First Responders (Fire / EMS / Law Enforcement)
- Hospitals
- Clinics
- Skilled Nursing Facilities

- **Military Responders**

- Oregon National Guard
 - 142nd
 - 173
 - MedCOM (Army)
 - 141st Brigade Support Battalion (Company C)
 - 641st Medical Battalion
- US Coast Guard
- Active Military
 - 304th Aero rescue
 - 125 Special Tactics Unit

MILITARY PARTNERS



STATE MILITARY HOMELAND RESPONSE FORCE



Homeland Response Force

HOMELAND RESPONSE TEAM COMPONENTS

- 10th Civil Support Team (10th CST)
- **CBRNE Enhanced Response Force Package (CERFP)**
- Joint Incident Site Communications Capability (JISCC)
- CBRNE Assistance Support Element (CASE)
- HRF Command and Control element (C2)

CERFP

- Designed to deploy within 6 hours
- Search and Extraction
- Mass Casualty DECON
- Medical Triage Treatment
- Fatality Search and Recovery.



OREGON AEROMEDICAL MILITARY ASSETS



1-189th Aviation Regiment OANG



1-168th Aviation Regiment OANG

US COAST GUARD





**OREGON DISASTER
MEDICAL TEAM**

OREGON STATE MEDICAL RESPONSE



- Agreement with Oregon Health Authority
(Oregon Public Health Division – OPHD)
- Operate as volunteers (SERV/OR)

ODMT TEAM CAPABILITIES

- Set up and staff civilian field hospitals
- Supplement personnel in existing hospitals
- Triage and treatment
- Mass vaccination, mass prophylaxis



ODMT DISASTER TRAILERS



ODMT DISASTER TRAILER CONTENTS



ODMT BASE OF OPERATIONS



ODMT WINTER OPERATIONS



CIVILIAN RESPONSE INTEGRATION WITH MILITARY RESPONSE



















THE OREGON MEDICAL RESPONSE

State of Oregon ESF-8 Health and Medical

Pre-scripted Missions

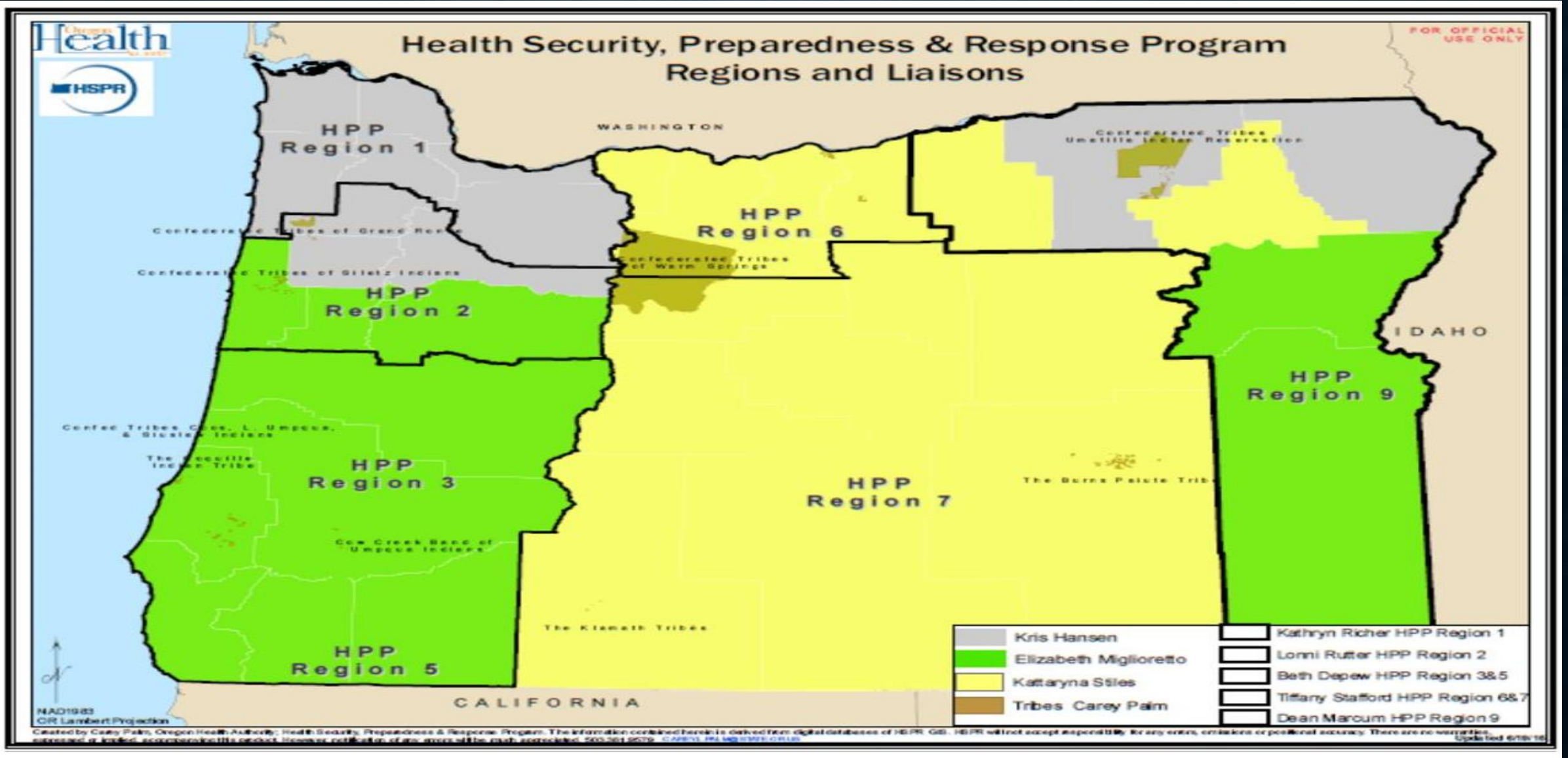
Based upon potential response needs in incidents the pre-scripted missions outline potential resources that could be requested or missions that are needed in a response. Financial estimates will need finalization prior to authorization during an incident and these numbers are an estimate of cost. This is a working document and will be updated by the Health Security, Preparedness, and Response All-Hazard Planning Team every three months.

November, 2015

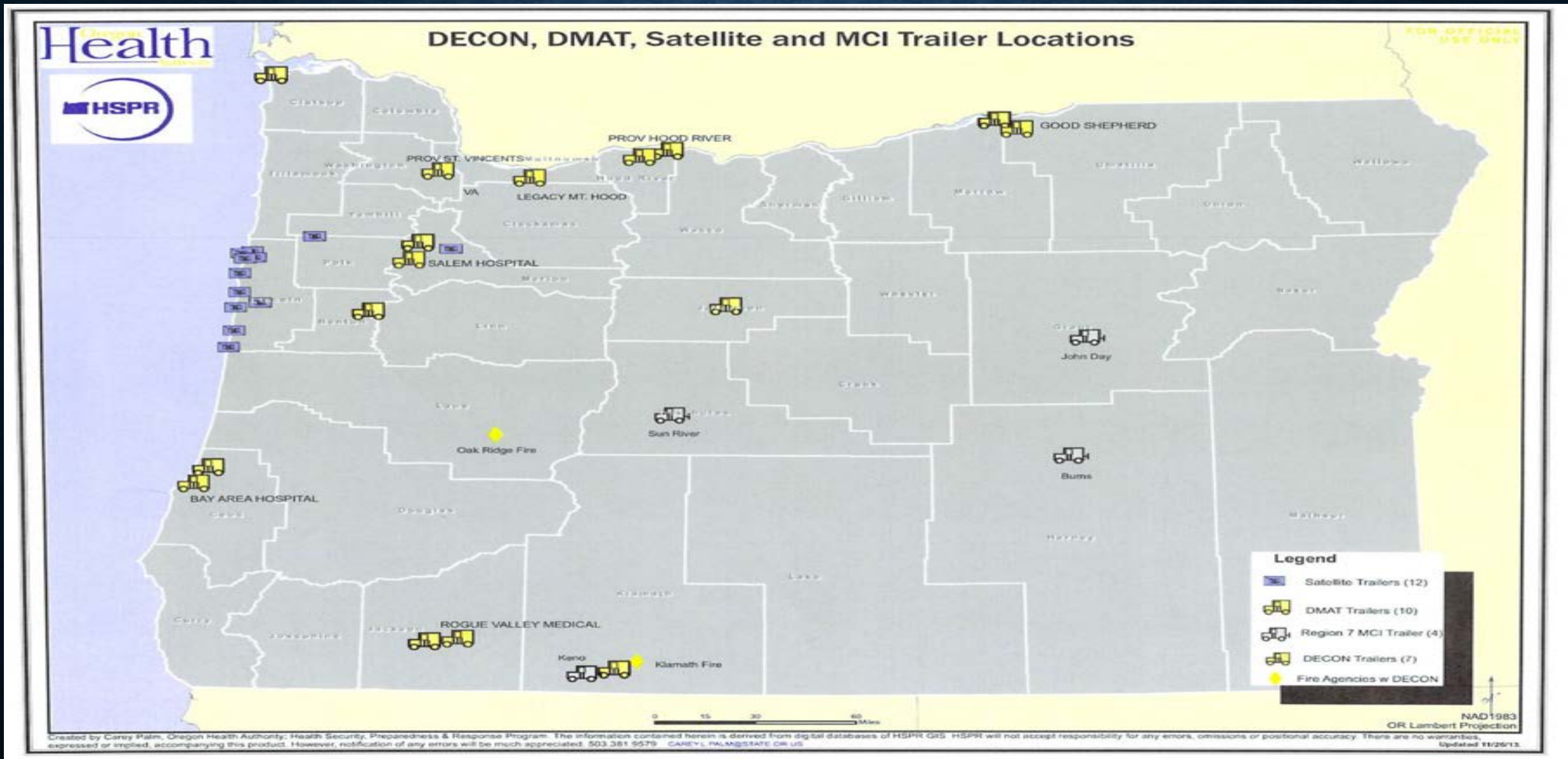


Oregon
Health
Authority

STATE OF OREGON PREPAREDNESS REGIONS



OHA: OREGON DMAT, DECON, MCI, SATELLITE LOCATIONS



OHA: PRE SCRIPTED MISSIONS

PLAY: 4-8-1	27
TASKING: DEPLOY MEDCOM MEMBERS TO WORK AS OVERHEAD TEAMS AT OREGON MEDICAL STATION	27
RESOURCE: MEDCOM	27
PLAY: 5-8-1	28
TASKING: MOVE MCM TO RSS SITES	28
RESOURCE: DOT TRUCKS TO MOVE MCM SUPPLIES	28
PLAY: 6-8-1	29
TASKING: DEPLOY ADVANCED LOGISTICS TEAM.....	29
RESOURCE: ADVANCED LOGISTICS TEAM.....	29
PLAY: 6-8-2	31
TASKING: DEPLOY MRRT MEMBERS TO WORK AS OVERHEAD TEAMS AT FEDERAL MEDICAL STATIONS	31
RESOURCE: MEDICAL RAPID RESPONSE TEAM	31
PLAY: 7-8-1	32
TASKING: RESTORE IT SYSTEMS IN PSOB AND ALTERNATE AOC'S	32
RESOURCE: COMMUNICATIONS REPAIR PERSONNEL	32
PLAY: 8-8-1	33
TASKING: REQUEST FEMA ASSISTANCE FOR 10 DMAT'S	33
RESOURCE: FEDERAL DISASTER MEDICAL ASSISTANCE TEAMS	33



Home / Oregon ORS / Volume 10 / Title 32 / Chapter 402 / Section 402.250

Compact

402.200

Legislative findings

402.205

Definitions for ORS 402

402.210

Oregon Resource
Coordination Assistance
Agreement

402.215

Request for assistance

Emergency Mutual Assistance Agreements

ORS 402.250

Pacific Northwest Emergency Management Arrangement

TEXT

ANNOTATIONS

The Governor shall participate on behalf of the State of Oregon with other governments legally joining in the compact in forms substantially as follows:

(1)

Source ▶

Last accessed

Mar. 11, 2023

REMOVE ADS

GREATEST DISASTER THREATS TO OREGON

WORST CASE SCENARIOS FOR OREGON?

**Cascadia Subduction Zone
Earthquake**



Devastating Wildland Fire



WORSE CASE SCENARIOS CASCADIA SUBDUCTION EARTHQUAKE



WILDLAND FIRE PARADISE CALIFORNIA 2018



CASCADIA SUBDUCTION EARTHQUAKE

IMPACT ON OREGON COAST

CSZ: SEVERITY OF QUAKE INTENSITY BY REGION

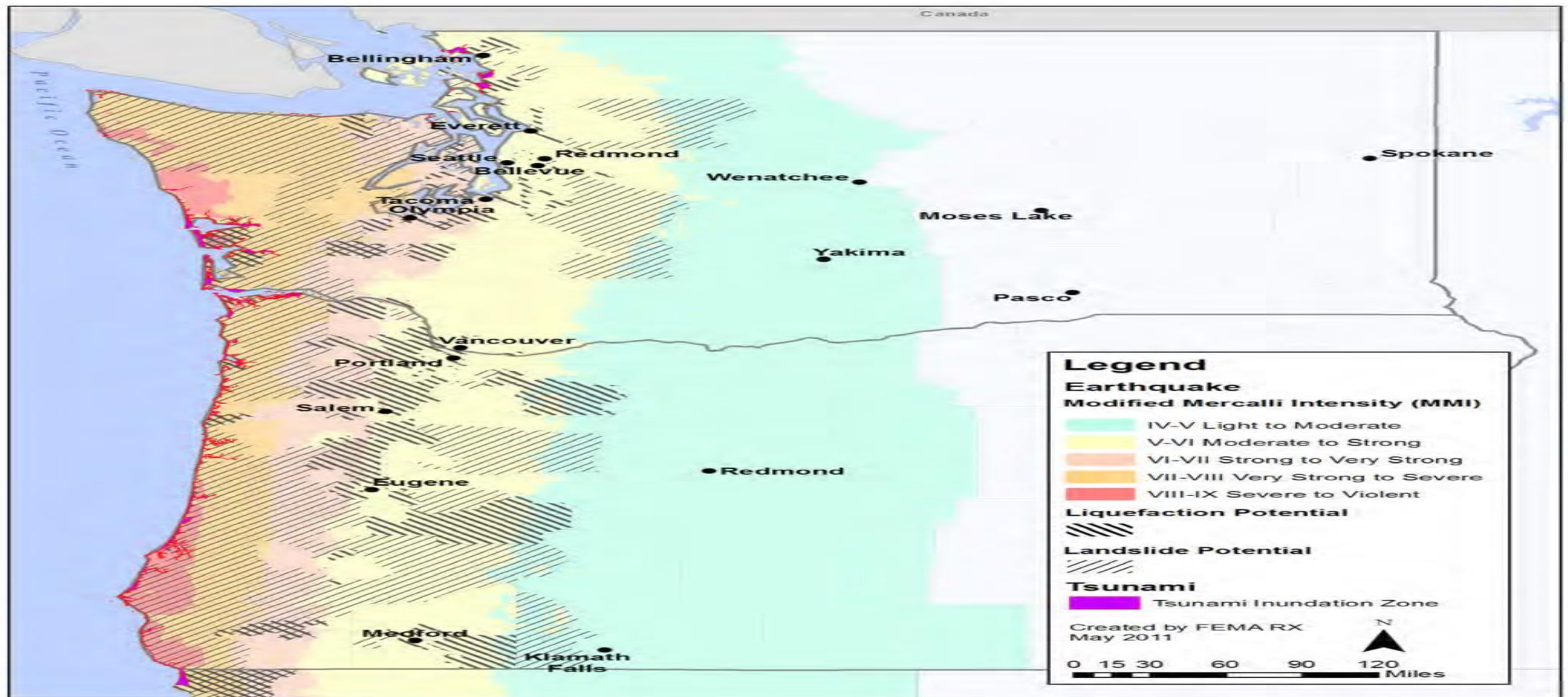


Figure 12: Areas affected by ground shaking, liquefaction, landslide and tsunami inundation

