



Cascadia Subduction Zone (CSZ)
Catastrophic Earthquake and Tsunami Functional Exercise 2016

SEA-PAC - June, 2015
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Clark County WA AEC

Cascadia Topics

- About your presenter
- What is the Cascadia Rising Exercise?
- How do we know it will be a big one?
- What are the likely impacts?
- How can you prepare for the exercise (and the event)?
- Credits, links, resources

Q&A throughout

What is the Exercise?

Simulated regional response to a 9.0 magnitude earthquake

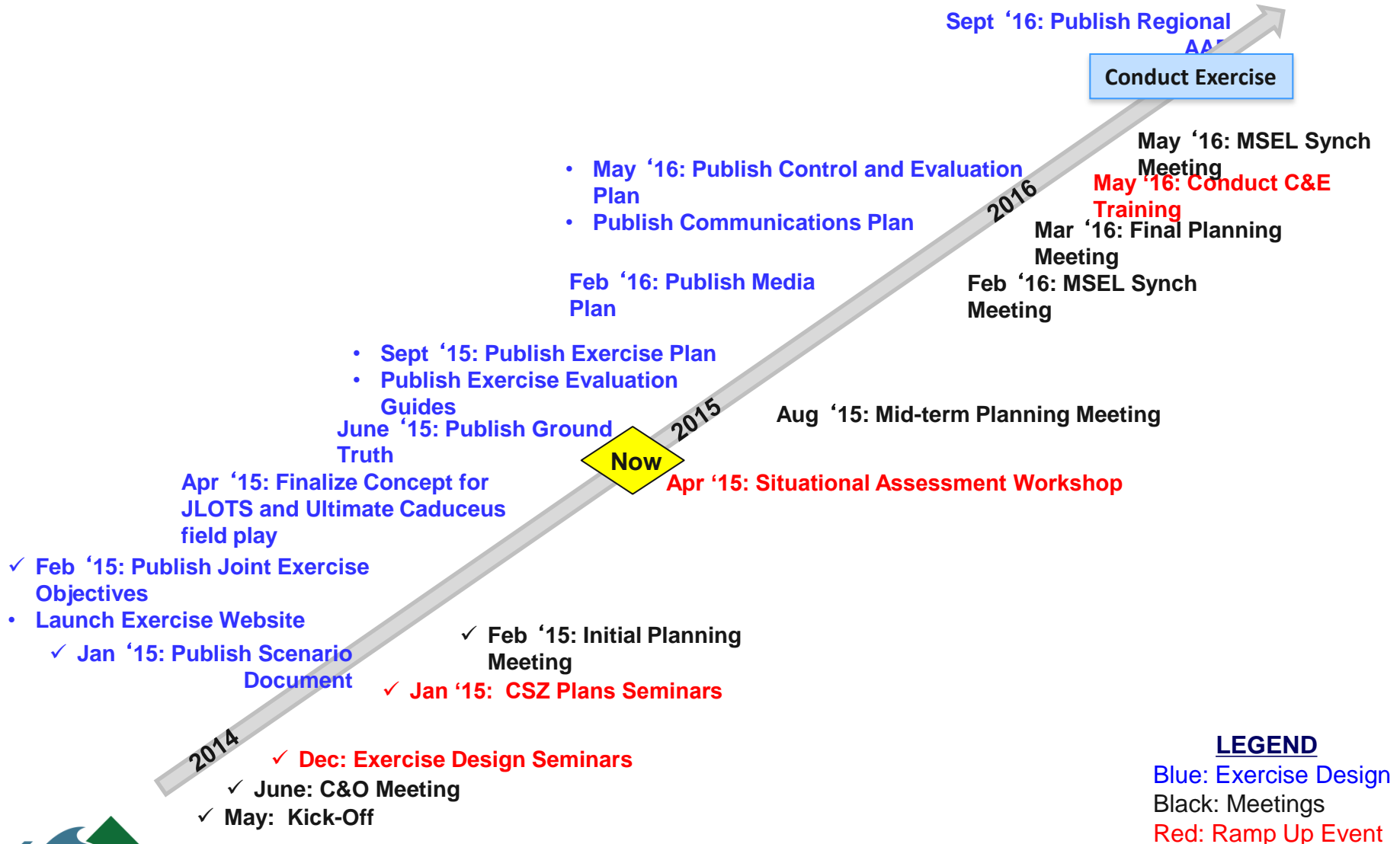
- Epicenter 95 mi W of Eugene, OR
- Loss/damage based on scientific models (90% confidence level)

