

MEMORANDUM

To: House Committee on Veterans and Emergency Preparedness
From: Debra Smith, General Manager
Date: March 31, 2015
Subject: HB 3386 Testimony - Cascadia Subduction Zone Preparedness Efforts

Introduction

For the past year, Central Lincoln staff has been working on the development of an Emergency Action Plan (EAP) and training employees in the national Incident Command System (ICS). While the District's EAP is designed to be an all-hazards plan that can be used with varying levels of emergencies or non-emergency incidents, it has become apparent that additional planning and attention should be given to a Cascadia subduction zone earthquake and tsunami event. The obvious approach to preparing for a larger event would be for the District to allocate additional resources to mitigate those risks, but the enormity of a Cascadia event requires that we also put effort toward coordinating with other utilities and governmental agencies, which are planning for the same no-notice disaster.

There are two primary drivers for the heightened interest within government agencies to prepare for a Cascadia event. First, advances in technology and seismology have provided the scientific community with an understanding of the Cascadia subduction zone threat and the devastating impact a seismic event will have on the Pacific Northwest. Second, the terrorist attacks in 2001 and Hurricane Katrina in 2005 (the costliest and deadliest natural disaster in the history of the United States) highlighted the need to focus on improving emergency management and coordination across the country. In the last couple of years, local, county, tribal, state and federal agencies, non-governmental entities and private sectors partners have all embarked on a coordinated path toward disaster preparedness.

Background

The Cascadia subduction zone is located off the west coast and runs north south from Vancouver BC to Northern California. Scientists have known for about twenty-five years that an earthquake caused by the Cascadia subduction zone could strike the Pacific Northwest. Now, after years of research, advances in technology, and data gathered from recent earthquakes in Chile and Japan, scientists have determined that there is a high probability that a large Cascadia earthquake will occur within the next 50 years. In the last 10,000 years, large Cascadia subduction zone earthquakes have occurred about every 240 years. The most recent Cascadia earthquake and tsunami occurred on January 26, 1700, making it 315 years since the last large earthquake.

Discussion

The following discussion is organized into federal, state, county and industry categories for the purpose of framing areas of responsibility, lines of authority and communication protocols. Understanding the overall framework will be critical to our response and eventual recovery in a no-notice event such as an earthquake and resultant tsunami.

Federal

After the 2001 terrorist attacks, the **U.S. Department of Homeland Security** became responsible for emergency management and has the authority over the following agencies that will affect how we respond to a major disaster.

- The **Federal Emergency Management Agency (FEMA)** is in the process of developing a response plan for a Cascadia subduction zone earthquake and tsunami event in conjunction with the western states in FEMA Regions 9 and 10. As with other FEMA plans, the response plan will focus on providing resources for life saving, sustenance and the stabilization of the event area within the first 72 hours. However, in a Cascadia event FEMA concedes that it may take weeks for resources to get to the coast and they recommend coastal residents have at least two weeks of food and water.



FEMA will test its response plan during the **Cascadia Rising 2016** tabletop exercise. The June 2016 exercise is also intended to test local, county and state response plans. Cascadia Rising planning is in the early stages at the state level and is focused on communications, medical services, mass care, situational assessment, critical transportation, and operational coordination. Central Lincoln intends to participate in the exercise where appropriate.

- The **National Incident Management System (NIMS)** frames the Incident Command System (ICS), which enables command and control of personnel and resources during an emergency as well as coordination with other entities. First responders for cities, counties and states are all required to be trained in ICS in order to receive federal assistance. Central Lincoln has chosen to train all employees in ICS to facilitate communication and coordination with government agencies and other first responders in times of emergency.
- The **National Response Framework (NRF)** organizes critical services into 18 Emergency Support Functions (ESF); electric utilities, natural gas and petroleum all fall under ESF-12 Energy. Oregon counties and state agencies have begun planning for a Cascadia event using the ESF format.
- **National Oceanic and Atmospheric Administration (NOAA)** leads the National Tsunami Hazard Mitigation Program. NOAA is tasked with developing integrated tsunami maps, raising tsunami awareness among potentially affected populations, improving tsunami warning systems and incorporating tsunami planning into state and federal multi-hazard programs. Central Lincoln uses the NOAA tsunami maps for long-term facility planning.

State

Oregon has an overall **Emergency Operations Plan (EOP)** and then uses supplements to address larger hazards. The plan specifies that the Office of Emergency Management (OEM) will coordinate all county requests for assistance during a disaster. The Oregon EOP is the authority for the following documents which determine the priorities and actions after an earthquake.