TSUNAMI INUNDATION ZONE: POPULATIONS AT RISK

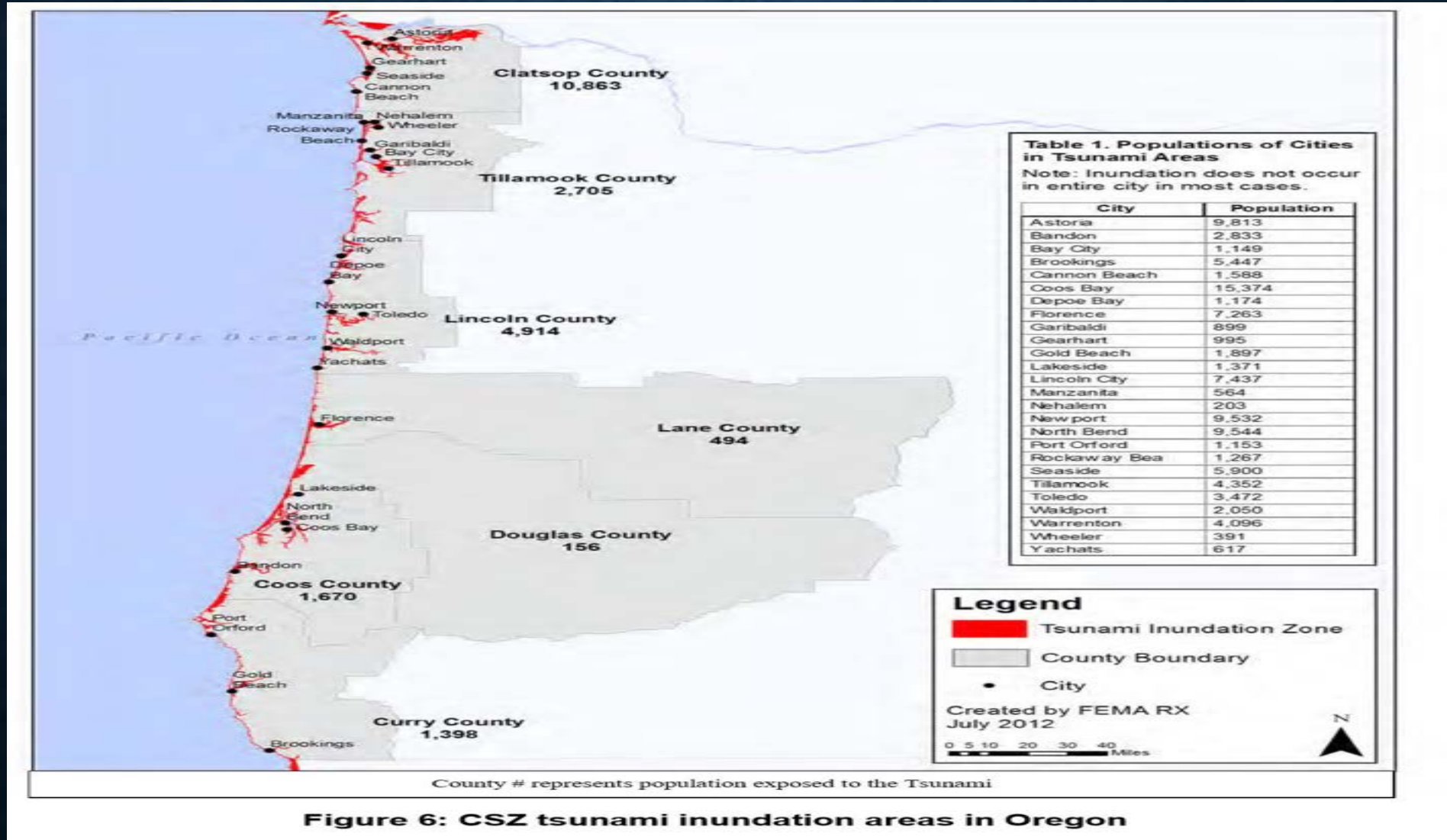
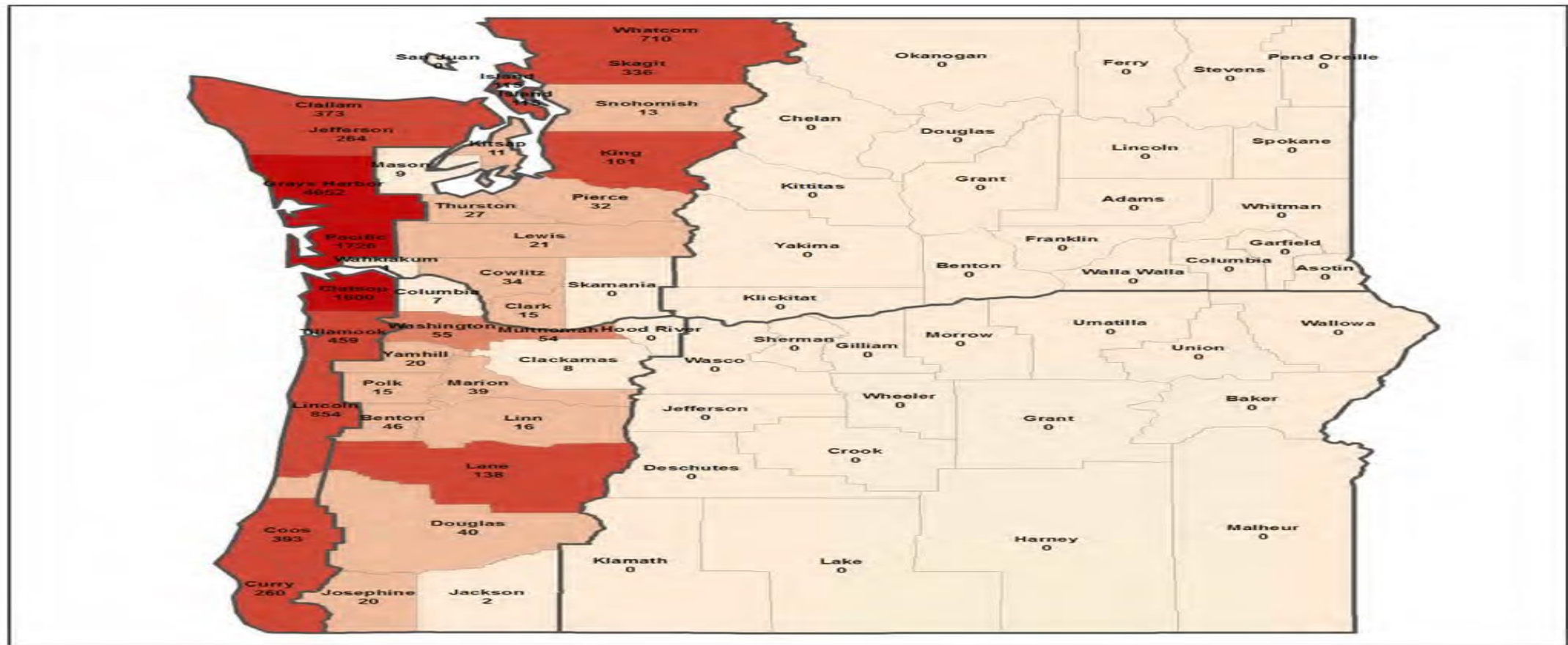


Figure 6: CSZ tsunami inundation areas in Oregon

ESTIMATED POPULATION IMPACTS TO OREGON AND WASHINGTON

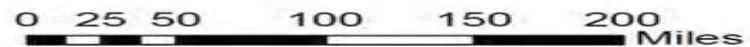
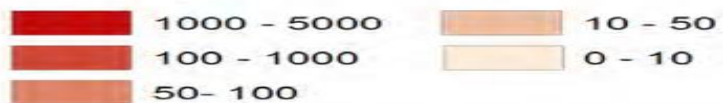
- Initial earthquake results in **23,000** injuries and **1,100** fatalities.
- Most earthquake-related casualties are in the Seattle and Portland metropolitan areas.
- Tsunamis can cause an additional **4,500** injuries and **13,500** fatalities.

CSZ EARTHQUAKE: DEATHS BY COUNTY



Legend

Deaths

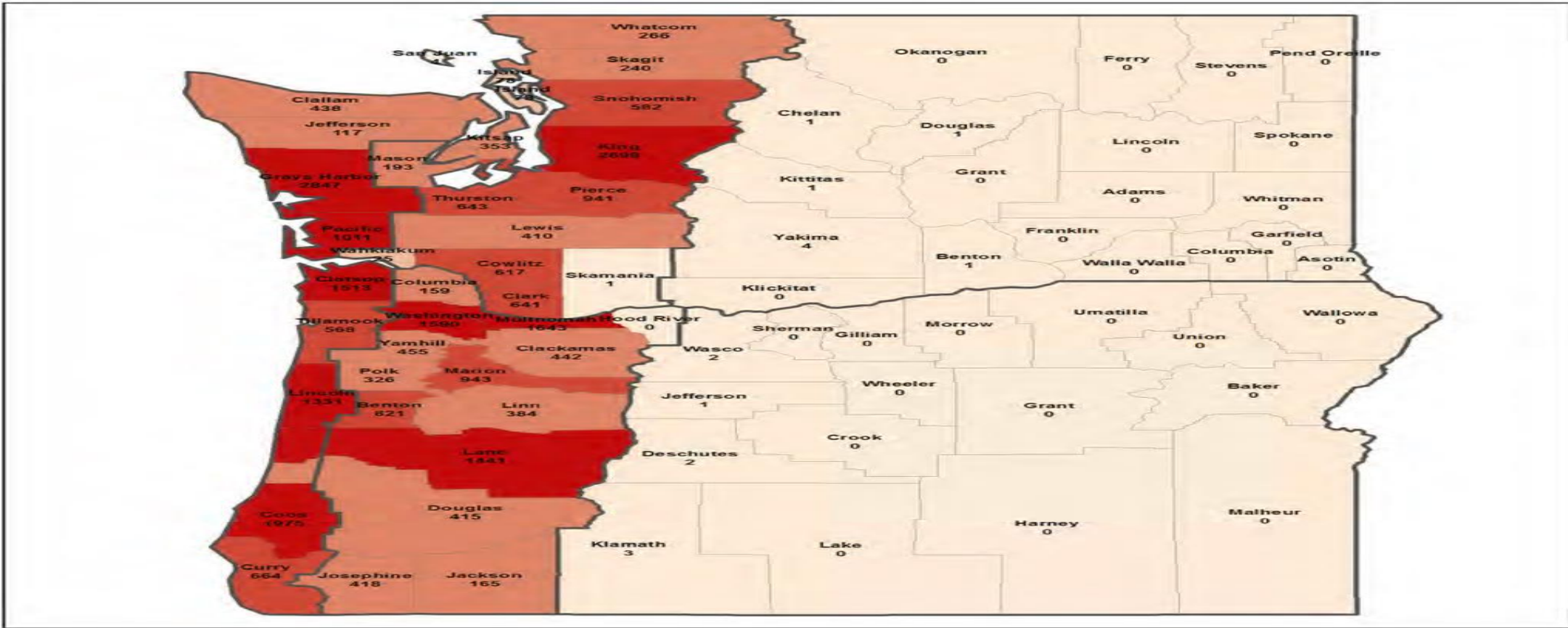


Created by FEMA Region X
August, 2012

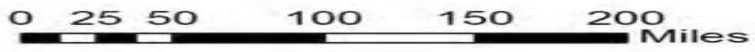
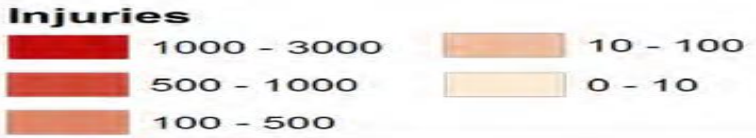


Figure 13: Deaths per county

CSZ EARTHQUAKE: INJURIES BY COUNTY



Legend



Created by FEMA Region X
August, 2012



Figure 14: Injuries by county

CSZ EARTHQUAKE: COMMUNICATIONS ELECTRICAL AND WATER INFRASTRUCTURE

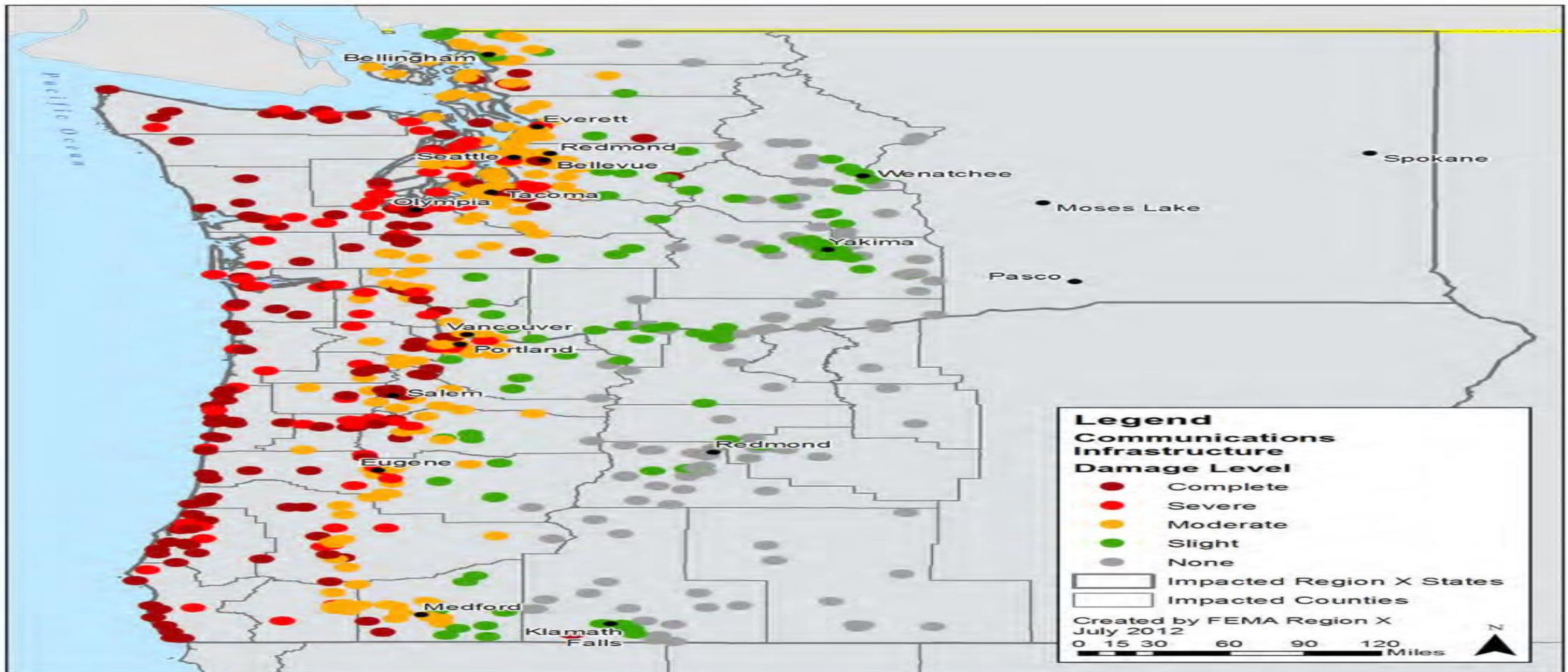


Figure 13: Extent of damage to communication infrastructure caused by earthquake

CSZ EARTHQUAKE: DAMAGE TO AIRPORTS

Table 4-3 Western Oregon Airport Damages from Cascadia event

Airport Name	City	Latitude	Longitude	50% damage model	90% damage model
INDEPENDENCE STATE	INDEPENDENCE	44.8669529	-123.1982329	Slight	Complete
SILETZ BAY STATE	GLENEDEN BEACH	44.87691688	-124.0285049	Complete	Complete
SOUTHWEST OREGON REGIONAL	NORTH BEND	43.41709754	-124.2460052	Complete	Complete
BANDON STATE	BANDON	43.08645591	-124.4078497	Complete	Complete
M McNARY FIELD	SALEM	44.90952233	-123.0024857	Slight	Moderate
PORTLAND-HILLSBORO	PORTLAND	45.54060562	-122.95018	Slight	Moderate
ALBANY MUNICIPAL	ALBANY	44.63780013	-123.0594301	Slight	Severe
MAHLON SWEET FIELD	EUGENE	44.12457795	-123.211958	Slight	Moderate
HOBBY FIELD	CRESWELL	43.93076128	-123.0072641	Slight	Moderate
COTTAGE GROVE STATE	COTTAGE GROVE	43.7998399	-123.0289536	Slight	Moderate
GRANTS PASS	GRANTS PASS	42.51011196	-123.3879755	Slight	Severe
ILLINOIS VALLEY	CAVE JUNCTION	42.10359479	-123.6824027	Moderate	Complete
ROGUE VALLEY INT. - MEDFORD	MEDFORD	42.37421692	-122.8734861	Slight	Moderate
ROSEBURG REGIONAL	ROSEBURG	43.23877774	-123.3558476	Slight	Moderate

CSZ EARTHQUAKE: DAMAGE TO AIRPORTS

SCAPPOOSE INDUSTRIAL AIRPARK	SCAPPOOSE	45.77102226	-122.8618188	Slight	Moderate
MC MINNVILLE MUNICIPAL	MC MINNVILLE	45.19443899	-123.13593	Slight	Complete
TILLAMOOK	TILLAMOOK	45.41823655	-123.8143693	Complete	Complete
CORVALLIS MUNICIPAL	CORVALLIS	44.49718821	-123.2898154	Slight	Severe
FLORENCE MUNICIPAL	FLORENCE	43.98281138	-124.1113551	Complete	Complete
NEWPORT MUNICIPAL	NEWPORT	44.58035578	-124.0579022	Severe	Complete
ASHLAND MUNICIPAL-SUMNER PARKER FIELD	ASHLAND	42.1902783	-122.6606145	Slight	Slight
PORTLAND-MULINO	PORTLAND-MULINO	45.21631949	-122.5900695	Slight	Severe
LENHARDT AIRPARK	HUBBARD	45.18039284	-122.7434106	Slight	Complete
AURORA STATE	AURORA	45.24713339	-122.7700412	Slight	Complete
PORTLAND INT.	PORTLAND	45.58871669	-122.5974856	Slight	Severe
PEARSON FIELD	VANCOUVER	45.62044697	-122.6564739	Slight	Severe
PORTLAND-TROUTDALE	PORTLAND	45.54935556	-122.4012356	Slight	Severe

OREGON DISASTER PLANNING UPDATE

State of Oregon

Cascadia Subduction Zone Catastrophic Earthquake and Tsunami Operations Plan

Component One of the Oregon Cascadia Subduction Zone Earthquake and Tsunami Operations Plan



Publication Date: September 2012



Oregon Military Department,
Office of Emergency Management
3225 State Street
Salem, Oregon 97301
503-378-2911

