

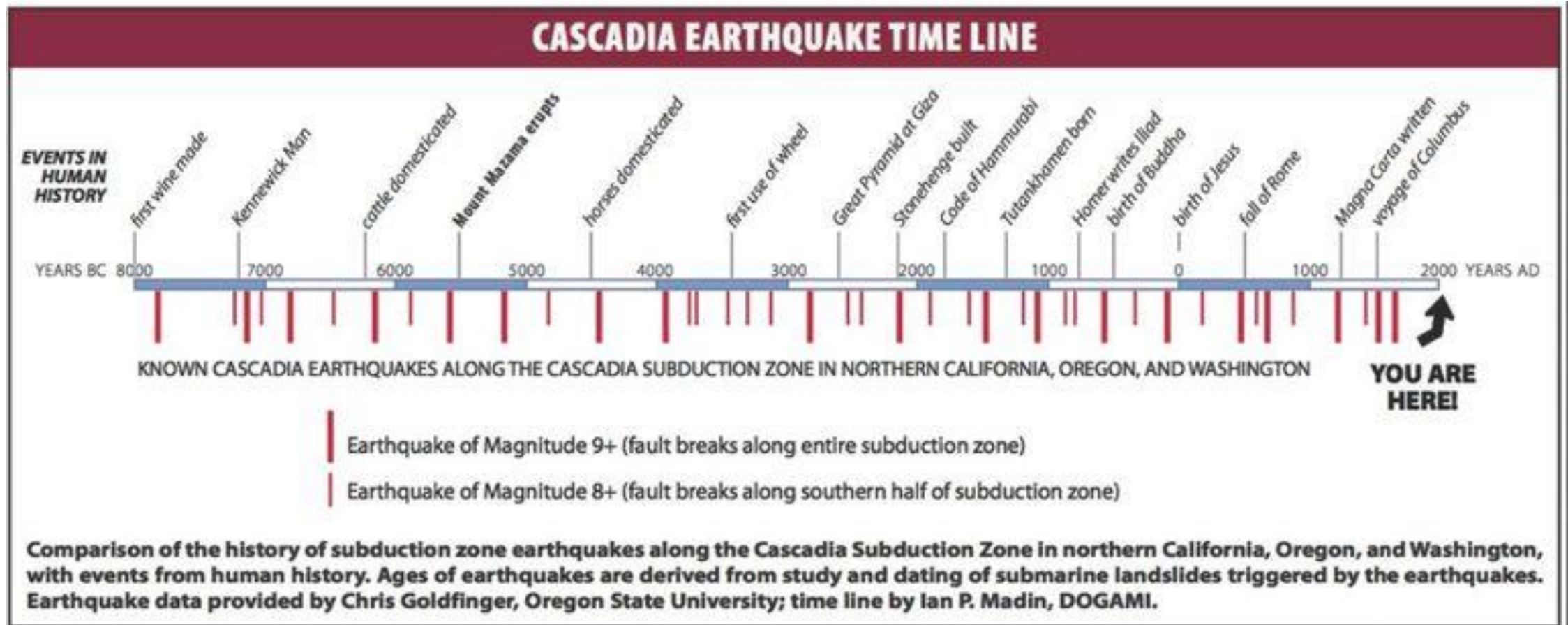


Environmental Quality Commission

DEQ Fuel Tank Seismic Stability Program Rule Adoption

Sept. 14, 2023

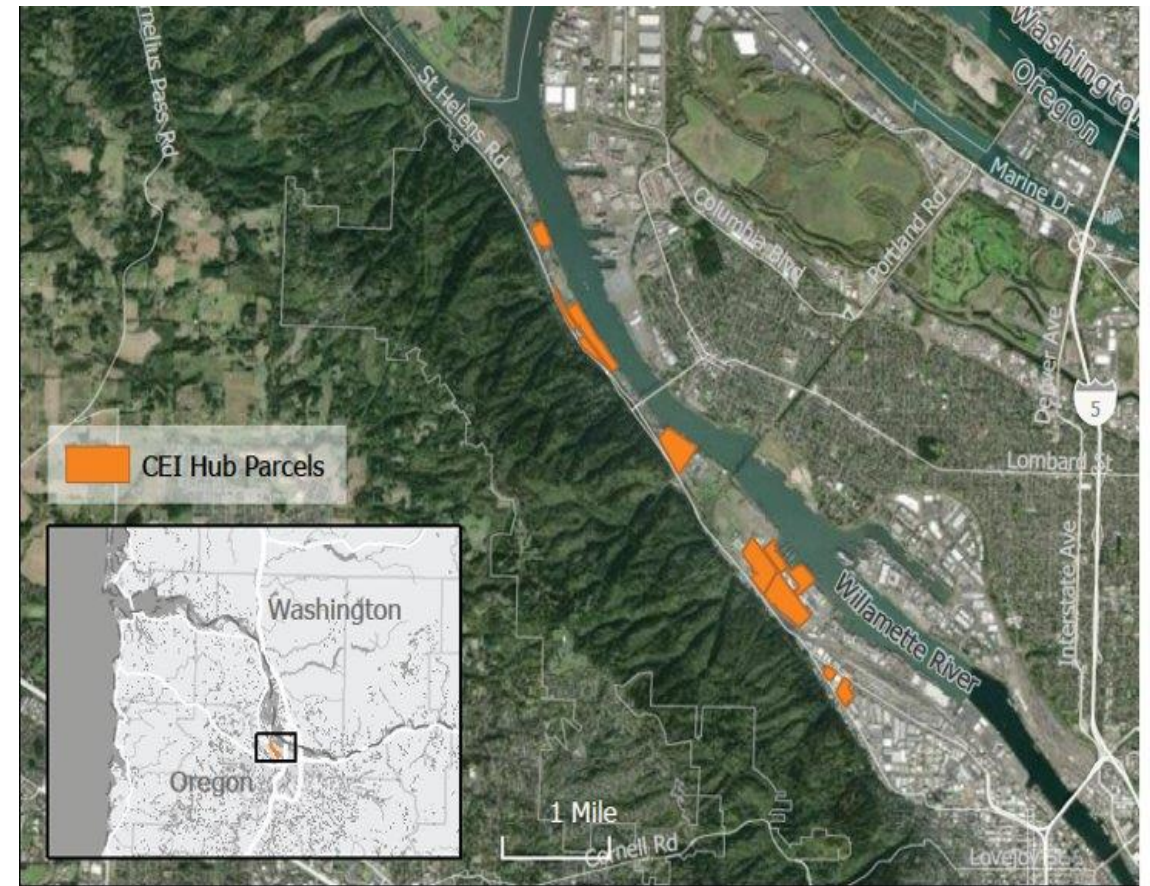
Cascadia Earthquakes



Oregon State University and DOGAMI

The Critical Energy Infrastructure Hub

- We will experience another mega earthquake;
- Fuel storage is centered near downtown Portland;
- 6-mile zone previously wetlands/dredge spoils subject to liquefaction in an earthquake;
- 13 tank farms;
- ~350M gallons of all types of refined oil and crude oil;
- 3 pipelines, ~ 537 Tanks;
- <2% of tanks built since 1993
- This is 90% of Oregon's fuel supply



Source: Created by ECONorthwest.

Senate Bill 1567

Requires:

- Facility owners to assess their land and equipment integrity by June 2024;
- Facilities develop and implement a risk mitigation plan;
- DEQ develop a risk mitigation implementation program, including rules;
- DEQ report to Legislature;
- Oregon Department of Energy to develop an Energy Security Plan.



