

Fuel Tanks Seismic Stability

Rulemaking Advisory Committee Meeting # 3

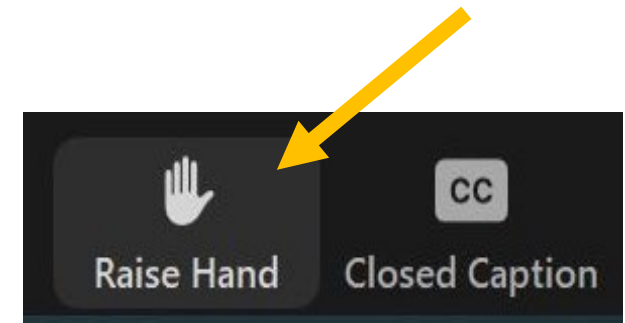
Agenda

Time	Topic
9 a.m.	Welcome, meeting overview and introductions (DEQ)
9:10 a.m.	Follow up from December 16 meeting (DEQ)
9:20 a.m.	Existing CA and WA policies (PSU) Committee comments (RAC)
9:35 a.m.	Performance-based design criteria(H&A) Committee comments (RAC)
9:45 a.m.	Environmental justice considerations (PSU) Committee comments (RAC)
10 a.m.	Break
10:15 a.m.	Draft rule (DEQ) Committee comments (RAC)
11:40 a.m.	Public input
11:55 a.m.	Next steps
12 p.m.	Adjourn meeting

Webinar Tips

Thank you for joining us today!

- Join audio by either phone or computer, not both
- For panelists discussion and comments, use the raise hand button to get in the queue; if joined by phone press *9
- This meeting is being recorded
- For Zoom technical issues, send a message through the chat to Svetlana Lazarev or email svetlana.lazarev@deq.oregon.gov



Meeting Ground Rules

- Listen and treat everyone with respect
- Allow one person to speak at a time – raise hand
- Be prepared and set time aside for the meetings
- Provide a balance of speaking time
- Bring concerns and ideas up for discussion early in the process
- Comment constructively and avoid personal attacks
- Move around and take care of yourself as needed

Communications

- Substantive discussion by the Rules Advisory Committee members will occur during public meetings, not offline.
- DEQ will post meeting materials and input received from RAC members on the [Seismic Stability rulemaking web page](#):
- RAC members may send input after a meeting to: seismicstability.2023@deq.oregon.gov

RAC Members

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	Western States Petroleum Assn.
Jacque Wurster	NW Eugene Ready
Lindsey Hutchison	Willamette Riverkeeper
Nancy Hiser	Linnton Neighborhood Association
Paul Edison-Lahm	Environmental Justice Interests
Peter Dusicka, PhD	PSU
Randy Groves	Eugene/Springfield Fire Chief (retired)
Sterling Stokes	Portland Harbor Community Coalition
Warren Seely	Seely Mint Farm

December Meeting Follow-up

- The scope of the program under SB 1567
- Policy and technical support tasks and deliverables
- The draft rule outline
- Public input
- Rulemaking timeline
- FAQ

Technical Support Team Interim Deliverables

PSU: Seismic Mitigation at Petrochemical Facilities Law Review

Law Background and Authority

California Accidental Release Prevention Program (CalARP):

- Effective 1/1/1997
- California Code of Regulations, Title 19, Division 2, Chapter 4.5
- Regulates stationary facilities which handle hazardous materials

Marine Oil Terminal Engineering & Maintenance Standards (MOTEMS):

- Effective 2/6/2006
- Title 24 Part 2 of the California Building Code
- Establishes the building code for oil transfer facilities that transfer to or from boats with a focus on berthing systems, tanks, and pipes

173-180 WAC, Facility Oil Handling Standards:

- Will take effect on 7/7/2023
- Revised Code of **Washington** 88.46.165
- Establishes minimum standards for safe oil transfer operations from fixed petrochemical transfer facilities.