OREGON COASTAL BRIDGES SEISMIC VULNERABILITY



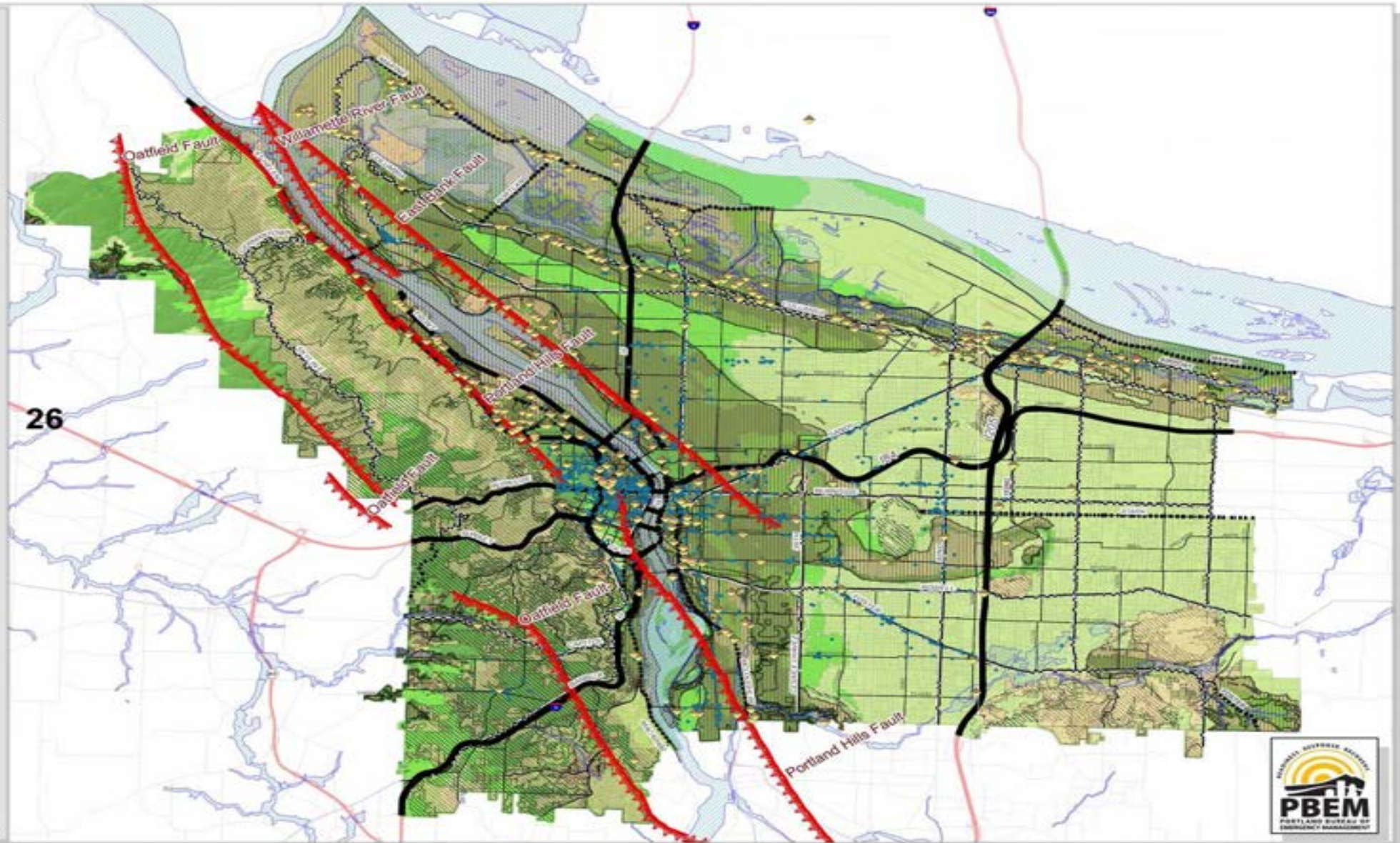
**CASCADIA SUBDUCTION EARTHQUAKE
IMPACT ON PORTLAND**

MYTH:

**PORTLAND WILL BE DESTROYED
IN A CSZ EARTHQUAKE**

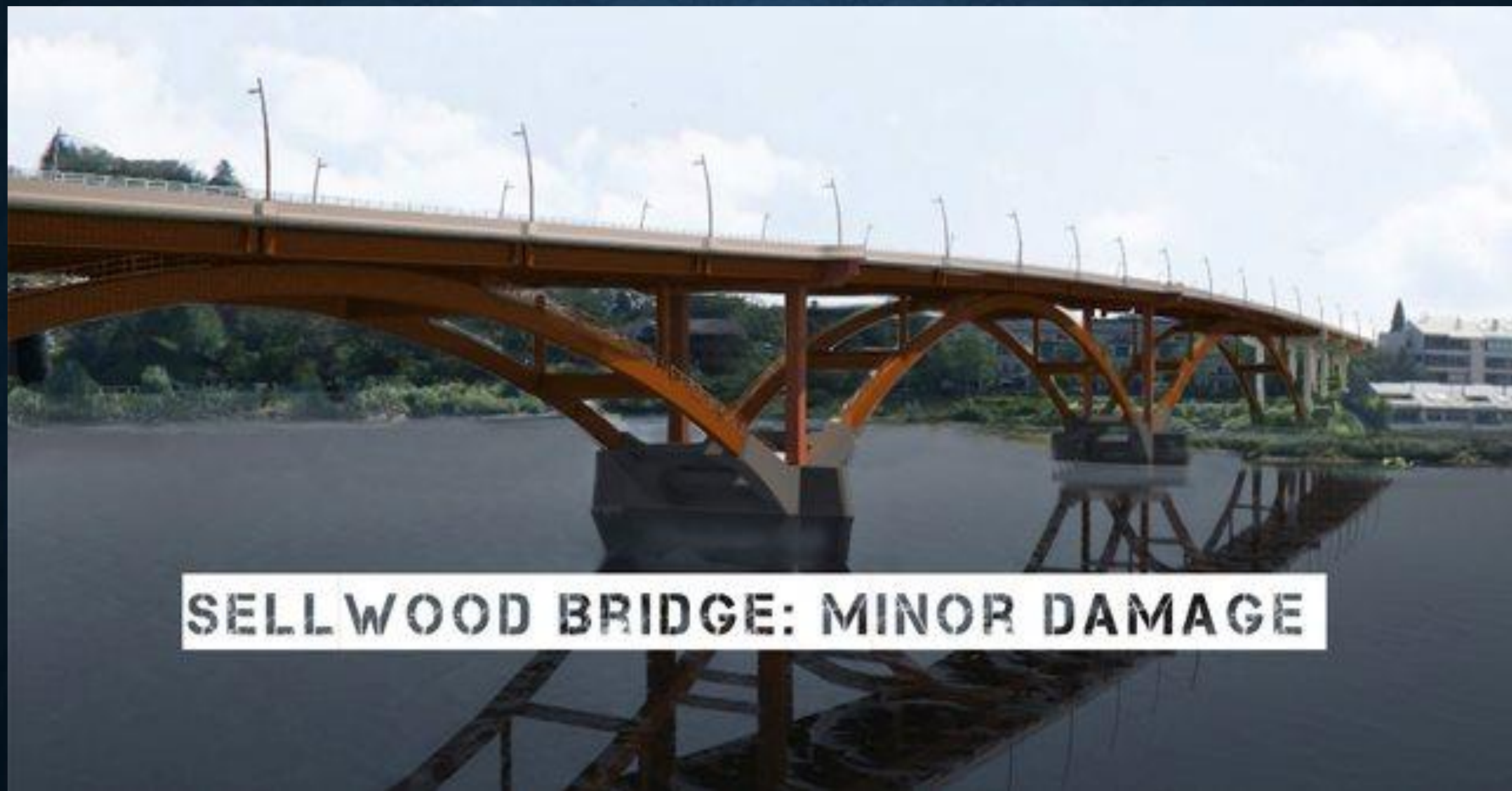
Portland Hazards

- Primary Evacuation Route
 - Secondary Evacuation Route
 - Emergency Transportation Route
 - Emergency Response Route
 - ◆ EHS & HM Facilities
 - Unreinforced Masonry Structures
 - ▨ 100 Year Floodplain
 - ▨ Wild lands Fire Area
 - ▨ Potential Landslide Hazard
 - Faults
 - ▨ Liquefiable Soils
- Amplification Potential**
- Low
 - Moderate
 - High





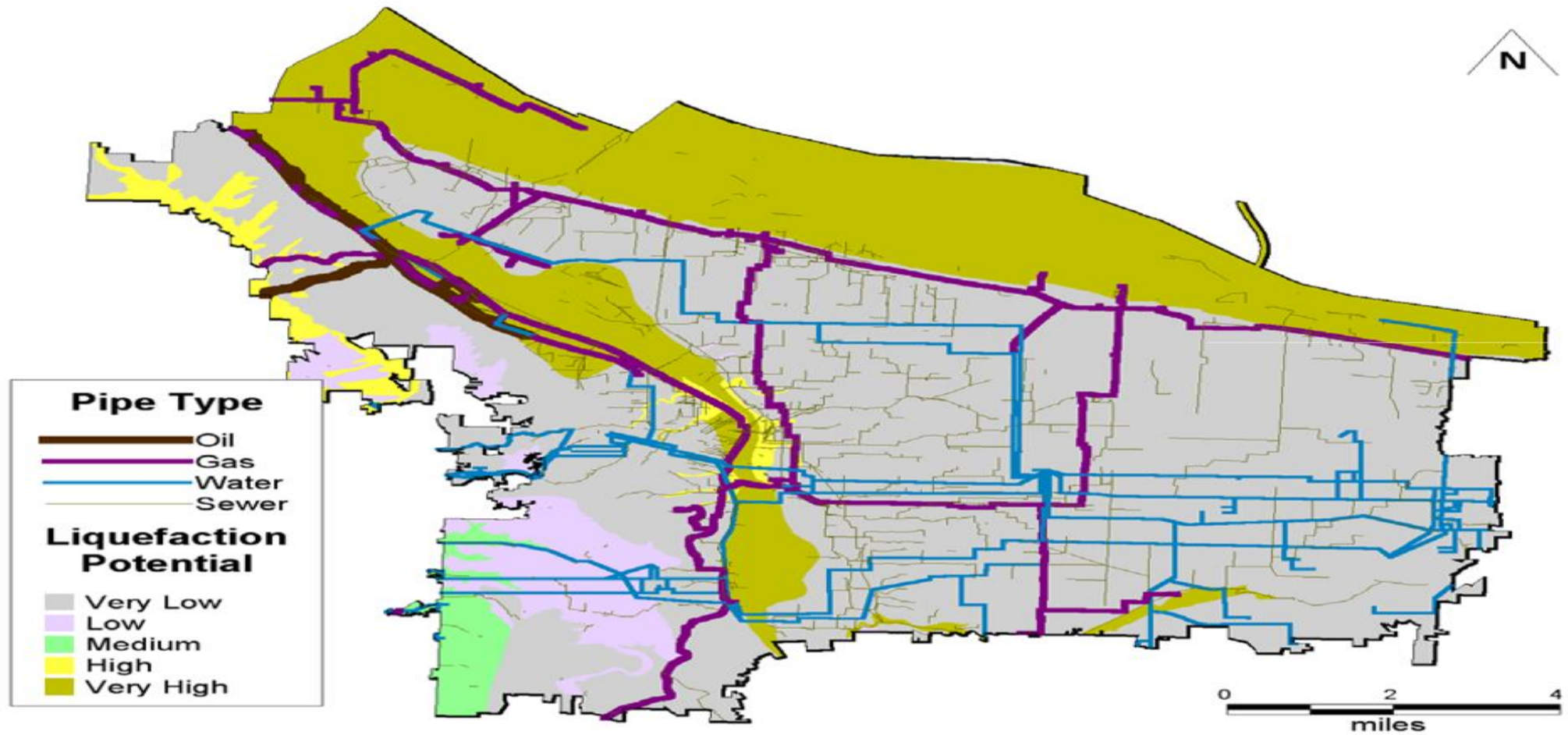
TILIKUM CROSSING: MINOR DAMAGE



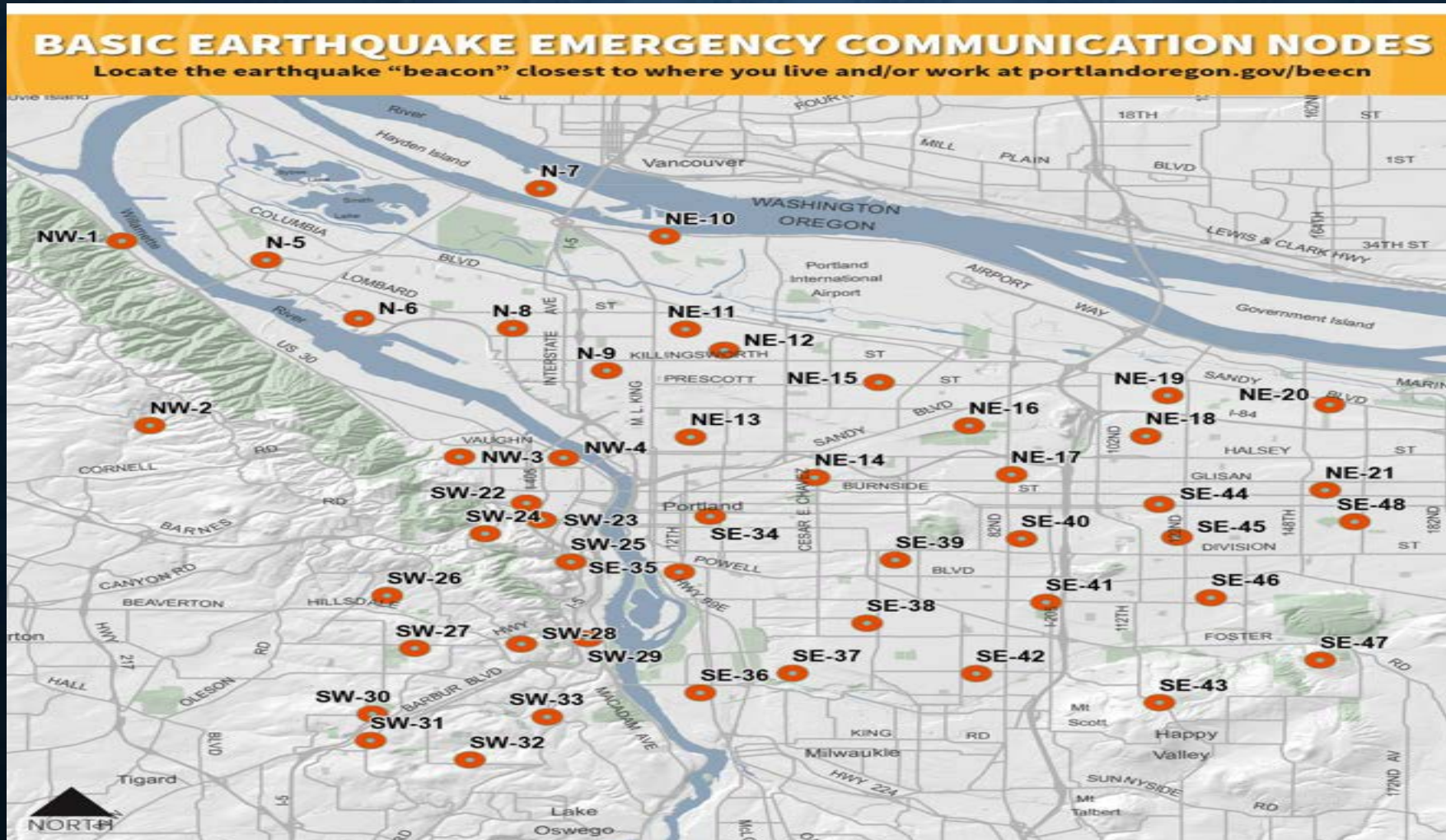
SELLWOOD BRIDGE: MINOR DAMAGE

UTILITY LIFELINES VS EARTHQUAKE HAZARD

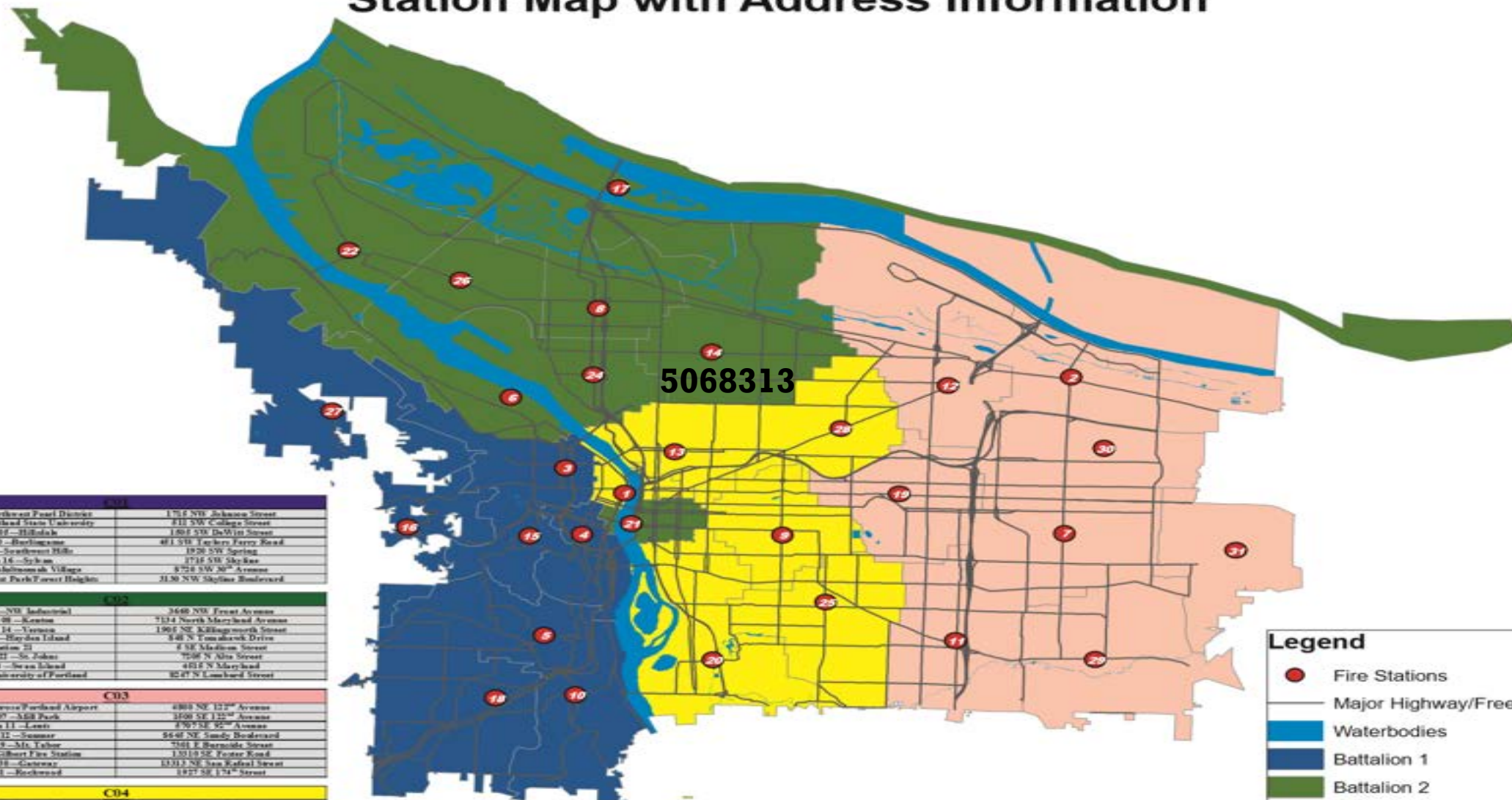
Figure II-4 Distribution of Utility Lifelines in Relation to Earthquake Hazard