Four day, 24-hours/day (Tue-Fri, June 7-10, 2016)

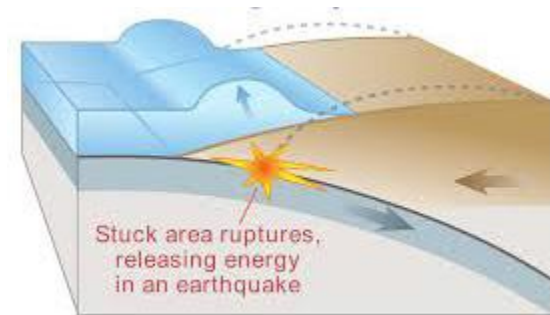
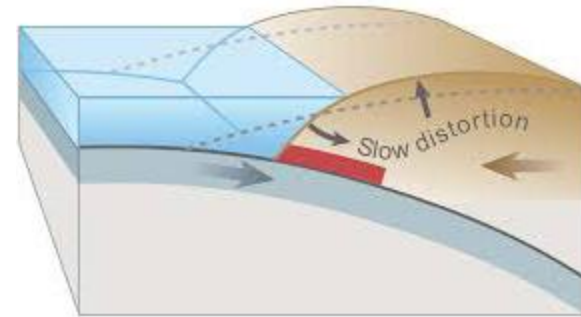
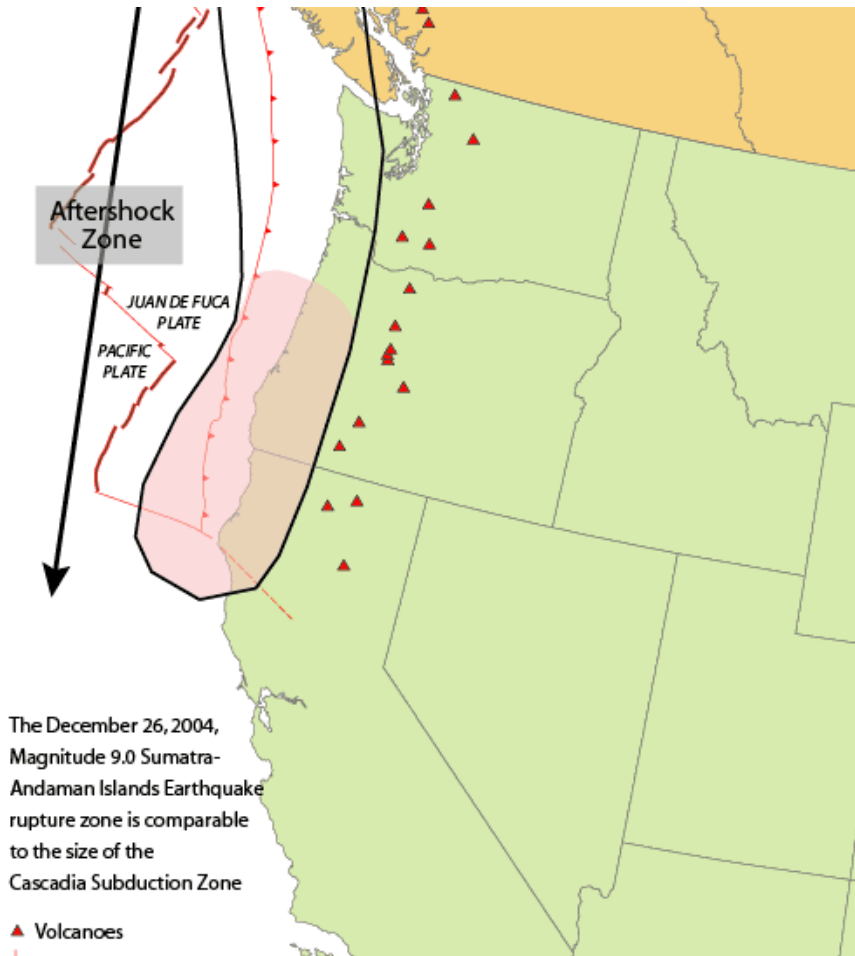
- Largest simulated emergency exercise in Pacific NW
 - Federal, State, Local, Tribal, Private, Amateur, MARS, SHARES, NGO
 - Does not include ‘secondary effects’
- “Injects” (surprise field problems)
- Provide EOC to EOC voice / data links
- Relay critical messages to the public (no TV or internet)