Technical Support Team Interim Deliverables

PSU: Seismic Mitigation at Petrochemical Facilities Law Review

Topics Reviewed:

- Vulnerability Assessment Requirements
- Assessment Personnel Certification Requirements
- Mitigation Plan Requirements
- Timeline for Mitigation
- Performance Requirements
- Considerations for Lighter Mitigation Requirements
- Plan Review Requirements and Public Comments



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Technical Support Team Interim Deliverables

PSU: Seismic Mitigation at Petrochemical Facilities Law Review

Law Review Highlights:

- Vulnerability Assessments:
 - CalARP: “Facilities must ensure mechanical integrity,” and comply with “recognized and generally accepted good engineering practices.”
 - MOTEMS: Looks at the effects of ground shaking to “verify that the displacement capacity of the structure is greater than the displacement demand.”
- Performance Requirements:
 - CalARP: Facilities must comply with “recognized and generally accepted good engineering practices.”
 - MOTEMS: For large earthquakes, facilities must safeguard against major damage, collapse, or major oil spill. Damage must be repairable within months.



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Technical Support Team Interim Deliverables:

PSU: Seismic Mitigation at Petrochemical Facilities Law Review

Next Steps:

- European Union's Seveso Directive and Sample Member State Rules:
 - Italy, Greece, Germany, etc. (If an English translation is available).
- Japan's Law Framework
- South Korea's Law Framework
- International Policies for the Reduction in Natural Disaster-Induced Spills at Petroleum Complexes
- Additional Academic Literature



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Technical Support Team Interim Deliverables

Haley and Aldrich

Seismic Performance Based Design Criteria Considerations:

- Will review current design standards for City, State, National here as well as other relevant jurisdictions to understand what is currently required to establish standard of practice
 - Building codes
 - Tank and supporting infrastructure design requirements
 - Spill containment requirements
 - Fire resistance requirements
 - Response requirements
- Will consider engineering design earthquakes
 - Probability of occurrence (including multiple fault sources)
 - Magnitude and degree of shaking
 - Percent of maximum shaking for design
 - Probability design shaking level will be exceeded



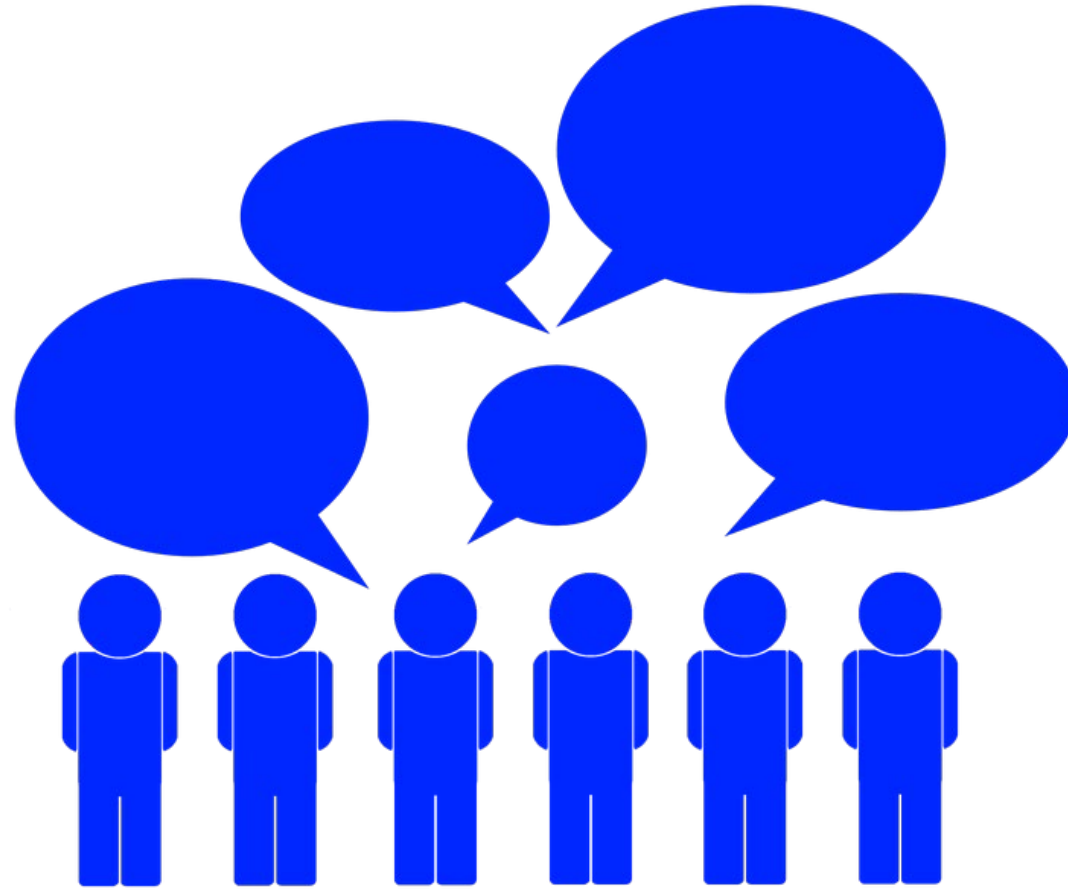
Technical Support Team Interim Deliverables