CSZ EARTHQUAKE: PORTLAND BASIC EARTHQUAKE COMMUNICATION NODES (BEECN)



Portland Fire & Rescue Station Map with Address Information



C01	
Station 03 - Northwest Pearl District	1715 NW Johnson Street
Station 04 - Portland State University	411 SW College Street
Station 05 - Hillside	1805 SW DuMoulin Street
Station 10 - Beaverton	481 SW Tumblers Ferry Road
Station 14 - Southwest Hills	1920 SW Spring
Station 16 - Sylvan	1715 SW Skyway
Station 18 - Multnomah Village	4714 SW 20 th Avenue
Station 27 - Forest Park/East Heights	3130 NW Skilton Boulevard

C02	
Station 06 - NW Industrial	3640 NW Front Avenue
Station 08 - Kenosha	7114 North Maryland Avenue
Station 14 - Yacoma	1905 NE Killingsworth Street
Station 17 - Hayden Island	348 N Youngs Bay Drive
Station 21	8 SE Madison Street
Station 22 - St. Johns	7048 N Alta Street
Station 24 - Swan Island	4018 N Maryland
Station 26 - University of Portland	8247 N Lombard Street

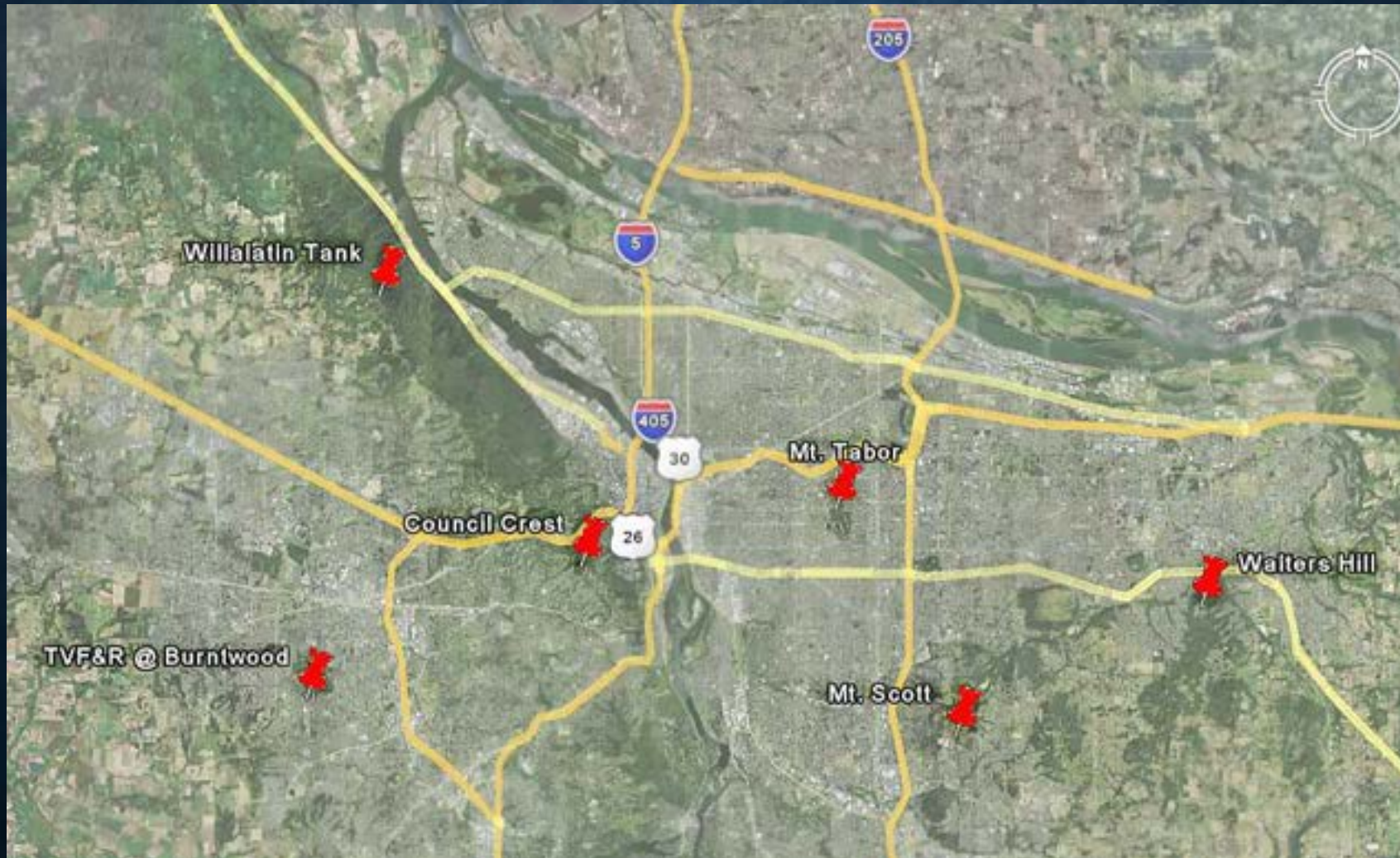
C03	
Station 02 - Fairview/Portland Airport	4803 NE 122 nd Avenue
Station 07 - SEB Park	2108 SE 122 nd Avenue
Station 11 - Lewis	4907 SE 82 nd Avenue
Station 12 - Sunner	8649 NE Sandy Boulevard
Station 13 - Mt. Tabor	7411 E Burnside Street
Station 20 - Gilbert Park Station	1701 NE Foster Road
Station 23 - Gresham	12112 NE Van Radium Street
Station 25 - Rockwood	1827 SE 174 th Street

C04	
Station 01 - Downtown Core	44 SW Ash Street
Station 09 - Hawthorne	1794 SE 122 nd Avenue
Station 13 - Lloyd Center	824 NE Wheeler Street
Station 20 - Sellwood/Marwood	2240 SE Robson Street
Station 28 - Woodstock	4211 SE Mall Street
Station 28 - Rose City	8140 NE Sandy Boulevard

Legend

- Fire Stations
- Major Highway/Freeway
- Waterbodies
- Battalion 1
- Battalion 2
- Battalion 3
- Battalion 4

FIRE UASI VHF REPEATER

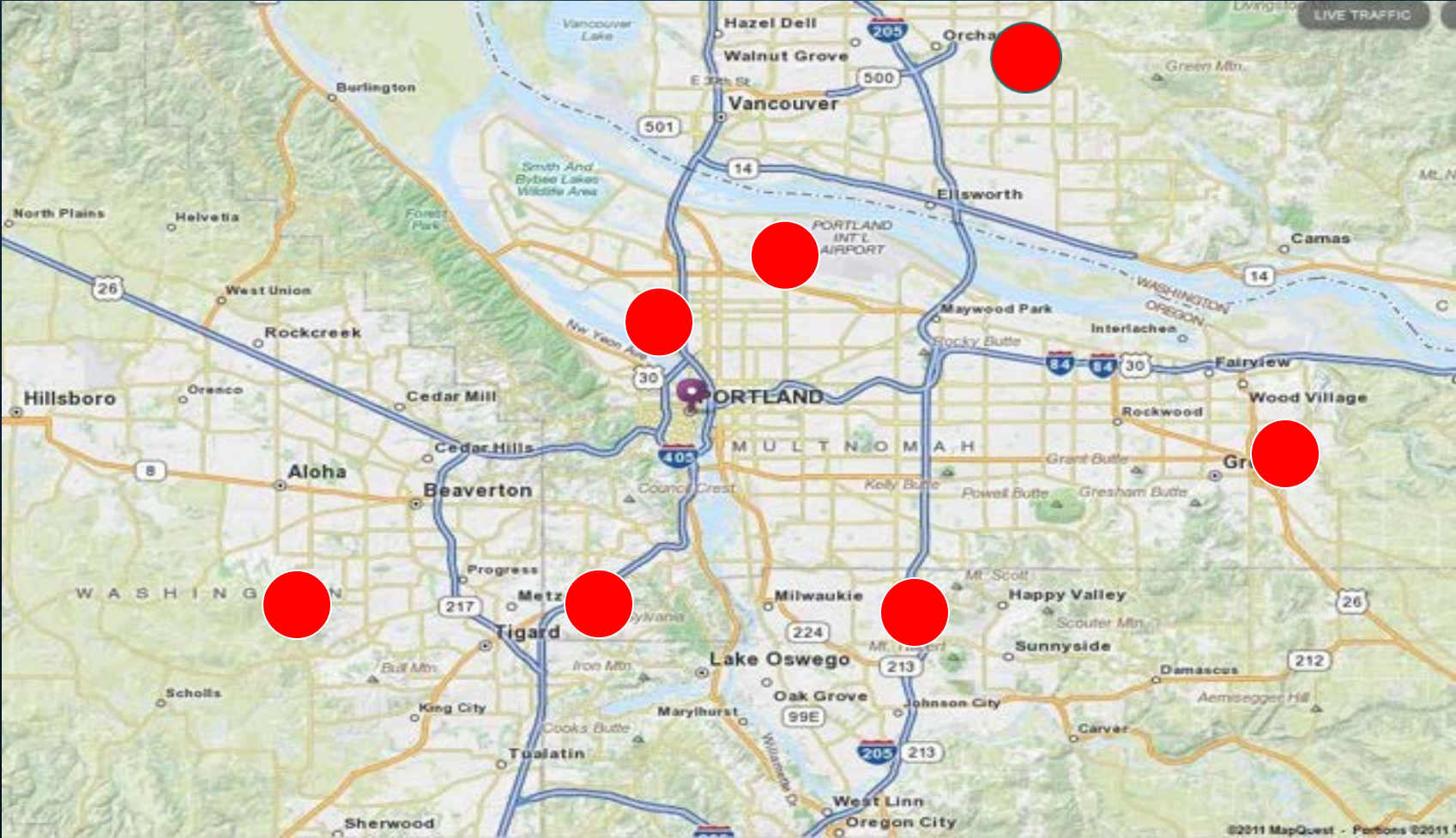


UASI CBRNE MCI SUPPORT

- 6 MCI units deployed throughout the region
 - Multnomah 4
 - Washington 1
 - Clackamas 1
- Each capable of managing 100 patients,
 - 10% critical
 - 20% serious
 - 70% ambulatory



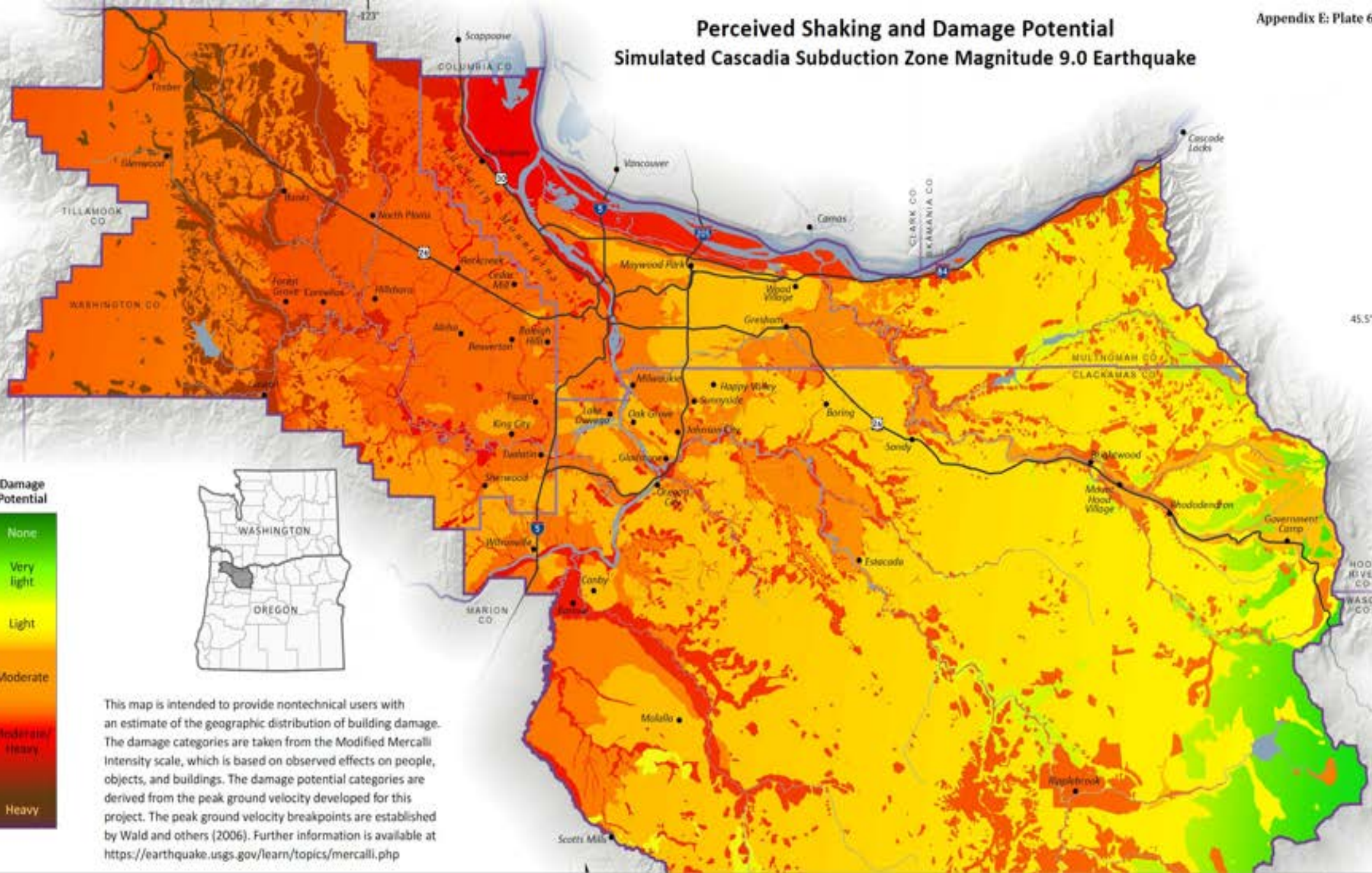
PORTLAND AREA UASI CBRNE MCI UNITS





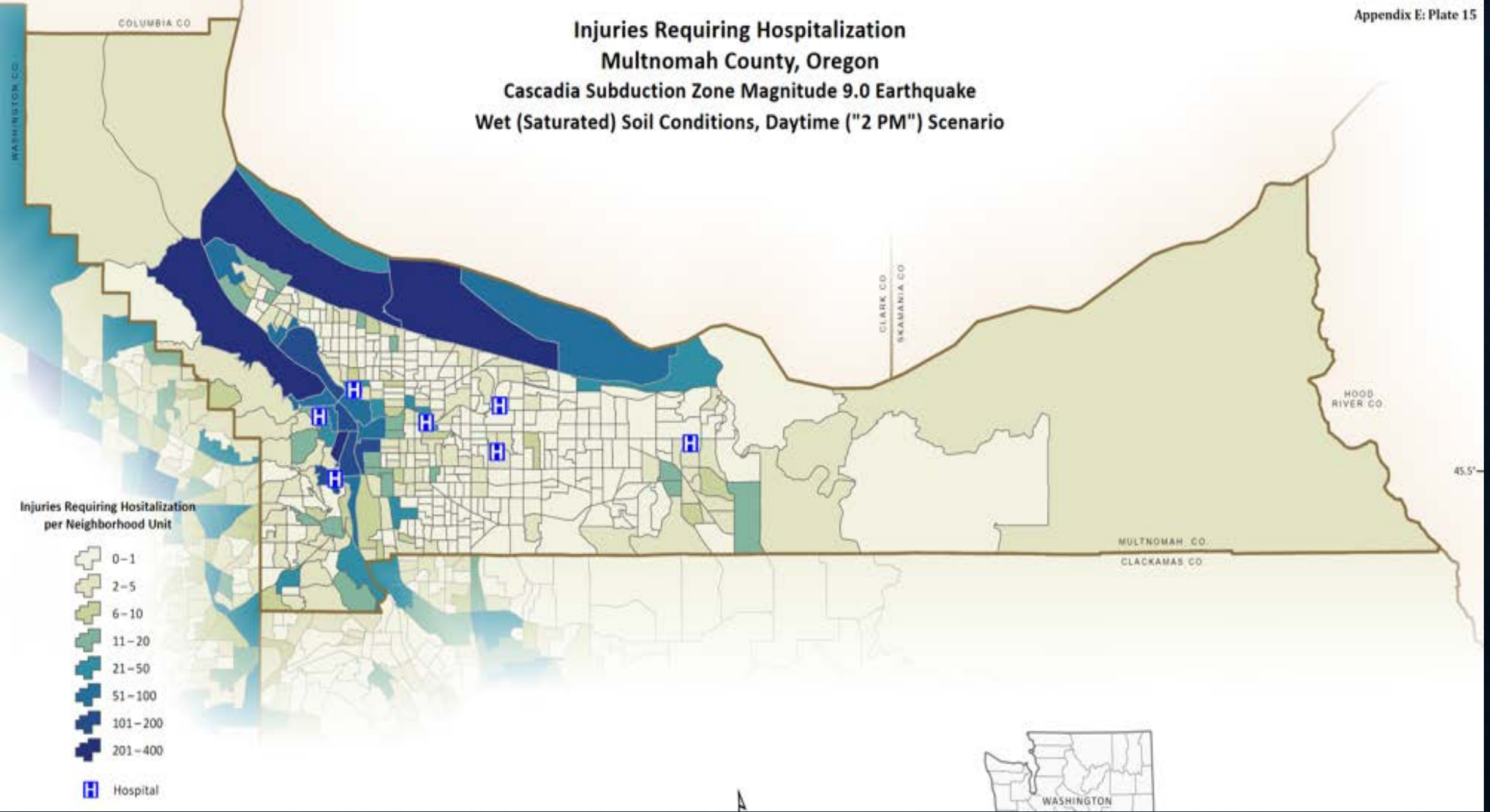
Perceived Shaking and Damage Potential Simulated Cascadia Subduction Zone Magnitude 9.0 Earthquake

