

CASCADIA

Ready or Not

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Office of Emergency Management



Natural hazards are a part of life



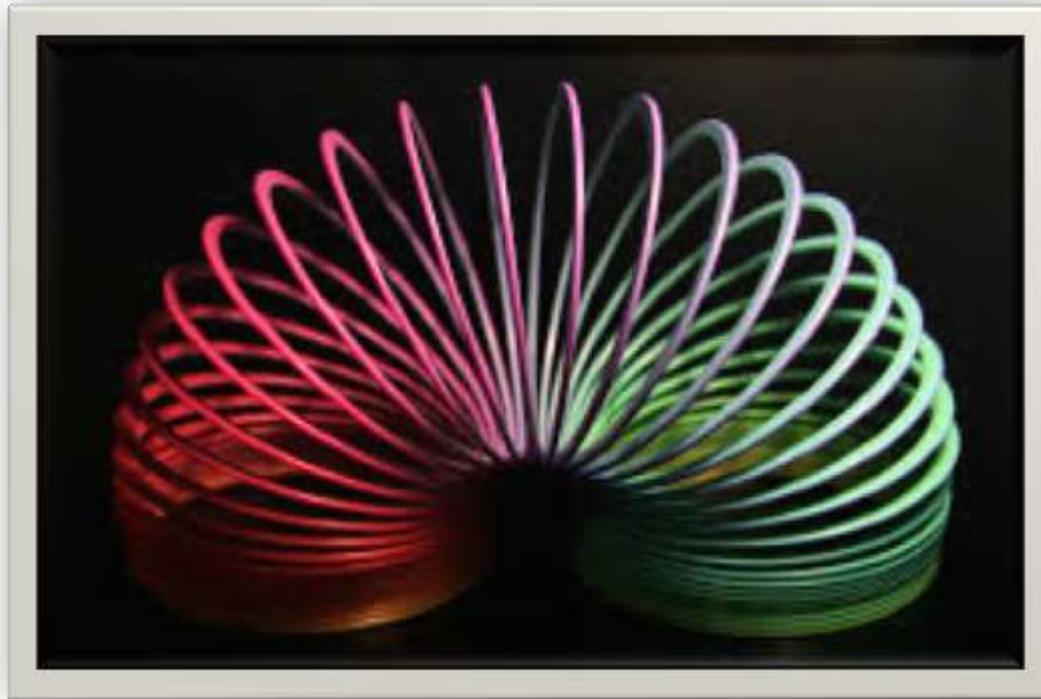
Disaster

- a sudden event, such as an accident or a natural catastrophe, that causes great damage or loss of life.



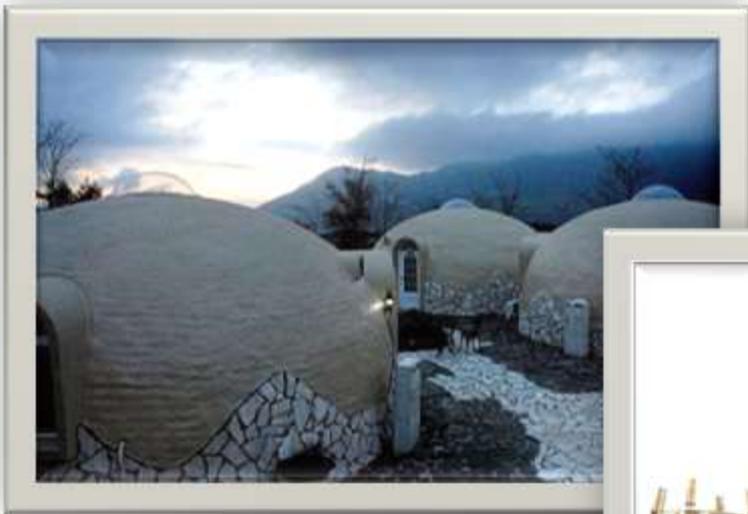
Resilience

- an ability to recover from or adjust easily to misfortune or change.



