

Lifeline Resilience Teams



Collaboration with Other Entities

Several other entities are heavily engaged in building quake resilience in the Cascadia Region. Groups that currently partner with CPrep include:

- FEMA, the Federal Emergency Management Agency, Region 10 (Seattle office)
- The Oregon Governor's Chief Resilience Officer (CRO), Mike Harryman
- OSSPAC, the Oregon State Seismic Policy & Advisory Council, the official state body that provides policy advice to the government
- CREW, the Cascadia Region Earthquake Workgroup, another regional nonprofit, funded by FEMA and based in Seattle
- Statewide Offices of Emergency Management and Emergency Management Associations
- Many local emergency/disaster preparedness groups and government agencies (CERT/NET, etc.)

CPrep will work closely with all these groups, report regularly to them on behalf of all the teams, and seek their advice and participation. Special program advisory councils may be formed to work with the teams.

Research Products

In addition to the expertise and research provided by team members, OSSPAC and other agencies including the CRO, the team will use the information developed in the preparation of the original Oregon Resilience Plan in 2013, and any relevant academic research conducted before or during the team's work.

The team will produce occasional research papers and progress reports related to their lifeline, which will be used, along with reports from other teams, as input to an

annual "resilience scorecard" update summarizing progress to date on all lifelines. The scorecard will be published and disseminated to the public through news media, and to policymakers through presentations to state and local government groups.

The Chief Resilience Officer has been charged with producing an update to the Oregon Resilience Plan by 2021. The teams' research, reports, and scorecards will be incorporated as appropriate into this update, which will be similarly disseminated.

Making Investments

This work will cost money. We are joining together in common cause to increase investments in earthquake resilience, in order to save our economy from devastation. But lifeline operators will be reluctant to carve these investments totally out of their own profit margins. Some of the cost will need to be spread out among customers, accompanied by the operators' firm commitment to investing the additional revenue on specified infrastructure improvements.

An important goal of all these teams, and their research and work products, is to find ways for lifeline infrastructure operators to significantly increase their investments in resilience. This will allow the economy of Oregon and other parts of Cascadia to recover more quickly and completely from damage caused by the Cascadia Subduction Zone earthquake/tsunami.

The teams will provide a supportive environment for negotiations among the operators and their customers. After all, it is in everyone's interest to succeed in building our quake resilience. What has been lacking in our preparedness is a forum for these conversations to take place – a forum the LRTs will provide.

Cascadia Prepared is a private-sector regional organization, covering areas of Northern California, Oregon, Washington and southern British Columbia subject to the recurring and overdue Cascadia Subduction Zone earthquake. We are initiating Lifeline Resilience Teams in Oregon, but will endeavor to expand their reach, or proliferate them, into other parts of Cascadia, as interest and resources permit.

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Overview

Cascadia Prepared, a 501(c)(3) private nonprofit corporation, is concerned about the threat to Oregon's economy posed by the overdue and inevitable Cascadia Subduction Zone (CSZ) earthquake (8-9 magnitude), which has been predicted to be the "worst natural disaster in modern American history." To counter this threat, Cascadia Prepared (CPrep) proposes the formation of several Lifeline Resilience Teams (LRTs). Each team will be focused on a different infrastructure "lifeline," or group of closely related lifelines, that our economy depends on for its survival and growth. **The critical end goal is to greatly improve the resilience of these lifelines to overcome destruction the CSZ quake.** These events have struck the Cascadia region regularly, the last time on January 26, 1700. Oregon State University geologists have found it to be the 29th major quake in the previous 5,800 years.

Examples of LRT focus include transportation, liquid fuel, electrical transmission lines, local utilities, and communications. While nearly all business entities are dependent for their own survival on most of these lifelines, we expect that each interested party will choose to focus on only one or two LRTs. As time goes on, each LRT will continue to recruit new partners in order to reach critical mass and become an effective advocate for building resilience in its chosen focus area.

Team Membership

The teams will include self-selected (volunteer) members as well as those who are recruited. They will be drawn from a variety of interested entities, including:

- the companies and agencies that operate the respective infrastructure elements
- businesses and the public (i.e. their customers)
- representatives of other stakeholders, such as labor groups and public agencies

To aid the teams in their research, CPrep will recruit experts with relevant expertise from both the public and private sectors. Examples of such experts include the dozens of volunteers who helped prepare the original Oregon Resilience Plan in 2013 and the American Society of Civil Engineers' 2019 infrastructure resilience report, a recent report on the Critical Energy Infrastructure Hub in Portland by Oregon Solutions at PSU, and similar efforts.

Activities

- **Member recruitment:** CPrep and its partners will work with initial members to reach out to prospective members, using each partner's network of contacts.
- **LRT development:** choose an Executive Committee to guide activities. (CPrep will provide staff time for both management and other administrative tasks as needed.)
- **Lifeline operator identification:** develop a data base of all entities that operate or maintain the lifeline infrastructure of focus, with information about their owners and managers.
- **Lifeline resilience research:** develop information about the state of quake resilience among the operators, and any programs they are planning or implementing for seismic improvement.
- **Resilience scorecard:** contribute this information to development of public reports, such as a scorecard.
- **Regular meetings:** bring members together physically and/or via teleconference to discuss research results, share information about seismic improvement techniques, and recognize progress.
- **Annual conference:** general gathering of all LRTs to share successes, gather inspiration from each other, roll out the current iteration of the public report/scorecard, and invite media to report.

Administration

The work of the teams will be administered by staff of CPrep, who will assist in recruiting members of the team, as well as guiding its research and reporting projects. Each team will have the opportunity to nominate a member of the CPrep board of directors, which in turn provides oversight to all CPrep programs, including the teams' work.

The team will select an Executive Committee, which will communicate on a regular basis with Cascadia Prepared regarding research projects. The full team will convene regularly to discuss progress, and an annual conference will convene all Lifeline Resilience Teams and other interested people to discuss progress, best practices and upcoming projects. CPrep will coordinate the teams' research projects and prepare drafts of reports and scorecards for their review prior to publication and dissemination.



The Cascadia Quake is Coming

The historic trend for the past 6,000 years shows the following:

- A major (mag 8-9) subduction zone quake has averaged every 202 years.
- The longest interval was 330 years.
- The last one was 319 years ago, on January 26, 1700.
- The next one will probably occur in the next 15-20 years.

We're not ready for it

All major systems are likely to fail for many months if not years: transportation, electric, water, all forms of communications, fuel, food, health care, public safety, etc. Not only will the death toll be in the thousands, but also the millions of immediate survivors will face business failures or job losses, and most will have to move elsewhere in search of a livelihood.

We can fix these systems, but human nature has gotten in the way.

We've known about the quake for some 30 years. The Oregon Resilience Plan was issued in 2013, but so far, very little has been accomplished to reduce the dangers outlined above. People just don't like to think about possible catastrophes, especially when they "might not happen in my lifetime."

Cascadia Prepared has a vision for getting us ready

We are forming Lifeline Resilience Teams to study each of the major systems likely to fail after the quake, determine how to measure our current state of resilience, and most importantly, figure out how to make them resilient enough to resume service within a couple weeks after the quake, rather than years. If we do this, we can save our economy from collapse and preserve a future for our children.

You can help us save your home and family, your job and business

Please review the two-page description of our Lifeline Resilience Teams project and then contact us to get involved.

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