City Council Work Session

Council Work Session

Critical Energy Infrastructure Hub

March 17, 2025 9:30 am – 12:00 pm

Available Online

Council in attendance:

- Councilor Avalos
- Councilor Dunphy
- Councilor Smith
- Councilor Kanal
- Councilor Pirtle-Guiney
- Councilor Ryan
- Councilor Koyama Lane
- Councilor Morillo
- Councilor Novick
- Councilor Clark
- Councilor Green
- Councilor Zimmerman

Meeting materials:

BPS CEI Hub Overview 11.48 MB

Critical Energy Infrastructure Hub Work Session Presentation 5.39 MB

Work sessions are public meetings related to a specific topic where information is presented to Council. Council does not vote or take any action; public testimony is not taken. The public and press may attend work sessions when held in person or watch the live broadcast online or on cable TV.

Council Chamber doors open to the public 15 minutes before the meeting starts. Learn more about visiting City Hall to attend a Council meeting. Watch the live broadcast on YouTube, on the Open Signal website, or on cable TV (Xfinity Channels 30 and 330, CenturyLink Channels 8005 and 8505).

Location

City Council Chambers

1221 SW Fourth Avenue
Second Floor Auditorium
Portland, OR 97204

Get Directions
More about this location

Contact

Donnie Oliveira

Deputy City Administrator, Community & Economic Development

donald.oliveira@portlandoregon.g

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THE BUREAU OF PLANNING & SUSTAINABILITY

Memo

DATE: March 10, 2025

TO: Portland City Council

FROM: Tom Armstrong, Supervising Planner, BPS

SUBJECT: Critical Energy Infrastructure (CEI) Hub – March 17, 2025 – Council Work Session Supplemental Information

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On March 17, 2025, the Portland City Council will hold a public work session to learn more about the Critical Energy Infrastructure (CEI) Hub located in northwest Portland. At this work session City and other agency staff will provide an overview of the CEI Hub and roles and responsibilities for oversight of activities in the CEI Hub.

In preparation for that work session, City staff have assembled a packet of additional resources related to the CEI Hub to support Council's understanding of the issues and jurisdictional roles. This memo provides additional background information, a brief description of agency roles, and a list of resource documents and reports. Attached to the memo are also the following materials:

- Attachment A: Set of citywide and CEI Hub focused maps for four natural hazard categories: flood, liquefaction, wildfire, and landslides
- Attachment B: Zoning map for CEI Hub area
- Attachment C: Zoning Code regulations related to Bulk Fossil Fuel Terminals
- Attachment D: Air Quality Permitting at Oregon Department of Environmental Quality (DEQ)
- Attachment E: DEQ Fuel Tank Seismic Stability Program

Background information

The Critical Energy Infrastructure (CEI) Hub is located in the Northwest Industrial District in Portland. The CEI Hub covers a six-mile stretch on the lower Willamette River located between the southern tip of Sauvie Island and the Fremont Bridge on US Highway 30. This location provides access to Oregon's largest seaport, the Olympic Pipeline, interstate rail lines, and interstate freeways. The energy sector facilities in the CEI Hub include:

- Liquid fuel port terminals
- Liquid fuel transmission pipelines and transfer stations
- Natural gas transmission pipelines
- Liquefied natural gas storage facility
- High voltage electric substations and transmission lines
- Electrical substations for local distribution

Existing fossil fuel terminals

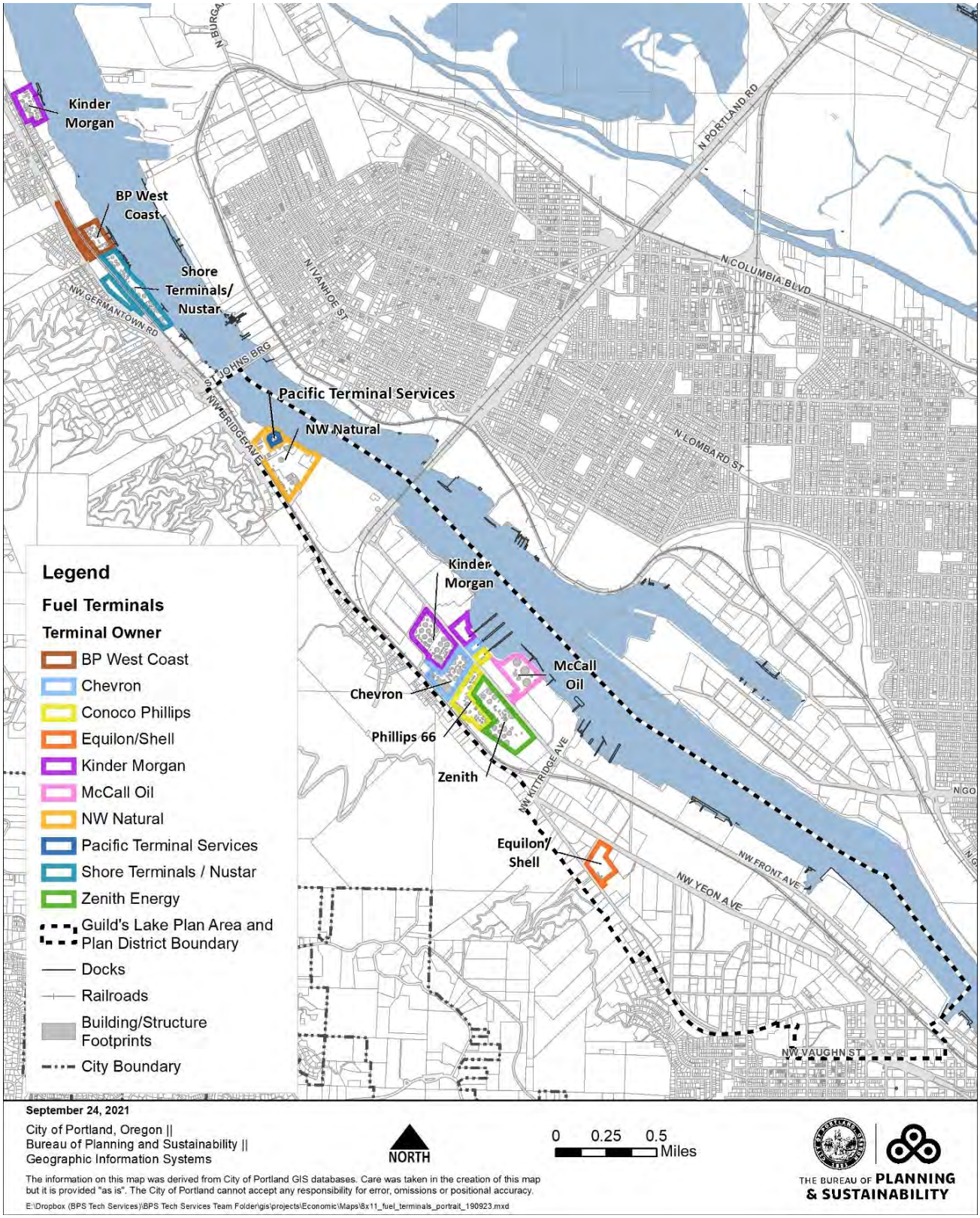
The ten petroleum terminals located in Northwest Portland (see Figure 1) are the gateway distribution facilities serving Oregon and Southern Washington markets. Additionally, NW Natural's GasCo liquified natural gas (LNG) terminal provides peak-consumption storage of natural gas for the region. In Northwest Portland, these "tank farm" storage facilities have direct access to pipelines, deep-water marine docks, railroad and truck route infrastructure. A list of existing companies operating these facilities and the storage capacity is included below Table 1.

Table 1. Estimated storage capacity at existing fossil fuel terminals

Operator	*Facility type*	*Site acres*	*Existing Storage capacity*
Petroleum fuels			gallons
Chevron	Petroleum terminal	21	46,803,000
Kinder Morgan Willbridge	Petroleum terminal	33	62,369,000
Zenith	Petroleum/crude oil	39	63,764,400
NuStar/Shore Terminals	Petroleum terminal	22	51,551,000
McCall Oil	Petroleum terminal	19	40,420,000
Conoco Phillips	Petroleum terminal	21	30,087,000
BP West Coast	Petroleum terminal	18	22,760,000
Kinder Morgan Linnton	Petroleum terminal	13	13,823,000
Equilon/Shell	Petroleum terminal	13	22,151,000
Pacific Terminal Services	Petroleum terminal	2	11,676,000
Total			*388,487,400*
Gaseous fuels			Dth
NW Natural GasCo	LNG plant/terminal	41	7,500,000

Terminology: Dth = decatherms, LNG = liquified natural gas
Sources: BPS analysis of tank inventory data in 2022 Multnomah County, Impacts of a Cascadia Subduction Zone Earthquake on the CEI Hub. NW Natural 2018 Integrated Resource Plan

Figure 1. Map of existing fossil fuel terminals in Northwest Portland (2021, BPS)



Roles and responsibilities

Oversight of activities in the CEI Hub is conducted at three levels of government – city, state, and federal.

City of Portland

The Portland Bureau of Emergency Management (PBEM) develops and implements strategic planning, programs, and policies to continually advance the City's mitigation, preparedness, response, and recovery capabilities.

The Portland Fire and Rescue (PF&R) protects communities through a combination of prevention and all-hazard response to fire, medical, natural disaster, and other emergencies. The City's Fire Marshal also reviews permits for storage tanks over 60 gallons that contain hazardous material and conducts inspections of the facilities every two years.

The Bureau of Planning and Sustainability (BPS) sets the Comprehensive Plan policies and Zoning Code that regulates land uses. BPS also runs the Franchise and Utility Program, which regulates access to the public right-of-way through franchise agreements. BPS also sets the Renewable Fuel Standard for fuel sold within city boundaries.

Portland Permitting and Development (PP&D) reviews applications for any new, expansion, or alteration of a building, structure, or tank at bulk fossil fuel facilities to ensure compliance with City development codes and state building codes.

Bureau of Transportation (PBOT) issues permits for improvements in the right-of-way, including pipelines, and establishes the freight routes for trucks hauling goods, including fuel, through Portland.

State of Oregon

The Department of Environmental Quality (DEQ) has responsibility for three programs: air quality permits, seismic stability assessments, and oil spill response. DEQ issues air quality permits based on the industry type, level of activity and toxicity of the source's emissions. DEQ manages the Fuel Tanks Seismic Stability program, which regulates large fuel distribution facilities located in Lane, Multnomah and Columbia counties. The program requires the facilities to assess their vulnerability to earthquakes and develop a plan to minimize risk of damage from earthquakes. DEQ oversees the High Hazard Rail Planning program, which requires railroads transporting liquid fuel, including oil, to prepare spill response plans.

The Oregon State Fire Marshal (OSFM) conducts inspections of facilities; manages the Community Right to Know program; and coordinates local emergency planning committees. The Oregon Community Right to Know and Protection Act (ORS 453.307-414) requires Oregon businesses to report hazardous substances, including where they are stored and the associated hazards. Information is provided to emergency planners, first responders, health professionals, and the public.

The Oregon Department of Emergency Management (OEM) coordinates and maintains a statewide emergency services system for emergency and disaster communications. Their responsibilities are defined and authorized in ORS 401.

The Oregon Department of Transportation (ODOT) acts as an agent for the Federal Railroad Administration (FRA) and inspects track, rail cars, signals, crossings and operating practices. ODOT receives quarterly reports describing the type and quantity of hazardous materials transported via rail to inform emergency response.

The Building Codes Division (BCD), through the Board of Boiler Rules regulates the construction, installation, inspection, operation, maintenance, and repair of pressurized piping for chemicals and petroleum products. They are responsible for the review and inspection of improvements to the piping at the fuel terminals.

The Oregon Department of Energy (ODOE) serves as a repository for energy data, provides education and technical assistance on energy challenges, manages the siting of energy facilities in the state, and supports the state's decarbonization efforts. The DOE leads a coordinated effort with multiple agencies and the public to develop and implement Oregon's Energy Security Plan.

Federal Government

The Federal Rail Administration (FRA) is responsible for regulating railroad safety, including the handling of hazardous materials and operating practices.

The Pipeline and Hazardous Materials Safety Administration (PHSMA) is responsible for regulating the operation, maintenance, and emergency response of interstate oil and natural gas pipelines.

The Environmental Protection Agency (EPA) receives notice on hazardous material spills.

The U.S. Coast Guard is the lead agency for pollution incidents that happen in the coastal zone – which is loosely defined as any waterways that are tidally influenced. In our area, that means the Columbia River up to Bonneville Dam, and the Willamette River up to Willamette Falls. The U.S. Coast Guard's National Pollution Funds Center (NPFC) certifies that oil-carrying vessels have the financial ability to pay in the case of an oil spill. When spills do occur, the NPFC provides funding for quick response,

compensates claimants for cleanup costs and damages, and takes action to recover costs from responsible parties.

Fuel Demand

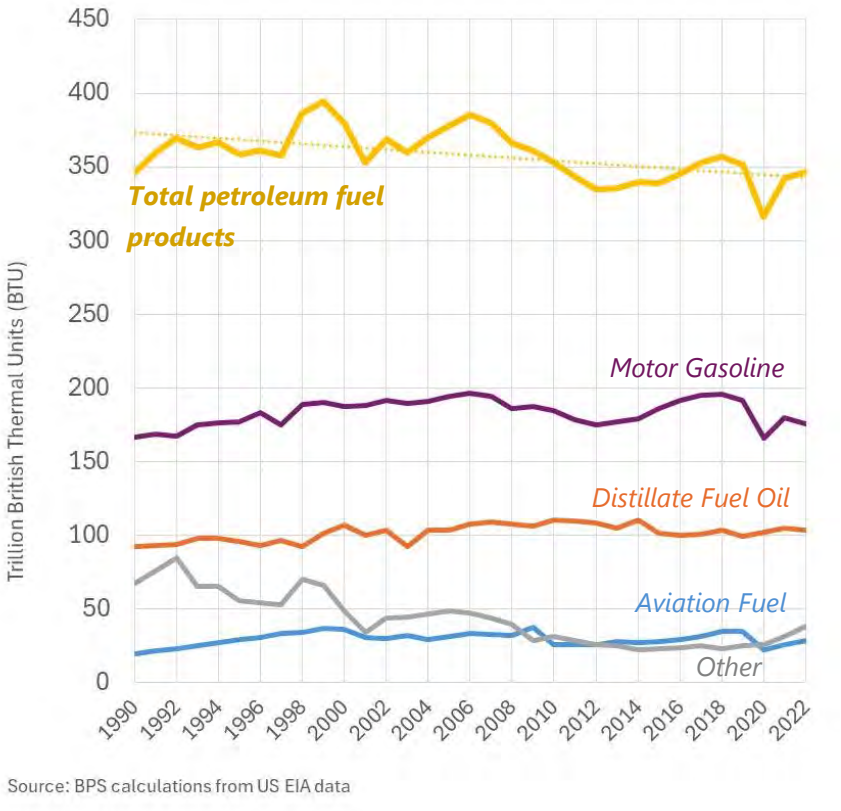
One of the key issues in placing limitations on the fossil fuel terminals has been concerns about meeting the future demand for fossil fuels and the impact that a constrained supply might have on economic growth. Specifically, Comprehensive Plan Policy 6.48 calls for continuing to serve the regional market:

> Policy 6.48 Fossil fuel distribution. Limit fossil fuel distribution and storage facilities to those necessary to serve the regional market.