Resistance

- ability to withstand injury or destruction from a hazard



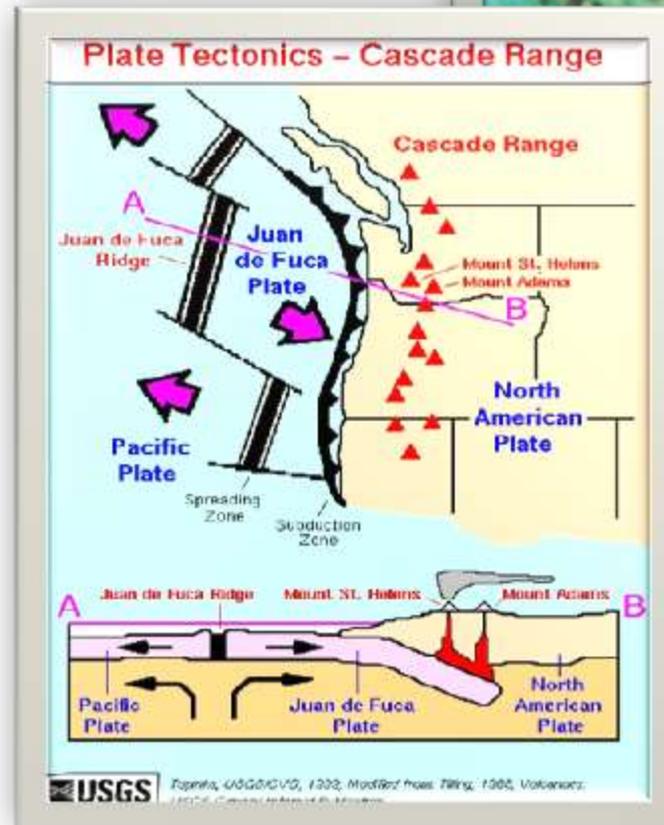
Cascadia Subduction Zone

the place where two lithospheric plates come together, one riding over the other



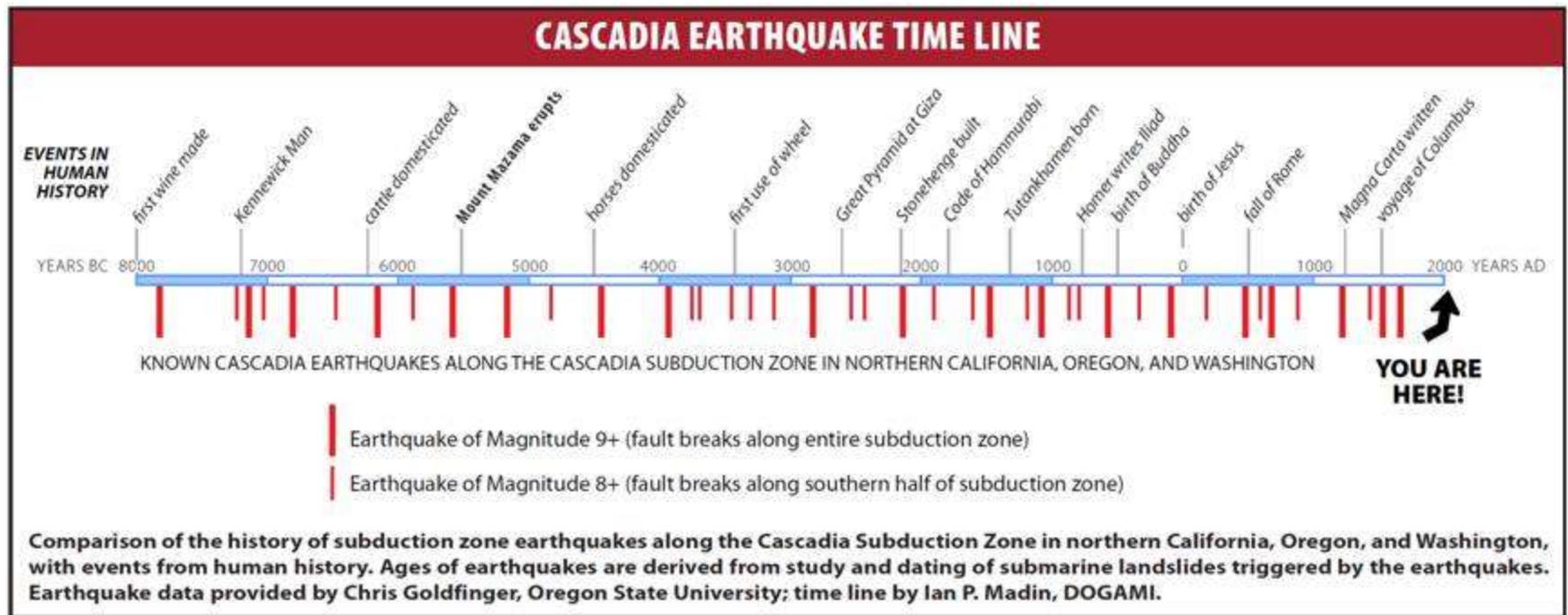
Cascadia Subduction Zone

- 600 mile fault zone
 - Northern CA to British Columbia
- Megathrust earthquakes
 - Up to 9.5 Mw
- Tsunami
 - Up to 130 feet