Haley and Aldrich

- Possible Performance Criteria
 - Structural design requirements
 - Tank types/lid types/etc.
 - Geotechnical design requirements
 - Liquefaction/lateral spread
 - Spill containment and sloshing
 - Fire control
- State of Infrastructure
 - New vs. Retrofit
 - Secondary effects/response requirements



Environmental Justice Review Status



Technical Support Team Interim Deliverables

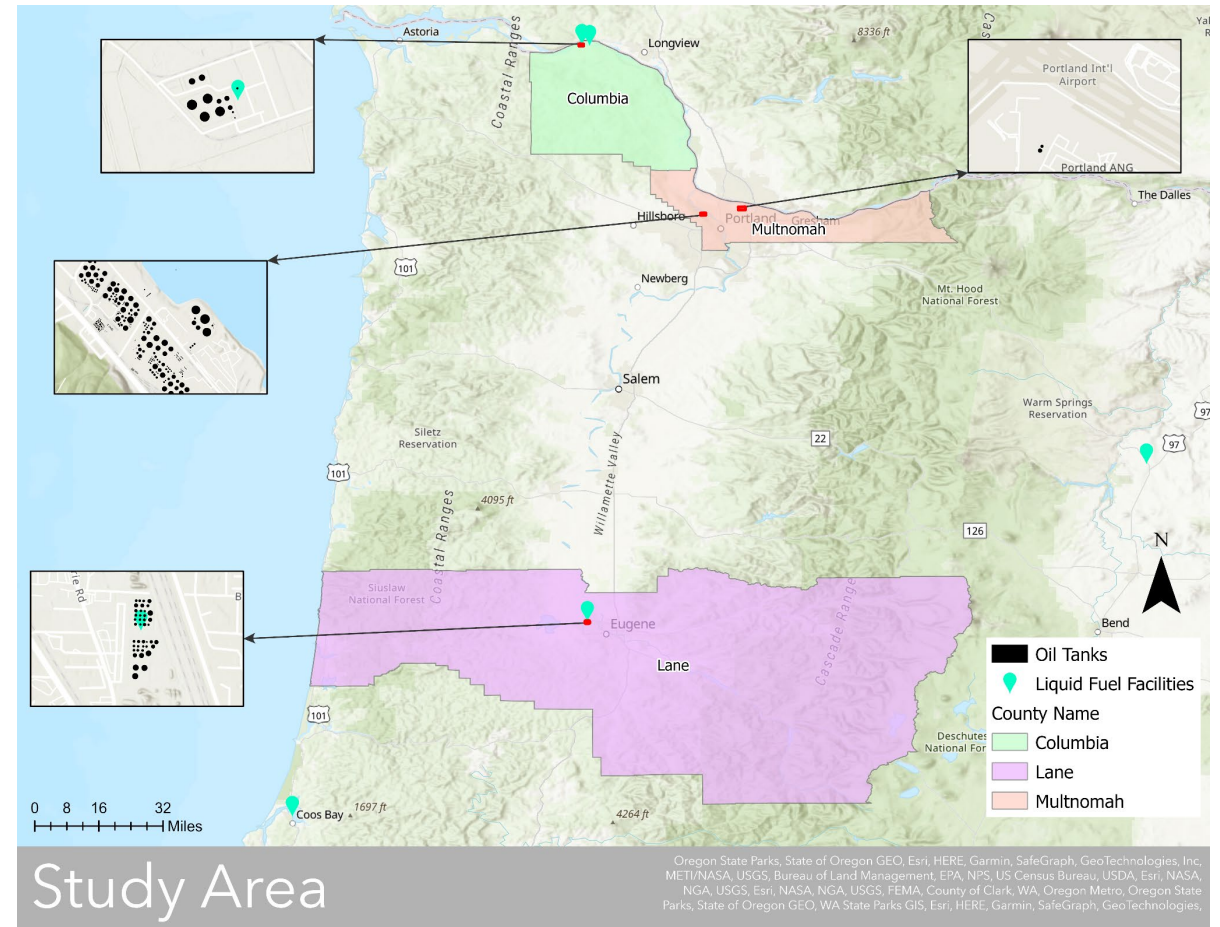
PSU: Environmental Justice Study

Arun Pallathadka, Idowu Ajibade,
Luke Hanst, Beth Gilden

Technical Support Team Interim Deliverables

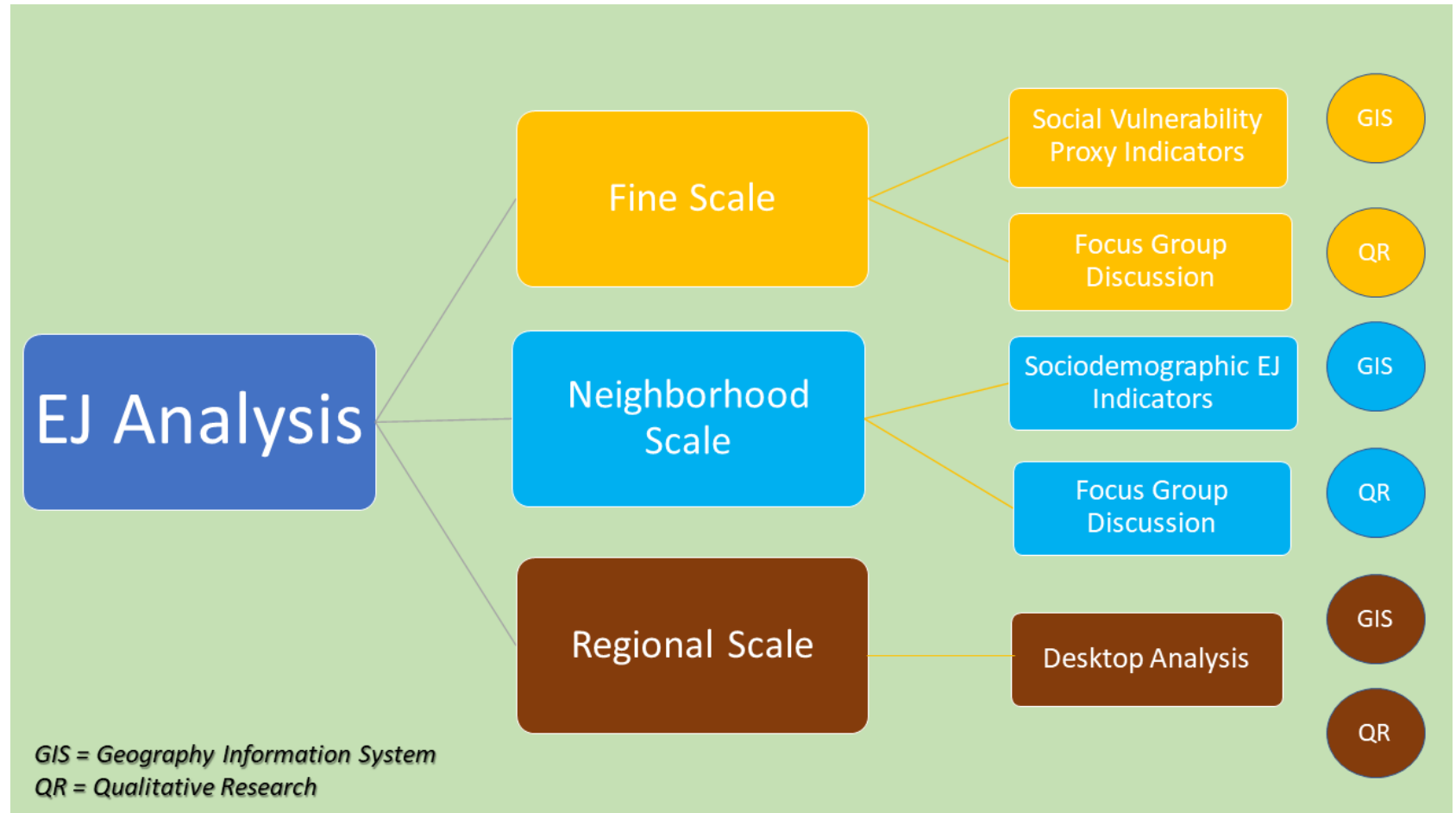
PSU: Environmental Justice Study

County	Liquid Fuel Facilities	Oil Tanks, (approximate number)
<i>Columbia</i>	2	~15
<i>Multnomah</i>	14	~550
<i>Lane</i>	1	~40



Technical Support Team Interim Deliverables

PSU: Environmental Justice Review



Technical Support Team Interim Deliverables: PSU: Environmental Justice Study Qualitative Research

Survey and Focus Group Discussion

- We intend to conduct up to three in-person or remote focus group discussions in mid/late March to better understand local community concerns
- Selected participants will first fill out a pre-focus group survey using Google Forms
- Participants will receive \$50 compensation for their time
- Focus group discussion will be guided by the results of the pre-focus group survey