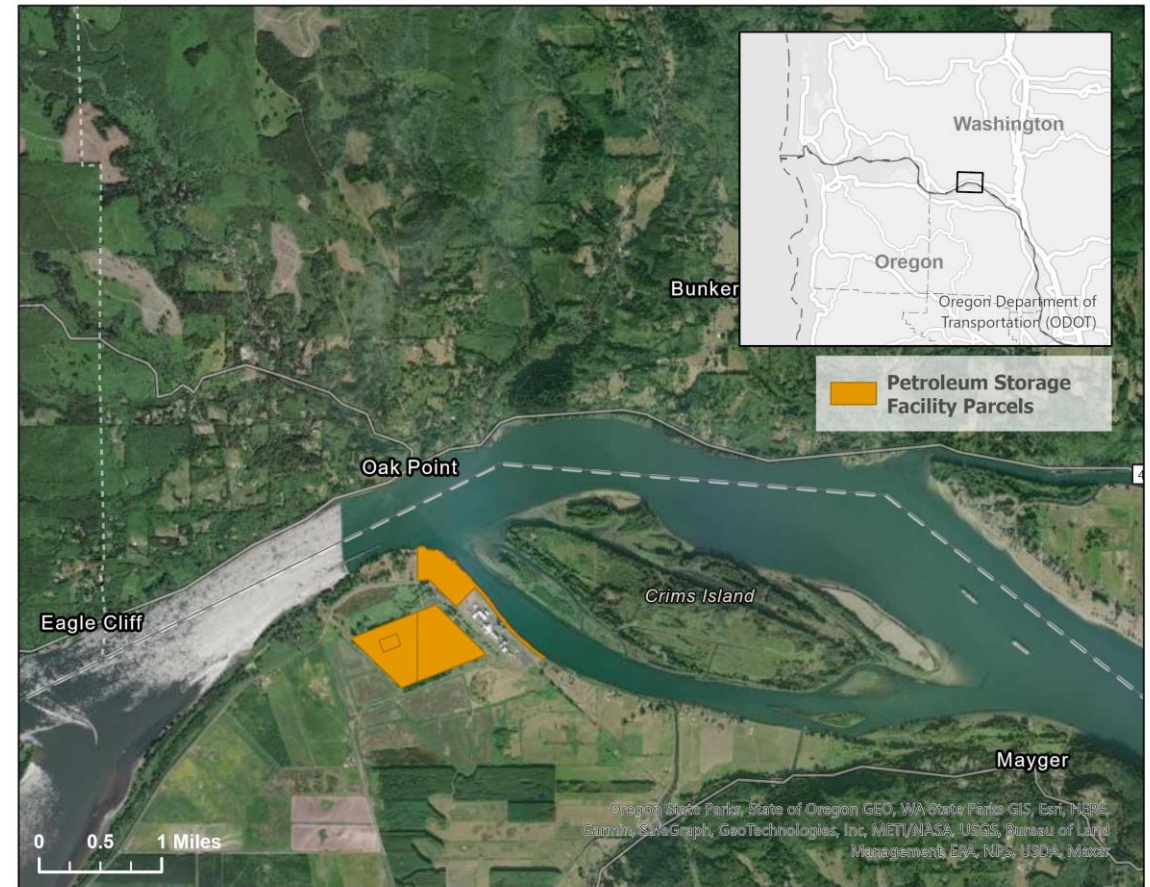
Facilities that may be Covered

High-Capacity Fuel Storage Facilities	County
Cascade General Inc. (Vigor Shipyard)	Multnomah
McCall Oil & Chemical Corp	Multnomah
Zenith Terminals	Multnomah
Phillips 66	Multnomah
Chevron USA Inc.	Multnomah
Shell Portland Distribution Terminal	Multnomah
Kinder Morgan Liquids Term LLC	Multnomah
Northwest Natural Gas Co	Multnomah
Pacific Terminal Services Inc.	Multnomah
Nustar Portland Terminal	Multnomah
SeaPort Midstream Partners	Multnomah
Owens Corning Roofing and Asphalt LLC	Multnomah
PDX Fuel LLC	Multnomah
SFPP LP (Kinder Morgan Eugene)	Lane
PGE	Columbia
Columbia Pacific Bio-Refinery	Columbia



Facilities that may be Covered (cont.)