MARS / Amateur Radio - only communications in early phases?

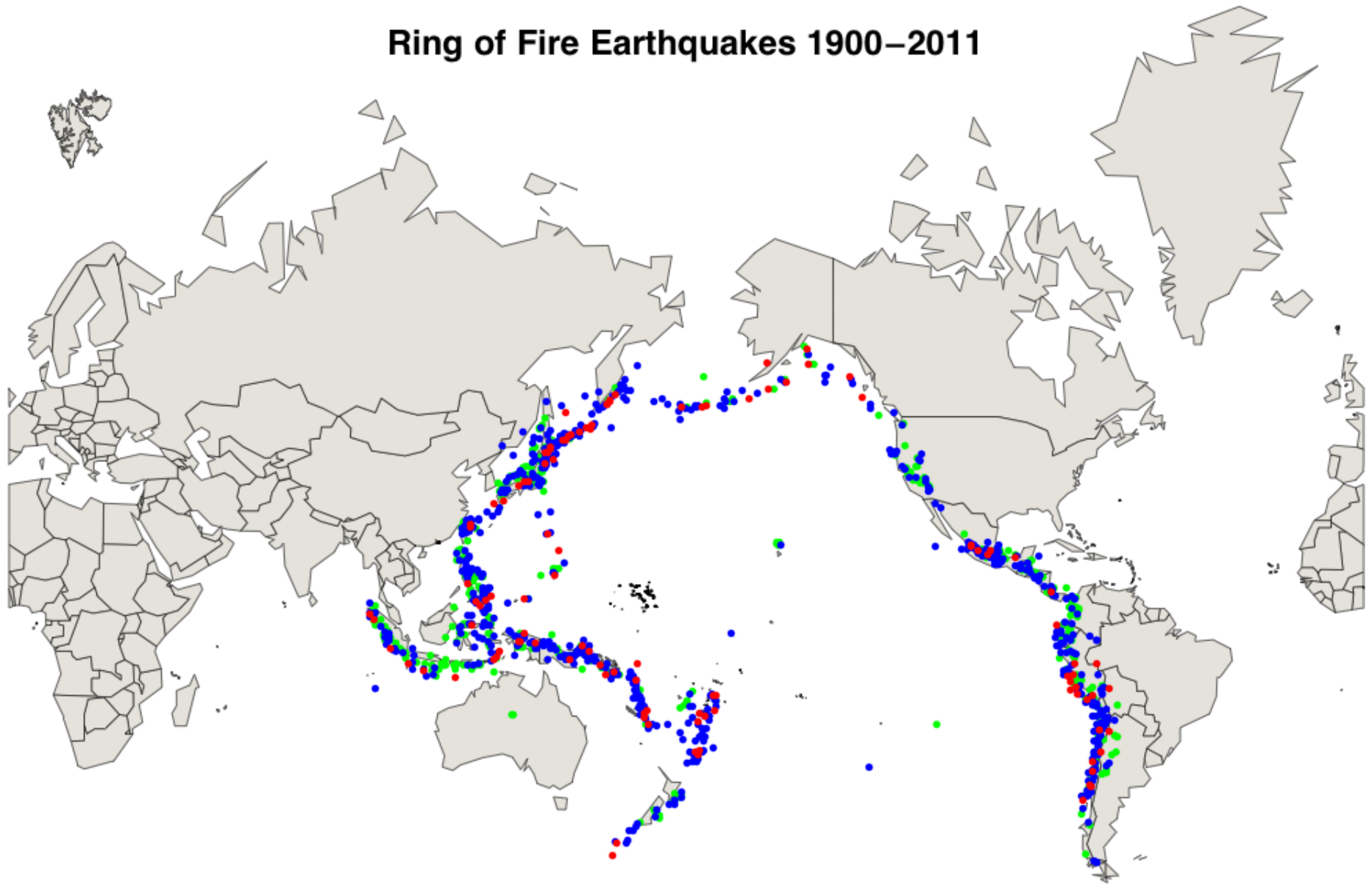
What is the schedule?