Pre-focus group survey (Google Survey Form)

Name:
Email:
County:
Location (Neighborhood):

How aware are you with the fuel storage facilities located near your community?

Not at all aware	Slightly aware	Moderately aware	Very aware	Extremely aware
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What are your primary concerns about the potential impact(s) of an earthquake on these facilities?

Top 5 concerns and anything else _____ (multiple checkbox)

How well do you feel the government and facility operators are addressing the potential risks posed by these facilities?

Not at all	Slightly	Moderately	Very	Extremely
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Are there any community resources available to support residents in the event of an emergency or spill related to these facilities?

Yes _____ (explain) No _____ (explain)

Are there any specific concerns you would like to see addressed regarding the fuel storage facilities near your community?

Do you feel that your community is prepared for a potential disaster related to these fuel tank facilities? How prepared is your community?

Not at all prepared	Slightly prepared	Moderately prepared	Very prepared	Extremely prepared
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What suggestions do you have that could assist the agency in developing plans?

Technical Support Team Interim Deliverables

PSU:

Environmental justice study general desktop analysis to capture potential impacts regionally

- Downstream environment, tribal communities, fisheries, etc.
- Unhoused populations
- Those threatened by a fire in Forest Park, the West Hills, and in East Portland
- Those threatened by toxic plumes and/or reduced air quality from evaporating petrochemicals and petrochemical fires
- Increased risks posed to the community through fuel shortages following an earthquake

Technical Support Team Interim Deliverables

PSU: Environmental Justice Study Current Progress

- GIS data collection - **complete**
- Focus Group questionnaire draft - **In progress**
- Institutional Review Board application process - **In progress**
- GIS analysis - **In progress**
- Regional Desktop analysis - **pending**

Technical Support Team Interim Deliverables

PSU: Environmental Justice Study Next Steps

- Finalize GIS outputs.
- Visit vulnerability centers in Lane, Columbia, and Multnomah counties to meet residents and have informal discussion about petrochemical facilities.
- Host a series of three focus groups (~10-15 participants each) and ad hoc interviews (as necessary) to assess local mitigation recommendations and identify community needs.
- Analysis and report writing.

