

Science, Policy, and Communication: *All or Nothing*

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Special thanks to Yumei Wang, Jay Wilson, Chris Goldfinger



Oregon's Problem

- 7-15% chance of M_w 9 CSZ quake in next 50 years
 - 32-42% chance of M_w 7.5-8.5 SCSZ quake
- 3-5 minutes of shaking
 - Amplification
- Many structures not built to recent/current code
 - Codes don't go beyond life safety
- Extensive liquefaction possible
- Extensive impact on W coast, Pacific



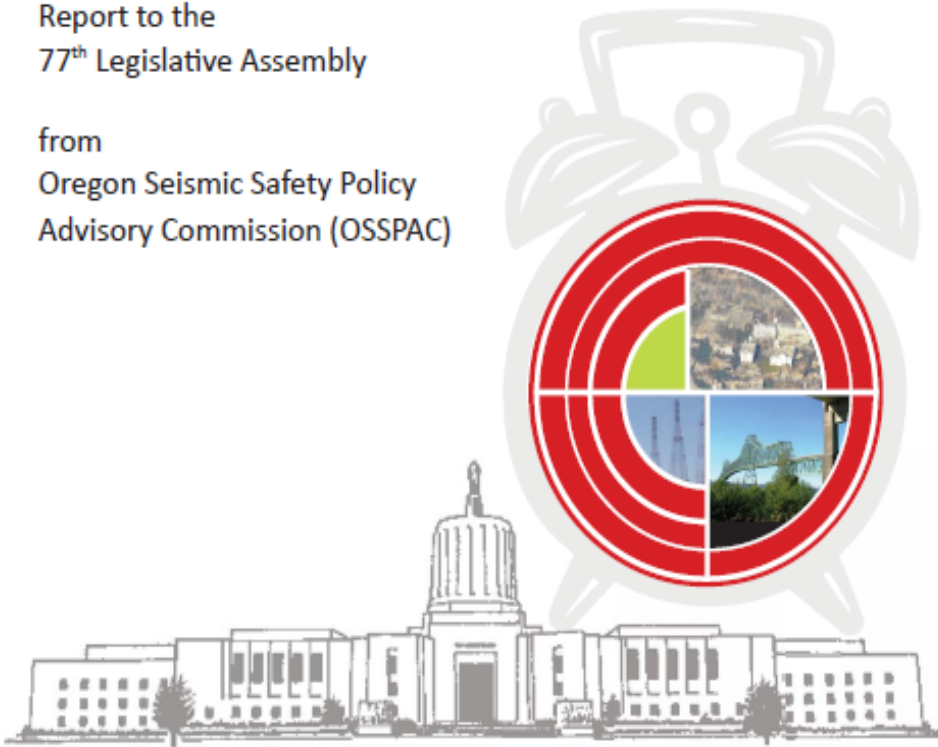
Oregon Resilience Plan (ORP)

The Oregon Resilience Plan

Reducing Risk and Improving Recovery
for the Next Cascadia Earthquake and Tsunami

Report to the
77th Legislative Assembly

from
Oregon Seismic Safety Policy
Advisory Commission (OSSPAC)