- The **CSZ Catastrophic Earthquake and Tsunami Operations Plan** is one of the supplements to the Oregon EOP and describes the response to a catastrophic earthquake and tsunami. The plan was completed in September 2012.
- The **Cascadia Playbook** is a quick reference guide to the first 14 days after an earthquake and is based on the above-mentioned CSZ Catastrophic Earthquake and Tsunami Operations Plan. The Playbook will activate using nationally adopted protocols including the ESF organizational structure, ICS for command and control, and FEMA's prioritizing criteria. The development of the Cascadia Playbook is in process and Central Lincoln is participating by way of the ESF-12 Energy work sessions.
- The **ESF 12-Energy** text outlines roles and responsibilities for an incident involving petroleum, liquid natural gas, radioactive materials and electricity. At the state level, the Oregon Department of Energy and Public Utilities Commission will assist in the coordination of public utilities after a disaster and in transferring personnel and resources to the affected area, in accordance with regional mutual aid agreements. Electric utilities will request assistance through the county Emergency Operations Center.
- As fuel is critical to disaster response and recovery, the U.S. Department of Energy and the Oregon Department of Energy (ODOE) is working in partnership with the petroleum industry to develop a response plan that is part of the overall ESF-12 strategy. The **ODOE Fuel Allocation Program** is designed to ensure emergency fuel distribution to priority users in the aftermath of a catastrophic earthquake and tsunami. Central Lincoln has participated in planning sessions that included the petroleum response portion of the ESF-12 plan.
- The OEM is hosting the Public Private Partnerships **P3 Summit**; a series of quarterly meetings that bring together participants to discuss fuel and energy issues that may arise during an emergency situation. Participants include local and state emergency managers, energy consumers (industry and business) and energy suppliers. The first P3 Summit meeting was held on March 24, 2015, and Central Lincoln was a participant.

County

Oregon counties all have an Emergency Management Operations Plan and designated emergency management services personnel. The state affirms that responding to a disaster remains a local responsibility and requests for assistance during a major disaster will go through the county **Emergency Operations Center (EOC)**. In the case of a Cascadia event, the state will supplement the county's response and federal assistance will in turn supplement the state's response. It is important that Central Lincoln continue to participate in county level planning, tabletop exercises, and to share contact information with the four counties within our District.

Industry

The **Bonneville Power Administration (BPA)** recently hosted the Cascadia Subduction Zone Summit 2015 to discuss the impact of a CSZ earthquake, share their preparedness efforts, and form working groups to plan for a Cascadia event. The working groups will address issues that affect the Energy sector including fuel requirements, damage assessment, mutual aid, interoperable communications, emergency materials, and employee/family preparedness.

BPA is also in the middle of a multi-year program to upgrade their buildings and make seismic retrofits to substation equipment which will be able to withstand a large earthquake. Two examples of their seismic retrofits are shown below.



Central Lincoln began to take steps toward preparing for a Cascadia subduction zone event about a year ago. A portion of the District is located within the designated tsunami zone so it was prudent to perform a high-level assessment of business and operations facilities in order to determine resilience in case of an earthquake and tsunami. As a result of the assessment, two offices located in the tsunami zone were closed and staff relocated to the main office; geotechnical and seismic evaluations were done on the headquarters building; and plans are underway to relocate the operations/main distribution and warehouse facility outside of the tsunami flood zone.

In addition to assessing facilities, the District has trained all employees in the national Incident Command System; developed an all-hazards Emergency Action Plan (EAP); added regional mutual aid agreements; equipped all fleet vehicles with a 3-day supply of food and water; educated all employees on the CSZ threat and provided starter supplies for a personal Go Bag. Next year plans for disaster preparedness efforts include a Business Continuity Plan; advanced ICS training; extending mutual aid connections; tabletop exercises to test the EAP; risk assessment of the transmission and distribution infrastructure; and evaluation of communication hardware capabilities.

Locally, District staff has participated in the development of the Lincoln County Natural Hazards Mitigation Plan and is participating in the ESF-12 portion of the West Lane Emergency Operations Group Emergency Operations Plan.

Conclusion

Preparing to respond and recover from a large disaster such as a Cascadia zone earthquake and tsunami event can be overwhelming at times, but not preparing seems irresponsible. Central Lincoln has taken a prudent multi-year approach to preparedness and for the next several years will continue to harden infrastructure, train employees and put protocols in place.

The work outside the District that involves attending meetings to provide input from an electric utility perspective may have a reduced timeframe. Government agencies at all levels and key partners seem to be meeting, planning and making decisions regarding response and recovery to a CSZ event around fairly short timelines. As our customers and facilities will be heavily impacted, it would also seem prudent that we sit at the table to optimize our ability to respond and recover. Tracking Cascadia Rising 2016, the state's Playbook development, ESF-12 Energy, ESF-2 Communications, discussions regarding fuel and BPA work groups is valuable and Central Lincoln will be working with other Oregon PUDs through the Oregon PUD Association (OPUDA) to coordinate efforts and maximize the effectiveness of the planning work.