Break



OAR Chapter 340 Division 300 Draft Rule



Draft Rule Sections

- 340-300-0001 Purpose and Applicability
- 340-300-0002 Definitions and Acronyms as used in this Division
- 340-300-0003 Seismic Vulnerability Facility Assessment Process and Criteria
- 340-300-0004 Assessment Requirements
- 340-300-0005 Mitigation Implementation Plan Criteria
- 340-300-0006 Mitigation Plan Requirements
- 340-300-0007 Reporting requirements, test methods and procedures
- 340-300-0008 Program Administration and Compliance fees
- 340-300-0009 Department's Responsibility to Review and Approve Plans

Draft Rule Writing Approach

The proposed draft rule criteria should be satisfactory to:

- prepare facility assessments and mitigation plans
- approve or reject assessments and plans
- implement the plans

Public Input



Program Timeline

SB 1567 effective

- June 3, 2022

Spring 2023:

- Public Notice

June 2024:

- Facilities submit assessments to DEQ

Oct. 2022 – April 2023

- RAC meetings

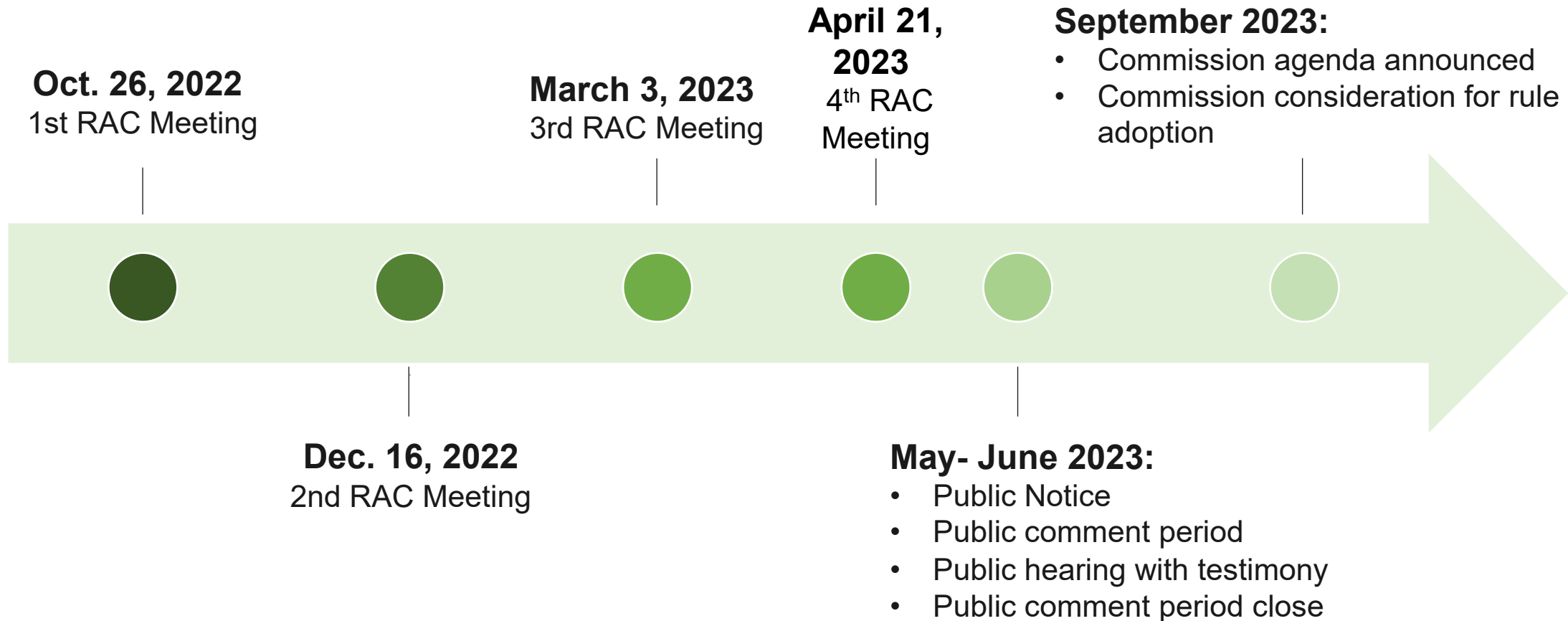
Sept. 2023:

- Commission consideration for rule adoption

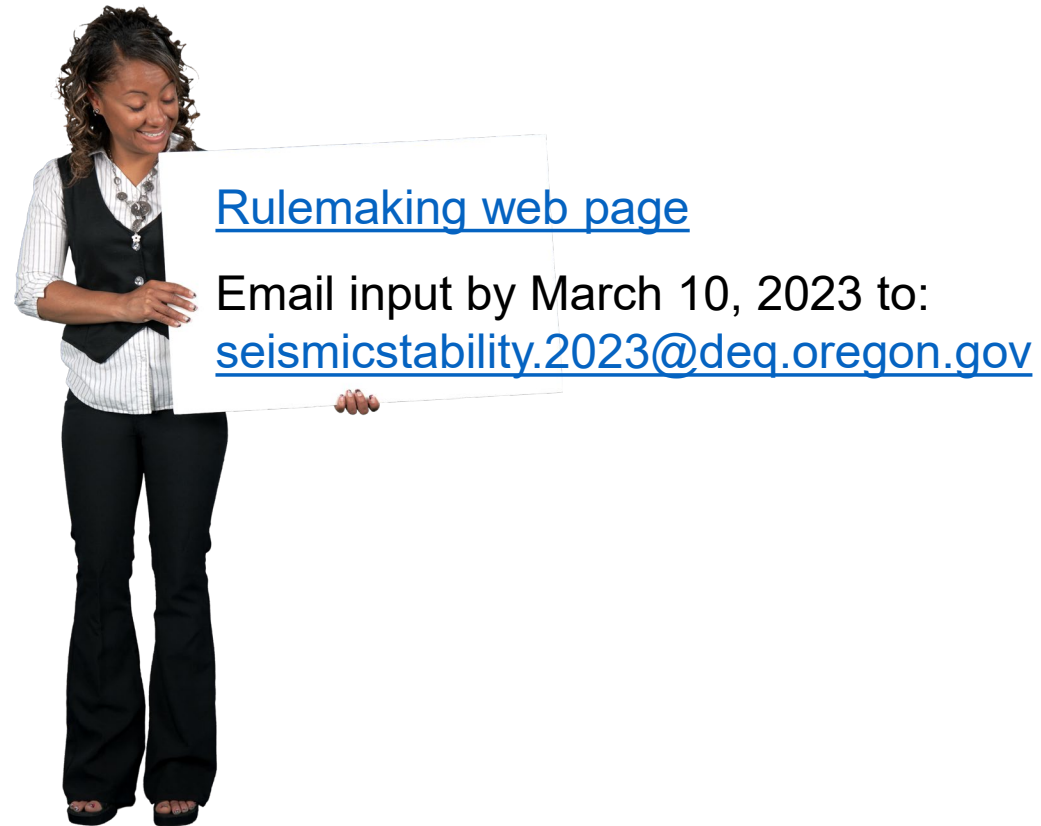
Nov. 2024 and on:

- Legislative report
- Mitigation implementation
- Continued community involvement

Rulemaking Timeline



More Information



*Thank
You*

Title VI and alternative formats

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