The federal Energy Information Administration (EIA) Annual Energy Outlook, the state Oregon Department of Transportation (ODOT) Revenue Forecast, and the Oregon Office of Economic Analysis (OEA) Clean Fuels Forecast have informed the overall conclusion that **the existing fossil fuel storage tank capacity, with the allowed exceptions, at the existing fossil fuel terminals (FFTs) is sufficient to serve the regional demand for liquid fossil fuels out to a 2050 planning horizon.**

Historic trends show declining petroleum fuel consumption in Oregon (Figure 2).

Figure 2. Petroleum fuel consumption in Oregon, 1990-2022



Source: BPS calculations from US EIA data

In general, the federal EIA Pacific region energy consumption forecast out to 2050 projects a decline in gasoline consumption and distillate fuel oil (diesel), with a moderate increase in jet fuel. These trends have been fairly consistent since the initial adoption of the Fossil Fuel Terminal Zoning (FFTZ) amendments in 2016. The forecasted growth for jet fuel is why the FFTZ code includes an exception for new storage tank capacity for transportation terminals:

> PCC 33.920.300 D.7
> The storage of fossil fuels for exclusive use at an airport, surface passenger terminal, marine, truck or air freight terminal, drydock, ship or barge servicing facility, rail yard, or as part of a fleet vehicle servicing facility are not Bulk Fossil Fuel Terminals.

These long range (2050) forecast trends are consistent with the short-term (2034) state forecasts. The October 2024 ODOT Revenue Forecast continues to forecast a decline in the consumption of gasoline due to many factors: increases light-duty vehicle fuel efficiency, the fast-growing share of electric vehicles, higher fuel prices, fewer miles traveled, and the overall decline in the total number of drivers. ODOT forecasts a continued increase in jet fuel consumption. The even shorter-term forecast for the Oregon Clean Fuels program shows robust growth in the consumption of renewable diesel, along with a modest increase in biodiesel and a slight decline in ethanol.

Related reports and resources

Related local resolutions

- 2015 - Portland - Resolution 37168 - Oppose expansion of infrastructure whose primary purpose is transporting or storing fossil fuels
- 2017 – Portland – Resolution 37289 - Establish goal to meet 100 percent of community-wide energy needs with renewable energy by 2050
- 2020 - Portland – Resolution 37494 - Climate Emergency Declaration

Related reports and resources

- Bureau of Planning and Sustainability - Fossil Fuel Terminal Zoning Amendments - Remand Report Fossil Fuel Terminal Zoning Amendments - Remand Report – June 2022
    - This report from the 2022 readoption of the Fossil Fuel Terminal zoning code changes includes a summary of the legislative history on this legislation, background information on the CEI Hub and fuel demand considerations, and the adopted zoning code with related commentary.
- Oregon Solutions – Critical Energy Infrastructure Hub Assessment – May 2019
    - Portland's Bureau of Emergency Management (PBEM) requested that Oregon Solutions conduct an assessment to determine potential avenues for collaborative action to increase resiliency. Specifically, this assessment looked at the following areas:
        - What ideas could reduce the risks associated with seismic activity impacting fuel storage facilities?
        - What are long- or short-term incentives, regulations, agreements, or other creative approaches to bring all parties to a collaborative table to improve resiliency?

      This report reflects the findings from assessment interviews.

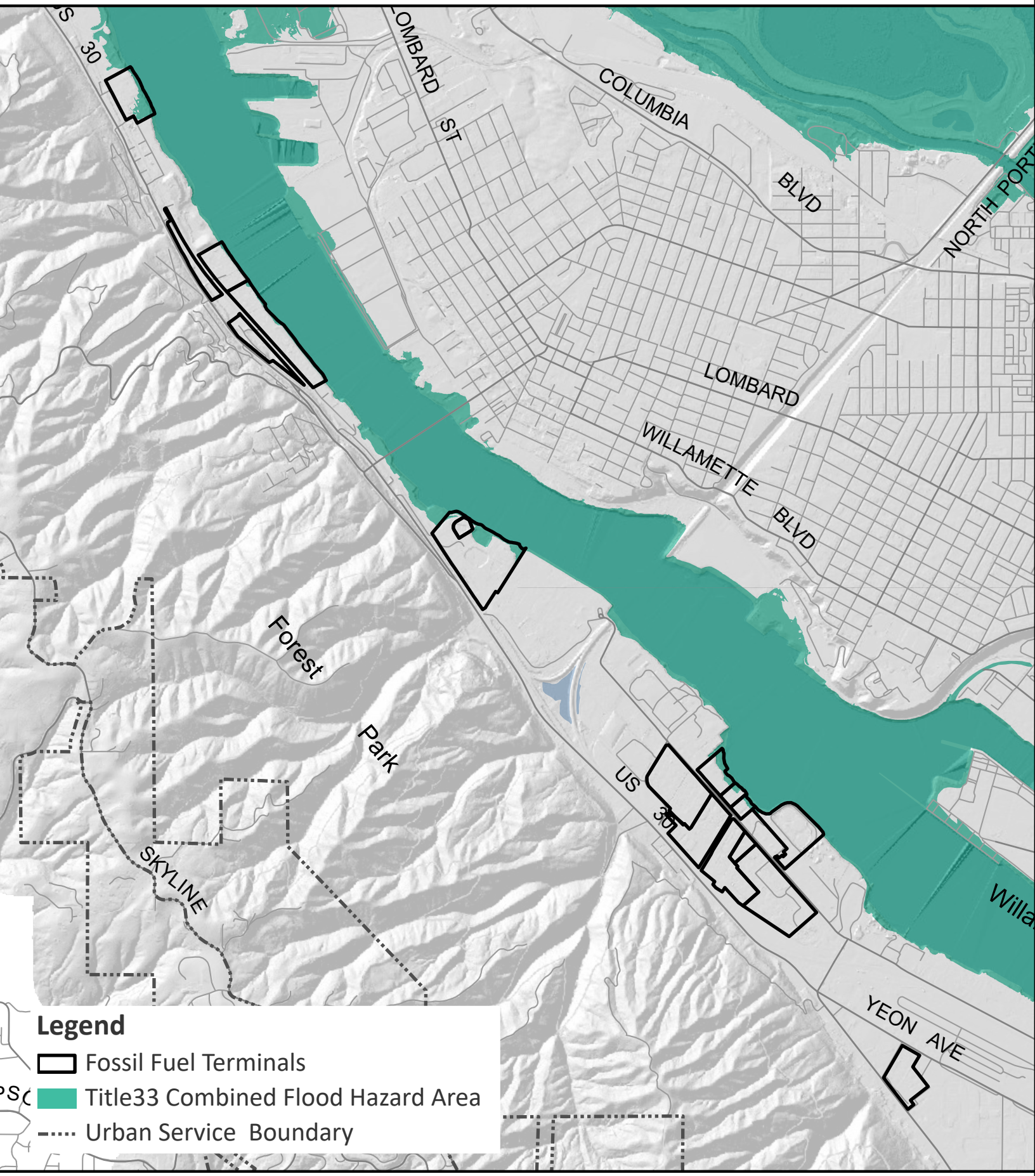
- Portland State University – Liquid Storage Tanks as the Critical Energy Hub – Seismic Assessment of Tank Inventory – May 2019
    - This report summarizes the findings of a study with three main goals:
        - Review past earthquake experiences from available literature of liquid fuel storage facilities to identify common vulnerabilities and key factors leading to tank damage and failure.
        - Identify the quantity and characteristics of the tanks and the supporting soil at the CEI hub. Contrast the information with past earthquake observations to gain a better appreciation of the expectations for seismic performance of the fuel storage tanks at the CEI Hub.
        - Review potential mitigation options that aim to enhance the seismic performance of liquid storage tanks and estimate order-of-magnitude costs for implementing the mitigations.

- EcoNW – Impacts of Cascadia Subduction Zone Earthquake on the CEI Hub – January 2022
    - Prepared for Multnomah County Office of Sustainability and Portland Bureau of Emergency Management, the purpose of this study is to identify the magnitude and extent of potential fossil fuel releases at the CEI Hub from a Cascadia Subduction Zone earthquake and to evaluate the resulting damages. This research includes a summary of available information about conditions at the CEI Hub, the likely effects of a major earthquake on CEI Hub facilities, qualitative descriptions and quantitative estimates of the earthquake's effects at the CEI Hub, including potential releases of fossil fuels, and estimates of the economic impacts of fossil fuel releases and infrastructure failures.
- PSU Institute for Sustainable Solutions – Risk of Earthquake-Induced Hazardous Materials Releases in Multnomah County, Oregon: Two Scenarios Examined – October 2023
    - This report examines the risks of earthquake-induced hazardous materials releases in Multnomah County and includes an examination of the life safety risks and response challenges in the CEI Hub, a review of laws pertaining to facilities that handle hazardous materials to understand the emergency management expectations placed on these facilities; a hazard assessment for possible earthquake-induced hazardous material releases; and recommended next steps to Multnomah County.

Attachment A: Hazard Maps

Hazard Maps

Flood Hazard



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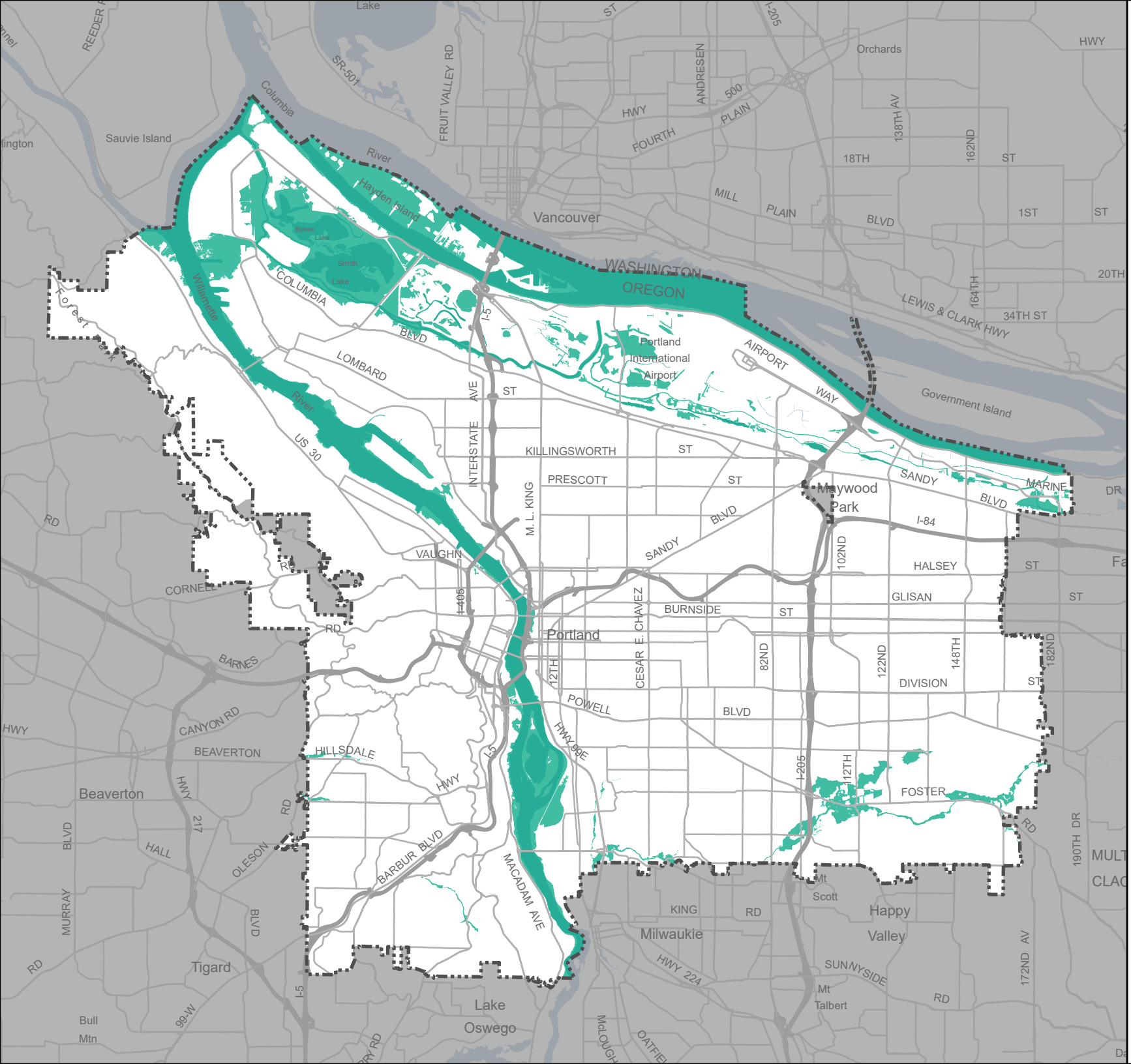

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Hazard Maps

Flood Hazard

Legend

- Title33 Combined Flood Hazard Area
- Urban Service Boundary

NORTH

0 1 2 Miles

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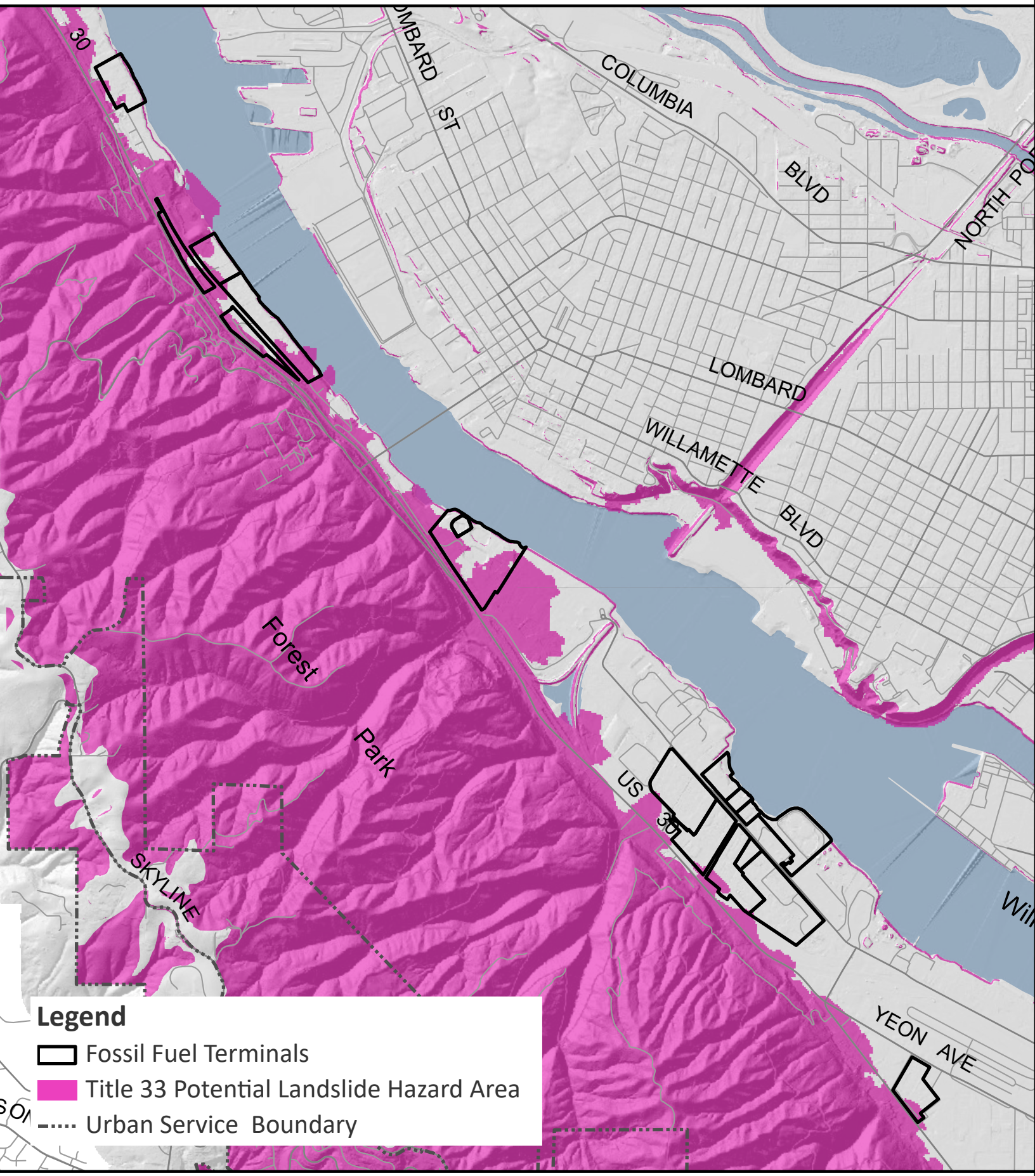
Hazard Maps

