Oregon
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Oregon Resilience Planning Overview

Background

A Cascadia earthquake and tsunami has the potential to cause an unparalleled economic and human catastrophe for the State of Oregon because its impacts are region-wide. Over 40 great earthquakes of magnitude 8 and larger have struck Western Oregon during the last 10,000 years. The current calculation of a 37% conditional probability that a Cascadia earthquake will strike Oregon within the next 50 years means that it is now prudent to understand and take steps to mitigate this risk to our economy and to our businesses, homes, and communities.

In April 2011, the Oregon House of Representatives unanimously passed House Resolution 3 (sponsored by Rep. Deborah Boone, D-Cannon Beach), which directs Oregon Seismic Safety Policy Advisory Commission (OSSPAC) to "lead and coordinate preparation of an Oregon Resilience Plan that . . . makes recommendations on policy direction to protect lives and keep commerce flowing during and after a Cascadia (megathrust) earthquake and tsunami." The Plan and recommendations are due to be delivered to the Oregon Legislative Assembly by February 28, 2013.

Richard A. Reed, President Obama's Senior Director for Resilience Policy, and Oregon Governor John Kitzhaber have acknowledged our resilience planning efforts and have provided their endorsement.

Resilience

Resilience as defined in House Resolution 3 means that Oregon citizens will not only be protected from life-threatening physical harm, but that because of risk reduction measures and pre-disaster planning, communities will recover more quickly and with less continuing vulnerability following a Cascadia Subduction earthquake and tsunami. OSSPAC defines the Cascadia earthquake to be a Magnitude 9.0 Cascadia Subduction earthquake with an average recurrence of once every 500 years.

To achieve the goal of rapid recovery, we need arrangements in place for government continuity, resilient physical infrastructure, and business/economic continuity. Resilient physical infrastructure is the foundation.

Resilience Planning Objective and Methodology

Oregon Seismic Safety Policy Advisory Commission (OSSPAC) will lead and coordinate with government agencies, academia, business and professional communities to develop a comprehensive 50-year resiliency plan so that the state will become a resilient state by 2062. It will work with various government agencies and advisory bodies to collect available studies and reports and develop data as appropriate to:

- assess **conditions** of existing critical facilities and lifeline systems,
- evaluate **effectiveness** of current design and construction practices relative to earthquake resilience,
- develop **desired performance targets** (in terms of usability and timeframe required for the restoration of services) to meet resilience goals, and
- prepare **recommendations** for statewide policies and actions to achieve the desired performance targets.

We will utilize concepts and ideas developed for San Francisco by the San Francisco Planning + Urban Research Association (SPUR) and by the Resilient Washington State initiative in our neighbor to the north, and apply them to a statewide level. The final SPUR documents for the Resilient City project in San Francisco can be found at http://www.spur.org/resilient_city.

To promote communication with the general public and policy makers, we will strive to use language appropriate for a general audience and minimize use of highly specialized technical vocabulary when developing the resilience plan.

Resilience Planning Organizational Structure

Oregon Seismic Safety Policy Advisory Commission (OSSPAC) will be leading and coordinating the preparation of the plan through its Resilient Oregon Steering Committee. OSSPAC Steering Committee consists of five commissioners as follows:

Kent Yu (Chair, Public member/Structural)
Jay Wilson (vice Chair, Public member/local government)
Althea Rizzo (OEM, State Earthquake/Tsunami Manager)
Ian Madin (DOGAMI)
Stan Watters (Public member/Utilities)

As a state commission with limited staff and resources at its command, OSSPAC must depend on voluntary assistance from Oregon's government agencies, academic, business, and professional communities to complete this task. OSSPAC has assembled one Advisory Panel and eight task work groups that represent a broad cross section of contributors, including policy advisors, government officials, emergency/business continuity managers, professors, engineers, scientists, business representatives, sustainability practitioners and others.

Advisory Panel

OSSPAC will seek strategic advice from the Advisory Panel throughout the development of the resilience plan. Its makeup is also intended to augment OSSPAC's overall capabilities and broaden OSSPAC representation from government, legislature, geographic region, and business.