Salem, Oregon
February 2013

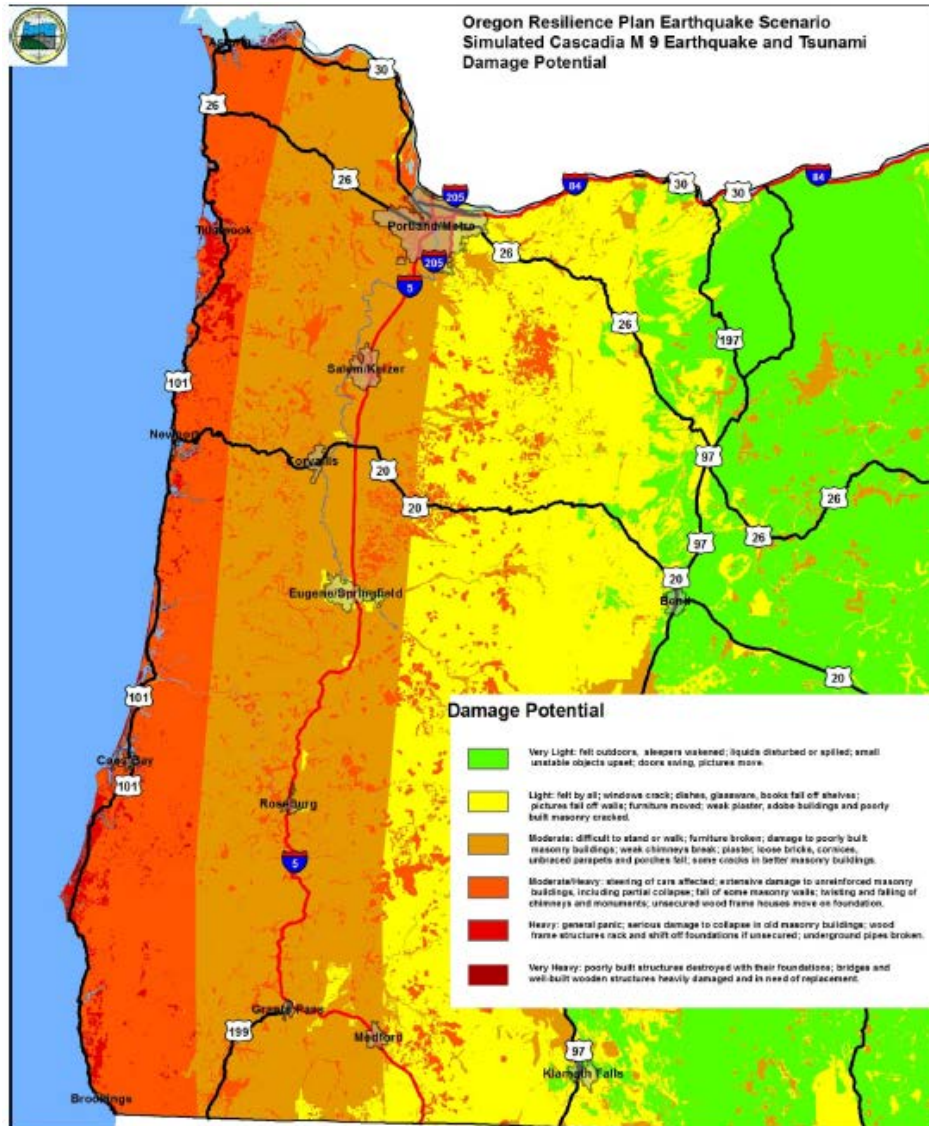
50-year Comprehensive Plan

- ☐ Save Lives
- ☐ Protect our Economy
- ☐ Preserve our Communities

- ☐ 169 volunteers
- ☐ \$0 Funding