Landslide Hazard



Legend

- Fossil Fuel Terminals
- Title 33 Potential Landslide Hazard Area
- Urban Service Boundary

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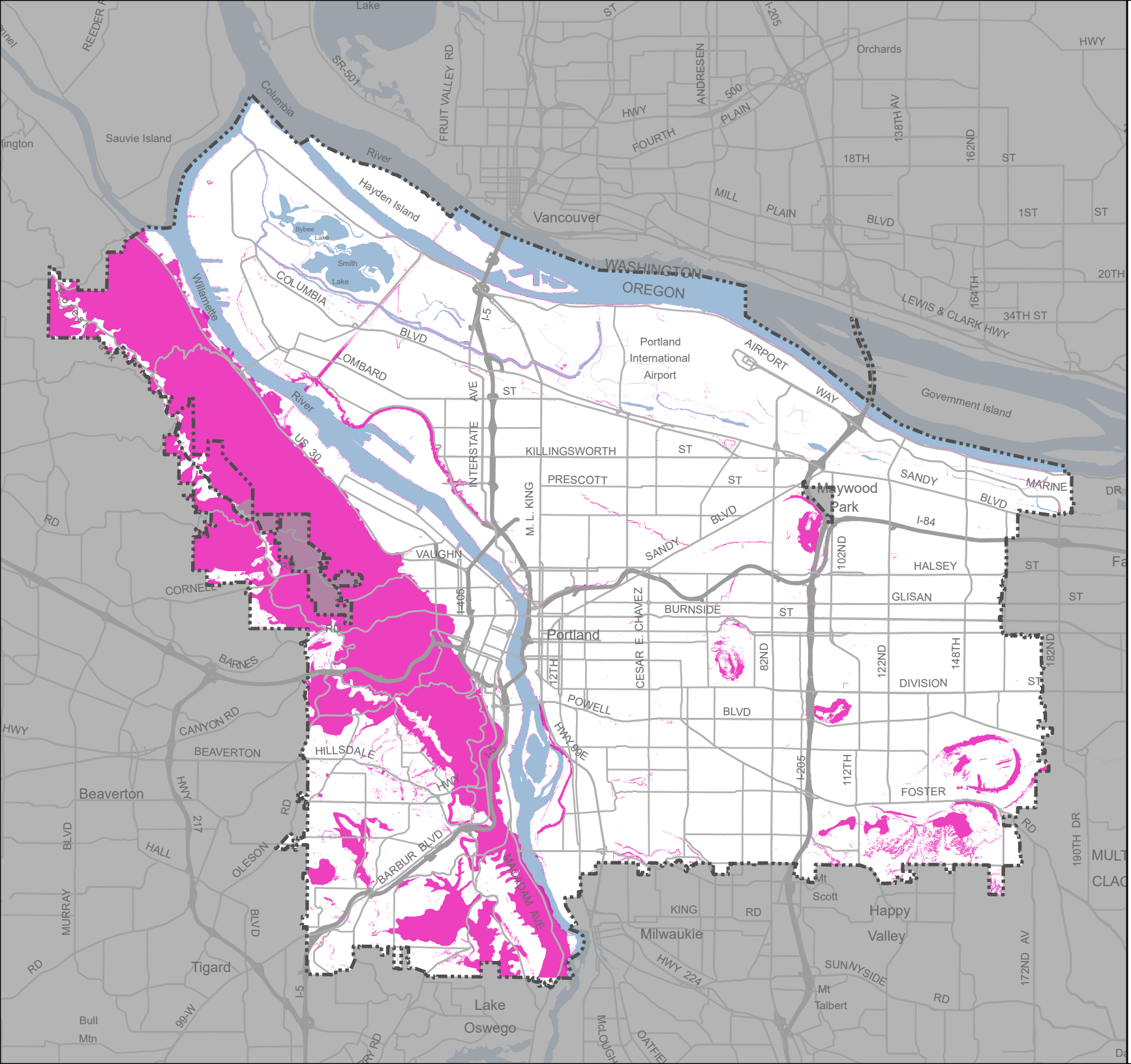

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Hazard Maps

Landslide Hazard

Legend

- Title 33 Potential Landslide Hazard Area
- Urban Service Boundary

The information on this map was derived from City of Portland GIS databases. Care was taken in the creation of this map but it is provided "as is". The City of Portland cannot accept any responsibility for error, omissions or positional accuracy.

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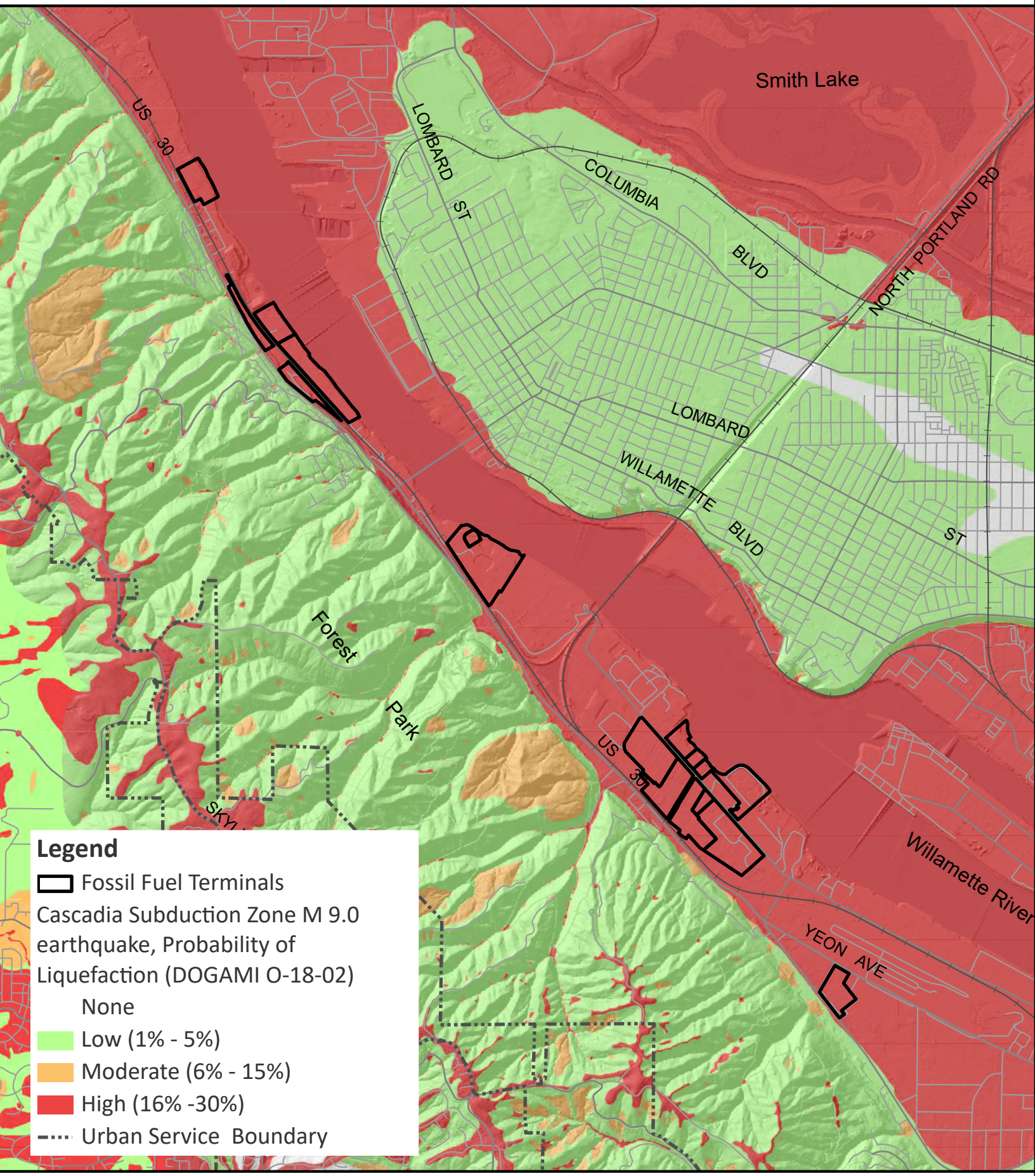
Hazard Maps

Liquefaction Risk



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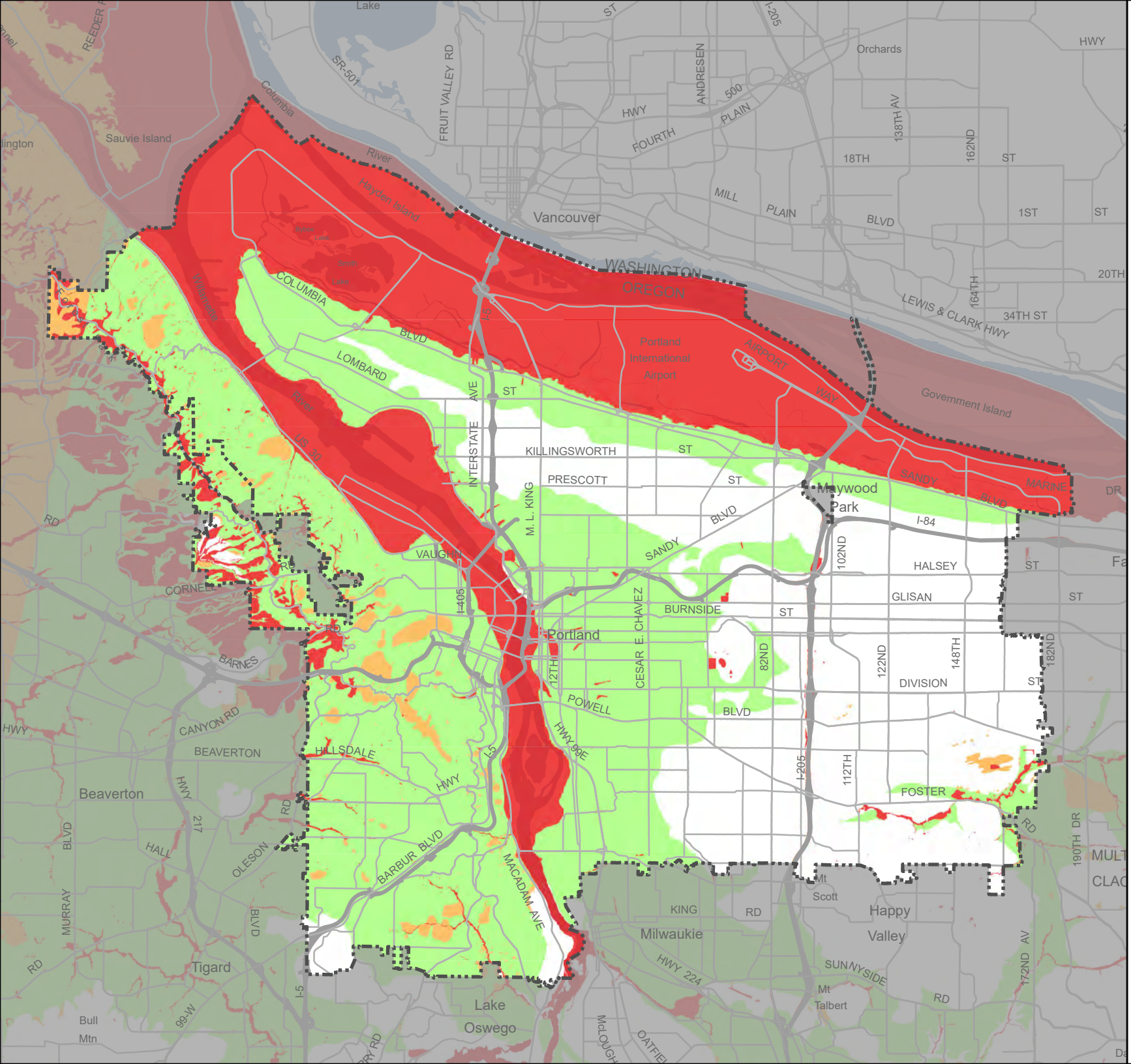

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Hazard Maps

Liquefaction Risk

Legend

Cascadia Subduction Zone M 9.0 earthquake, Probability of Liquefaction (DOGAMI O-18-02)

- None
- Low (1% - 5%)
- Moderate (6% - 15%)
- High (16% -30%)
- Urban Service Boundary

NORTH

0 1 2 Miles

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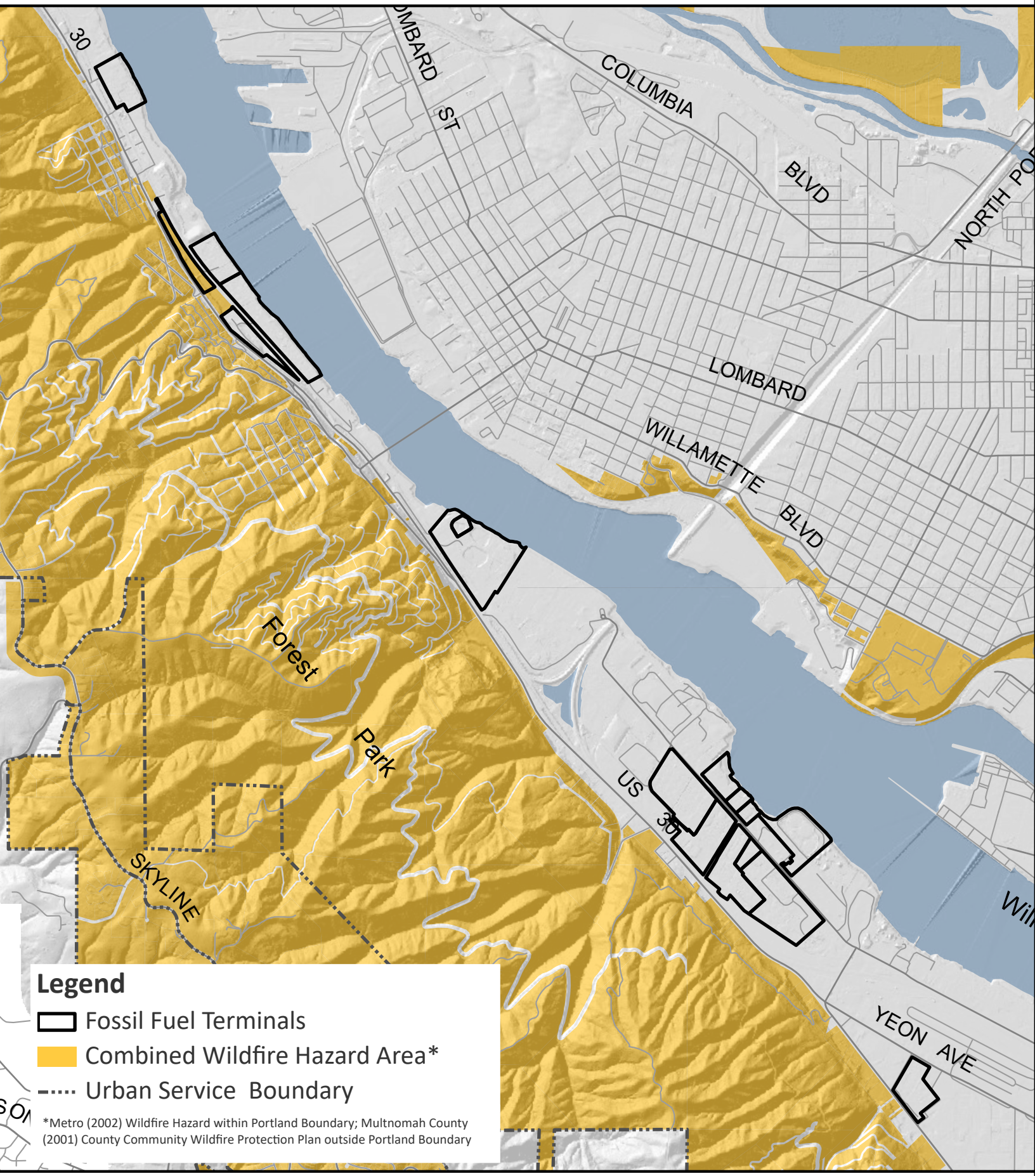
Hazard Maps