Why this scenario?



Ring of Fire Earthquakes 1900–2011

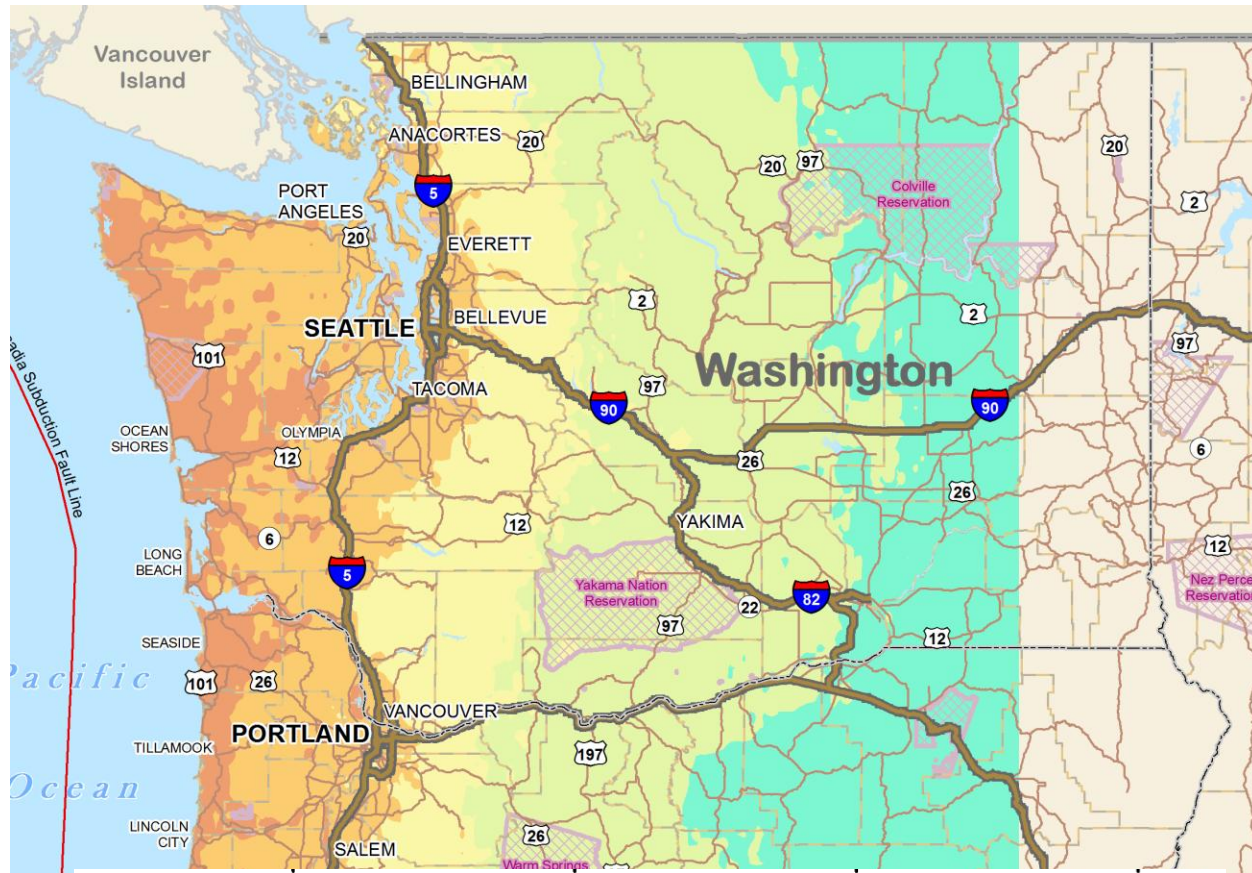


Orphan Tsunami

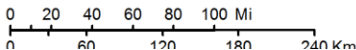
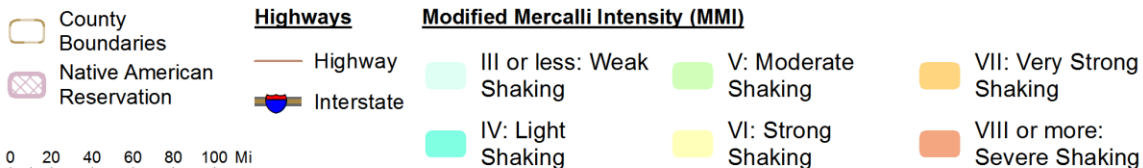
- Are those Breakfast Links, or a Dinner Sausage?
- Mag 9 earthquakes every ~3-500 years
- Most recent one was January 26, 1700



How much will it shake?