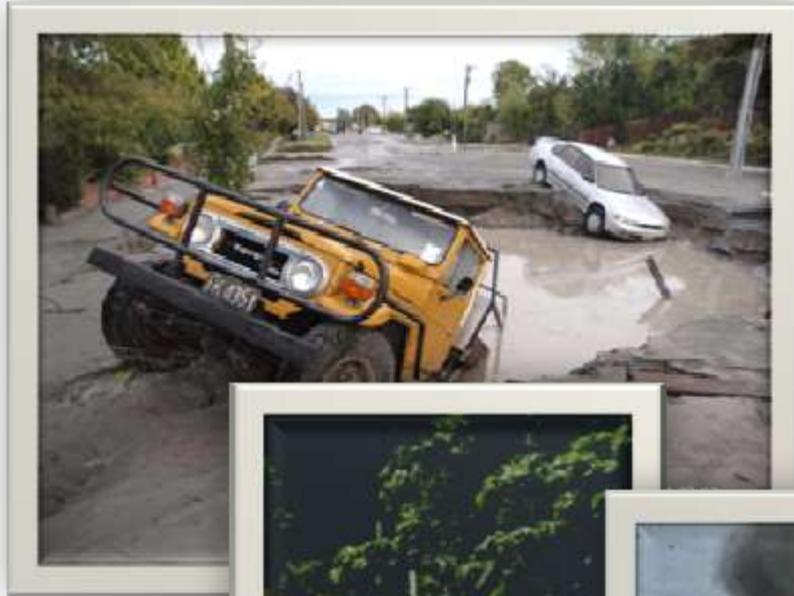


Cascadia Subduction Zone

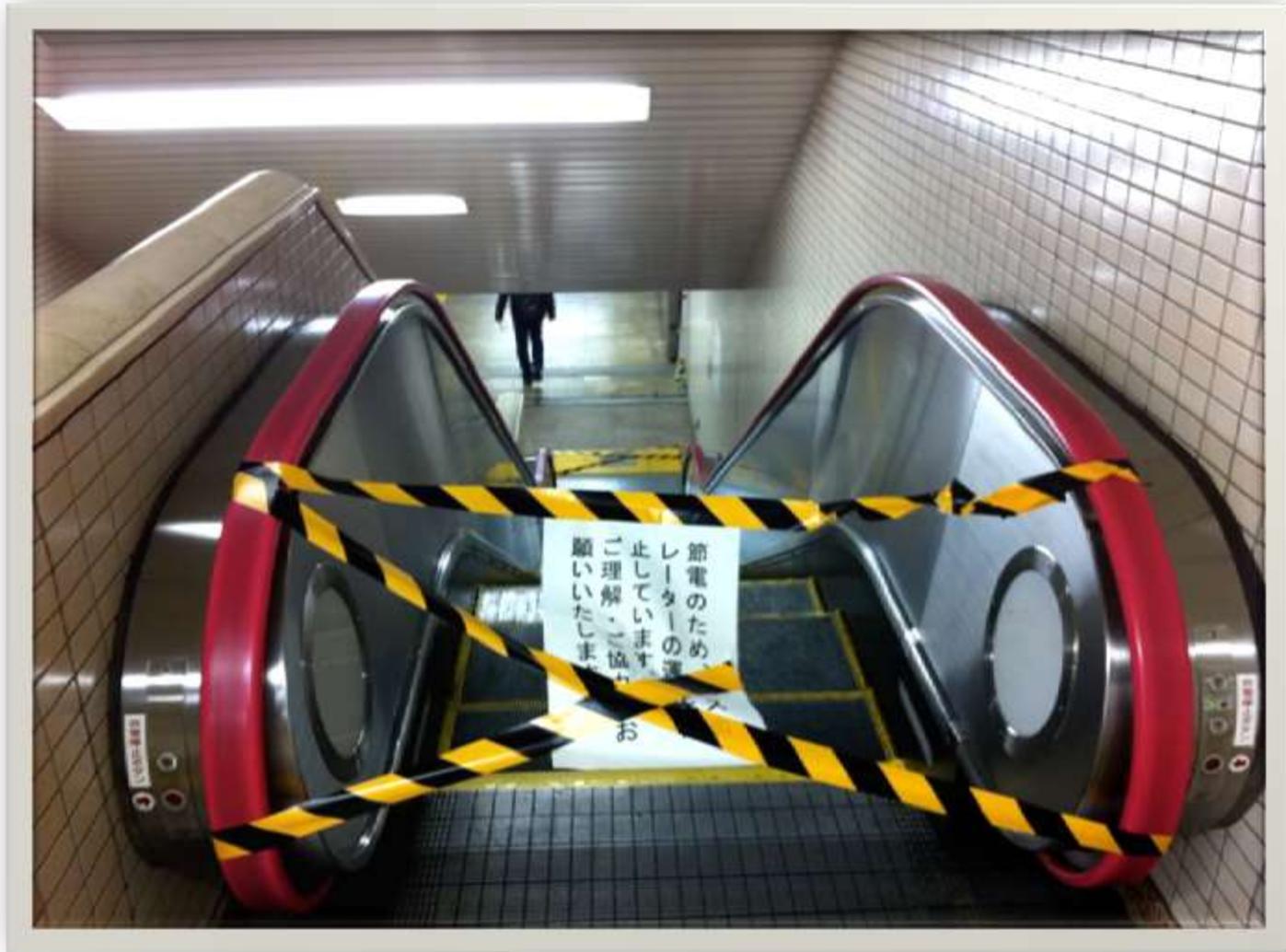
When have earthquakes occurred in history?



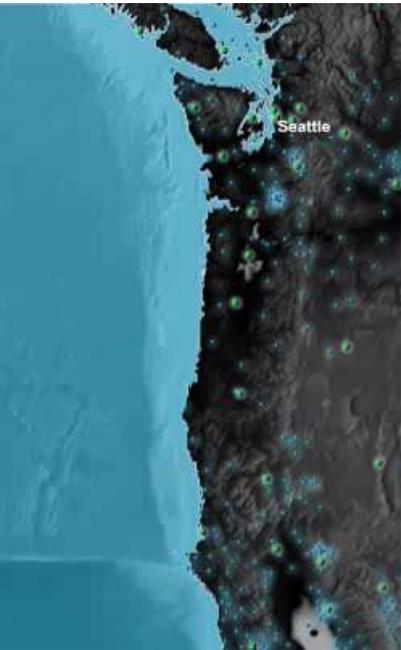
What will Oregon look like if Cascadia happened today?



What will Oregon look like if Cascadia happened today?



What will Oregon look like if Cascadia happened today?



- 15 million people live in the impact zone
 - No power for weeks/months/years
 - No fuel for weeks/months/years
 - No deliveries of food/water for weeks/months
 - No running water for weeks/months/years
 - No sewer system for weeks/months/years



How resilient is Oregon today?

Critical Service	Zone	Estimated Time to Restore
Electricity	Valley	1 to 3 months
Electricity	Coast	3 to 6 months
Police and fire stations	Valley	2 to 4 months
Drinking water and sewer	Valley	1 month to 1 year
Drinking water and sewer	Coast	1 to 3 years
Top-priority highways (partial restoration)	Valley	6 to 12 months
Healthcare facilities	Valley	18 months
Healthcare facilities	Coast	3 years