Wildfire Hazard



Legend

- Fossil Fuel Terminals
- Combined Wildfire Hazard Area*
- Urban Service Boundary

*Metro (2002) Wildfire Hazard within Portland Boundary; Multnomah County (2001) County Community Wildfire Protection Plan outside Portland Boundary

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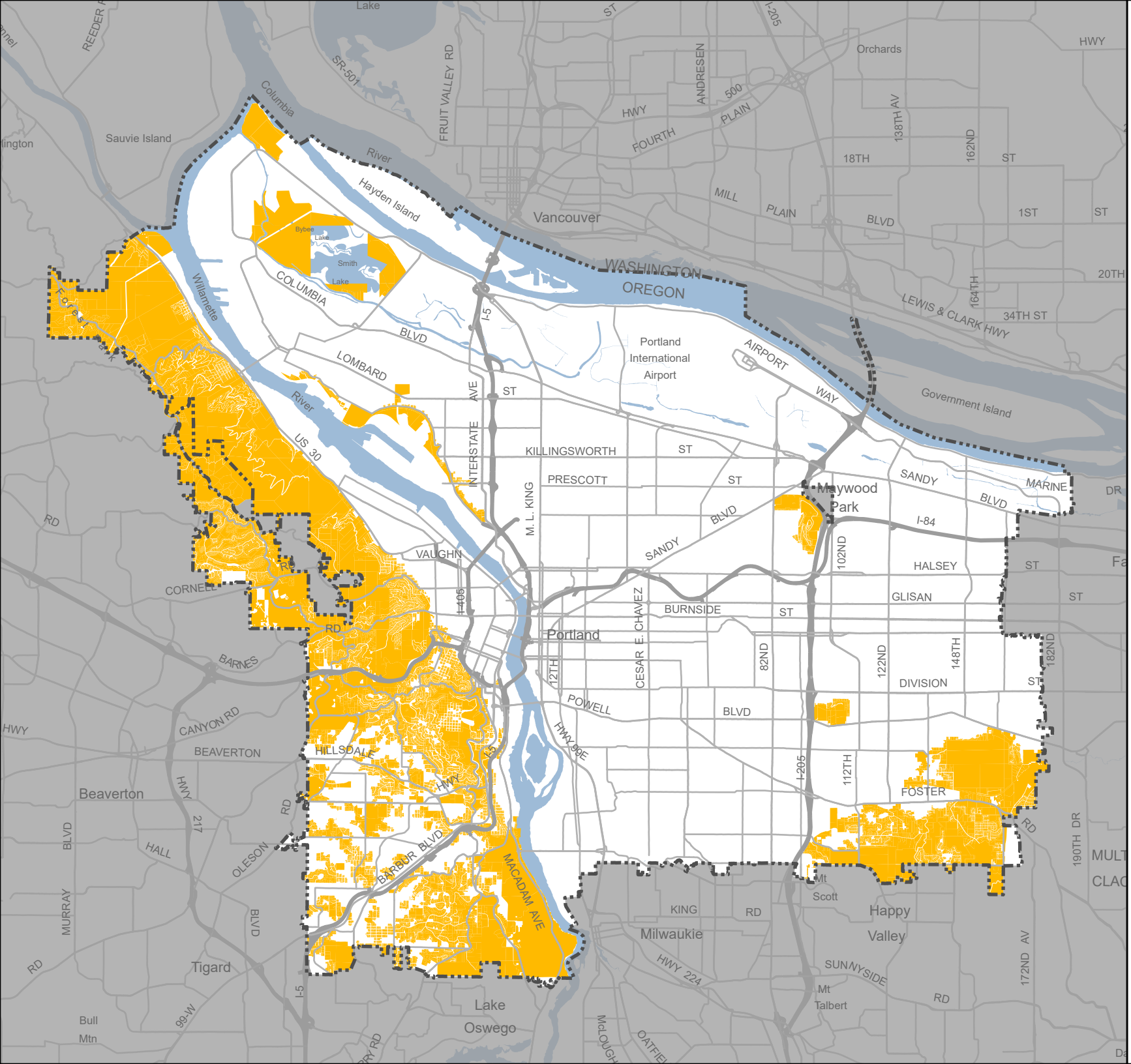

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Hazard Maps

Wildfire Hazard

Legend

- Combined Wildfire Hazard Area*
- Urban Service Boundary

*Metro (2002) Wildfire Hazard within Portland Boundary; Multnomah County (2001) County Community Wildfire Protection Plan outside Portland Boundary

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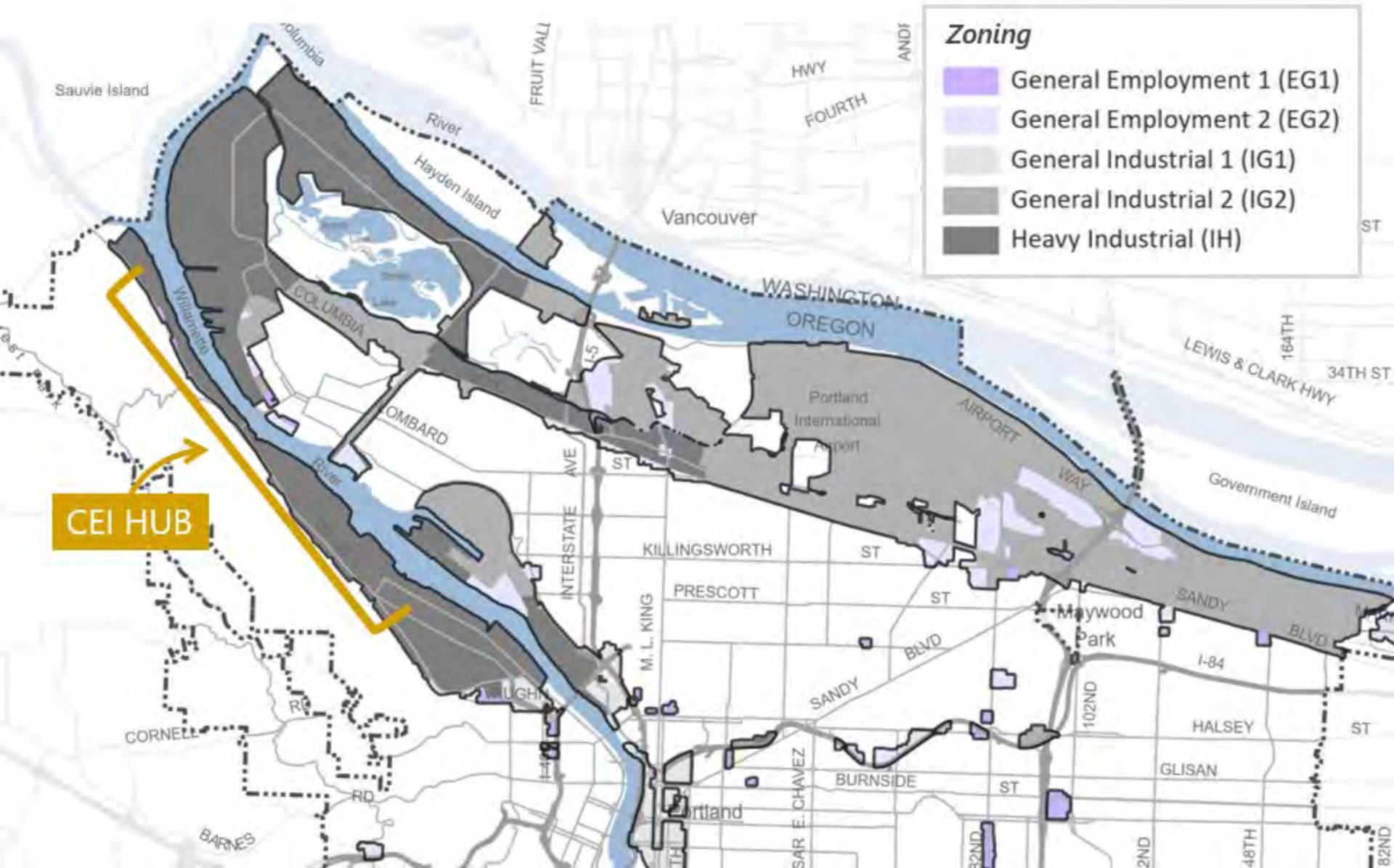
Attachment B: Zoning Map

Industrial & Employment Zones



Attachment C - Zoning Code Information Related to Bulk Fossil Fuel Terminals in Employment Zones

Portland Zoning Code Section 33.920.300 -- Bulk Fossil Fuel Terminal Definition

A. Characteristics: Bulk Fossil Fuel Terminals are establishments primarily engaged in the transport and bulk storage of fossil fuels. Terminal activities may also include fuel blending, regional distribution, and wholesaling. Terminals have access to marine, railroad, or regional pipeline to transport fuels to or from the site, and either have transloading facilities for transferring a shipment between transport modes, or have transloading facilities and storage tank capacity exceeding 2 million gallons. There is minimal on-site sales activity with the customer present.

B. Accessory uses: Accessory uses may include retail sales of petroleum products, offices, food membership distribution, parking, storage, truck fleet parking and maintenance areas, rail spur or lead lines, and docks.

C. Examples: Examples include crude oil terminals, petroleum products terminals, natural gas terminals, propane terminals, and coal terminals.

D. Exceptions:

1. Truck or marine freight terminals that do not store, transport or distribute fossil fuels are classified as Warehouse And Freight Movement uses.

2. Truck or marine freight terminals that have storage capacity of 2 million gallons or less are classified as Warehouse And Freight Movement uses. However, multiple fossil fuel facilities, each with 2 million gallons of fossil fuel storage capacity or less but cumulatively having a fossil fuel storage capacity in excess of 2 million gallons, located on separate parcels of land will be classified as a Bulk Fossil Fuel Terminal when two or more of the following factors are present:

    a. The facilities are located or will be located on one or more adjacent parcels of land. Adjacent includes separated by a shared right-of-way;
    b. The facilities share or will share operating facilities such as driveways, parking, piping, or storage facilities; or
    c. The facilities are owned or operated by a single parent partnership or corporation.

3. Gasoline stations and other retail sales of fossil fuels are not Bulk Fossil Fuel Terminals.

4. Distributors and wholesalers that receive and deliver fossil fuels exclusively by truck are not Bulk Fossil Fuel Terminals.

5. Industrial, commercial, institutional, and agricultural firms that exclusively store fossil fuel for use as an input are not Bulk Fossil Fuel Terminals.

6. Uses that involve the transfer or storage of solid or liquid wastes are classified as Waste-Related uses.

7. The storage of fossil fuels for exclusive use at an airport, surface passenger terminal, marine, truck or air freight terminal, drydock, ship or barge servicing facility, rail yard, or as part of a fleet vehicle servicing facility are not Bulk Fossil Fuel Terminals.

8. Uses that recover or reprocess used petroleum products are not Bulk Fossil Fuel Terminals.

33.140.100 and Table 140-1, table of allowed primary uses in Employment and Industrial Zones

Table 140-1
Employment and Industrial Zone Primary Uses

Use Categories	EG1	EG2	EX	IG1	IG2	IH
Residential Categories						
Household Living	L[1]	L[1]	Y	CU [2]	CU [2]	CU [2]
Group Living	L[1]	L[1]	Y	CU [2]	CU [2]	CU [2]
Commercial Categories						
Retail Sales And Service	L/CU [3]	L/CU [3]	Y	L/CU [4]	L/CU [5]	L/CU [6]
Office	Y	Y	Y	L/CU [4]	L/CU [5]	L/CU [6]
Quick Vehicle Servicing	Y	Y	N	Y	Y	Y
Vehicle Repair	Y	Y	Y	Y	Y	Y
Commercial Parking	CU [14]	CU [14]	CU [14]	CU [14]	CU [14]	CU [14]
Self-Service Storage	L [8]	L [8]	L [7]	Y	Y	Y
Commercial Outdoor Recreation	Y	Y	Y	CU	CU	CU
Major Event Entertainment	CU	CU	CU	CU	CU	CU
Industrial Categories						
Manufacturing And Production	Y	Y	Y	Y	Y	Y
Warehouse And Freight Movement	Y	Y	Y	Y	Y	Y
Wholesale Sales	Y	Y	Y	Y	Y	Y
Industrial Service	Y	Y	Y	Y	Y	Y
Bulk Fossil Fuel Terminal	L [16]	L [16]	N	L [16]	L [16]	L [16]
Railroad Yards	N	N	N	Y	Y	Y
Waste-Related	N	N	N	L/CU [8]	L/CU [8]	L/CU [8]

Y = Yes, Allowed
L = Allowed, But Special Limitations
CU = Conditional Use Review Required
N = No, Prohibited

33.140.100.B.16

16. Bulk Fossil Fuel Terminals. This regulation applies to all parts of Table 140-1 that have a [16].

a. Bulk Fossil Fuel Terminals that *existed on August 31, 2022 are allowed, but the total amount of fossil fuel that can be stored on the site in storage tanks is limited to the fossil fuel storage tank capacity that existed on August 31, 2022*. Total fossil fuel storage tank capacity on the site in excess of the capacity that existed on August 31, 2022 is prohibited. *Adding storage tank capacity exclusively for renewable fuels or to comply with the Renewable Fuel Standard (PCC Chapter 16.60 Motor Vehicle Fuels) is not considered an increase in capacity.* Storing coal on the site is prohibited.

b. New Bulk Fossil Fuel Terminals are prohibited

Non-Conforming Uses:

If there were a prohibition on all existing Bulk Fossil Fuel Terminals it would not eliminate or require existing facilities to cease operations. Instead, existing facilities would become non-conforming uses which allow facilities to continue operations and maintenance indefinitely, but restricts expansion.

Attachment D: Air Quality Permitting at DEQ

Air Quality Permitting at DEQ

The Oregon Department of Environmental Quality protects and restores Oregon's air quality. The quality of the air you breathe depends on where you live, what you do, and the conditions around you. Since air quality and pollution are complex and influenced by various factors, DEQ uses a variety of tools including regulation, permits, incentives and awareness building to reduce emissions and protect the quality of Oregon's air.