Modified Mercalli Intensity Scale	Perceived Shaking	Damage Potential
IV	Light	None
V	Moderate	Very light
VI	Strong	Light
VII	Very Strong	Moderate
VIII	Severe	Moderate-Heavy
IX	Violent	Heavy



This map is intended to provide nontechnical users with an estimate of the geographic distribution of building damage. The damage categories are taken from the Modified Mercalli Intensity scale, which is based on observed effects on people, objects, and buildings. The damage potential categories are derived from the peak ground velocity developed for this project. The peak ground velocity breakpoints are established by Wald and others (2006). Further information is available at <https://earthquake.usgs.gov/learn/topics/mercalli.php>

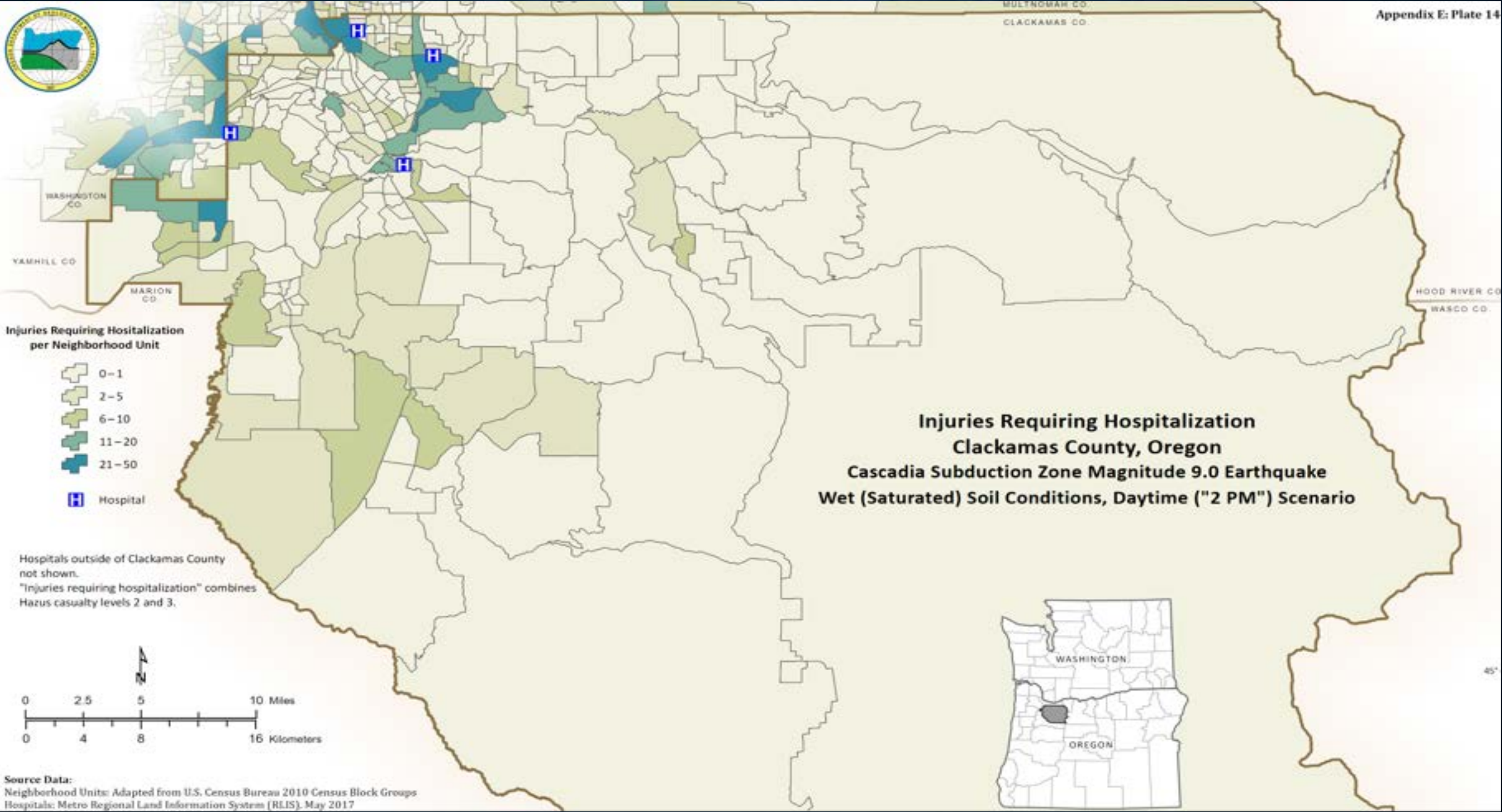
Injuries Requiring Hospitalization Multnomah County, Oregon Cascadia Subduction Zone Magnitude 9.0 Earthquake Wet (Saturated) Soil Conditions, Daytime ("2 PM") Scenario



Injuries Requiring Hospitalization
per Neighborhood Unit

- 0-1
- 2-5
- 6-10
- 11-20
- 21-50
- 51-100
- 101-200
- 201-400
- H Hospital



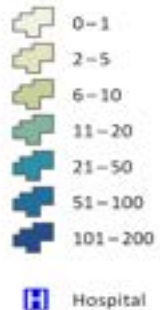


Source Data:
 Neighborhood Units: Adapted from U.S. Census Bureau 2010 Census Block Groups
 Hospitals: Metro Regional Land Information System (RLIS), May 2017

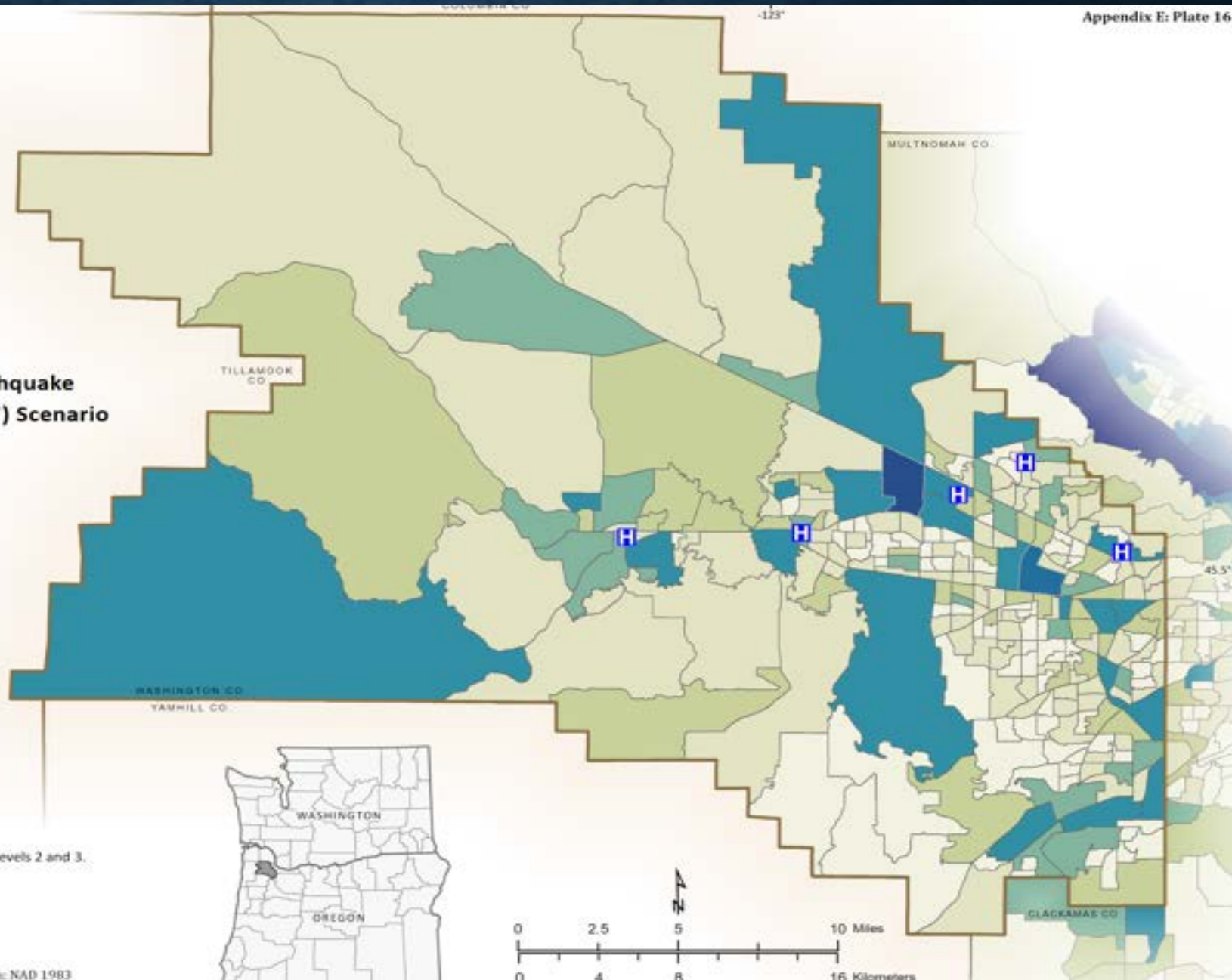


Injuries Requiring Hospitalization Washington County, Oregon Cascadia Subduction Zone Magnitude 9.0 Earthquake Wet (Saturated) Soil Conditions, Daytime ("2 PM") Scenario

Injuries Requiring Hospitalization
per Neighborhood Unit



Hospitals outside of Washington County not shown.
Injuries requiring hospitalization combines Hazus casualty levels 2 and 3.

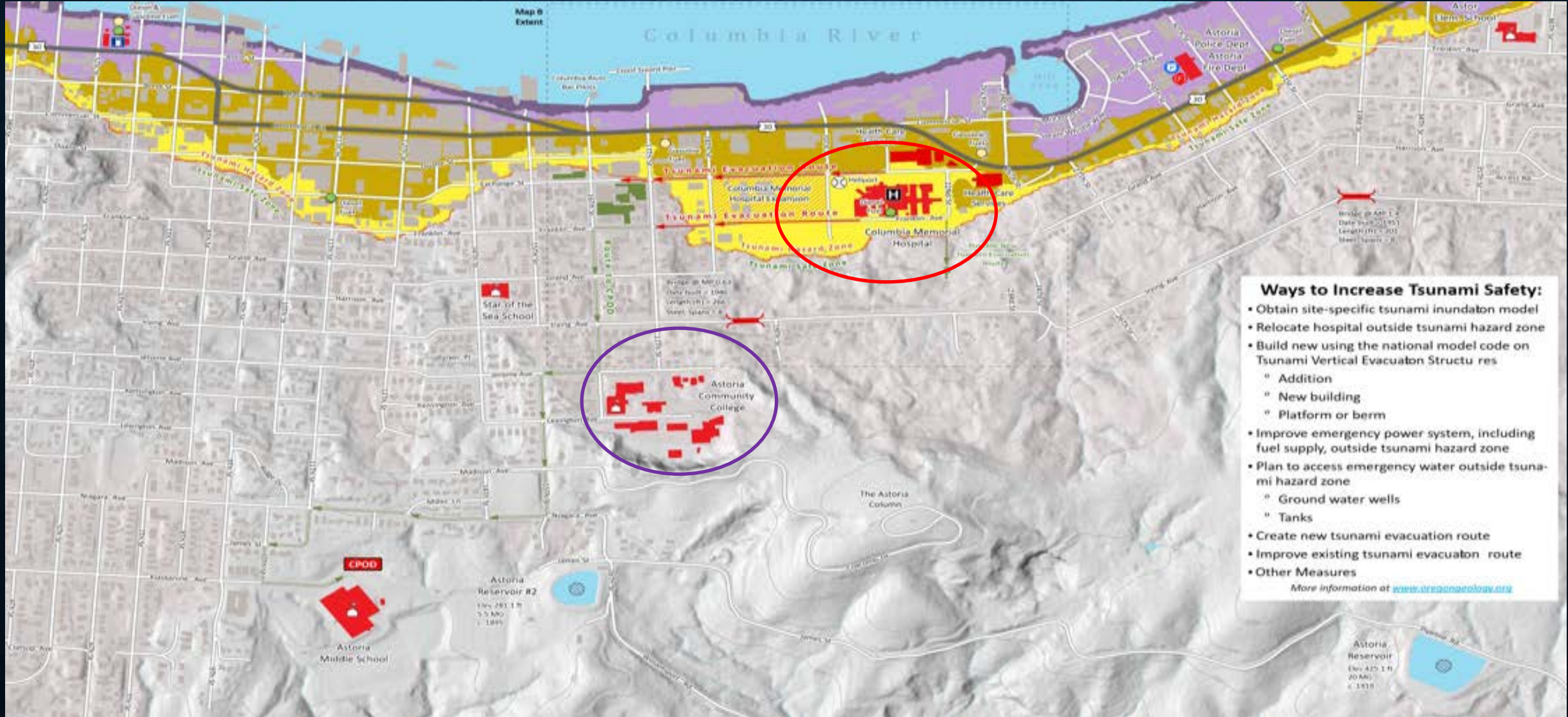


Source Data:
Neighborhood Units: Adapted from U.S. Census Bureau 2010 Census Block Groups
Hospitals: Metro Regional Land Information System (RLIS), May 2017
Projection: Lambert Conformal Conic, EPSG 2913, Unit: International Feet, Horizontal Datum: NAD 1983