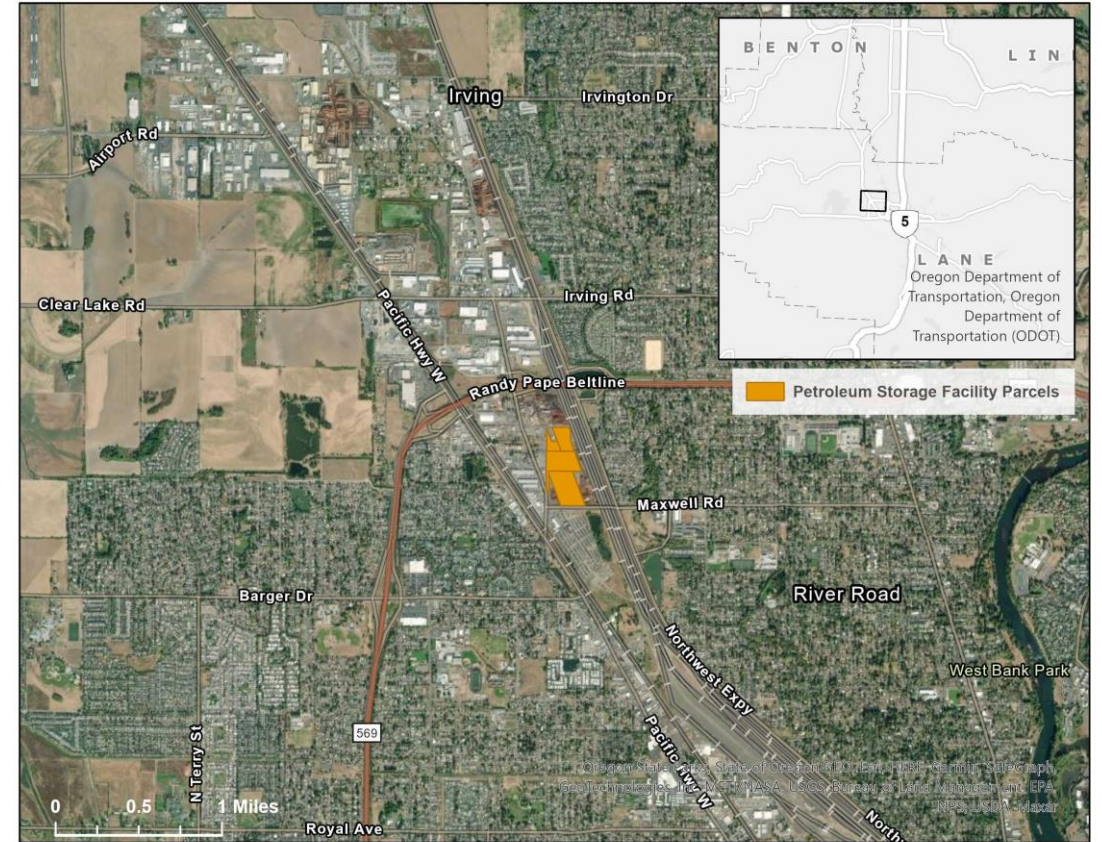
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PGE	Columbia



Oregon DEQ | Emergency Response

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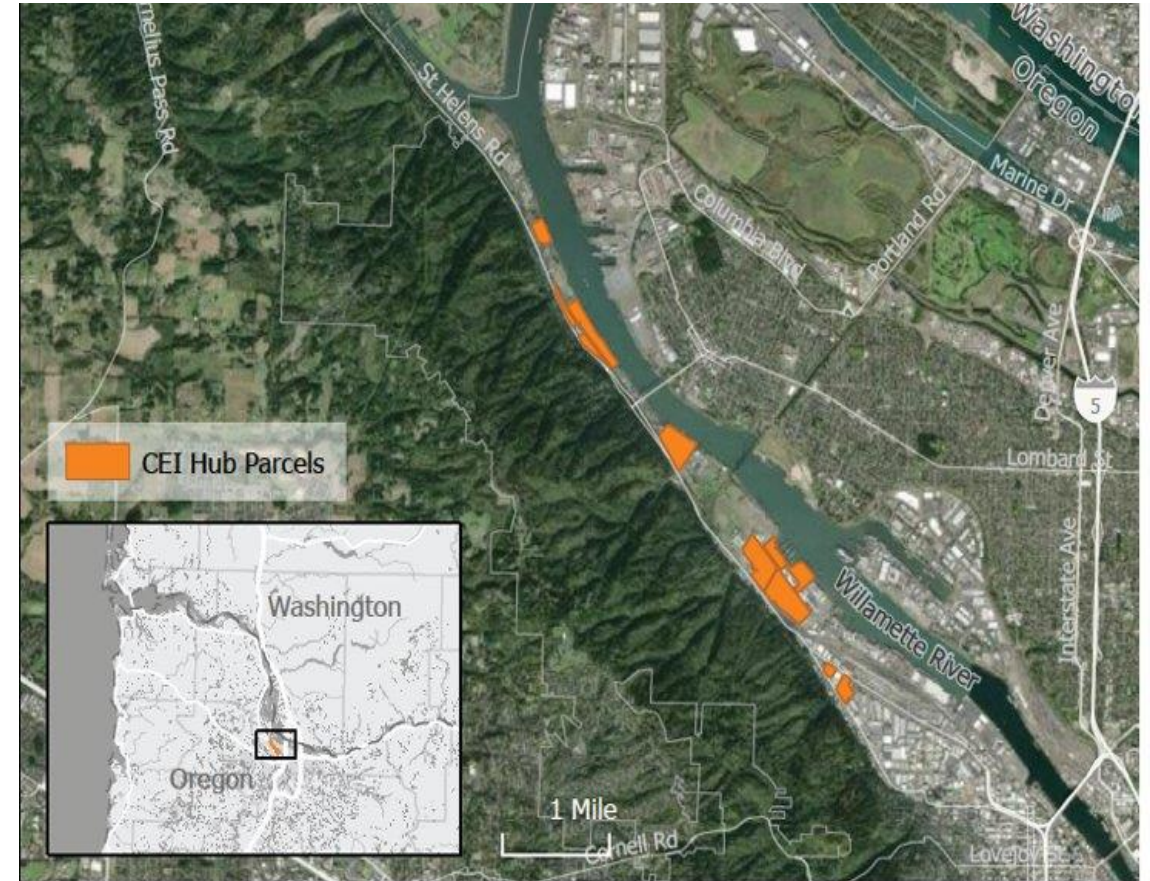
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Zenith Terminals	Multnomah