Why we have air quality permits

DEQ develops air quality permits for facilities so that they can operate while keeping the air safe to breathe. Permits contain specific emission limits and reporting requirements. Depending on the facility, permits may also contain pollution controls, equipment testing requirements and compliance schedules. Permits require ongoing rulemaking, policy and guidance development to incorporate new requirements and assist facilities in compliance.

Who needs an air quality permit

DEQ's air quality permitting program is tasked with reducing emissions from stationary and portable facilities in Oregon. Stationary sources are places with fixed emission points, like power plants, industrial facilities, or a small business like a dry cleaner or gas station. Portable facilities are facilities that move from location to location, like asphalt paving plants or rock crushing facilities. Portable facility regulations do not extend to mobile sources like vehicles, trains or marine vessels. Any business or industry that emits or has the potential to emit pollution into the air may be required to obtain an air permit from DEQ.

What air quality permits regulate

DEQ's air quality permits use models to establish emissions limits and monitoring requirements for six federally regulated air pollutants that can cause respiratory health risks and damage airways:

- **Particulate matter**. Dust, dirt, soot, smoke, and liquid droplets in the air.
- **Lead**. A byproduct of ore and metal processing, utilities, and transportation.
- **Carbon monoxide**. An odorless, invisible gas from incomplete combustion, mainly from motor vehicles and utilities.
- **Nitrogen oxides**. A group of pollutants mainly from burning fuels, like in vehicle exhaust.
- **Sulfur oxides**. A group of gases, mainly from burning fossil fuels, like in power plants.
- **Ground-level smog**. Created when pollution from cars, power plants, and other industrial facilities react in the presence of sunlight. In permits, this shows up as a limit on volatile organic compound, or VOC, emissions.

DEQ also requires facilities to perform air quality modeling for emissions of nitrogen oxides, sulfur oxides, and particulate matter to ensure these emissions meet federal air quality standards.

Translation or other formats

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State of Oregon
DEQ Department of Environmental Quality

Lastly, DEQ evaluates and regulates the emission of hazardous air pollutants. Hazardous air pollutants are known or suspected to cause cancer and other serious health effects, such as reproductive effects or birth defects, or adverse environmental effects. DEQ evaluates the number tons of emissions per year and can require facilities install pollution controls to lower the level of hazardous air pollutants a facility emits.

Cleaner Air Oregon

Oregon has a health-based air regulations known as the Cleaner Air Oregon Program. This program requires businesses applying for an air quality permit to demonstrate compliance with health-based standards prior to obtaining a permit. Compliance with a health-based standard rather than limits based on emission control technology is important because some chemicals can have a significant impact on health even in small amounts.

The program addresses the hazardous air pollutants mentioned above and greatly expands the number of chemicals DEQ regulates. Based on the facility's risk assessment, Cleaner Air Oregon may recommend additional permit conditions to protect public health. Cleaner Air Oregon has a prioritized, risk-based list it is using to call companies in to the program. Permit requirements for existing facilities can be added at any time through a permit addendum or modification.

How to get an air quality permit

DEQ issues permits for new facilities, existing facilities, and facilities that are undergoing a modification to industrial processes. To obtain a permit from DEQ, facilities must have an approved Land Use Compatibility Statement from the appropriate local zoning or planning authority. Before applying for an air quality permit, facilities must inventory and share information with DEQ about all equipment and processes with the potential to emit pollutants at the facility. This includes things like emergency engines, heaters, boilers, equipment that burns fuel and activities that create dust or evaporate volatile materials like solvents or paints.

Type of air quality permits

Generally, air permits follow this hierarchy from most complex to least complex: Title V, Standard Air Contaminant Discharge Permit (ACDP), Simple ACDP, General ACDP, and Basic ACDP.

Title V permits are required by the Federal Clean Air Act for major sources of criteria or hazardous air pollutants. Title V permits apply to some of the highest emitting and most complex facilities in Oregon. There are about 105 100 facilities that require a Title V permit in Oregon as of January 2025.

Air Contaminant Discharge Permits apply to construction of new and modified stationary facilities of various sizes as well as operation of medium sized existing stationary facilities that are not required to obtain Title V permits. The ACDP program, which began in 1972, permits about 2,500 facilities in Oregon. ACDP permits cover facilities that range in size and scale from a local autobody shop to landfills and incinerators. Facilities that emit air pollution but are not required to obtain an ACDP because their emissions are below permitting thresholds are required to notify DEQ through a Notice of Construction.

Non-discrimination statement

DEQ does not discriminate on the basis of race, color, national origin, disability, age, sex, religion, sexual orientation, gender identity, or marital status in the administration of its programs and activities. Visit DEQ's Civil Rights and Environmental Justice page.

Attachment E: DEQ Fuel Tank Seismic Stability Program

Fuel Tank Seismic Stability Program

Introduction

The Fuel Tank Seismic Stability Program was created by the Oregon Legislature in 2022 through Senate Bill 1567. DEQ manages this spill prevention program which aims to evaluate and improve the earthquake safety of large oil and fuel storage facilities. The law requires facilities with more than two million gallons of storage capacity in Columbia, Lane, and Multnomah counties, mostly in the City of Portland, to assess their seismic vulnerability and plan for risk reduction. The program protects public health and the environment from potential fuel spills and fires caused by earthquakes.

Seismic Vulnerability Assessments

Facilities must submit Seismic Vulnerability Assessments to DEQ. These assessments must include evaluations of soil, structure and safety. Initial submittals were due June 1st, 2024. DEQ reviews the SVAs and provides technical comments and change requests. After approval, facilities have six months to submit a Risk Mitigation Plan.

Risk Mitigation Implementation Plans

The Risk Mitigation Implementation Plan must propose ways to address vulnerabilities identified in the SVA and to minimize risks from a potential Cascadia megaquake. Facilities must describe any remaining risks after the plans are implemented and outline their emergency response measures. All risk reduction work must be completed within 10 years of plan approval.

Reporting Requirements

Facilities must submit annual risk mitigation status reports until DEQ approves the completion of implementation.

Translation or other formats

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State of Oregon
DEQ Department of Environmental Quality

Regulated Facilities

Columbia County:
Cascade Pacific Bio-Refinery
Portland General Electric, Beaver Plant & Port Westward

Lane County:
Kinder Morgan Liquids, Eugene SFPP LP

Multnomah County:
Chevron Fuels, Willbridge
Kinder Morgan Liquids, Linnton
Kinder Morgan Liquids, Willbridge
McCall Oil & Chemical Corporation
NW Natural
Owens Corning Roofing and Asphalt
Pacific Terminal Services
PDX Fuel Co., LLC
Phillips 66 Co.
Seaport Midstream Partners, LLC
Sunoco NuStar Energy LP, Portland Terminal
Shell Triton West, LLC
Vigor Industrial
Zenith Energy Terminals

More information

FTSS Program Website: **https://www.oregon.gov/deq/ss/Pages/default.aspx**

Contacts

Program: Killian Stoltenburg
Phone: 971-295-8734
Killian.stoltenburg@deq.oregon.gov

Media: Jennifer Flynt
Phone: 503-229-6585
jennifer.flynt@deq.oregon.gov

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CRITICAL ENERGY INFRASTRUCTURE HUB
COUNCIL WORK SESSION

March 17, 2025

Tom Armstrong
Supervising Planner
Bureau of Planning and Sustainability

Rachit Nerwal
Chief Resilience Officer
Bureau of Emergency Management

Work Session Overview

Critical Energy Infrastructure (CEI) Hub Overview

- What is the CEI Hub?
- Agency Roles and Responsibilities In the CEI Hub
  - Regulatory Responsibilities
  - Emergency Management
- Future Actions

Work Session Overview - Continued

Guest Panelists

- State Emergency Management
- DEQ regulatory programs
- Multnomah County Financial Responsibility

What is the Critical Energy Infrastructure (CEI) Hub?

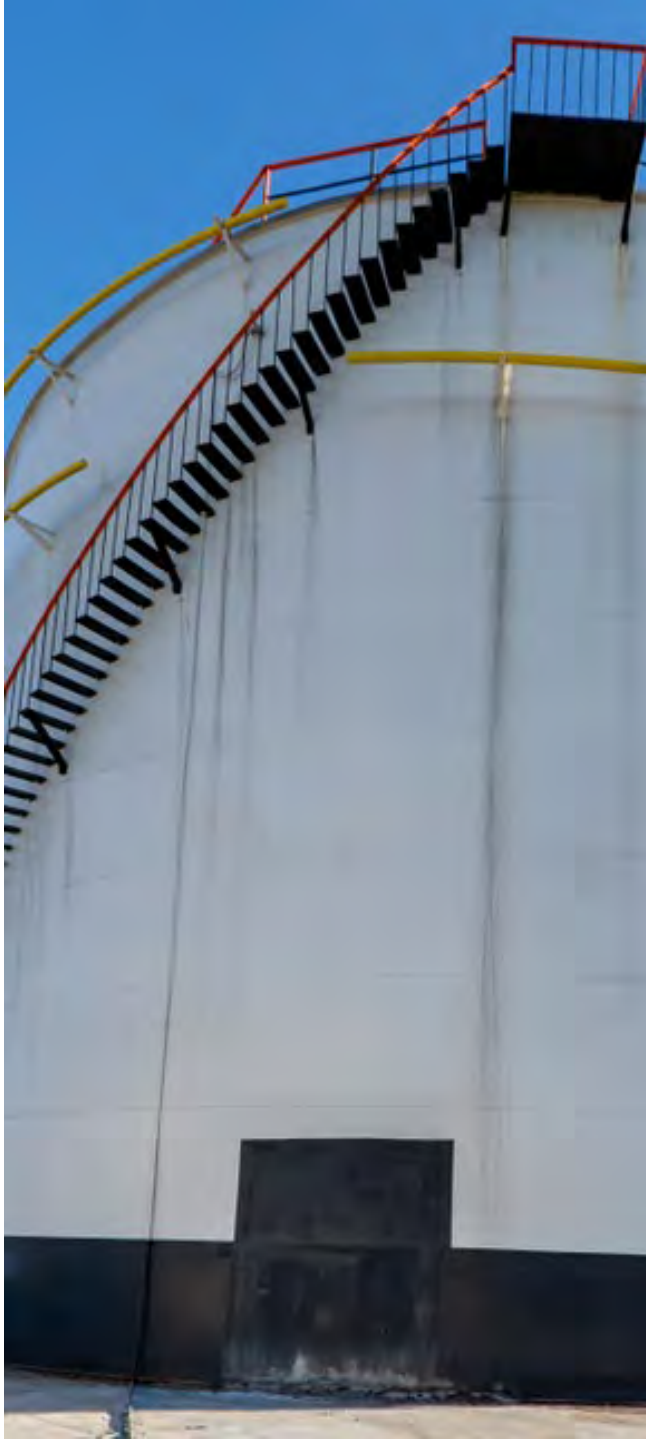
Strategic Approach

Acknowledge:

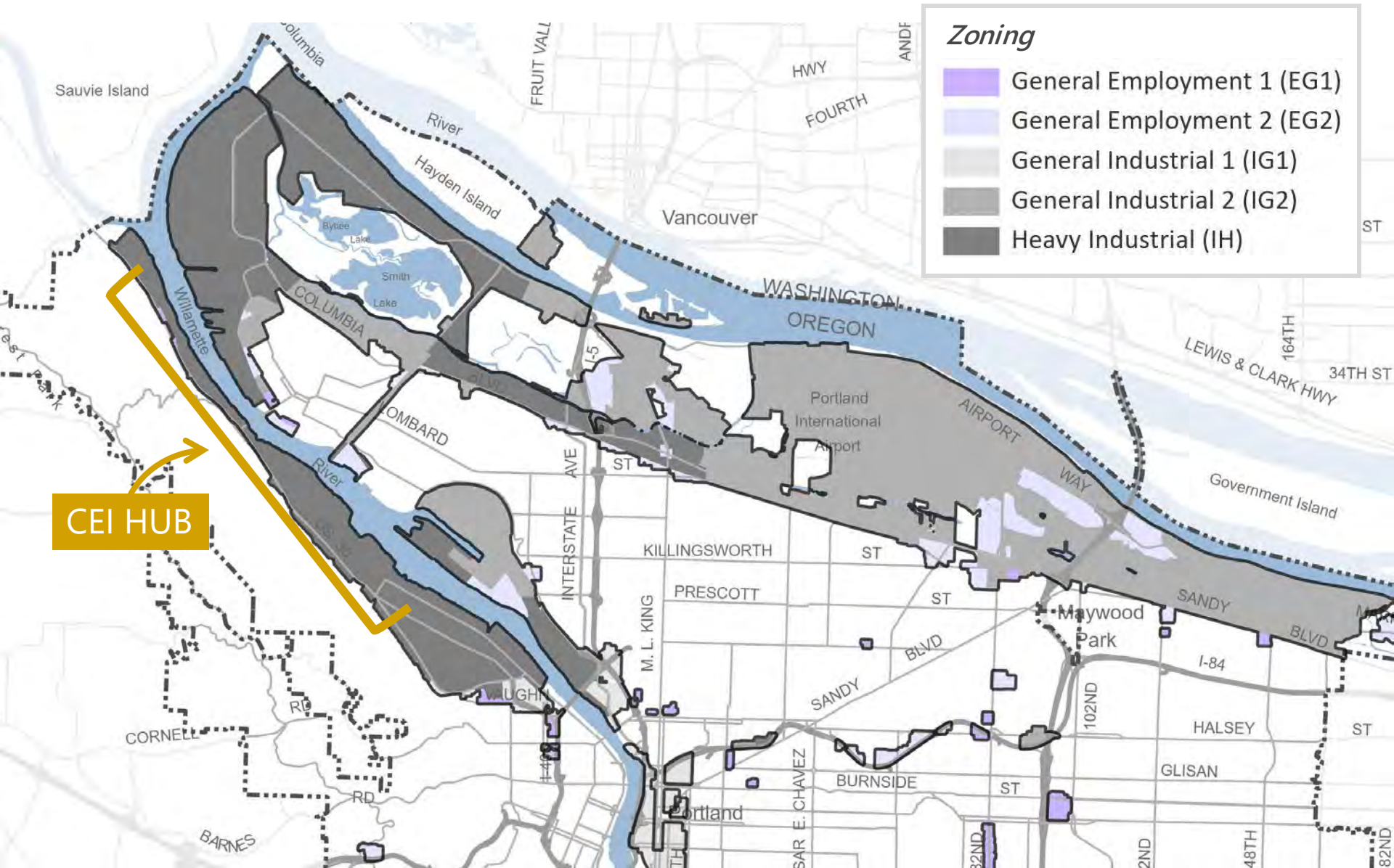
- Liquid fuel is essential for Portland, the region, and Oregon
- The CEI Hub is in a high-risk area
- Need to transition away from fossil fuels in a way that minimizes economic impacts

Mitigate:

- Limit the growth of these facilities
- Make the existing facilities safer



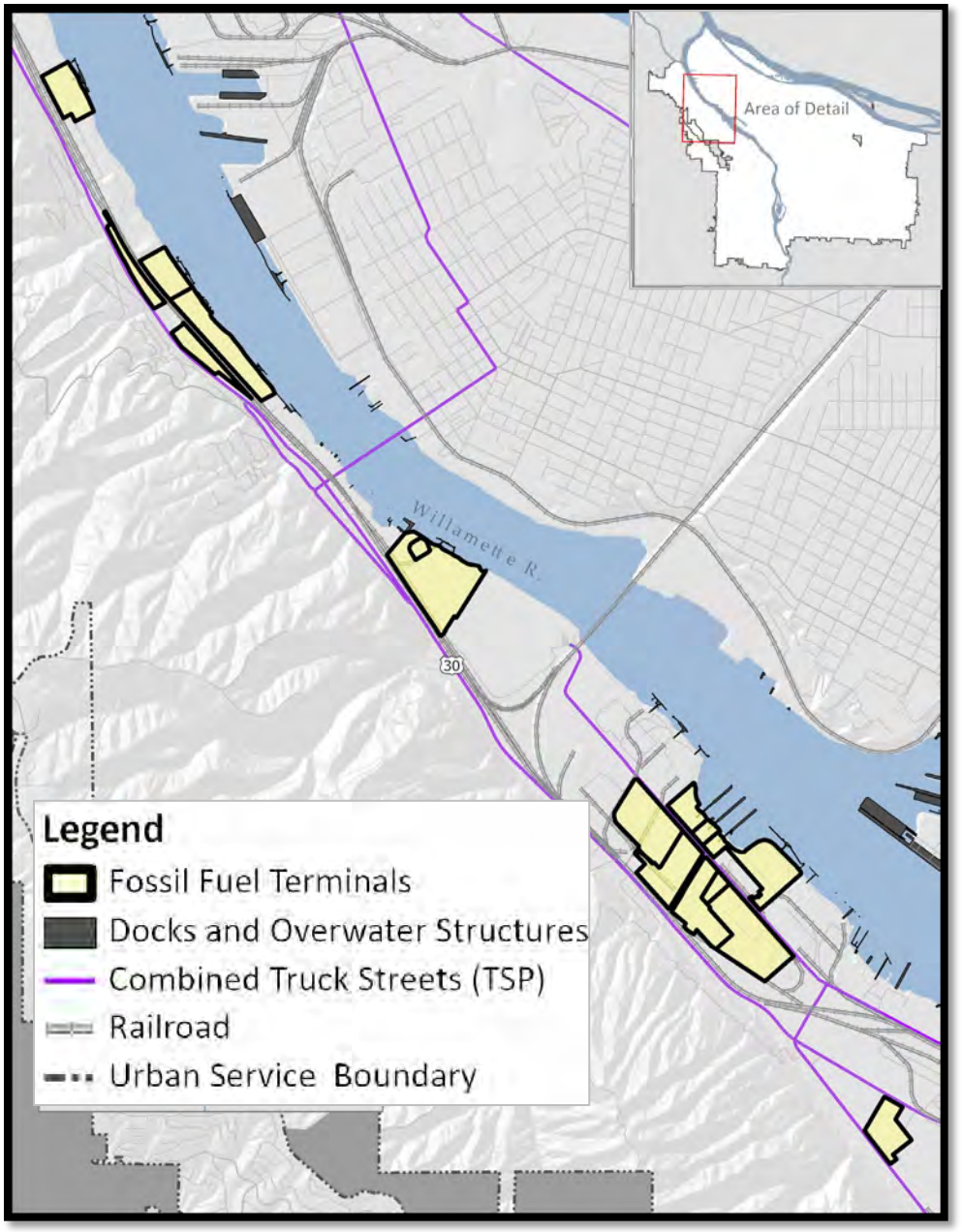
Industrial & Employment Zones



CEI Hub Overview

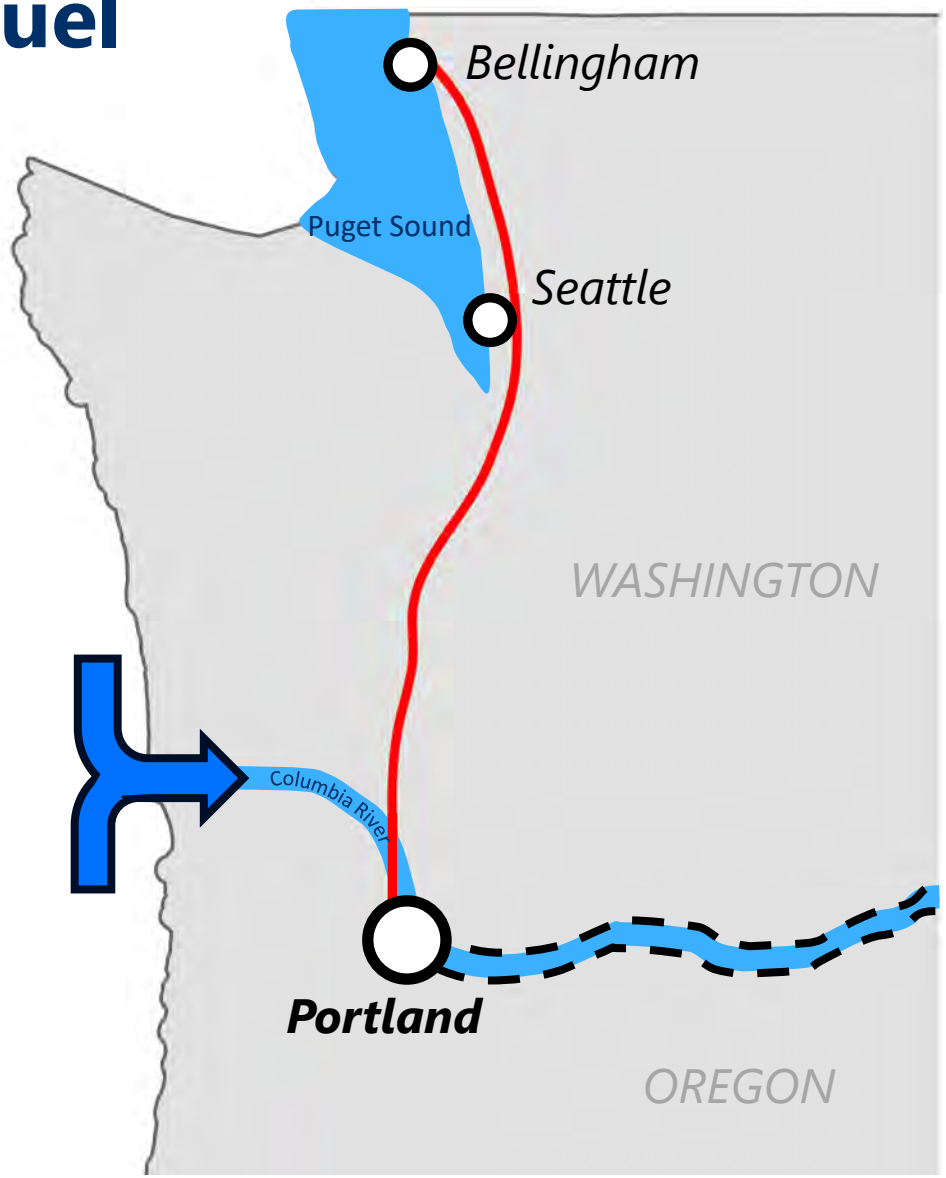
- 11 fossil fuel terminals
  - 630 Storage Tanks
  - 350 Million Gallons

- Associated Elements
  - Pipelines
  - Electrical Substations
  - Marine Docks, Railroads, Fuel Distribution Lines



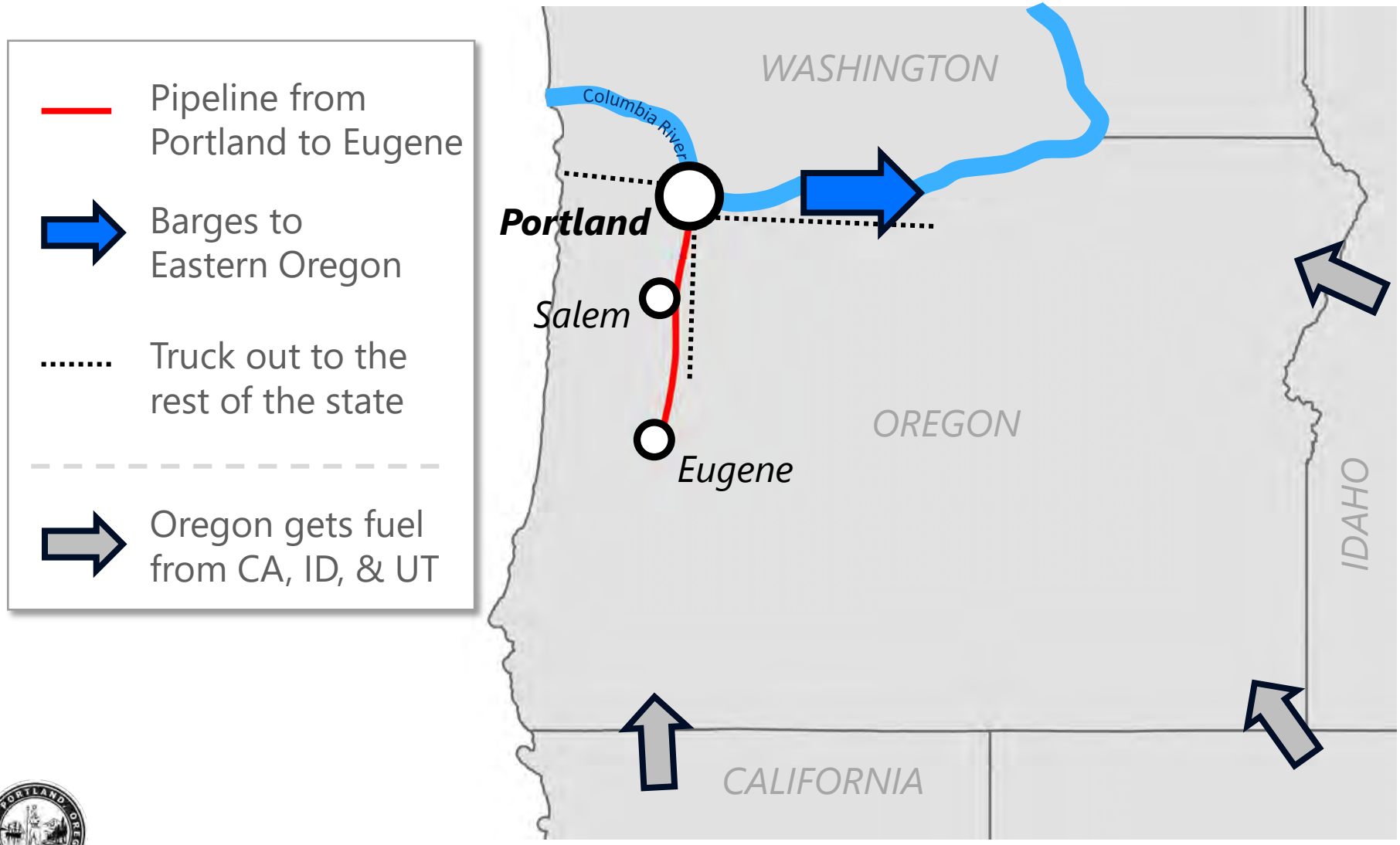
Where does the fuel come from?

- Via Pipeline from Bellingham Refineries
- Via Barges from California & Puget Sound
- Via Rail



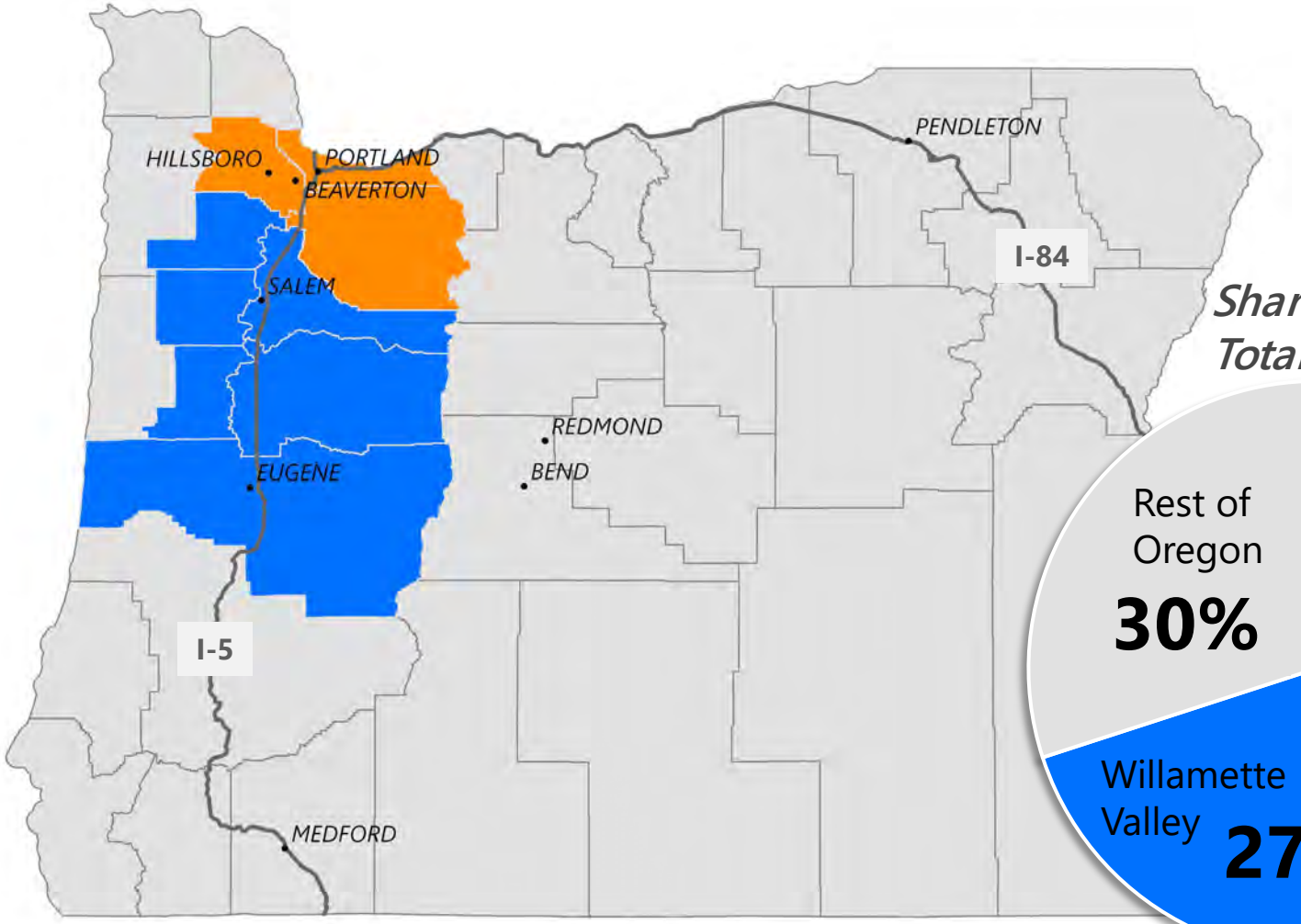
Where does the fuel go from Portland?

90% of Oregon's fuel supply is transported through the CEI Hub.