- ☐ One-year Schedule



Strong Shaking and Tsunami





Liquefaction



Wikimedia Commons: Martin Luff



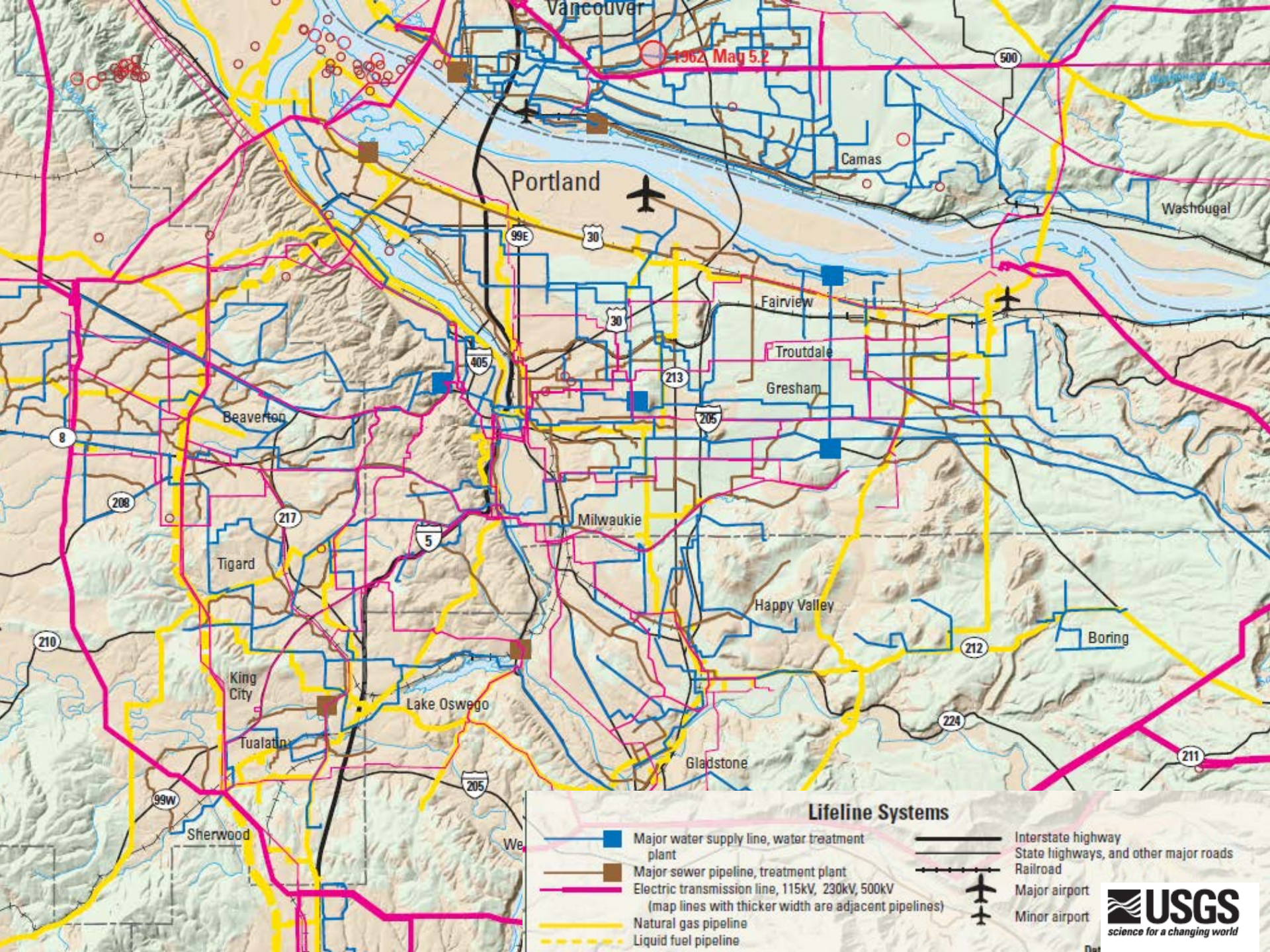
Chile, 2/27/10: weak soils (Y. Wang)