Source: Created by ECONorthwest.

Rulemaking Advisory Committee

Name	Organization
Amit Kumar, PE	Development Services/City of Portland
Andrew Holbrook	Kinder Morgan
Chris Voss	Multnomah County
Doug Lenz	Columbia Pacific Bio-Refinery
Holli Johnson/ Tom Umenhofer	Western States Petroleum Assn.
Jacque Wurster	NW Eugene Ready
Lindsey Hutchison	Willamette Riverkeeper
Nancy Hiser	Linnton Neighborhood Association
Paul Edison-Lahm	NAACP Environmental Justice Committee
Peter Dusicka, PhD	Portland State University
Randy Groves	Eugene/Springfield Fire Chief (retired)
Sterling Stokes	Portland Harbor Community Coalition
Warren Seely	Seely Mint Farm

Rules Advisory Committee Meetings

Oct. 26, 2022

- Purpose and intent
- SB 1567 overview
- Environmental justice considerations
- Engineering considerations

Dec. 16, 2022

- Scope of the rule
- Technical tasks
- Rule outline
- Public input

March 3, 2023

- Draft rules
- Environmental justice study methodology
- Conceptual engineering performance criteria

April 21, 2023

- Revised draft rules
- Equity impact statement
- Fiscal impact statement

Public Comment May 31 – July 12, 2023

- Virtual Public Hearings:
 - ✓ 7 pm, Thursday, June 15, 2023
 - ✓ 2 pm, Saturday, June 17, 2023
 - ✓ 12 pm, Tuesday, June 20, 2023

Proposed Rules: Chapter 340 Division 300

- 340-300-0000 Context
- 340-300-0001 Purpose and Applicability
- 340-300-0002 Definitions and Acronyms as used in this Division
- 340-300-0003 Seismic Vulnerability Assessment Requirements and Timeline
- 340-300-0004 Risk Mitigation Implementation Plan Requirements and Timeline
- 340-300-0005 Reporting Requirements, Test Methods and Procedures
- 340-300-0006 Program Administration and Compliance Fees
- 340-300-0007 DEQ Responsibility to Review and Approve SVAs and RMIPs

340-300-0000: Context

- A Cascadia Subduction Zone earthquake impacting the large capacity fuel handling facilities in Oregon could create widespread environmental damage, fires, endanger health and safety of surrounding communities and place impossible demands on the state's emergency response capabilities.
- The 2022 Oregon legislature adopted Senate Bill 1567 enacted as chapter 99 of Oregon Laws 2022. The law authorizes the Environmental Quality Commissions to adopt requirements for Seismic Vulnerability Assessments and the Risk Mitigation Implementation Plans for large capacity bulk fuels terminals in Columbia, Lane and Multnomah counties.