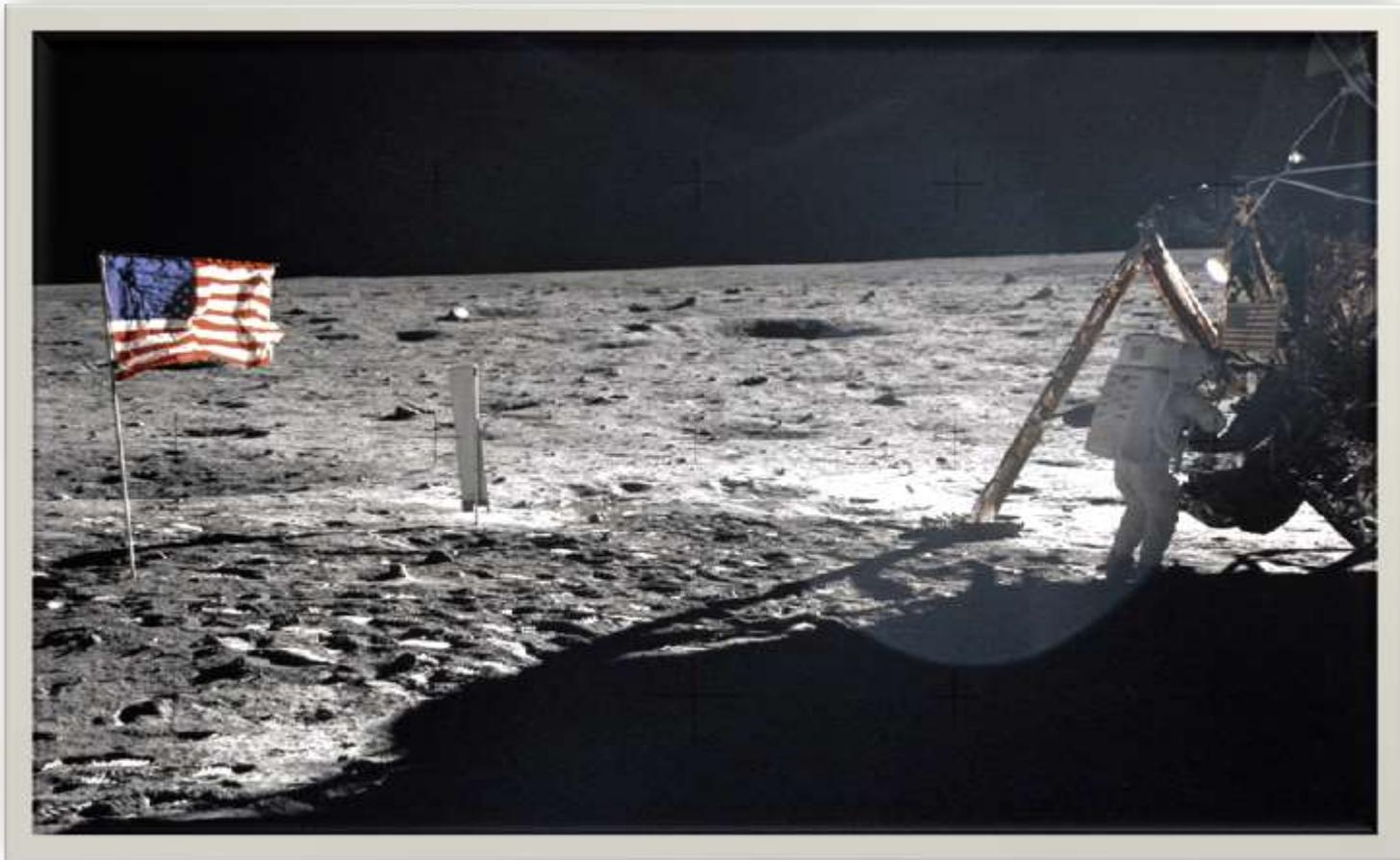
How resilient are other countries?

- After the Feb. 27, 2010 M8.8 Maule Earthquake, Chile
 - 90% communication services and 95% power supply within two weeks, and re-start commercial flights after ten days.
- After the March 11, 2011 M9.0 Tohoku Earthquake,
 - 90% power supply in ten days, 90% telephone lines in two weeks, and 90% cellular base stations in 19 days.



How do we get to where we need to be?

- Acknowledge that it can be accomplished



How do we get to where we need to be?

- Cultural shift that YOU will create
- Change this big doesn't happen by itself
- Change this big happens in small ways



How do we get to where we need to be?

- Cultural shift that will take a generation
 - Improved personal preparedness
 - Less than 30% U.S. trained in first aid
 - 90% in Norway
 - 80% in Germany



Cultural shift happens ...

- ... because people taking control and ownership



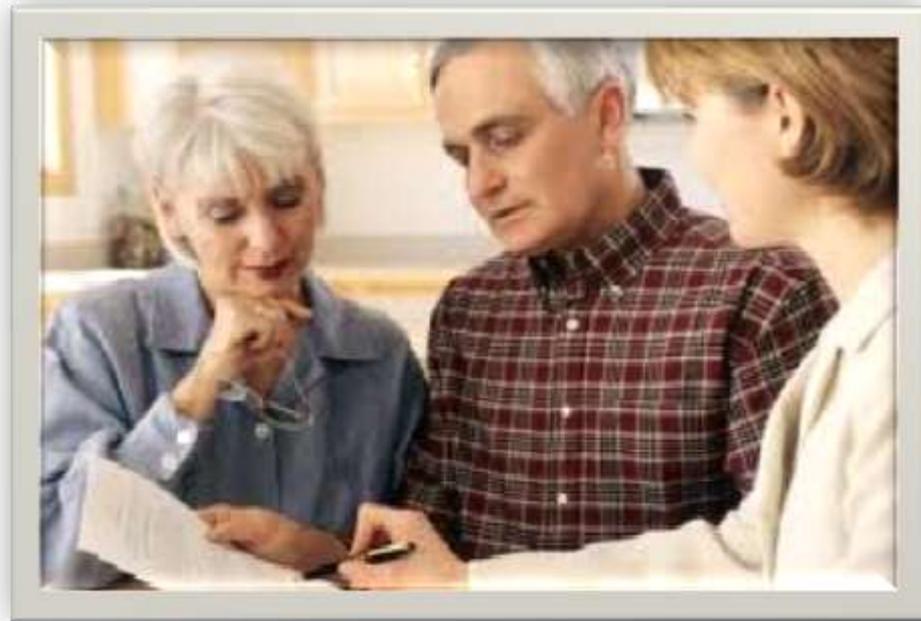
Cultural shifts happen ...

- ... because passionate people refuse to quit



Cascadia cultural shift – *it's seismic!*

- Preparedness: a part of daily life
 - Starts with talking about it



Cascadia cultural shift

- Preparedness a part of daily life
 - Make a plan
 - Get a kit
 - Do something
- ready.gov
- redcross.org