OREGON COASTAL HOSPITALS

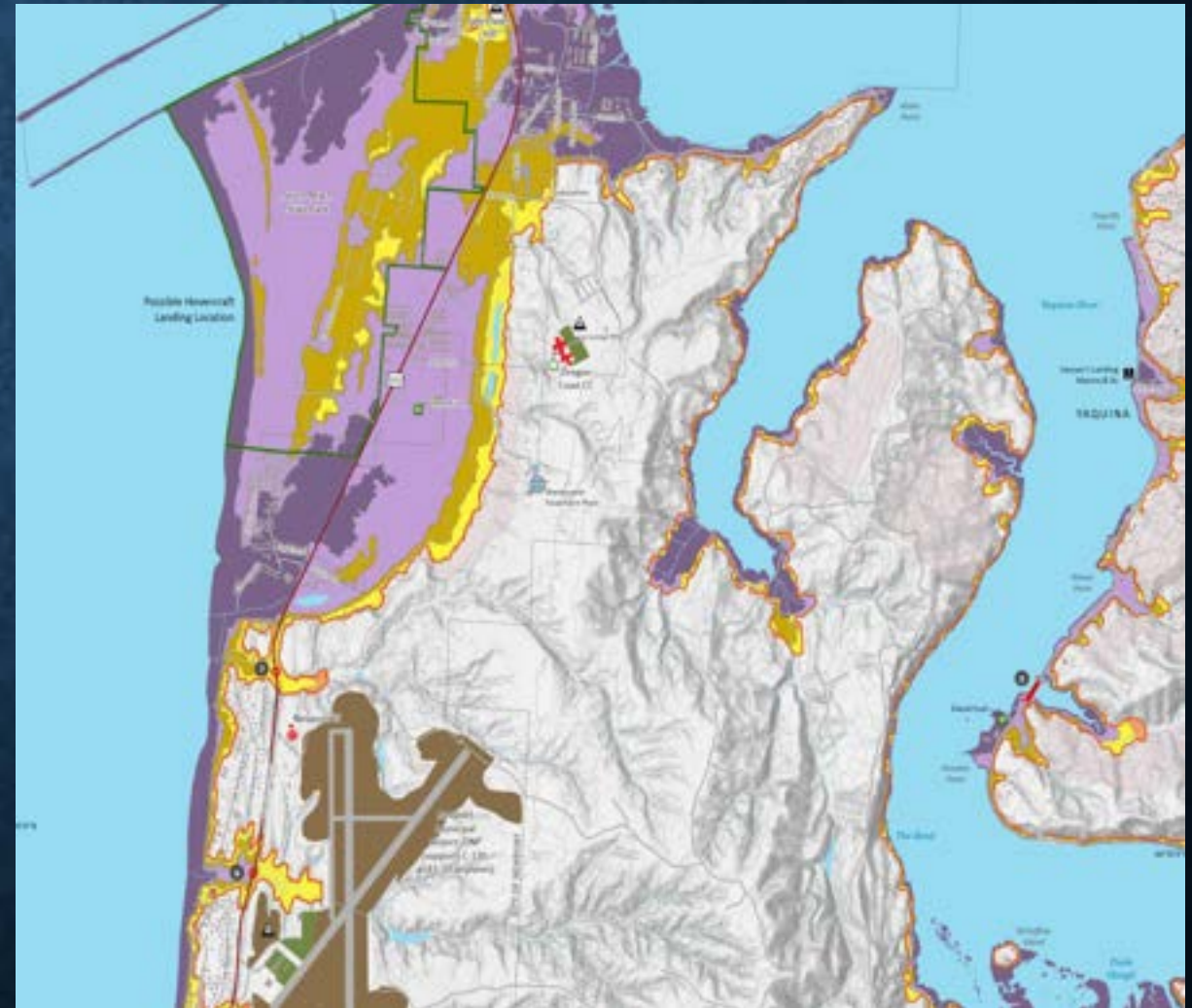
MYTHS
COASTAL HOSPITALS WILL BE DESTROYED IN
CSZ EARTHQUAKE

DOGAMI MAPS : COASTAL HOSPITALS ASTORIA COLUMBIA MEMORIAL

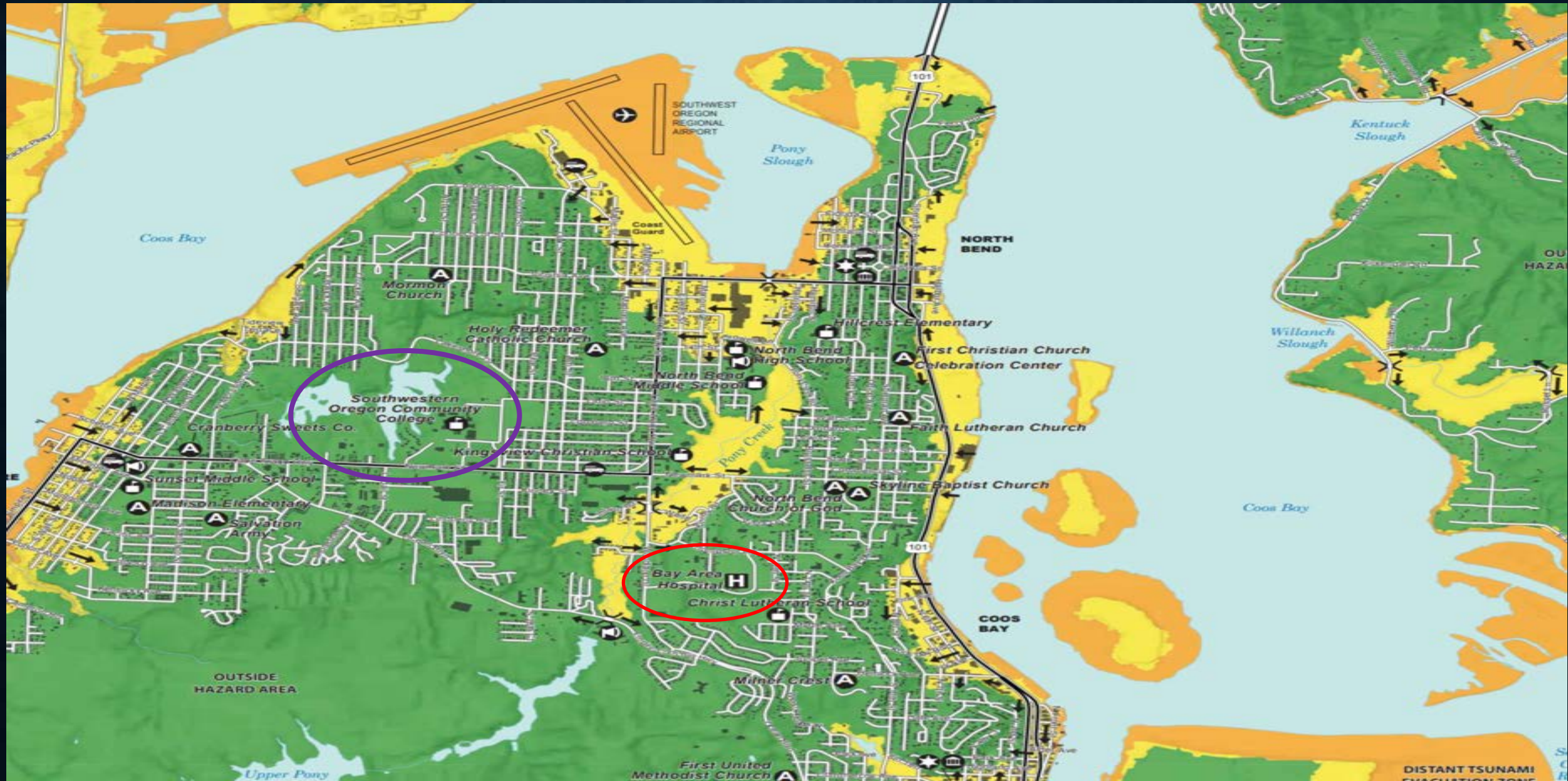


- Ways to Increase Tsunami Safety:**
- Obtain site-specific tsunami inundation model
 - Relocate hospital outside tsunami hazard zone
 - Build new using the national model code on Tsunami Vertical Evacuation Structures
 - Addition
 - New building
 - Platform or berm
 - Improve emergency power system, including fuel supply, outside tsunami hazard zone
 - Plan to access emergency water outside tsunami hazard zone
 - Ground water wells
 - Tanks
 - Create new tsunami evacuation route
 - Improve existing tsunami evacuation route
 - Other Measures
- More information at www.oregonology.org

DOGAMI MAPS: COASTAL HOSPITALS NEWPORT SAMARITAN PACIFIC COAST HOSPITAL



BAY AREA HOSPITAL - COOS BAY



SAMARITAN PACIFIC COMMUNITIES HOSPITAL

**“Best Prepared Oregon Coastal
Hospital” IMHO**



 Samaritan Pacific Community Center

ACCESSIBLE
PARKING

ACCESSIBLE
PARKING

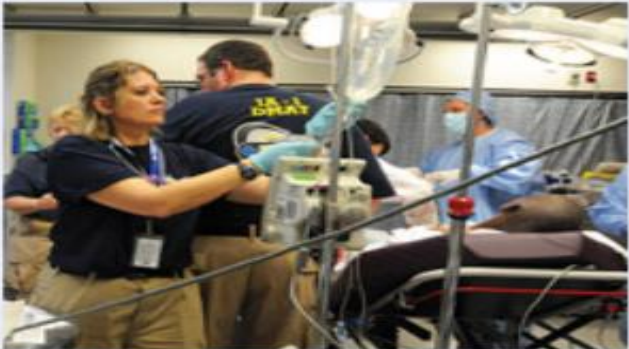
ACCESSIBLE
PARKING

ACCESSIBLE
PARKING



**THE FEDERAL RESPONSE TO
CATASTROPHIC DISASTERS IN OREGON**

NATIONAL DISASTER MEDICAL SYSTEM



Disaster Medical Assistance Teams



Trauma & Critical Care Teams



Disaster Mortuary Operational Response Teams



Victim Information Center Team



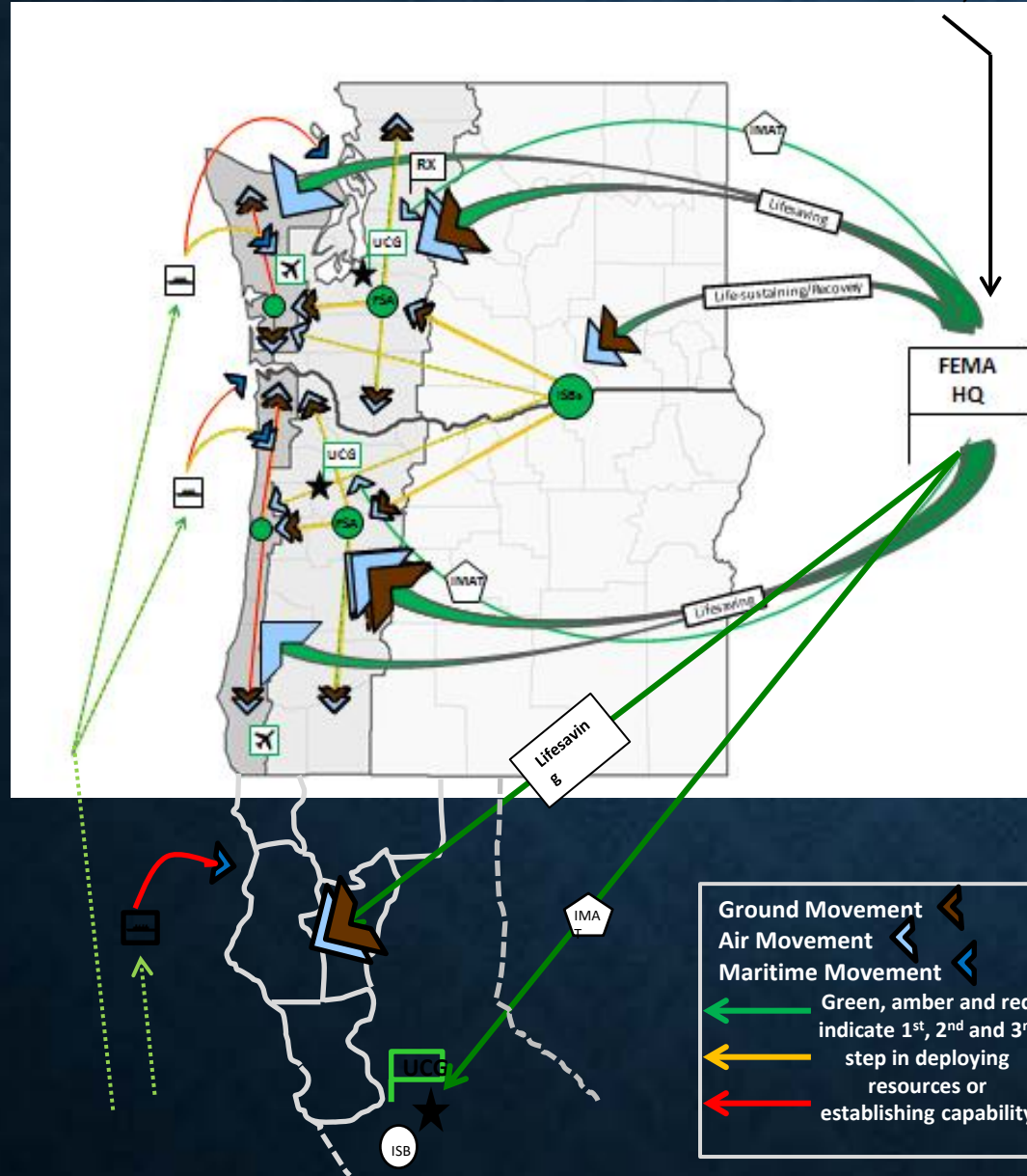
National Veterinary Response Team



Join NDMS

FEMA Concept of Operations

In WASH, DC



FEMA Region X Concept of Operations: Deploy and employ resources and capabilities to support lifesaving operations to the impacted area throughout the Coastal and I-5 Corridor GRAs in order to support state and local lifesaving operations based on pre-identified resource requirements. Simultaneously deploy life-sustaining/restoration capabilities and all other resources to one or more ISBs in the East of the Cascades GRA in order to conduct RSOI, provide just-in-time training and build capability to provide stability based on state identified priorities and situational awareness.

FEMA Region IX Concept of Operations: FEMA Region IX's RRCC activates and collects situational assessment data from the state, activating appropriate ESFs and federal agency resources. A FEMA Incident Management Assistance Team(s) (IMAT) is deployed, along with logistical capabilities and initial response teams and resources, followed by more robust resources to conduct SAR, mass care and medical treatment. Incident Support Bases (ISBs) and FSAs are activated to support the local and state jurisdictions.



The response concept covers three Geographic Response Areas (GRA).
 In each State: (Divided by Columbia River)

- Coastal
- I-5 Corridor
- East of the Cascades
- Each GRA generally follows county borders and/or mountain terrain features

US DOD NORTHERN COMMAND



This Playbook is classified
UNCLASSIFIED

USNORTHCOM Playbook
Cascadia Subduction Zone (CSZ)
Catastrophic Earthquake & Tsunami Response

Pre-Decisional Working Draft (Version 18) as of 29 Apr 2016

Information and assumptions contained herein are based upon the FEMA Region X CSZ Catastrophic Earthquake & Tsunami Response Plan and the FEMA Region IX/Cal OES California CSZ Earthquake & Tsunami Response Plan

UNCLASSIFIED



UNCLASSIFIED

USNORTHCOM / DOD CSZ Concept of Operations (1 of 3)

- Defense Support of Civil Authorities
- Homelands Partnerships

★★★★★
USNORTHCOM

USNORTHCOM:
Mission Essential Task (MET): Synchronize the DOD operational response in support of FEMA (Lead Federal Agency)
Purpose (P): Save lives, minimize suffering, & stabilize incident

★★★
JTF-X
T10 Supported Command
JTF-SAR

Joint Task Force X (JTF-X): (Supported Operational HQs)
MET: Provide C2 for assigned or attached T10 forces executing DSCA Response ISO the Lead Federal Agency throughout the affected area
P: Save lives, minimize suffering, & stabilize incident

JTF Search and Rescue (SAR):
MET: In coordination with JTF-X, conduct SAR and provide SAR capabilities in support of ESF 9
P: Save lives, minimize suffering, & stabilize incident

Defense Coordinating Officers (DCOs):
MET: Represent USNORTHCOM and DOD within each Unified Coordination Group (UCG) and, in coordination with the FCO, identify and validate DOD requirements
P: Facilitate rapid provision of Title 10 DOD capabilities



FEMA (IAW Region X Plan):

MET: Provide immediate federal support and resources to the impacted states
P: Save and sustain life

USTRANSCOM:

MET: Support USNORTHCOM and FEMA with strategic air, land, and sea transportation movement
P: Provide the most optimal force flow to deliver capabilities efficiently into the Affected Area

Defense Logistics Agency (DLA):

MET: Provide commodities in support of USNORTHCOM and FEMA
P: Sustain life and support operations

US Army Corps of Engineers (USACE):

MET: As ESF 3 lead, provide support to infrastructure systems and support FEMA and USNORTHCOM's operations
P: Re-establish operating infrastructure systems to save and sustain life

Services (Army, Navy, Air Force, Marines):

MET: Support USNORTHCOM through rapid sourcing and installation (BSI) support
P: Facilitate USNORTHCOM DOD and FEMA operations



Theater Army (ARNORTH/JFLCC):

MET: Support JTF-X by opening APODs and BSIs in the Affected Area and coordinating logistics support for the Joint Force
P: Ensure JTF-X has the capabilities, visibility, and support required for Joint Forces

Service and Functional Components:

MET: Support JTF-X
P: Ensure JTF-X has the capabilities, visibility, and support required for Joint Forces

Maritime Command Element

Maritime Command Element:

MET: C2 Maritime Assets in Support of JTF-X
P: Ensure JTF-X has the capabilities, visibility, and support required for Joint Maritime Forces

DOD Title 10 Units and Installations within Affected Area:

MET: Assess and report status, provide support as requested by civil authorities under Immediate Response Authority, and BPT provide capabilities in support of USNORTHCOM
P: Save lives, minimize suffering, stabilize incident, and facilitate provision of capabilities in support of the overall DOD effort



USNORTHCOM / DOD CSZ Concept of Operations (2 of 3) Scheme of Maneuver for Initial Response (Phase 2a)

● Defense Support of Civil Authorities
● Homelands Partnerships



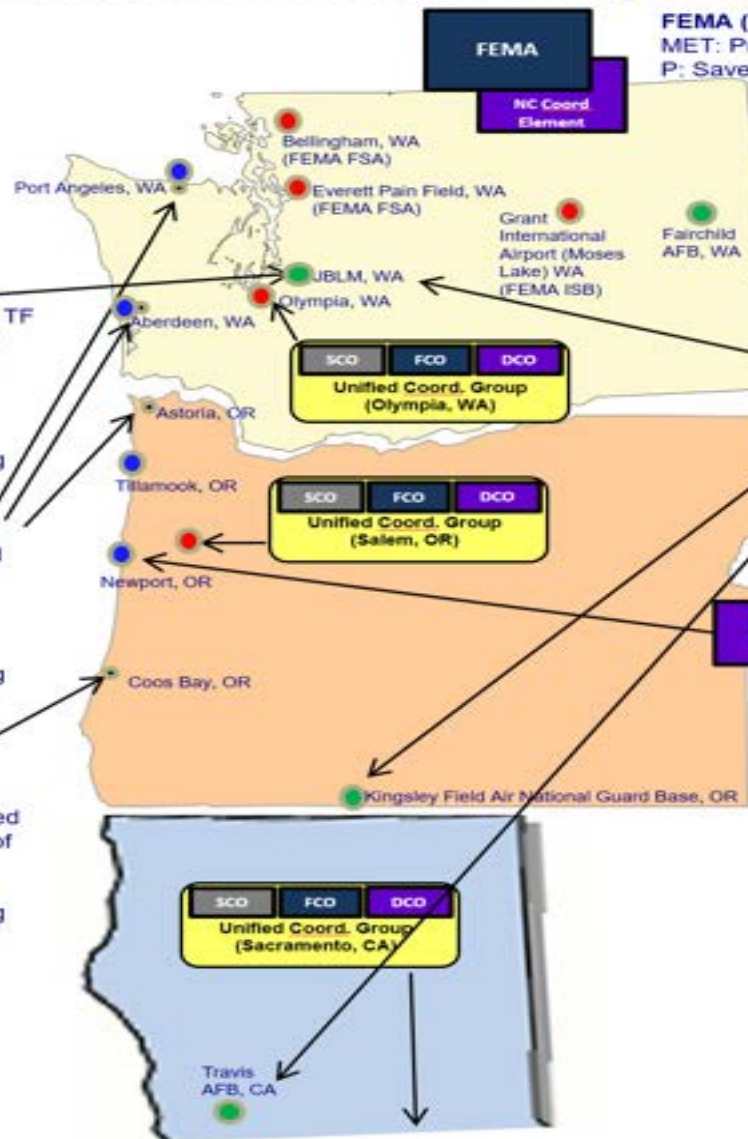
Defense CBRN Response Force (DCRF):

• **Task:** Deploy C2 (JTF-CS HQ, TF Ops HQ, TF Avn HQ, TF Med, & TF Log HQ) with major support units to JBLM and establish rotary wing operations to deploy and support Response Task Forces (RTFs) forward.
Purpose: Save lives, minimize suffering, stabilize incident, and provide life sustaining support.