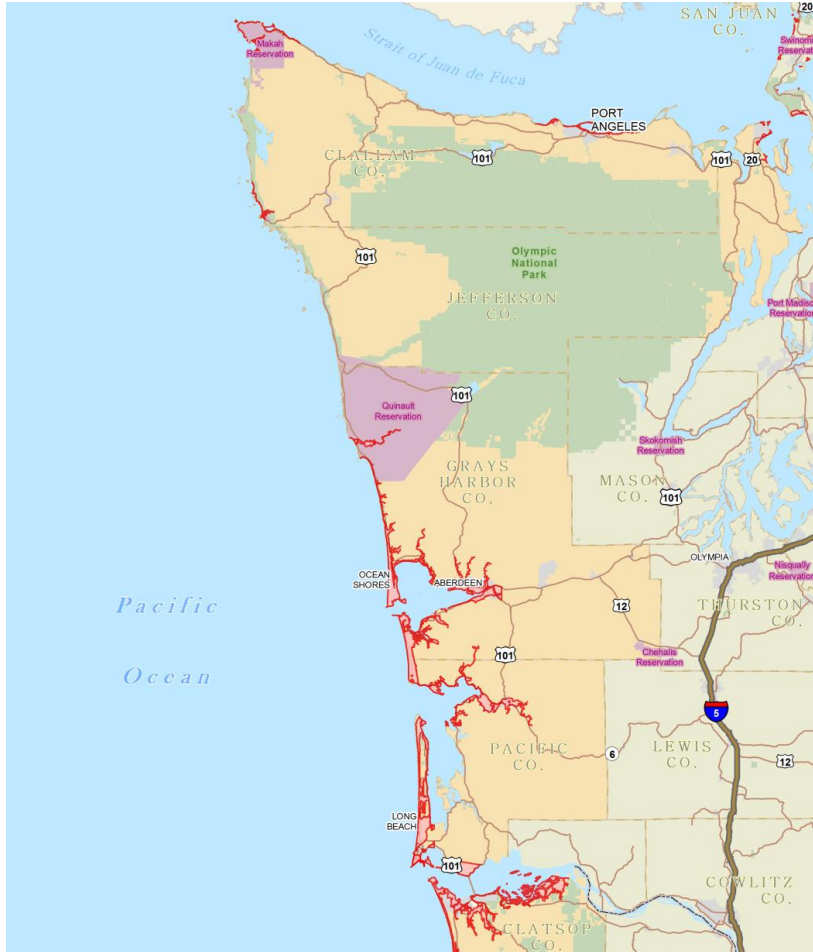


Legend

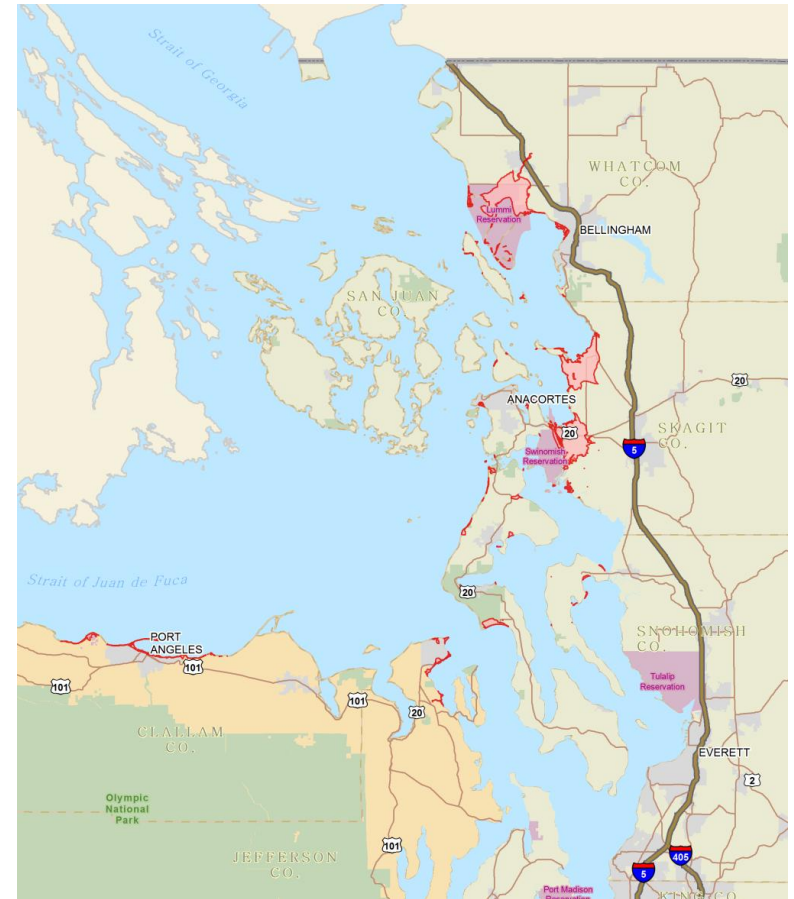


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What will the tsunami(s) affect?



WA Coast



Puget Sound

What will be damaged or destroyed?

	WA Coast	WA I-5 corridor
Injured (Quake / Tsunami)	2000 / 3000	7000 / 400
Deaths (Quake / Tsunami)	100 / 9000	300 / 1300
Highways	80%	30%
Bridges	73%	40%
Airports	100%	40%
Rail	73%	45%
WA Seaports	100%	82%
Electrical Facilities	100%	78%
Natural Gas Systems	100%	95%
Refined Fuels Industry	n/a	100%
Communications Systems	100%	76%