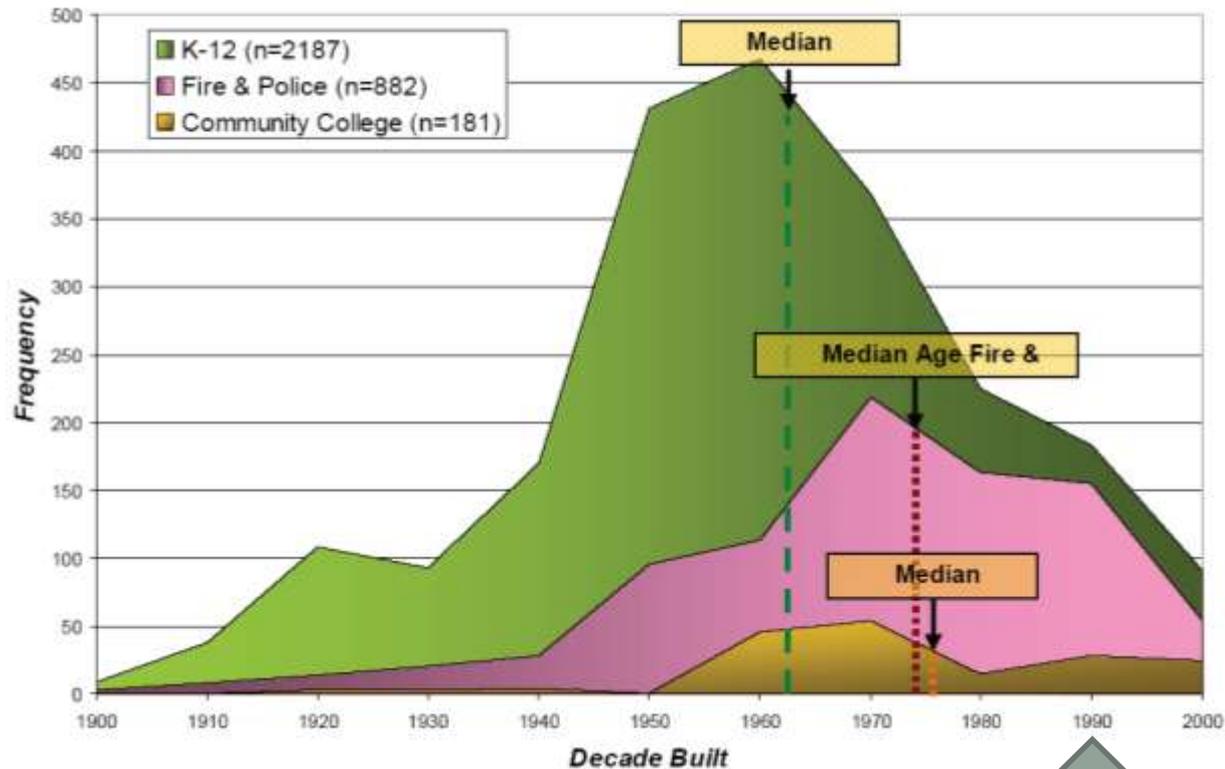
BREAK



What do we need to do better?