• **Task:** Deploy key elements of 3 RTFs each with US&R team, EMEDs, ASMC, FST, and key but limited C2 and support enablers to coastal centers of Port Angeles, WA; Aberdeen, WA; and Astoria, OR.
Purpose: Save lives, minimize suffering, stabilize incident, and provide life sustaining support.

Command & Control CBRN Response Element A (C2CRE A):

• **Task:** Deploy key elements of 1 RTF with US&R team, ASMC, FST, and key but limited C2 and support enablers to coastal center of Coos Bay, OR.
Purpose: Save lives, minimize suffering, stabilize incident, and provide life sustaining support.



FEMA (IAW Region X Plan):

MET: Provide immediate federal support and resources to the impacted states
P: Save and sustain life



Theater Army (ARNORTH/JFLCC) and Supporting Service and Functional Components:

• **Task:** Rapidly open and establish fixed & rotary wing air operations and ground transportation operations, concurrently, but in the following order of priority:

- Joint Base Lewis Mchord, WA (FEMA Federal Staging Area (FSA))
- Fairchild AFB, WA (nearby FEMA ISB of Grant International Airport (Moses Lake) WA)
- Kingsley Field Air National Guard Base, OR
- Travis Air Force Base, CA

Purpose: Rapidly open and expand the transportation network to ensure JTF-X has the capabilities, visibility, and support required for Joint Forces in support of FEMA

Maritime Command Element:

• **Task:** As rapidly as possible, establish maritime logistics support hub, in coordination with deployed DCRF and C2CRE A RTFs at coastal centers: Primary: Newport, OR and Aberdeen / Grays Harbor, WA; then Secondary: Tillamook, OR and Port Angeles, WA.
Purpose: Save lives, minimize suffering, stabilize incident, and provide life sustaining support.

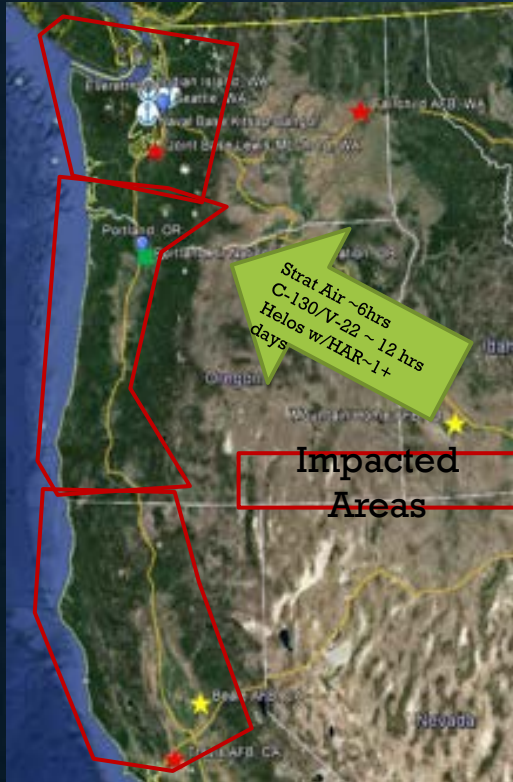
DOD Title 10 Units and Installations within Affected Area:

MET: Assess and report status, provide support as requested by civil authorities under Immediate Response Authority, and BPT provide capabilities in support of USNORTHCOM

P: Save lives, minimize suffering, stabilize incident, and facilitate provision of capabilities in support of the overall DOD effort



Search and Rescue Concept



Summary:

- All rescue capability Initially operating under Immediate Response and AFRCC/USCG coordination
 - Additional SAR capability coordinated through AFRCC/USCG Mass Rescue Operations
- ESF#9 activated, Overall Primary Agency designated, Federal SAR Coordination Group Deployed
 - US&R TFs: 24 Alerted, 18 Activated, 12 initially deployed
- USNORTHCOM proactively deploys DSCA CAT 1 & 2 forces, RFFs for CAT 4+ in anticipation of RFAs
- DoD to provide strat lift for Central and East US&R TFs and significant military support capability

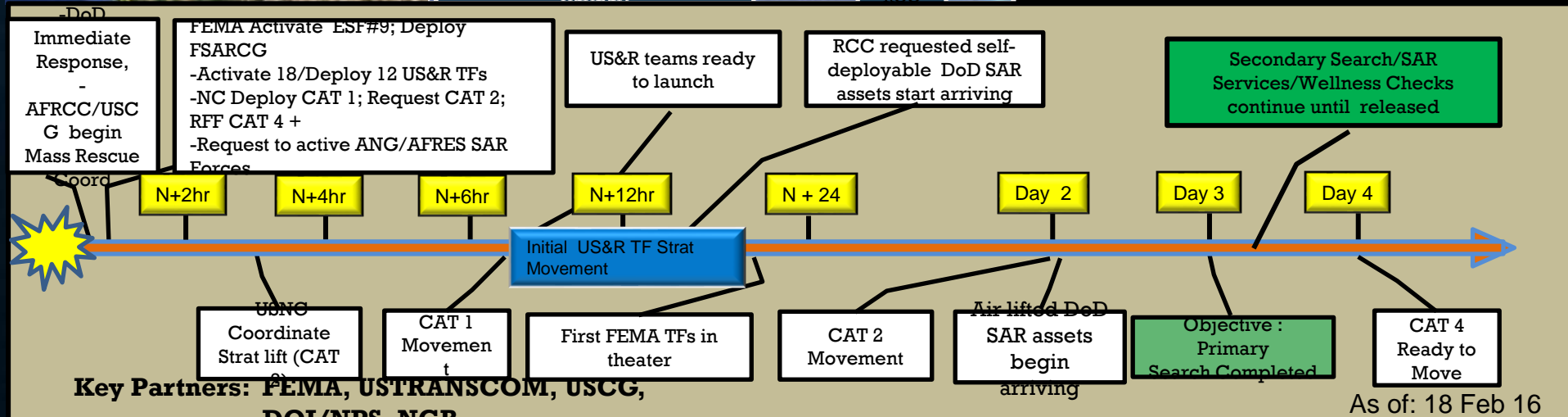


Primary Tasks: Initial Search & IAA, Strategic lift to support US&R TFs, Theater Opening, Rotary wing SAR and tactical lift, over-horizon comm, Landing/Pick up operations; medical response, collapsed st

Washington Rqmts: Initial SAR plan—shelter in place, then re-supply/evacuate; 8 SAR dedicated w hoist 3x HAAR C-130s; 50 GA; 39 tilt rotor/med-lift RW; 7 heavy-lift RW; 2x CAB; ARG with SPMAGTF (afloat); 200 LMTVs w operators

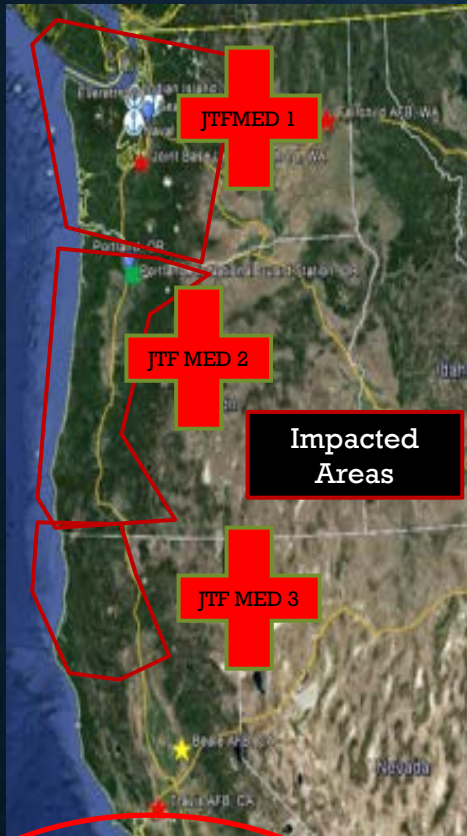
Oregon Rqmts: 1.5 CAB; ARG with SPMAGTF (afloat); 8 SAR RW; 30 GA; 3xHAAR C-130s; 60 tilt rotor/med-lift RW; 7 heavy lift RW; 200 LMTVs with operators;

Northern California Rqmts: 9 SAR RW; 25 med-lift RW/tilt rotor; 3xHAAR C-130s; 16 GA; 150 LMTVs with operators





Medical Operations Concept



Summary: Establish regionalized Joint Health Support (JTF MED 1 / 2 / 3) within 72 hours to begin providing:

- Joint (air, ground, maritime) medical evacuation to transport survivors within the impacted area
- Joint medical triage, treatment, surgical and holding facilities to stabilize patients for transport
- Joint patient movement (strategic lift) capability to evacuate patients outside of the impacted area
- Force health protection to include preventive medicine, combat stress control, and veterinary services
- Class VIII supply and resupply to supporting JHS medical capability

*DoD immediate response medical capabilities may be severely limited in the first 96 hours of a CSZ event

Primary Tasks: Provide Joint Health Support and Force Health Protection (FHP) measures ISO disaster relief operations in accordance with State and local requirements .

Potential Requirements:

Provide immediate medical care (Role 2, Role 3, FST)

- Treatment and triage
- Surgical stabilization
- Chronic disease management

Facilitate operability of hospitals (MEDLOG, Staffing)

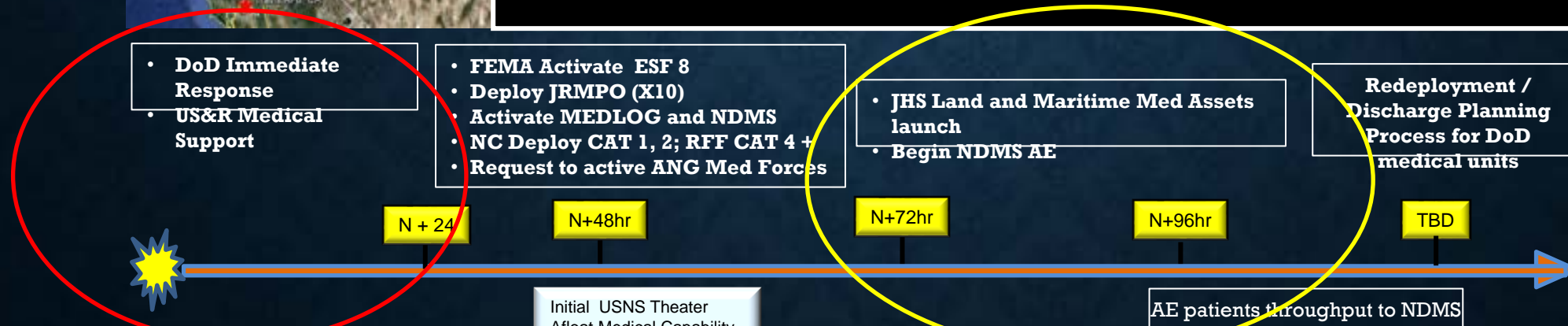
- Class VIII resupply
- Staffing assistance
- Bed clearing evacuation
- Basic power, fuel, food , water support
- Communications capability assurance

Conduct patient evacuation (NDMS, MEDEVAC, GA)

- Conduct Intrastate (ground and air) patient evac
- Conduct interstate (ground and air) patient evac
- Facilitate patient movement tracking

Prevent health threats (PM, VET, COSC)

- Food sanitation/inspection
- Prevent waterborne illnesses
- Animal care
- Mental health



Key Partners: FEMA, USTRANSCOM, USCG, DOI/NPS, NGB

SUMMARY

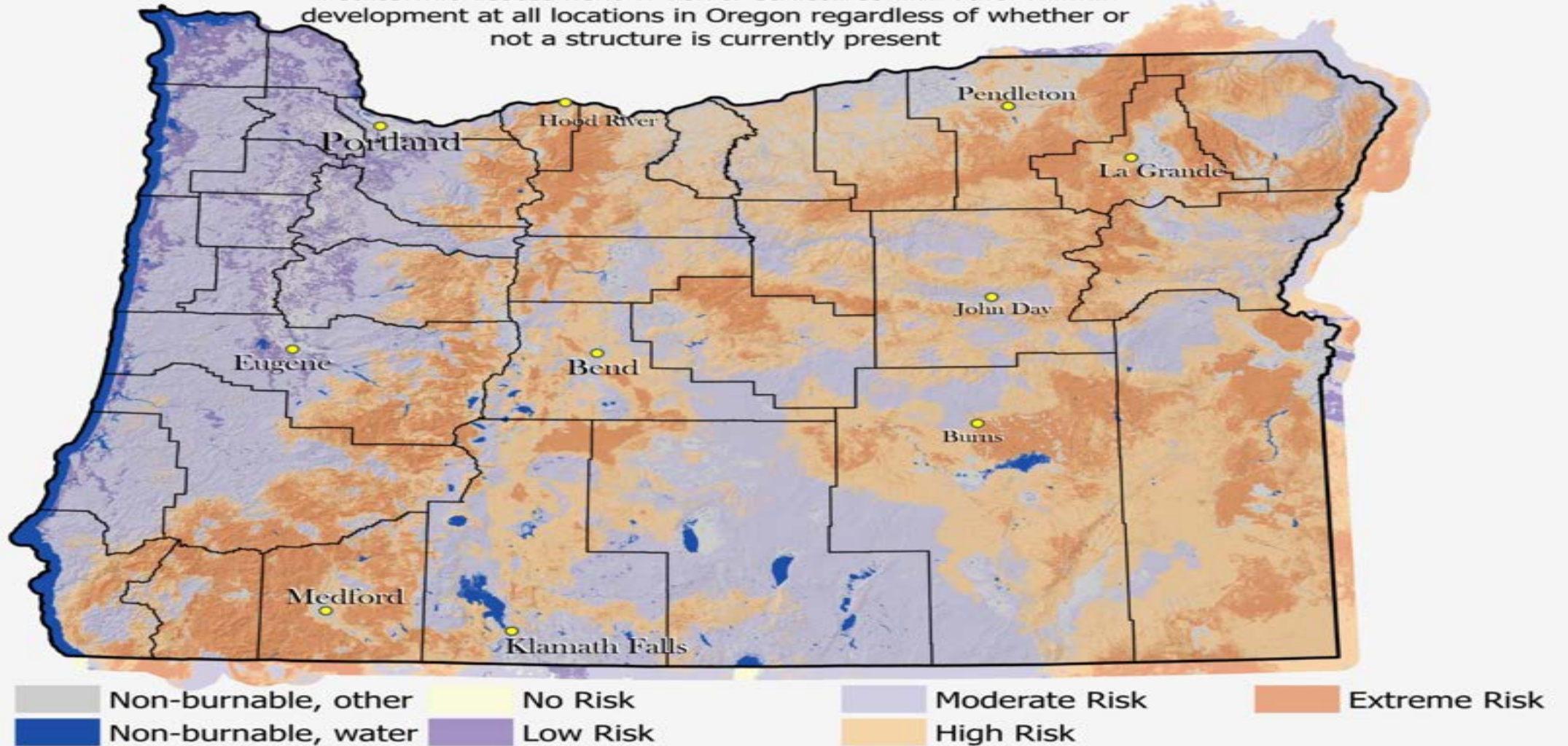
- Oregon can anticipate **thousands of deaths and casualties** from a catastrophic disaster event (CSZ Earthquake)
- All regions of Oregon will be affected, some more than others
- The **State of Oregon has a Medical Response plan and framework in place.**
- Population **needs to be prepared to be without food, water, or shelter for extended periods of time**
- Major challenges remain include increasing resiliency of individual families, schools, fuel, electricity, sanitation
- Medical institutions can anticipate lack of water, electricity, staffing, degraded structures, evacuation, and lack of medical supplies.