The Advisory Panel currently consists of

Cameron Smith (Public Safety Advisor to the Governor)
The Hon. Peter Courtney/Ryan Mann (Oregon Legislature)
JR Gonzalez (Oregon PUC)
Bruce Johnson (ODOT)
Ed Dennis (Oregon Dept. of Education)
Yumei Wang (NEHRP)
Onno Husing (Oregon Coastal Zone Management Assn.)
Nate Wood, Ph.D. (USGS)
Scott Ashford, Ph.D. (OSU)
Chris Goldfinger, Ph.D. (OSU)
Andre LeDuc (U of O)
Jeff Soulages (Intel)
Edward Wolf (Oregon citizen)
Leon Kempner (Regional/Bonneville Power Administration)
Don Lewis (DOGAMI)
Jean O'Connor (Oregon Health Authority)

Eight Task Groups

OSSPAC Steering Committee has established eight task groups to address the state's critical facilities and its energy, water/wastewater, transportation, and telecommunications systems, mitigate tsunami risk, and enhance business continuity. The state's Department of Geology and Mineral Industries (DOGAMI) will support our work with mapped depictions of Cascadia earthquake scenarios based on the best available science.

Eight task groups are listed below:

1. Magnitude 9.0 Earthquake/Tsunami Scenario led by Ian Madin (OSSPAC/DOGAMI)
2. Critical/Essential Buildings led by Ed Quesenberry and Trent Nagele (SEAO)
3. Energy led by Stan Watters (OSSPAC/Port of Portland) and JR Gonzalez (PUC)
4. Telecommunications led by Althea Rizzo (OSSPAC/OEM) and Mike Mumaw (OSSPAC/Beaverton)
5. Transportation (Highways + Bridges/Ports/Railroads) led by Bruce Johnson (ODOT)
6. Tsunami Risk Mitigation led by Jay Wilson and Jay Raskin
7. Water and Waste Water System led by Mike Stuhr (PWB) and Mark Knudson (TVWD)
8. Business Continuity led by Susan Steward (OSSPAC/BOMA) and Gerry Williams (OSSPAC)

Magnitude 9.0 Earthquake/Tsunami Scenario Group will develop:

- Ground shaking intensity maps
- Tsunami Inundation maps
- Landslide and liquefaction maps

All other task groups will utilize the various maps developed to generate their resiliency plans. The task group makeup is expected to vary from one group to another due to the difference of the sectors. However, we expect each group to have at least one emergency manager, one engineer, and one business representative.

The Critical Building Task Group will address:

- Emergency Operations Centers
- Education facilities (K-12, College and University);
- Healthcare facilities (Hospitals and MOBs)
- Police and Fire Stations
- Critical government administration/services facilities
- Emergency sheltering facilities
- Community retail centers
- Financial/banking buildings
- Residential housing
- Vulnerable buildings (Un-reinforced masonry buildings and non-ductile concrete buildings)

The Energy Task Group will address the systems listed below:

- Electricity
- Natural Gas
- Liquid Fuel
- Alternative Energy – Solar, Wind and others
- Dams

The Telecommunications Task Group will address the systems listed below:

- Communication Network and Database
- Telecommunication Infrastructure

The Transportation Task Group will address the systems listed below:

- Bridges (owned by ODOT, Counties, or Cities)
- Airports and river and sea ports
- Railroads
- Mass Transit (Trimet)
- Columbia River

Tsunami Risk Mitigation Group will address the following:

- Tsunami evacuation
- Zoning and land use policy
- Critical facilities
- Re-building community
- Debris management

The Water and Wastewater Task Group will address the systems listed below:

- Drinking water storage, transmission, and distribution systems
- Wastewater collection systems and treatment plants

Interdependency issues among different lifeline sectors will be addressed through coordination of the steering committee and collaboration of Group leaders at a regular monthly meeting.

January 26, 2012 Kickoff Workshop

We will kick off the Oregon resiliency planning effort on January 26, 2012 (the 312th anniversary of the most recent Cascadia earthquake) at the Port of Portland.

We anticipate that the participants will get an overview of House Resolution 3 and the roadmap of the Oregon resilience plan, and learn about what Washington has accomplished with its Resilient Washington State initiative. During the breakout sessions, the leaders of each task group will facilitate and lead the discussion of the scope of their group, and work with their participants to develop action plans and schedules. Each task group will assign a designated participant to take notes, and the OSSPAC steering committee will assemble a final document based on information submitted by all workgroups. A second workshop will be scheduled in the fall of 2012 for each group to report their progress.