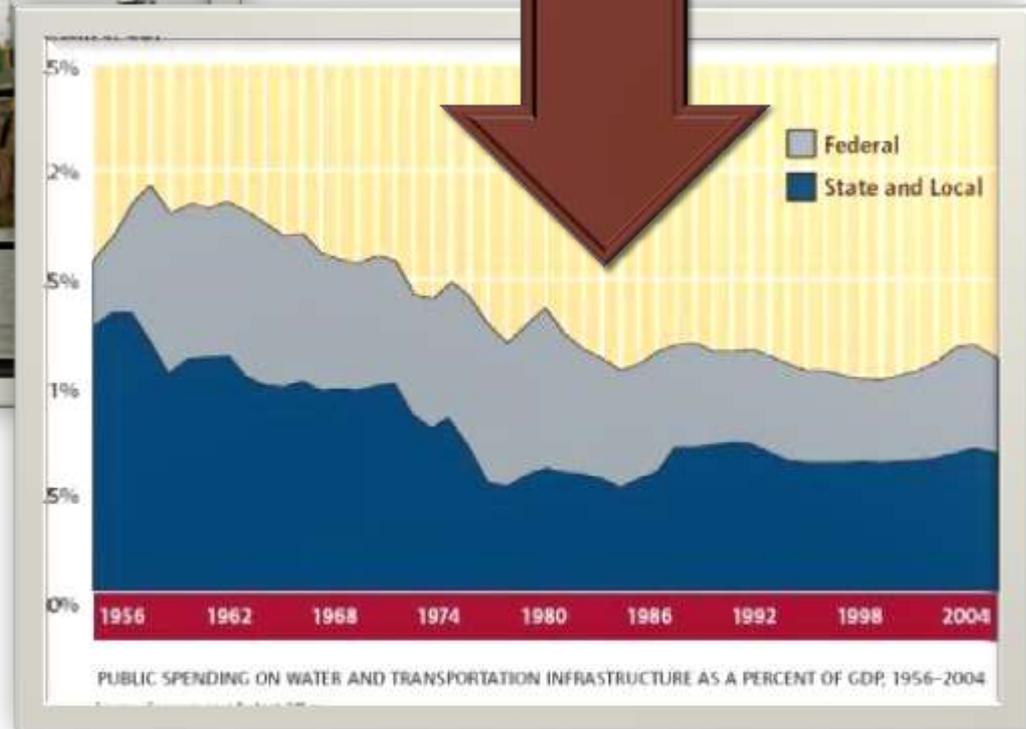
Cascadia shift towards better building



First seismic building codes
in Oregon



Spending on infrastructure

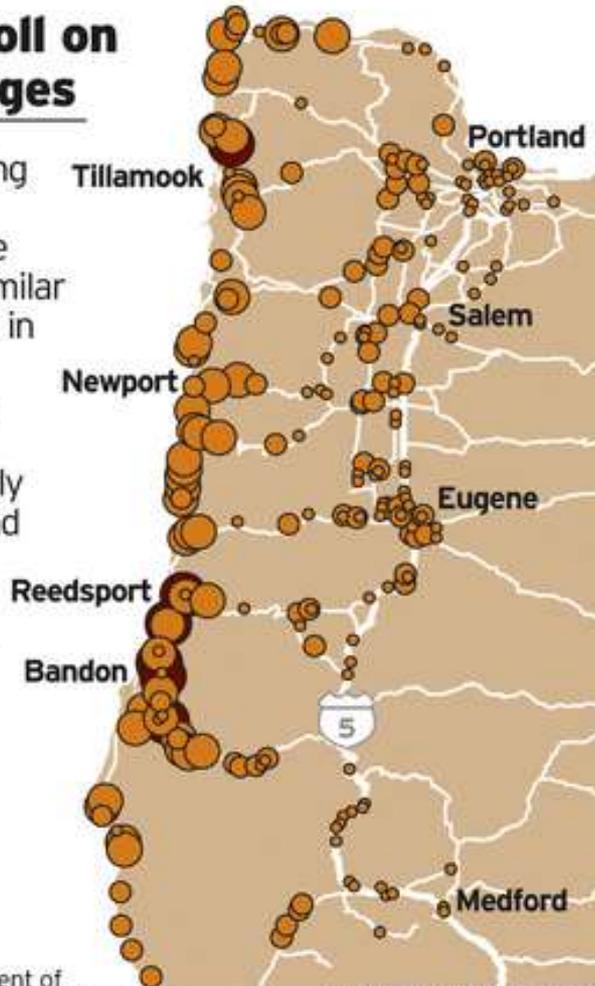


State of Oregon's bridges

A quake's toll on Oregon bridges

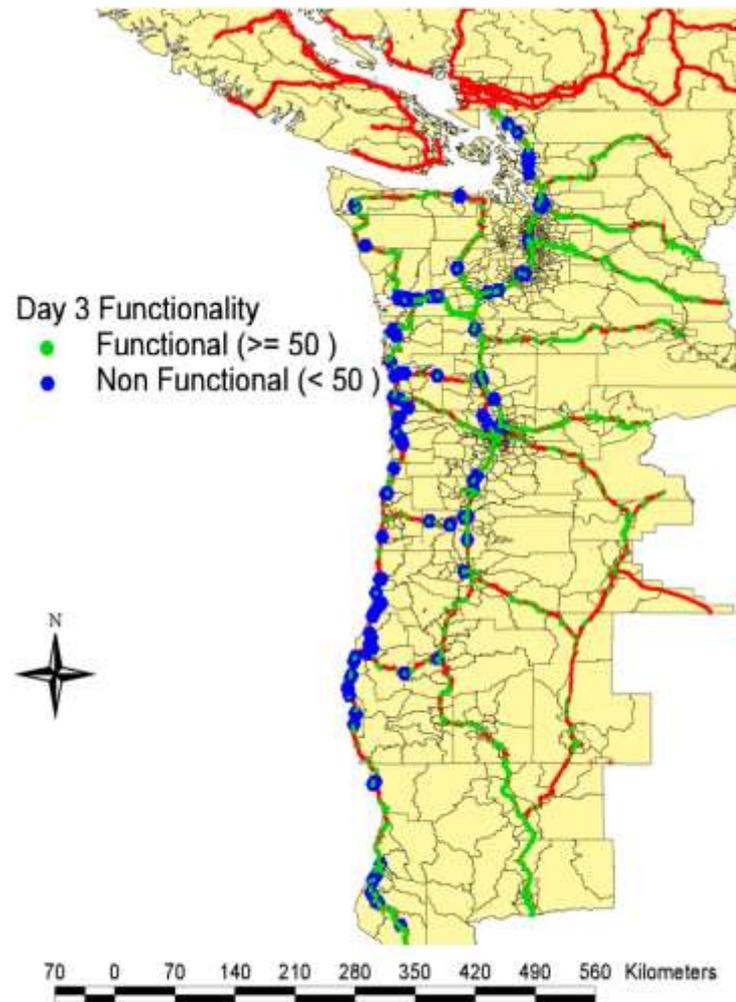
Computer modeling shows a 9.0 earthquake off the Oregon coast – similar to what happened in January 1700 – would collapse six major highway bridges, extensively damage others and cost \$1 billion for bridge repair and replacement.

- Slight
- Moderate
- Extensive
- Collapse



Source: Oregon Department of Transportation/Portland State University

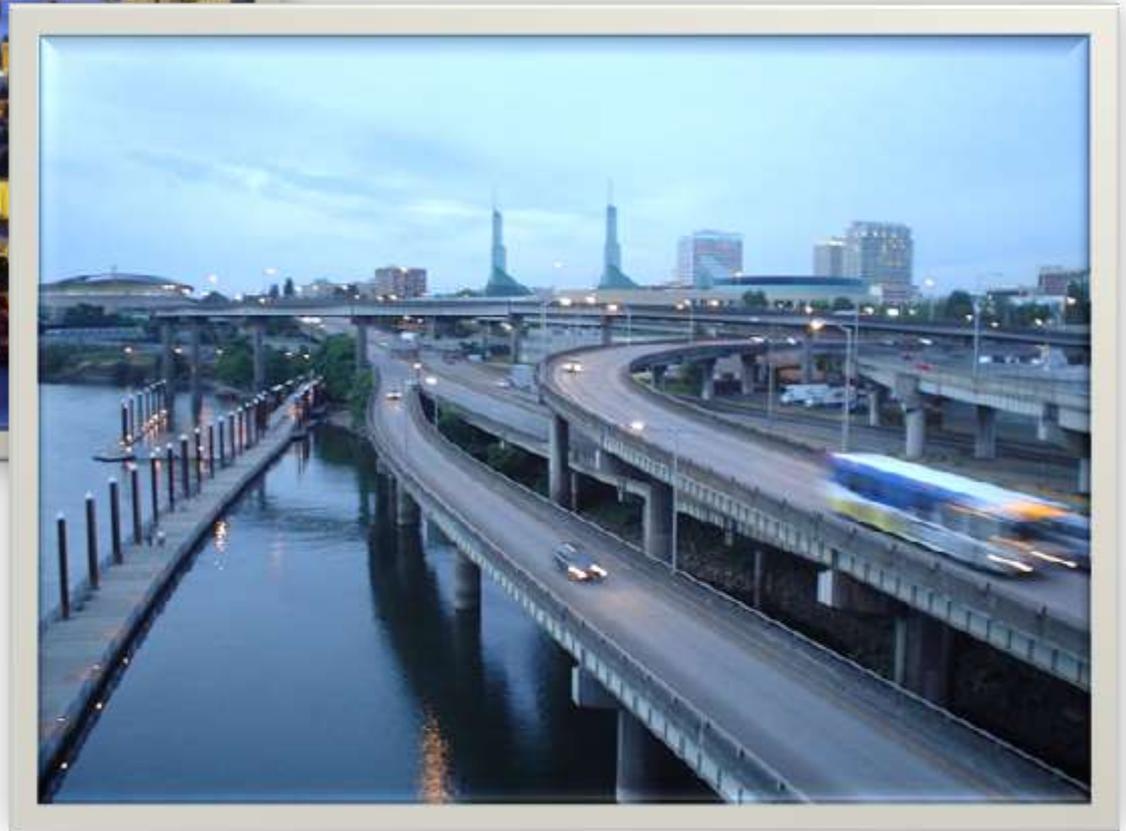
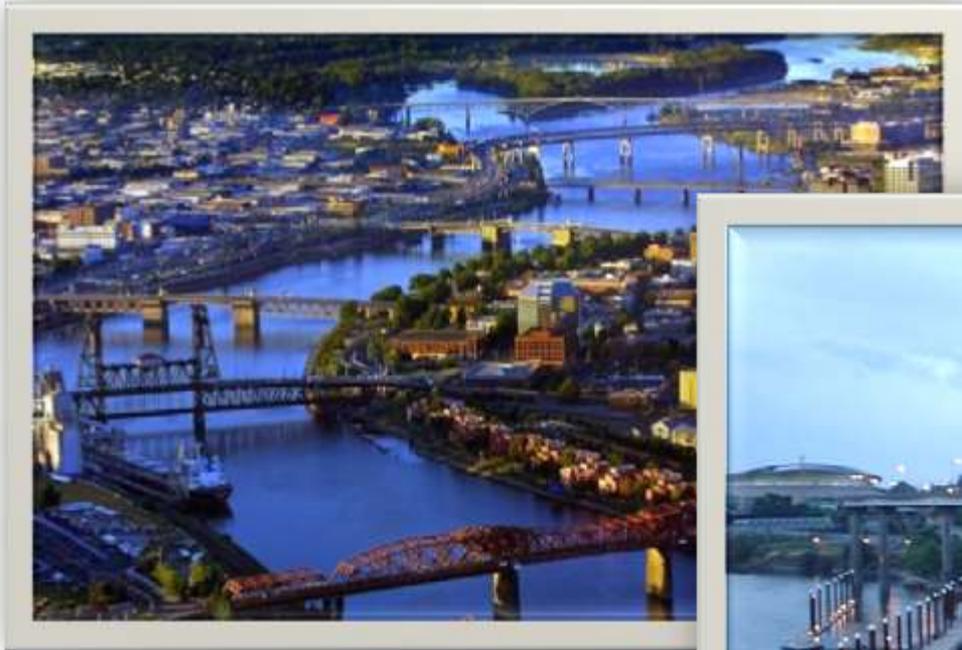
STEVE COWDEN/THE OR