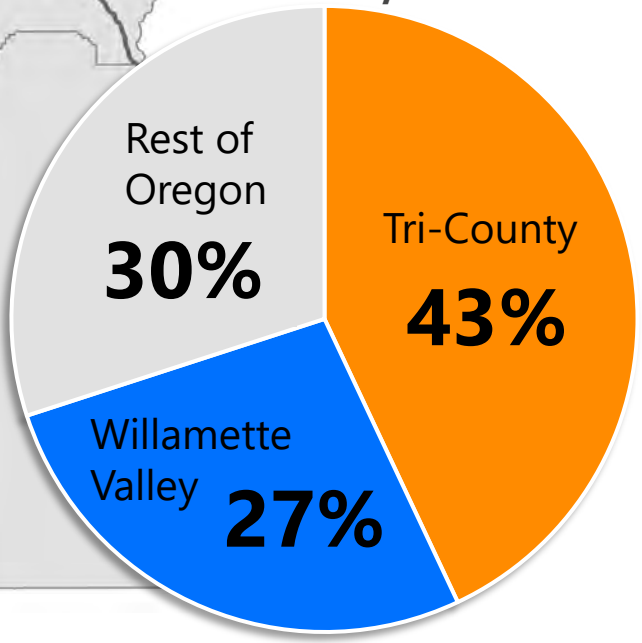


Where is fuel consumed in Oregon?

Using Population as Proxy



Share of Oregon's Total Population



Agency Roles and Responsibilities in the CEI Hub

City Bureaus

Bureau of Emergency Management

Portland Fire & Rescue

Portland Permitting and Development

Bureau of Planning and Sustainability

Bureau of Transportation

Bureau of Environmental Services

State Agencies

Department of Environmental Quality - Air Quality

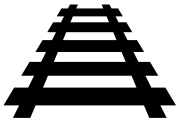
Department of Environmental Quality - Seismic Stability

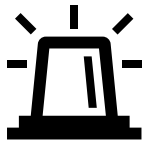
State Fire Marshal

Department of Transportation

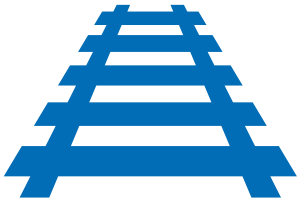
Department of Emergency Management

Building Codes Division



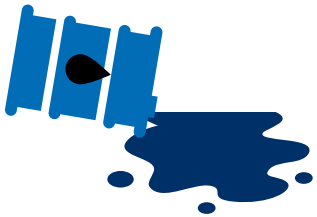


Federal



Federal Railroad Administration

Pipeline and Hazardous Materials Safety Administration



Environmental Protection Agency

U.S. Coast Guard

Regulatory Responsibilities

Federal

Federal Rail Admin

PHSMA

State

Bldg Codes

Fire Marshal

DEQ

City

PP&D

PF&R

BPS

PBOT

City of Portland
Regulations and Review Processes

What requires a Building Permit?

Any new, expansion, or alteration of a building, structure, or tank requires a building permit from Portland Permitting and Development.

"Structure" includes the supports for above ground piping.

Code standards for the review:

- Portland City Code Title 24 Building Regulations
- Oregon Structural Specialty Code
- Portland Fire Code

Other permits required:

- A separate permit through the City Fire Marshal's Office is required for new tanks over 60 gallons that contain hazardous material.
- A plumbing permit is required for new or alterations to pipes that carry water and are not in the public right of way.
- A mechanical permit is required for new or alterations to natural gas piping that serves a building or appliance.

How are Fossil and Renewable Fuels Defined in the Zoning Code?

- **Fossil Fuel.** Fossil fuels are petroleum products (such as crude oil and gasoline), coal, methanol, and gaseous fuels (such as natural gas and propane) that are made from decayed plants and animals that lived millions of years ago and are used as a source of energy.
- **Renewable Fuel.** Renewable fuels (such as biodiesel, biomethane, and clean hydrogen) are produced from non-petroleum, non-natural gas renewable resources and have less than 5 percent fossil fuel content.

How is a Bulk Fossil Fuel Terminal Defined?

- Bulk Fossil Fuel Terminals are defined as terminals with:
  - Transloading facilities with access to a pipeline, marine dock, and/or rail line; and
  - Storage **tank capacity exceeding 2 million gallons**.

The purple shaded lots are all under the same ownership and therefore are all defined as a Bulk Fossil Fuel Terminal.

How does Portland's Zoning Code regulate Bulk Fossil Fuel Terminals?

- **NEW** Bulk Fossil Fuel Terminals are **prohibited** outright
- **Existing** Bulk Fossil Fuels Terminals are designated as a **limited use**
  - Fossil Fuel storage tank capacity at existing terminals is limited to that which existed as of August 2022
  - Allows for adding storage capacity exclusively for use at a transportation facility, such as an airport or marine terminal, or for renewable fuels or non-fuel products

Table 140-1
Employment and Industrial Zone Primary Uses

Use Categories	EG1	EG2	EX	IG1	IG2	IH
Residential Categories						
Household Living	L[1]	L[1]	Y	CU [2]	CU [2]	CU [2]
Group Living	L[1]	L[1]	Y	CU [2]	CU [2]	CU [2]
Commercial Categories						
Retail Sales And Service	L/CU [3]	L/CU [3]	Y	L/CU [4]	L/CU [5]	L/CU [6]
Office	Y	Y	Y	L/CU [4]	L/CU [5]	L/CU [6]
Quick Vehicle Servicing	Y	Y	N	Y	Y	Y
Vehicle Repair	Y	Y	Y	Y	Y	Y
Commercial Parking	CU [14]	CU [14]	CU [14]	CU [14]	CU [14]	CU [14]
Self-Service Storage	L [8]	L [8]	L [7]	Y	Y	Y
Commercial Outdoor Recreation	Y	Y	Y	CU	CU	CU
Major Event Entertainment	CU	CU	CU	CU	CU	CU
Industrial Categories						
Manufacturing And Production	Y	Y	Y	Y	Y	Y
Warehouse And Freight Movement	Y	Y	Y	Y	Y	Y
Wholesale Sales	Y	Y	Y	Y	Y	Y
Industrial Service	Y	Y	Y	Y	Y	Y
Bulk Fossil Fuel Terminal	L [16]	L [16]	N	L [16]	L [16]	L [16]
Railroad Yards	N	N	N	Y	Y	Y
Waste-Related	N	N	N	L/CU [8]	L/CU [8]	L/CU [8]

Y = Yes, Allowed
L = Allowed, But Special Limitations
CU = Conditional Use Review Required
N = No, Prohibited

What is NOT a Bulk Fossil Fuel Terminal?

- Gasoline stations and other retail sales of fossil fuels.
- Distributors that receive and deliver fossil fuels exclusively by truck.
- Industrial, commercial, and institutional firms exclusively store fossil fuel for use as an input
- Fleet transportation facilities, such as airports, marine terminals or rail yards.
- Uses that reprocess used petroleum products.

What is a Franchise Agreement?

The City grants access to the right-of-way (ROW) to private utility companies, like gas, electricity, telecommunications and pipelines.

- Long-term agreements for the use of public ROW for a fee.
- BPS' Franchise Utility program works closely with PBOT, which oversees permitting process for physical improvements in the ROW.
- There are six franchises to operate pipelines for fossil fuel distribution:

- Chevron	- Kinder Morgan
- Northwest Natural	- Zenith Energy
- Olympic Pipeline Co.	- Oregon Holdings LLC

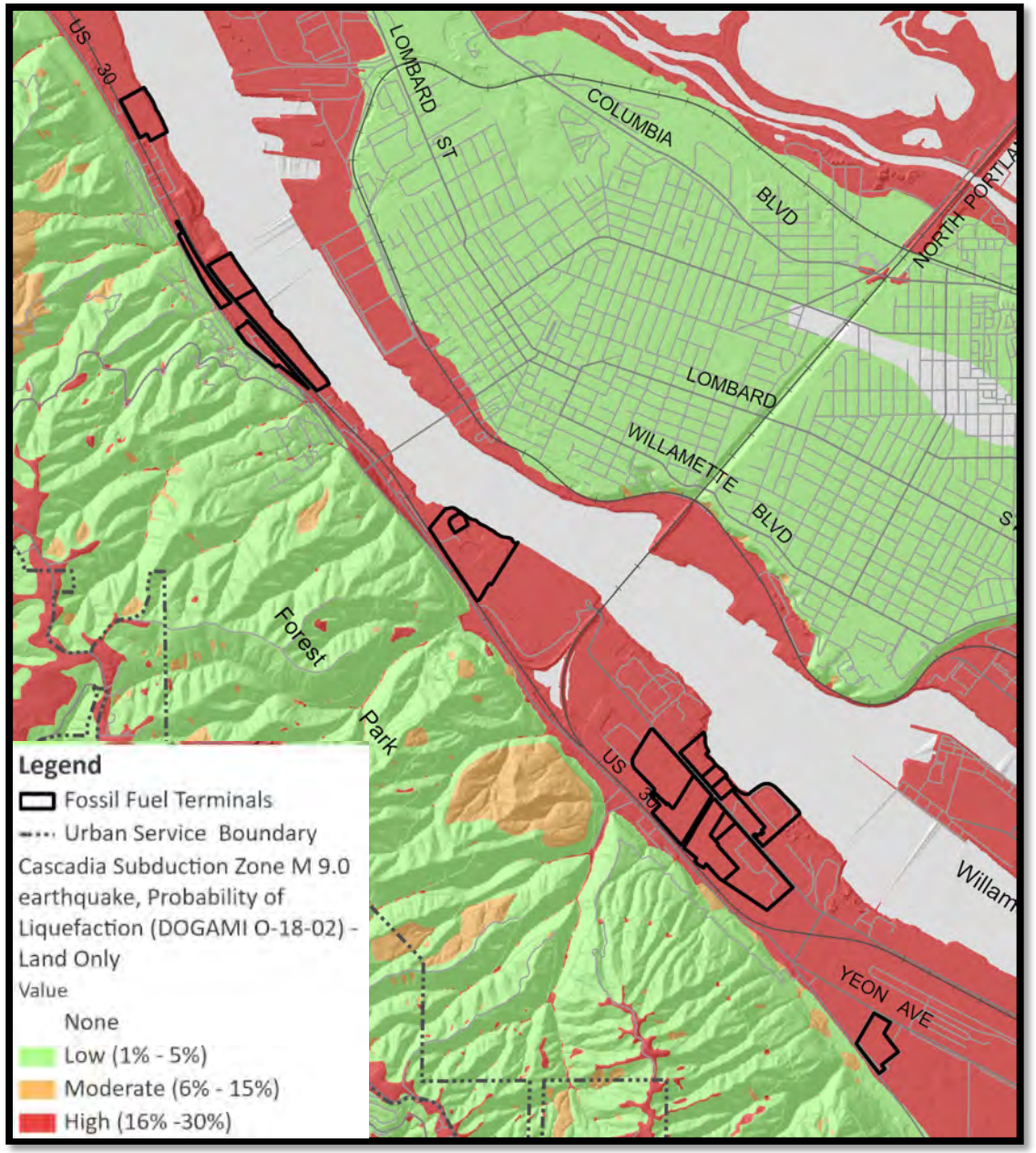
Emergency Management

What are the Risks?

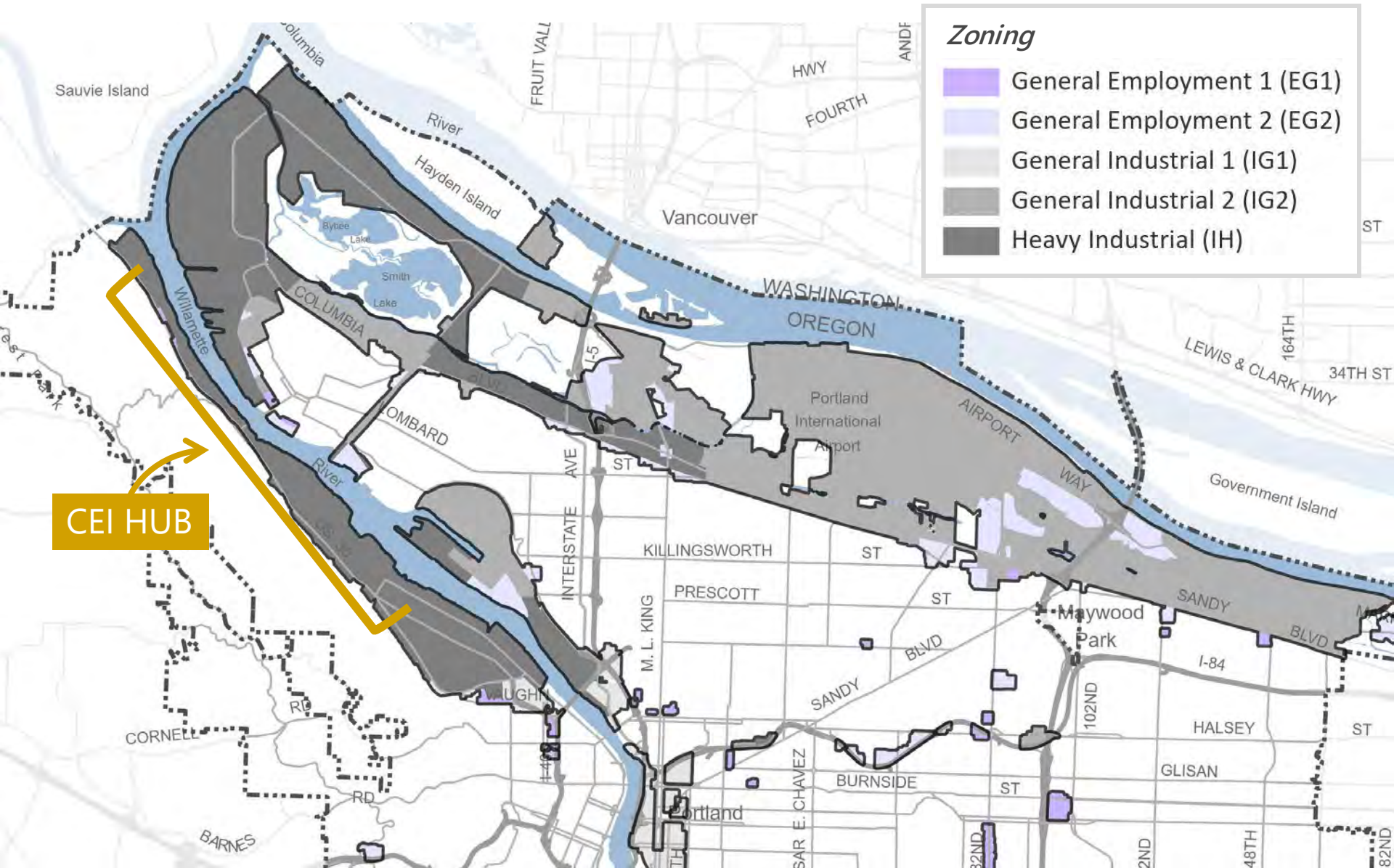
Liquefaction Risk

The CEI Hub is located in an area that has a high probability of liquefaction in the event of a Cascadia event 9.0 Earthquake.