WILDLAND FIRE

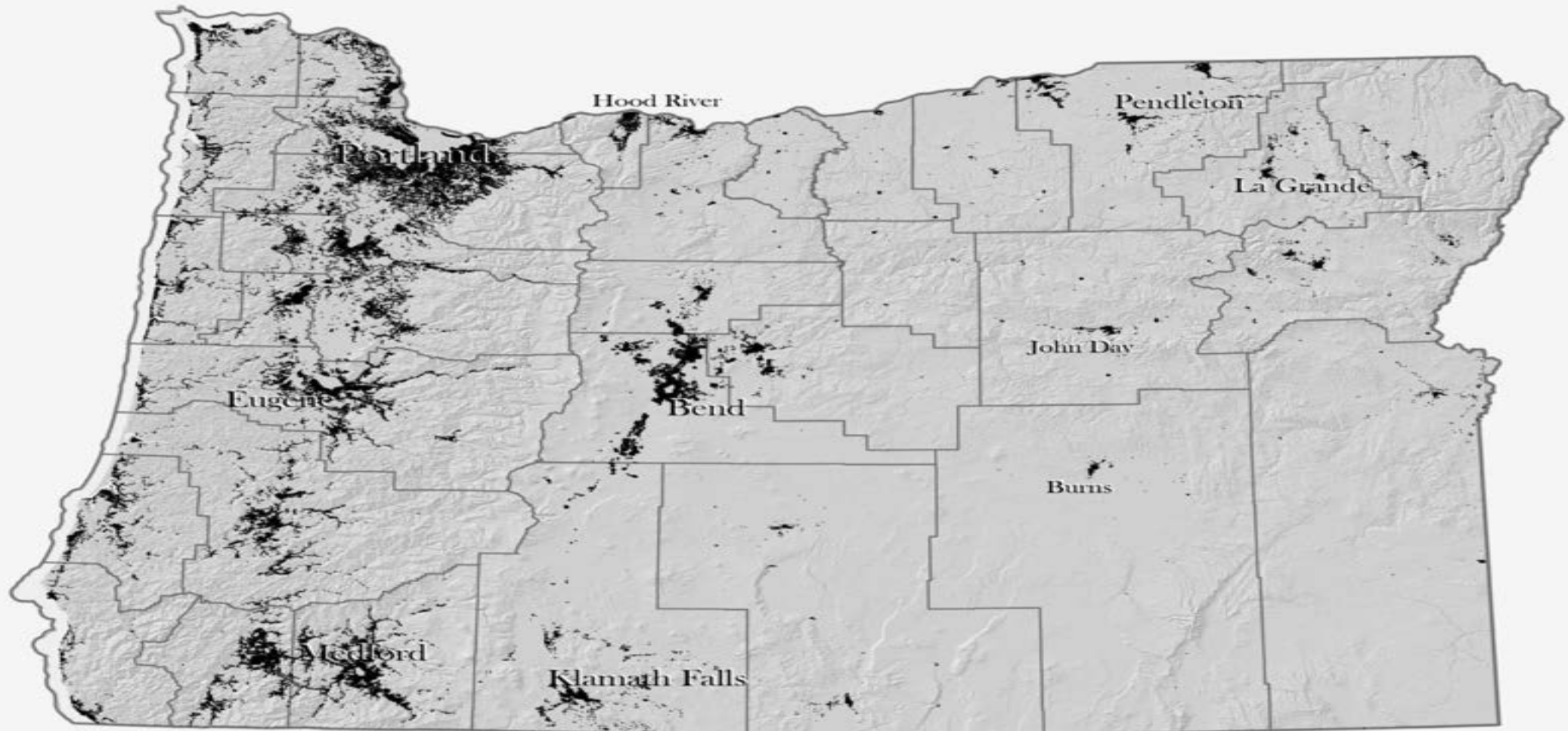
WILDLAND FIRE RISK

Risk to Potential Structures

a statewide assessment of risk to structures and other human development at all locations in Oregon regardless of whether or not a structure is currently present



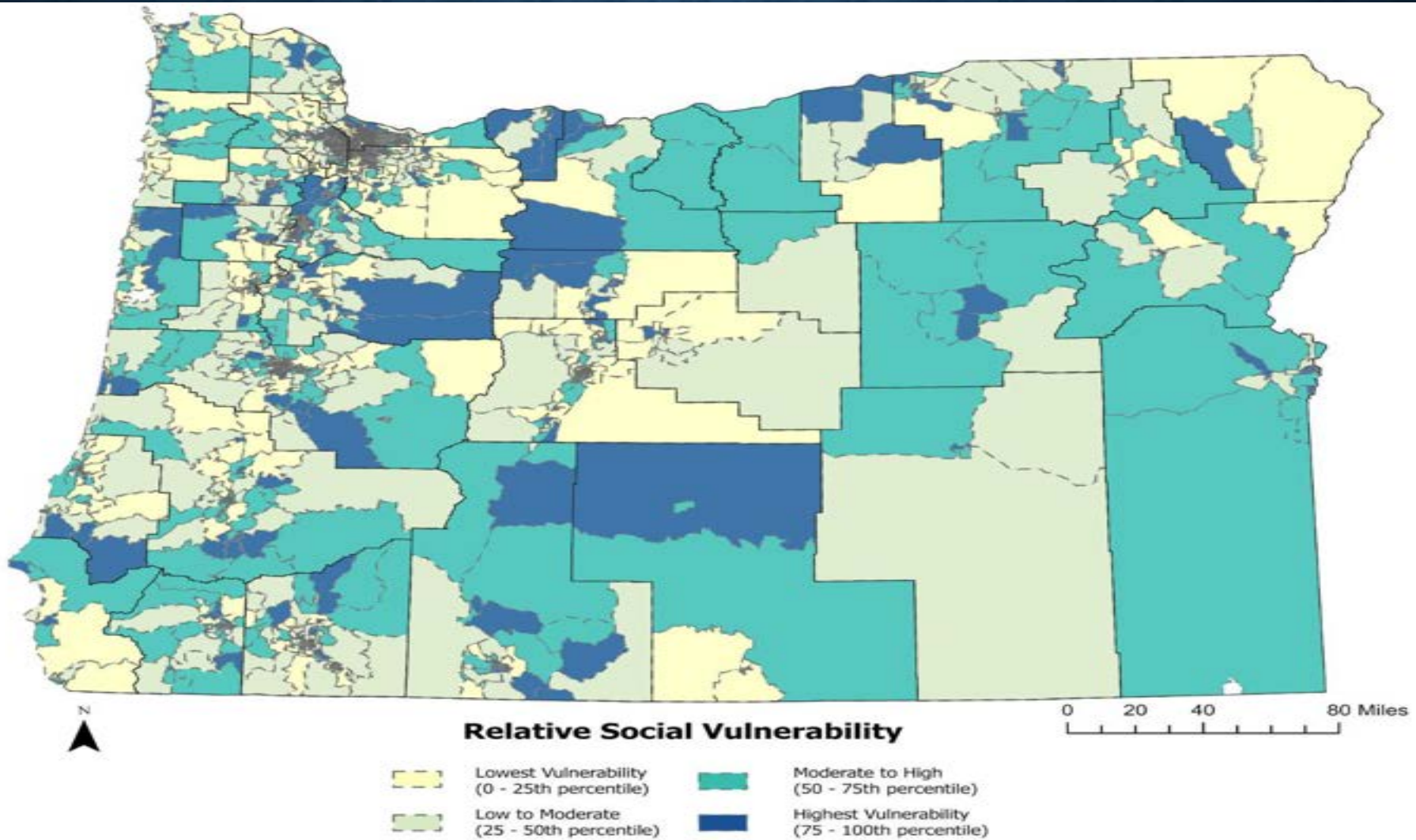
WILDLAND URBAN INTERFACE



Wildland Urban Interface

■ WUI

RELATIVE SOCIAL VULNERABILITY



WILDLAND FIRES IN OREGON

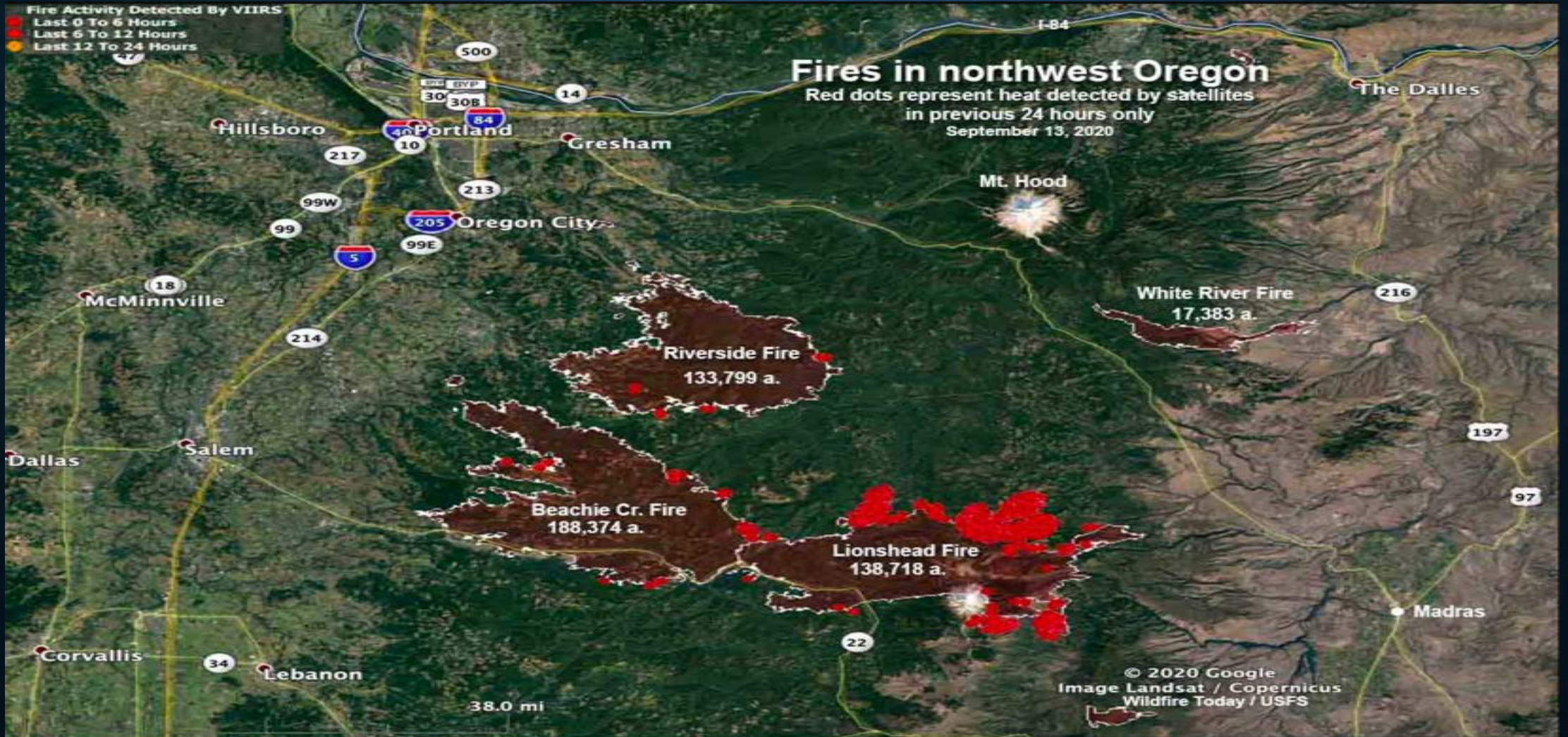
5 Oregon towns have been 'substantially destroyed' by wildfire, governor says

Charles R. Davis Sep 9, 2020, 3:42 PM



Fire seen in Salem City, Oregon, on Tuesday in a picture obtained from social media. ZAK STONE/via REUTERS

RIVERSIDE FIRE 2022



OREGON EVACUATION LEVELS

🔔 **Sign up for Emergency Alerts!** Get lifesaving alerts and instructions during emergencies to help you and others stay safe in Oregon. [Sign up now](#)

🌐 An official website of the State of Oregon [How you know](#)



Oregon Wildfire Response & Recovery

[Current Wildfire Situation](#)

[Prepare and Prevent](#)

[Wildfire Recovery](#)

[News](#)

Evacuations

Evacuation Information

Oregon follows a 3 Level evacuation notification system, each structured around the readiness need and threat level. Know the current levels and what they mean to help make the best decision to stay safe. Don't wait to evacuate if you feel unsafe.



**BE READY.
BE SET.
GO NOW!**

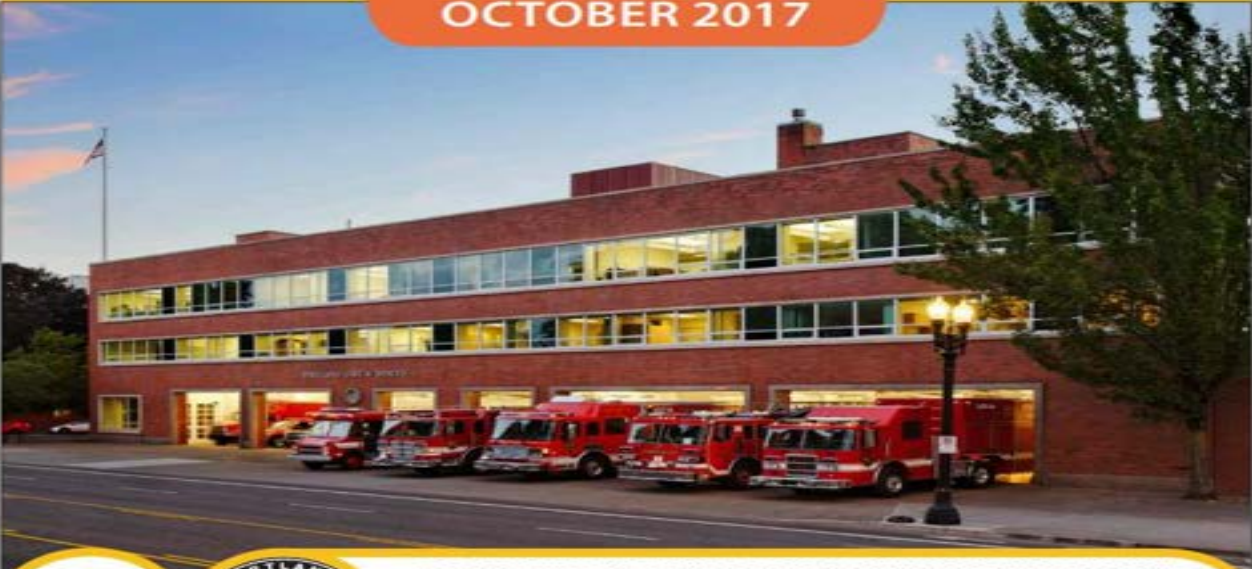
Know evacuation levels and follow advice of emergency officials.
Make the best decision for your safety. Don't wait to evacuate if you feel unsafe!

LEVEL 1	LEVEL 2	LEVEL 3
BE READY PREPARE TO EVACUATE <i>BE AWARE OF DANGER IN THE AREA</i>	BE SET BE SET TO EVACUATE AT A MOMENT'S NOTICE <i>SIGNIFICANT DANGER IN THE AREA</i>	GO NOW! LEAVE IMMEDIATELY! <i>EXTREME DANGER IN THE AREA</i>
<ul style="list-style-type: none">Stay informed.Have your plan & go-kit ready.Act early if you or your loved ones can't move quickly.	<ul style="list-style-type: none">Follow your evacuation plan & grab your go-kit.Check news & radio for updates.Conditions change rapidly. Leave if you feel unsafe.	<ul style="list-style-type: none">Leave without delay. It is unsafe to stay.Do not stop to gather belongings or protect your home.Do not return until officials announce the area is safe.

CITY OF PORTLAND EVACUATION PLAN

City of Portland Annex D | Evacuation Plan

- Updated -
OCTOBER 2017



PORTLAND BUREAU OF EMERGENCY MANAGEMENT

Mayor Ted Wheeler, Commissioner-In-Charge • Carmen Merlo, Director
9911 SE Bush Street, Portland, OR 97266-2562
(503) 823-4375 • Fax (503) 823-3903 • TDD (503) 823-3947



SO, WHERE IS OREGON AS FAR AS MEDICAL PREPARATION FOR A CATASTROPHIC EVENT

Framework is
in place but
needs to be
put together
and exercised



SUMMARY

Strengths

- Civilian / Military collaboration
- Core components in place
- “Volunteerism “ is high in Oregon
- Rural Communities are used to “being alone”
- Coastal and eastern Oregonians are very well aware of the disaster risks

Weakness

- No prior similar incidents
- Lack of concern (apathy) or attitude by population
- Vulnerable populations
- Infrastructure
- Lack of integration of plans
- Lack of coordination of Command / Control in some communities
- Organizations not used to respond to catastrophes

**HOW CAN WE PREPARE FOR
THIS EVENT?**

CARMEN MERLO: DIRECTOR OF PORTLAND BUREAU OF EMERGENCY MANAGEMENT



WHAT SHOULD I IN MY “DISASTER KIT”



A 12- TO 15-INCH **ADJUSTABLE PIPE OR CRESCENT WRENCH**, FOR TURNING OFF WATER AND GAS (LEARN HOW: NWNATURAL.COM AND PORTLANDOREGON.GOV/WATER)



COPIES OF VITAL DOCUMENTS: BIRTH CERTIFICATES, INSURANCE POLICIES, WILLS, BANK ACCOUNT INFO, ETC.



WORK GLOVES AND PROTECTIVE GOGGLES



NEEDED PRESCRIPTION DRUGS, PLUS OVER-THE-COUNTER PAIN-KILLERS



ADD A **WHISTLE** TO YOUR KEY CHAIN—IT COULD BE A LIFE SAVER IF YOU’RE TRAPPED IN RUBBLE.



CHARCOAL OR PROPANE FOR OUT-DOOR COOKING. A **BAYOU CLASSIC 12-INCH DOUBLE JET COOKER** FROM LOWES (\$60) CAN BE USED IN THE MEANTIME FOR CAMPING!

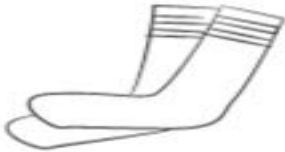
WHAT SHOULD I IN MY “DISASTER KIT”



EXTRA BATTERIES, MULTIPLE FLASHLIGHTS, LIGHT STICKS



DECK OF CARDS? HARMONICA? THE CANTERBURY TALES? SOMETHING, FOR SURE



COMFORTABLE, WARM CLOTHING, INCLUDING EXTRA SOCKS, AND RAIN GEAR SUCH AS A PONCHO



COOKING UTENSILS AND A MANUAL CAN OPENER



AT LEAST 14 SERVINGS OF FOOD PER PERSON (CANNED, DRIED, OR OTHER LONG-LASTING FOODSTUFFS)



BLANKETS AND/OR SLEEPING BAGS, PERHAPS A TENT



HEAVY-DUTY PLASTIC BAGS (FOR WASTE AND TO SERVE AS TARPS) AND DUCT TAPE



HAND-CRANK RADIO. (AMBIENT WEATHER WR-11B OFFERS THE SWISS ARMY KNIFE OF AM/FM/NOAA DIGITAL RADIOS FOR \$40.)



A MINIMUM OF ONE GALLON OF WATER PER PERSON, PER DAY, STORED IN FIVE-GALLON CONTAINERS. APARTMENT DWELLERS MIGHT CONSIDER A LIFESTRAW PERSONAL WATER FILTER (\$20). HOME-DWELLERS WITH WATER HEATERS, SAY HELLO TO YOUR NEW DRINKING FOUNTAINS.

RECOMMENDATIONS FOR MEDICAL PROVIDERS

- Have and exercise a **family plan**
 - **Communications** with family members
- Develop a **family survival kit**
- Know your institution and regional disaster response plan and most importantly your role.
- Assist in **disaster planning** and mitigation in your community

THE END