Cascadia Scenario Bridge Functionality



State of Oregon's bridges



State of Oregon's bridges

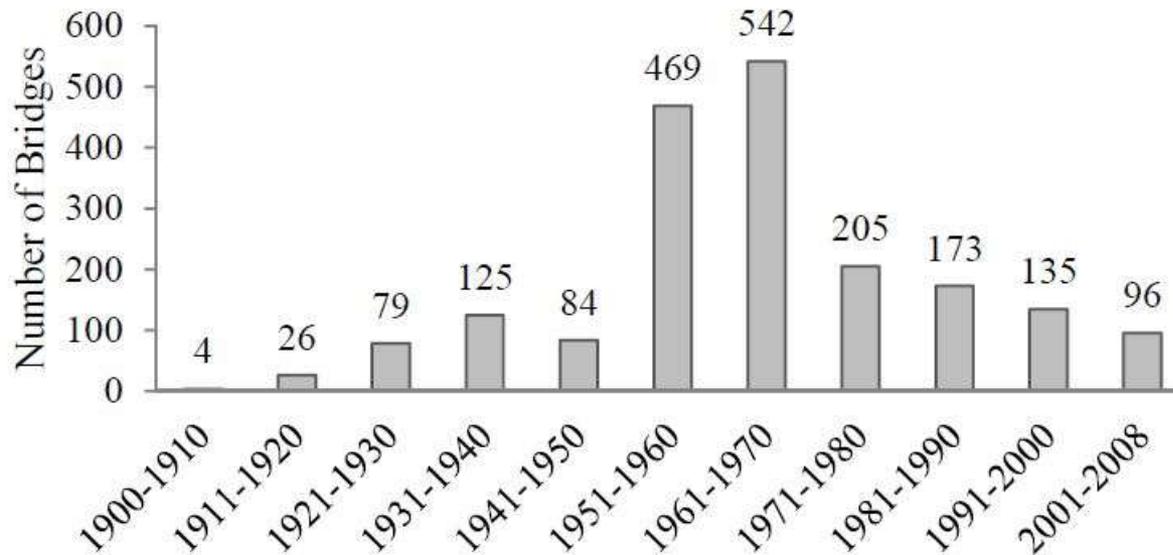


Figure 3: Distribution of year of construction completion



How hard can it be to fix?

Featured Videos

Salem debates 3rd Willamette bridge



Stories | standings | for Oregon Hou

Home > Pacific Northwest News

Third Willamette bridge planned in Salem after years of debate

Published: Monday, May 27, 2013 1:56 PM

AP By The Associated Press

Department of Transportation - Northwest Region - Region 5

SALEM RIVER CROSSING

The Salem River Crossing project is working toward finding a solution that will reduce traffic congestion for all users (buses, cars, trucks, bikes) on the two bridges that cross the Willamette River and the connecting roads in downtown and West Salem.

The Oregon Department of Transportation (ODOT) and the City of Salem published and collected public and agency comments on the Draft EIS through June 18, 2012.

The Draft EIS assessed the impacts of 11 alternatives plus a no-build alternative, as well as developing variations of what each alternative would look like. The final EIS will analyze the locally preferred alternative (all local jurisdictions must reach consensus on the Locally Preferred Alternative) and will respond to public and local agency/transportation comments from the Draft EIS.

What's New

- October 2013: The Oregon's Team meeting materials, including a map of the Salem River Crossing, are available.
- See the website for to have project updates emailed to you.

KGW Staff | Email | Follow

Posted on November 6, 2012 at 10:00 AM

Updated Tuesday, November 6, 2012 at 10:00 AM

SALEM--It's been a long time since ODOT and an over a dozen local agencies in Salem

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Clackamas County calls ODOT response to Columbia River Crossing concerns unsatisfactory, still considers opposition



Robert Libke memorial

Robert Libke: Full coverage

Complete coverage of the celebration of life for Oregon City Police Reserve Officer Robert Libke. ... More

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NO 3rd Bridge is on Facebook.