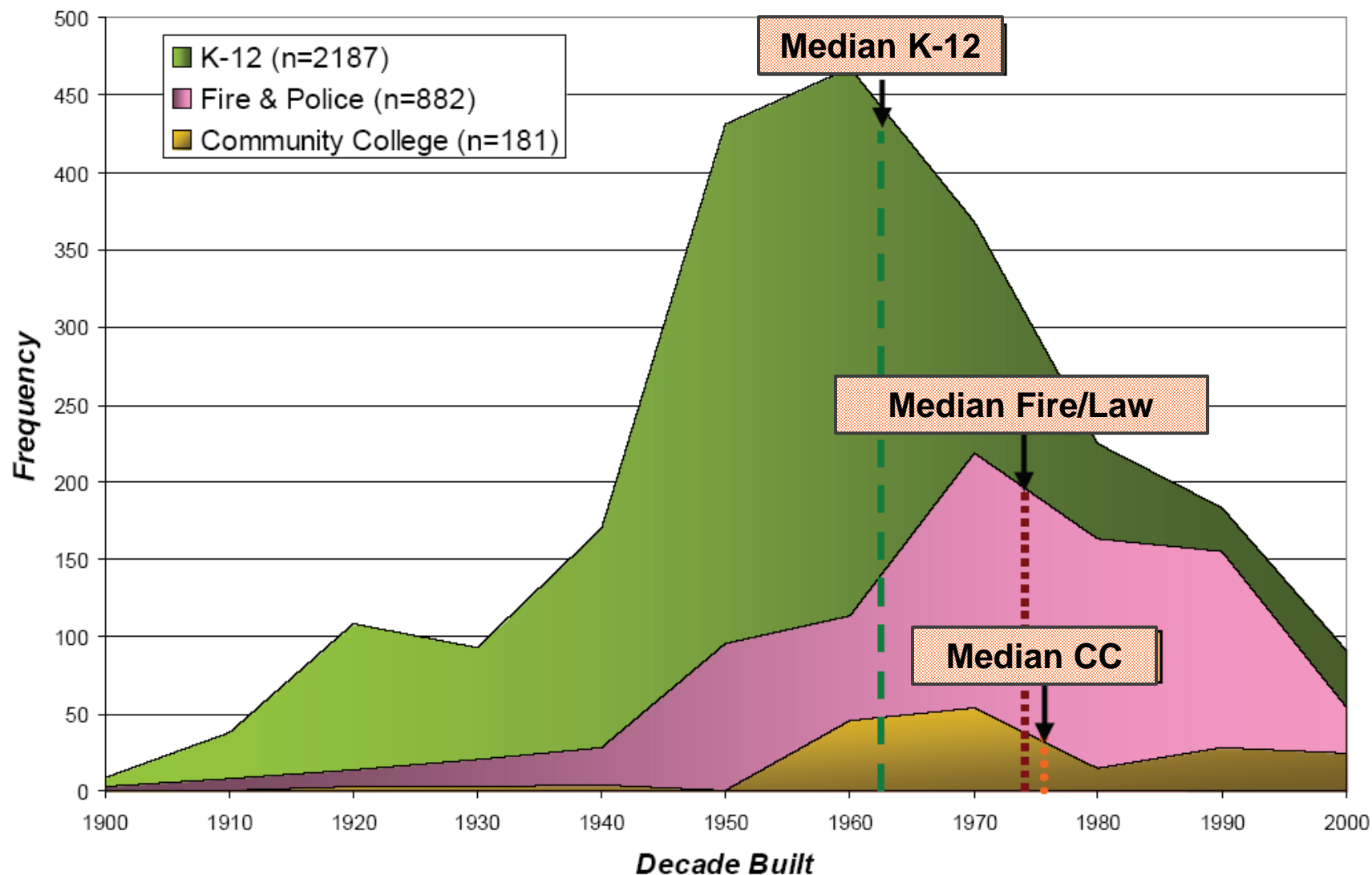
What Else?

- **Interdependencies: Lifelines**
 - Utilities
 - Transportation
 - Fuel
 - Countless microbreweries and wineries
- **Difficult to grasp low-frequency, high-impact events**
 - Inadequate seismic knowledge + inadequate codes
 - Many “best practices” untested
 - Exercise challenges





Oregon Education & Emergency Facilities





Key ORP Findings

- OR far from resilient to impact of great Cascadia earthquake today
 - Casualties (1,000-10,000)
 - Economic loss (close to 20% of state GDP)
 - More than one million truckloads of debris
- Liquid fuel vulnerability





OR Resilience Task Force

77th OREGON LEGISLATIVE ASSEMBLY--2013 Regular Session

Enrolled

Senate Bill 33

Printed pursuant to Senate Interim Rule 213.28 by order of the President of the Senate in conformance with pre-session filing rules, indicating neither advocacy nor opposition on the part of the President (at the request of Governor John A. Kitzhaber, M.D., for Oregon Military Department)

“The task force shall facilitate a *comprehensive and robust plan to implement the strategic vision and roadmap of the ORP* for responding to the consequences of naturally occurring seismic events associated with geologic shift along the CSZ by making recommendations about...”