340-300-0001: The Purpose of the Proposed Rules

To protect public health, life safety and environmental safety against fires and release of fuel products and establish:

- The process and criteria for completion of facility-wide Seismic Vulnerability Assessments, including vulnerability to shaking associated with the Cascadia Subduction Zone and other earthquake sources and related post-earthquake secondary effects, performed by the facilities and submitted to DEQ for review and approval.
- The process and criteria for development of Risk Mitigation Implementation Plans to minimize risk to people and environment and to be prepared by facilities and submitted to DEQ for review and approval.
- Fees
- Implementation provisions
- Reporting requirements

340-300-0001 (cont.): Applicability

The owners and operators of oil and liquid fuel storage and distribution facilities with at least 2-million-gallon bulk oil or fuel storage capacity located in Columbia, Multnomah and Lane counties

Seismic Vulnerability
Assessment or Initial
Assessment Report

- June 1, 2024
- Can be submitted in series

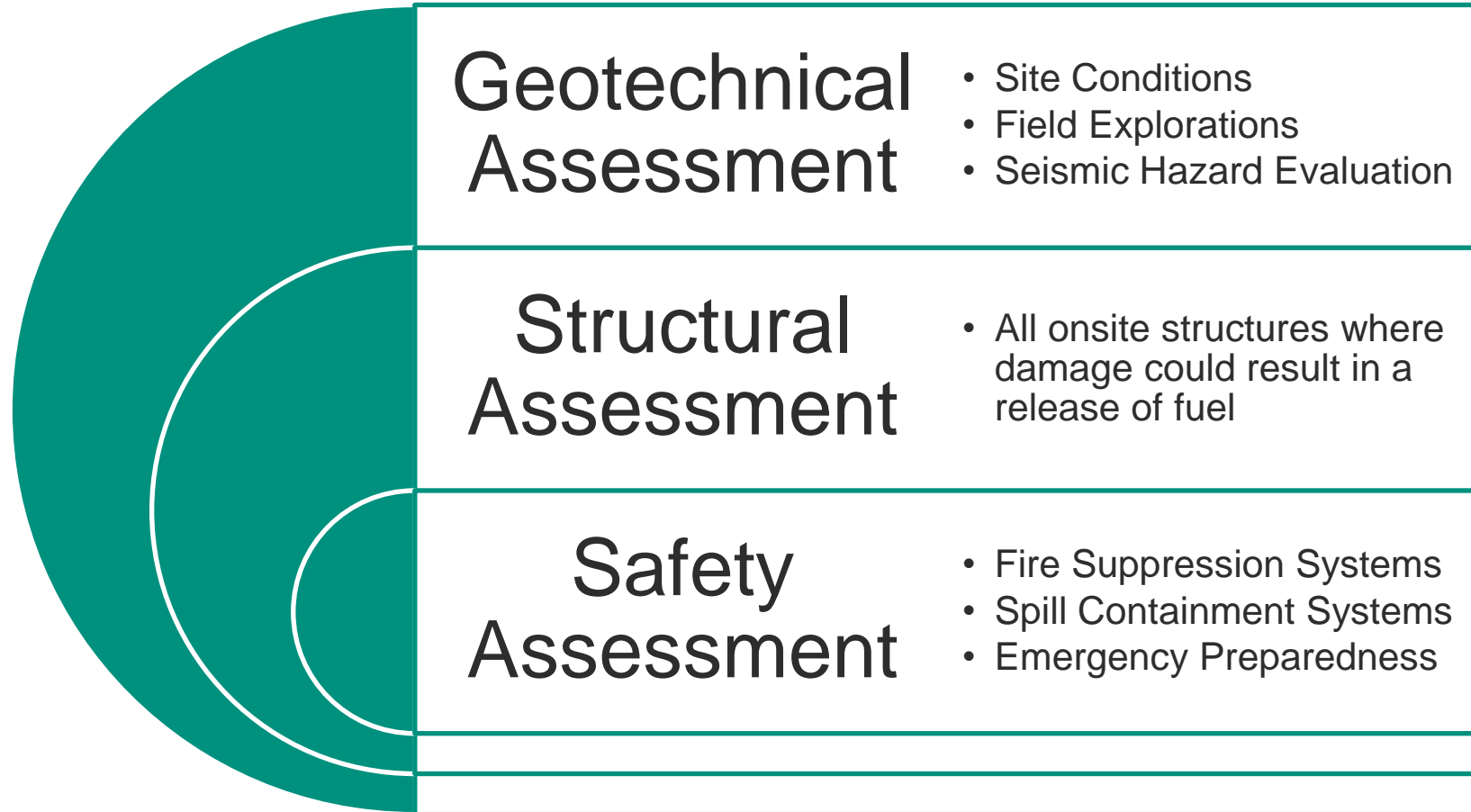
Risk Mitigation
Implementation Plan
1, 3, 5- year
milestones