% gone or would require major repairs

“Normal” ECOM Plan

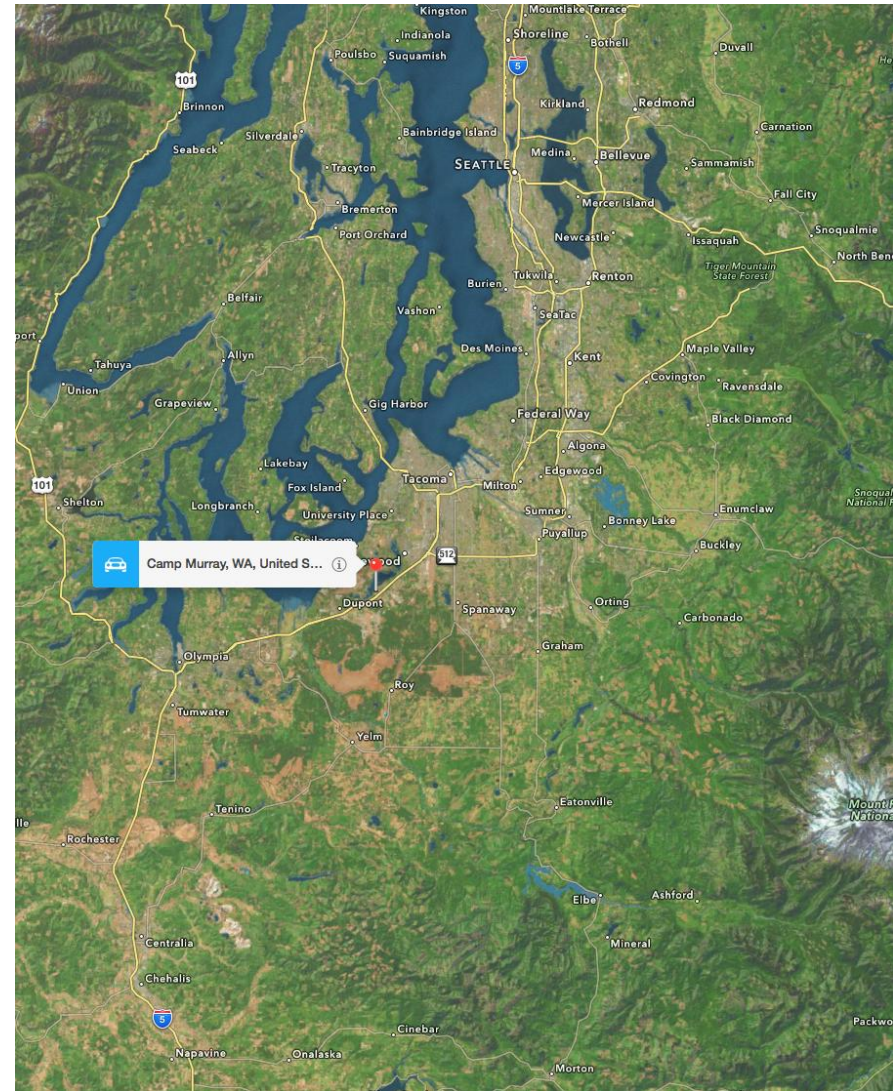
All regions contact State EOC: Camp Murray, WA



WA State EOC – Camp Murray WA

Overwhelmed in in a catastrophic disaster?

- 40% of state lives nearby
 - King County – 2 million
 - Pierce County – 0.8 million
 - WA – 7 million
- Physical integrity
 - Ground stability
 - Infrastructure stability



Regions 5 & 6: State EOC. Regions 1-4: HF links to Eastern Regions



What can I do?

Take care of you and your family

- Emergency food, water, supplies, 72 hour kit (or longer)

Get your “radio” ready

- V/UHF and HF station
- Emergency power
- Become proficient at Winlink 2K (PACTOR and/or WINMOR)

Learn more

- Attend training events, guest speakers at club meetings
- Participate in ARRL or local SET, MARS exercises, CERT

Orphan Tsunami

<http://pubs.usgs.gov/pp/pp1707/>

alternate: <http://pubs.dggsalaskagov.us/webpubs/usgs/p/text/p1707.pdf>

https://www.youtube.com/watch?v=PFqm7qJ_RcU - Brian Atwater Talk

Cascadia Rising Exercise

https://huxley.wvu.edu/sites/huxley.wvu.edu/files/Cascadia_Rising_high_0.pdf

ARES

<http://www.wastateares.org>

<http://www.oregonaresraces.org/>

Mike Chaplin NC7Q, WA Communications lead (EFS 2), ARRL ASEC, ASRO

Monte Simpson AF7PQ ARRL WWA SM, WA STATE RO

What will you do?

“It will take 50 years for us to prepare for this impending earthquake” – Scott Ashford

Kearney Professor and Dean of the OSU College of Engineering
May-2015

The journey of a thousand miles begins with one step. – Lao Tzu, Tao Te Ching, ~550 BC (?)





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QUESTIONS?