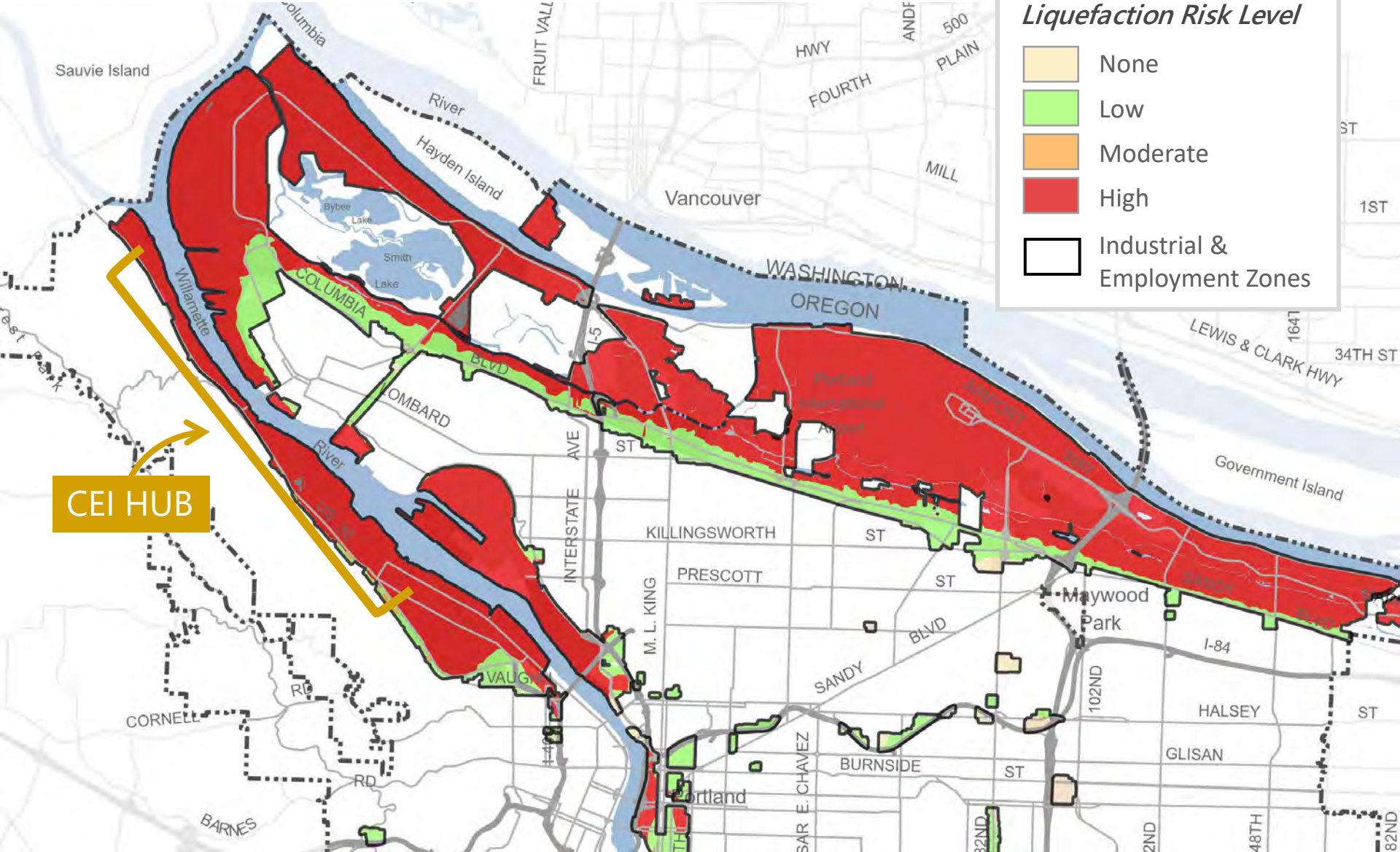
Liquefaction: Soils become saturated, soften and lose strength resulting in displacement.



Industrial & Employment Zones

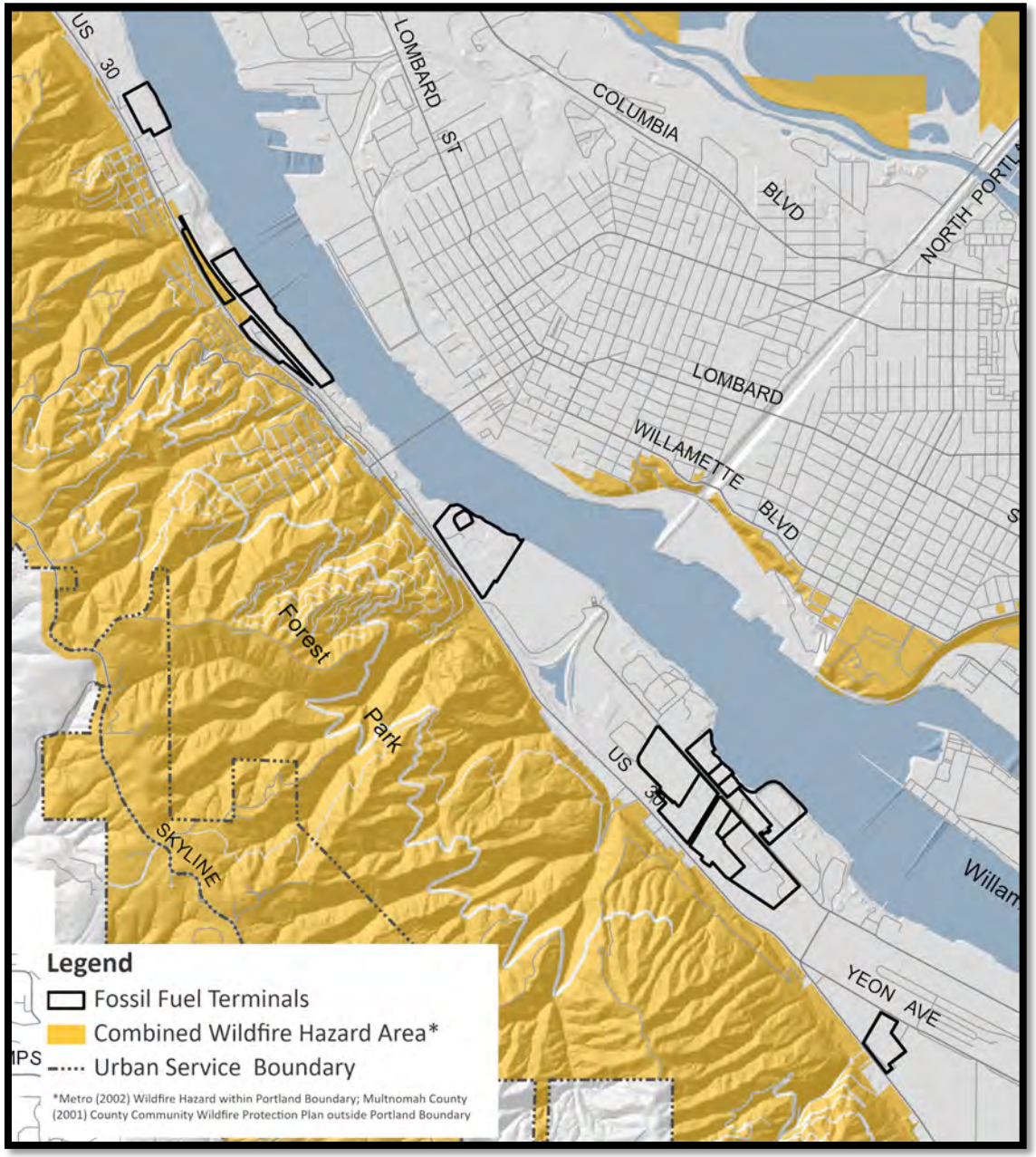


Liquefaction Risk in Industrial & Employment Zones



Wildfire Hazard

The CEI Hub is located next to Forest Park, which is a wildfire hazard area, presenting the risk of a fuel terminal fire causing a wildfire in Forest Park.



2022 City/County Risk Assessment Findings

- 630 storage tanks with a capacity of 350 million
- The total potential release could be 95 million to 194 million gallons
- The containment structures will be insufficient to contain releases from multiple tank failures
- Releases pose threats to the immediate area, downstream, and downwind of the CEI Hub
- **The costs related to potential releases at the CEI Hub range from $359 million to $2.6 billion**

Emergency Management Responsibilities

Federal

Federal Emergency Management Agency (FEMA)

Environmental Protection Agency (EPA)

US Coast Guard

State

Department of Environmental Quality

Oregon Emergency Management

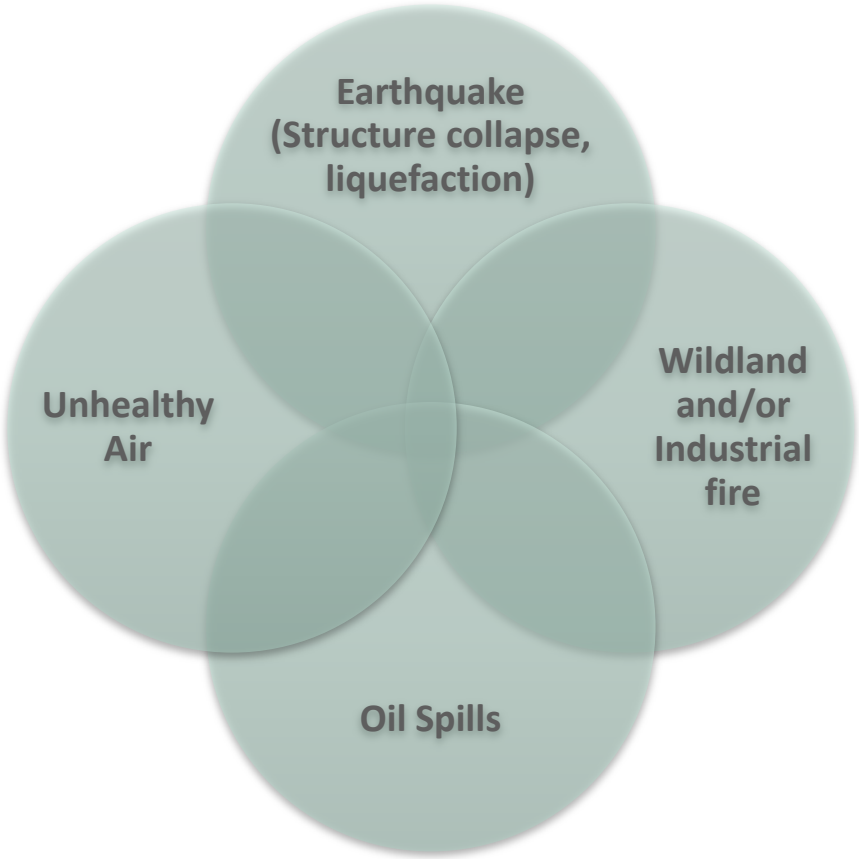
Local and Regional

City:
PF&R
PBEM
BES

Multnomah County EM

Regional: RDPO

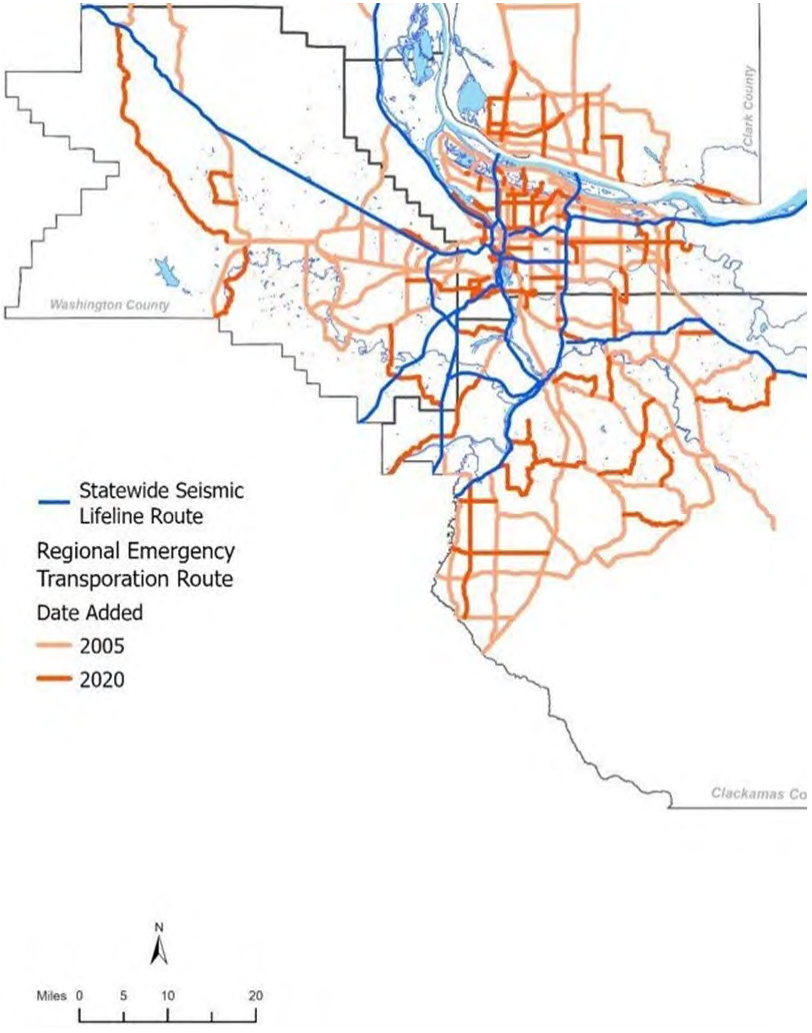
Hazards



- Emergency Operations Plan (Last updated 2022)
- City's earthquake response framework (Last updated 2023, pending approval)
- Unhealthy Air Operational Guideline (Last updates 2023)

Emergency Response

- City's Alert and Warning (Last Updated, 2019)
  - Currently lacks hyper-local, timely capability to alert locals
- City's Evacuation Plan (Last approved plan, 2017)
- Debris management Plan (Last updated 2014)
- Mass Care plan (Multnomah County led plan)
- Portland Fire: Pre-Fire Plan for HazMat Response
- Regional Emergency Transportation Routes Projects



Community Preparedness - Linnton Neighborhood

- An active but small NET team, supported by PBEM through multiple training events, including Basic NET training (2014, 2018) and CPR/AED/First Aid certification (2023)
- Designated BEECN site with a secure and fully stocked cache
- PBEM and Linnton NET developed nine hilltop caches with medical and communications equipment for emergency response in mini-neighborhoods
- NETs collaborate with PF&R's Firewise program to mitigate WUI fire risks in Linnton
- PBEM actively participates in community meetings on disaster preparedness and the CEI Hub

Local Emergency Planning Committee (LEPC)

- Emergency Planning Community Right to Know Act (EPCRA)
- Oregon Community Right-to-Know and Protection Act (CR2K)
- HAZMAT Emergency Response Plan

Future Actions

2025 Legislature

- HB 2151 Seismic Mitigation Fund
- HB 2152 State Fuel Plan
- HB 2914 Pipeline Safety Task Force
- HB 2949 FFT Financial Responsibility
- HB 3450 CEI Transition Plan

FEMA Grant – CEI Hub Policies and Code

$405,720 Grant

- 10% City Match
- 2-yr Project
- Funds Staff Time/Consultant

Process

- Research options
- Community Engagement
- Planning Commission
- City Council

Risk Mitigation Strategy

- Limit future development (City)
- Require seismic upgrades (DEQ)
- Require financial responsibility (Multnomah County)
- Reduce demand for liquid fuel (City/Metro/State)
- Prepare for emergencies (City/State/Federal)

Panelists

Guest Panelists

Emergency Management

- Jonna Papaefthimiou, Governor's Chief Resilience Officer
- Mary Ann Christian, Local Emergency Planning Committee Coordinator, Office of Oregon State Fire Marshal

Department of Environmental Quality

- Christine Svetkovich, Northwest Region Administrator
- Mike Kortenhof, Manager, Seismic Stability Program

Multnomah County Financial Responsibility

- John Wasiutynski, Director Office of Sustainability

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Traducción e Interpretación | Biên Dịch và Thông Dịch | अनुवादन तथा व्याख्या | 口笔译服务 | Устный и письменный перевод | Turjumaad iyo Fasiraad | Письмовий і усний переклад | Traducere și interpretariat | Chiaku me Awewen Kapas | 翻訳または通訳 | ภาษาเขียนและภาษาพูด | ອະທິບາຍ | الترجمة التحريرية أو الشفهية | Portland.gov/bps/accommodation