- 6 month after DEQ's approval of the assessment

340-300-0002: Definitions

- Twenty-five Division 300 definitions
 - “Oils or liquid fuel products” means petroleum product or biological oils and blends of any kind, that are liquid at atmospheric temperature and pressure or liquified by reducing its temperature and increasing pressure including, but not limited to, petroleum, gasoline, reformulated gasoline, reclaimed oil, crude oil, asphalt, benzene, benzol, kerosene, fuel oil, diesel oil, liquified natural gas, propane, oil sludge, oil refuse, and oil mixed with wastes other than dredge spoil or any other volatile and inflammable liquid.

340-300-0003: Seismic Vulnerability Assessment



340-300-0004: Risk Mitigation Implementation Plan

- Due 180 calendar days after DEQ approves the Seismic Vulnerability Assessment
- Must propose risk mitigation measures to address vulnerabilities identified in the Seismic Vulnerability Assessment to protect public health, life safety and environment
- Must address post-implementation residual risk and provide relevant information to communities and local authorities for creation of external alarms and emergency plans
- Must outline 1-, 3-, and 5-year mitigation actions
- All actions must be implemented within 10 years of approval

340-300-0005: Reporting Requirements and Inspections

- Annual implementation status reports
- DEQ and special inspections
- Final post-implementation report
- Recordkeeping

340-300-0006: Program Administration and Fees

- Seismic Vulnerability Assessment Submittal Fee: \$39,000
- Risk Mitigation Implementation Plan Submittal Fee: \$36,000
- Annual Compliance Fee:
 - Year one \$23,000
 - Year two and on \leq \$50,000 based on annual program expenses
- Risk Mitigation Implementation Plan modification fee of \$5,000

340-300-0007: DEQ Review and Approval

- DEQ Approves Seismic Vulnerability Assessment and Risk Mitigation Implementation Plan.
- DOGAMI is preparing to review Seismic Vulnerability Assessment if requested by DEQ; other jurisdictions may be consulted.
- Risk Mitigation Implementation Plans public notice and comment period.
- Public hearings if requested.

Performance Objective and Codes

Facilities have two options to comply:

1. **“Maximum Allowable Uncontained Spill”** is measured per tank at the facility and is equivalent to the minimum reportable volume as provided in OAR 340-142.
2. **Codes and Standards** using the seismic design criteria in American Society of Civil Engineers ASCE 7 for new structures applying the most stringent risk category.

Main Rule Changes in Response to Comment

- 169 comments, 77 comment categories;
- 34 comment categories resulted in rule changes:
 - **Adjustments to definitions of**
 - Design Level Earthquake
 - Performance Objective
 - Fuel
 - Owner and operator
 - **Clarifications to**
 - Required codes and standards
 - Reporting and training requirements
 - Residual risk requirements

Comments that did not Result in Rule Changes

- 33 comment categories did not result in rule changes:
 - Seismic Risk Assessment timeline;
 - The 10-year Risk Mitigation Implementation Plan timeline (too long, not long enough);
 - Performance Criteria (too stringent, not stringent enough);
 - Rule applicability to asphalt and biofuels facilities;
 - Installation of the Early Warning System.

340-012-0064: Fuel Tank Seismic Stability Enforcement Classification of Violations

There are 3 categories of violations

- Class I - failure to submit plans
- Class II – failure to allow access or notify about plan modifications
- Class III – failure to keep records or notify about implementation schedule changes

340-012-0140: Determination of Base Penalty

- (2) \$12,000 Penalty Matrix:
- (a) The \$12,000 penalty matrix applies to the following: (Y) Any violation of the Fuel Tank Seismic Stability Program rules under OAR chapter 340, division 300.

DEQ Recommendation to EQC

DEQ recommends that the Environmental Quality Commission:

- Adopt Chapter 340 Division 300 rules
- Adopt 340-012-0064 rule
- Adopt the amendment to 340-012-0140

Proposed Motion Language

“I move that the Oregon Environmental Quality Commission adopt the rules and amendments proposed in the staff report for this item as part of Chapter 340 of the Oregon Administrative Rules to be effective on filing with the Oregon Secretary of State.”

Title VI and Alternative Formats

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