To connect with NO 3rd Bridge, click the Like button.

NO 3rd Bridge

1 like · Talking about this

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223 Columbia River Crossing: Tolling questions could scuttle bridge project

By Jeff Hummer | The Oregonian

Published November 15, 2012 at 12:46 PM

When Washington pulled out of the Columbia River Crossing bridge project, Oregon lost not just an equal funding partner, it also lost Washington's experienced toll-collection organization, which was being counted on to generate half the project's \$2.6-billion cost.

COLUMBIA RIVER CROSSING

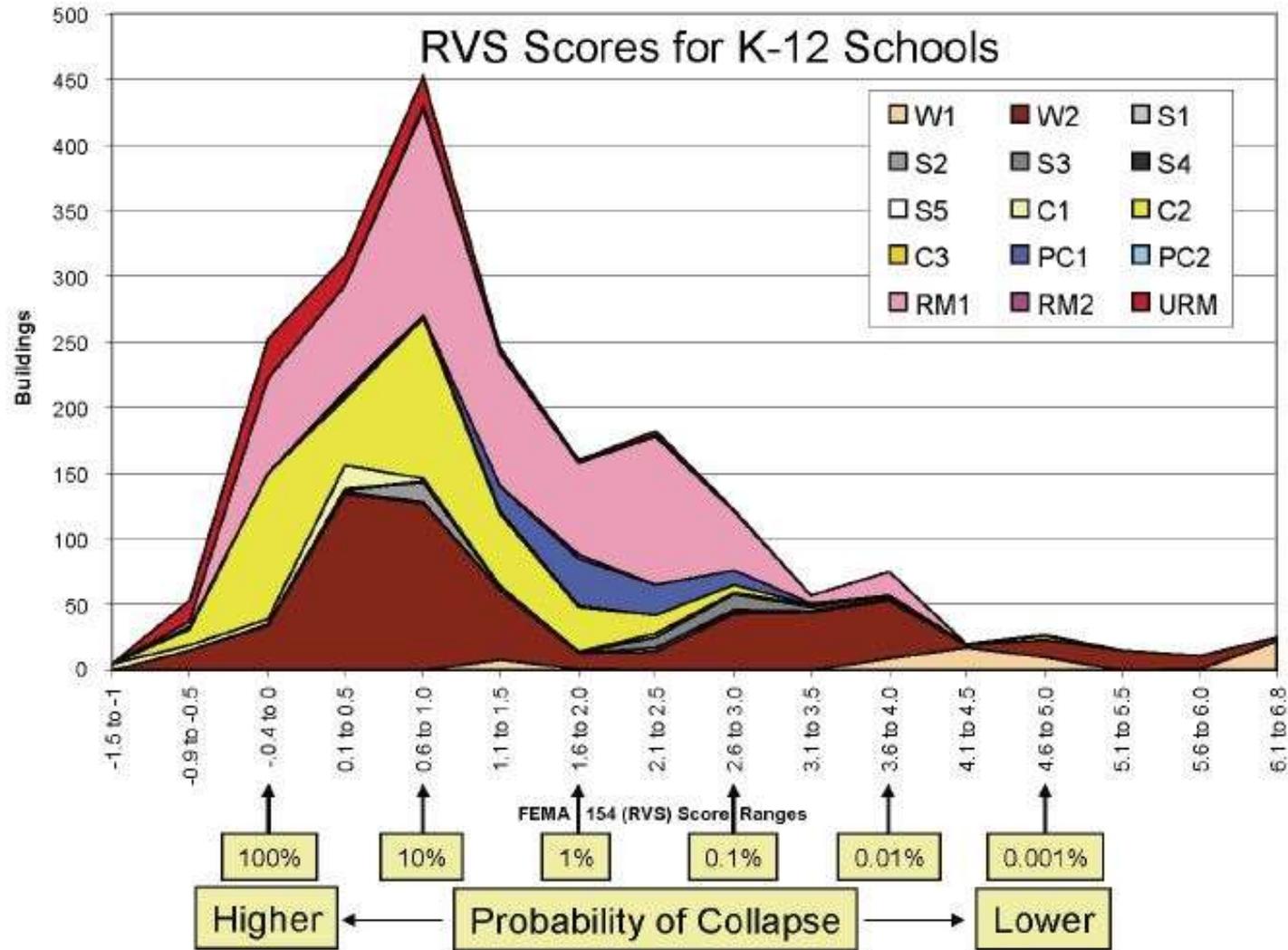
Columbia River Crossing, interim legislative committee approved

Columbia River Crossing: If they build it, who will drive over it?

Cover Oregon's State says it



Cascadia's effect on schools



Salem Keizer School District

<u>District Name</u>	<u>V High</u>	<u>High</u>	<u>Mod</u>	<u>Low</u>	<u>Sum</u>	<u>Seismic Risk</u>
Rainier SD 13	-	3	1	1	5	62
Redmond SD 2J	-	11	10	7	28	43
Reedsport SD 105	-	4	1	1	6	69
Reynolds SD 7	4	12	20	9	45	120
Riddle SD 70	1	4	-	-	5	280
Riverdale SD 51J	1	3	-	1	5	260
Rogue River SD 35	-	3	3	3	9	37
Salem Keizer SD 24J	15	20	9	25	69	248
Santiam Canyon SD 120 I		2	1	1	4	53



It doesn't take collapse to make a building unusable



How hard can it be to fix?

- Seismic Retrofit Grant Program
- Mixed results in bond measures



Serving the Communities of Lincoln County

BOND PROJECTS

Thank You, Lincoln County Voters!

You supported our \$63 million bond measure proposal by a large margin. We are humbled and encouraged by this show of support for our students and our schools!

Now, the task at hand is to accomplish our stated facilities improvement goals... *build a new high school for Waldport students, remove aging portable buildings and replace them with permanent classrooms, and make other repairs and improvements...* all while continuing to improve student achievement



Cascadia shift happens ...

- ... when people ...
 - Learn about the hazard
 - Make a choice
 - Take action
- Do one thing ...





**KEEP
CALM
AND
BE
RESILIENT**



Questions?

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