www.oregon.gov/OMD/OEM/Pages/Resilience-Taskforce.aspx



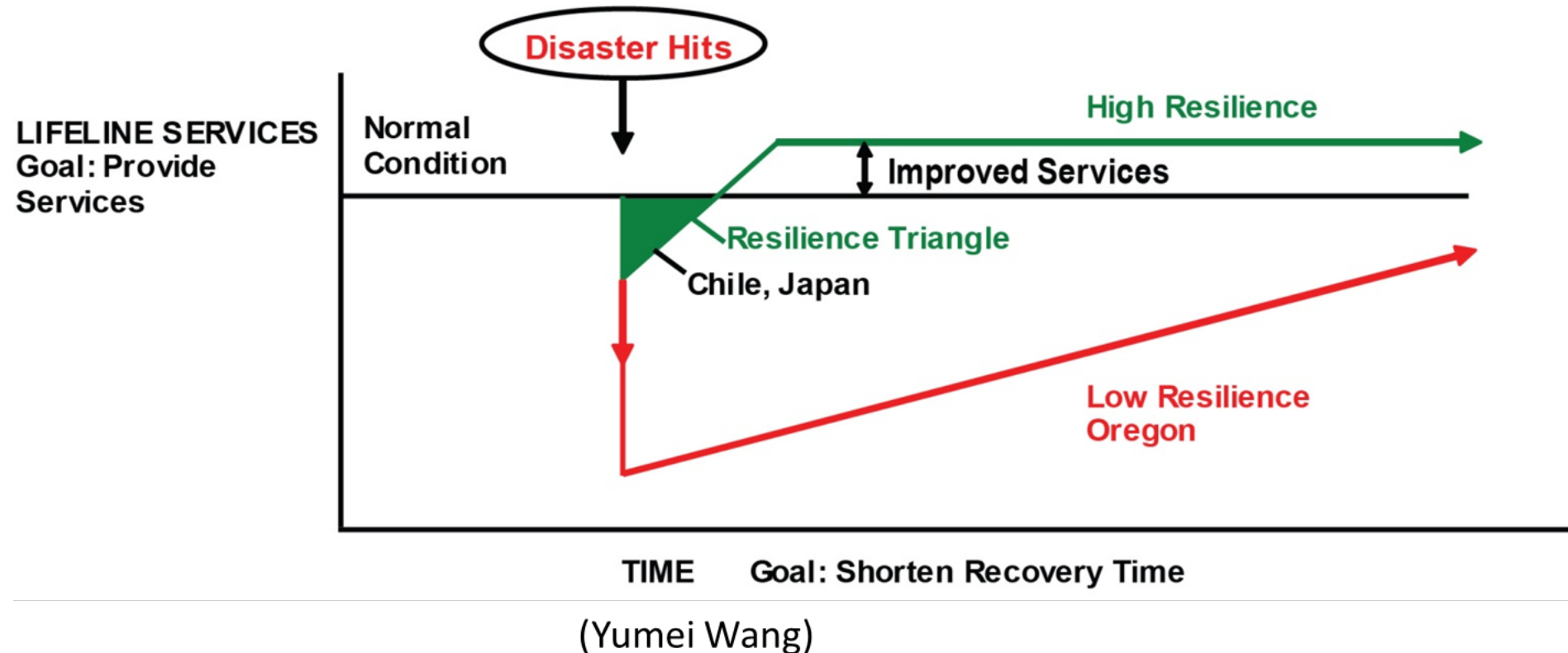
What Does Resilience Mean?



(Degenkolb)



Our Definition of Resilience



- **Resilience: Save lives, Reduce Losses, Speed Recovery, Rebuild Better**



2015 Legislative Session

- ✓ **State Resilience Officer**
- ✓ **> \$200M for critical-facility rehab**
- ✓ **Funding facilitation for seismic rehab of multi-occupant buildings**
- ✓ **Liability protection for privately-owned utilities**
- ✓ **Require insurance to cover 90-day Rx at walk-in pharmacy**
 - **Still need to address additional prescription for reserve**



How Did We Get There?

- **Direct engagement on policy**
 - Help write legislation, serve as SMEs
 - Testify; trusted resource
 - Serve on committees
 - Write letters (within boundaries)
- **Communicate**
 - Can you get your point across to non-scientists without dumbing it down?
 - Trusted resource
- **Follow up**



Media

- Pitch your story
 - Know your reporters and editors
 - Realistic expectations
- Look for opportunities
 - *New Yorker* articles
 - OPB *Unprepared*
- Does your employer have PIOs?



What's Next?

- DOGAMI to adopt updated inundation zones
 - Science-based policy (ORS 455.446)
- State-local hazards coordination on land-use options (esp. tsunami)
- Mass care, shelter, medical care
- Fuel vulnerabilities
- ORTF report intended to address first biennium only
 - Foundation of *sustainable process*



Follow Up

- **Touch base at end of session**
- **Identify issues, priorities, and strategies for next session**
- **Look for opportunities**
- **Don't wait for things to come to you!**



Opportunity

- Front page
- Business focus
- TV evening news (2.5-minute feature)
- Drive-time news (2.5-minute feature)
 - Most news items are ≤ 30 sec



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