

# Otter Rock Water District Addendum to the Lincoln County Multi-Jurisdictional NHMP

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*Photos courtesy of Gary Halvorson, Oregon State Archives*

Effective:

December 17, 2025 through December 16, 2030



Prepared for  
Otter Rock Water District  
6515 Gladys Ave  
Otter Rock OR 97369

Prepared by  
The University of Oregon  
Institute for Policy Research & Engagement  
School of Planning, Public Policy, and Management



Institute for Policy  
Research and Engagement

This Natural Hazard Mitigation Plan was prepared by:



UNIVERSITY OF  
OREGON

School of Planning, Public  
Policy and Management

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Research and Engagement

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**FEMA**

December 17, 2025

Stephen Richardson  
State Hazard Mitigation Officer  
Oregon Department of Emergency Management  
3930 Fairview Industrial Dr SE  
Salem, OR 97302

Reference: Approval of the Lincoln County Multi-Jurisdictional Natural Hazard Mitigation Plan

Dear Officer Richardson:

In accordance with applicable<sup>1</sup> laws, regulations and policy, the Risk Analysis Branch of FEMA Region 10 Mitigation Division has approved the local mitigation plan for the following jurisdictions:

Lincoln County	City of Depoe Bay	City of Newport
City of Toledo	Beverly Beach Water District	Central Lincoln People's Utility District
Central Oregon Coast FRD	Depoe Bay Fire District	Gleneden Sanitary District
Kernville-Gleneden Beach-Lincoln Beach Water District	North Lincoln Fire and Rescue District	Otter Rock Water District
Panther Creek Water District	Salishan Sanitary District	Seal Rock Water District
Siletz Valley Fire District	SW Lincoln County Water People's Utility District	

Mitigation plans may include additional content to meet Element H: Additional State Requirements or content the local government included beyond applicable FEMA mitigation planning requirements. FEMA approval does not include the review or approval of content that exceeds these applicable FEMA mitigation planning requirements.

The approval period for this plan is from December 17, 2025 through December 16, 2030.

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<sup>1</sup> Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended; the National Flood Insurance Act of 1968, as amended; and National Dam Safety Program Act, as amended; 44 CFR Part 201, Mitigation Planning; and Local Mitigation Planning Policy Guide (FP-206-21-0002).

The jurisdictions' plan approval ensures the eligibility for project grants under FEMA's Hazard Mitigation Assistance programs. All requests for funding are evaluated individually according to eligibility and other program requirements. Having an approved mitigation plan does not mean that mitigation grant funding will be awarded. Specific application and eligibility requirements can be found in each FEMA grant program's respective policies and annual Notice of Funding Opportunities, as applicable.

FEMA's approval is for a period of five years, effective the date FEMA received the adoption documentation. For this plan, documentation was received on December 17, 2025 and is considered approved as of then. Prior to December 16, 2030, each jurisdiction must review, revise, and submit their plan to FEMA for approval to maintain eligibility for grant funding. The enclosed plan review tool provides opportunities to incorporate into future updates.

Sincerely,

Wendy Shaw, P.E.  
Risk Analysis Branch Chief  
Mitigation Division

JG: MB

Attachment: Local Mitigation Plan Review Tool

Resolution # 2025-36

**A Resolution Adopting the Otter Rock Water District Representation in the Updates to the Lincoln County Multi-Jurisdictional Natural Hazards Mitigation Plan**

**Whereas**, the **Otter Rock Water District** recognizes the threat that natural hazards pose to people, property and infrastructure within our service area; and

**Whereas**, undertaking hazard mitigation actions will reduce the potential for harm to people, property and infrastructure from future hazard occurrences; and

**Whereas**, an adopted Natural Hazards Mitigation Plan is required as a condition of future funding for mitigation projects under multiple FEMA pre- and post-disaster mitigation grant programs; and

**Whereas**, the **Otter Rock Water District** has fully participated in the FEMA prescribed mitigation planning process to prepare the *Lincoln County, Multi-Jurisdictional Natural Hazards Mitigation Plan*, which has established a comprehensive, coordinated planning process to eliminate or minimize these vulnerabilities; and

**Whereas**, the **Otter Rock Water District** has identified natural hazard risks and prioritized a number of proposed actions and programs needed to mitigate the vulnerabilities of the **Otter Rock Water District** to the impacts of future disasters within the *Lincoln County, Multi-Jurisdictional Natural Hazards Mitigation Plan*; and

**Whereas**, these proposed projects and programs have been incorporated into the *Lincoln County, Multi-Jurisdictional Natural Hazards Mitigation Plan* that has been prepared and promulgated for consideration and implementation by the participating cities and special districts of Lincoln County; and

**Whereas**, the Oregon Department of Emergency Management and Federal Emergency Management Agency, Region X officials have reviewed the *Lincoln County, Multi-Jurisdictional Natural Hazards Mitigation Plan* and pre-approved it contingent upon this official adoption of the participating governments and entities;

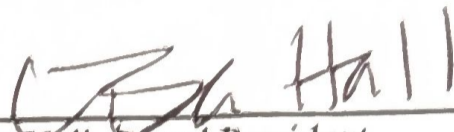
**Whereas**, the NHMP is in an on-going cycle of development and revision to improve it's effectiveness; and

**Whereas**, **Otter Rock Water District** adopts the NHMP and directs the Board to develop, approve, and implement the mitigation strategies and any administrative changes to the NHMP.

**Now, therefore, be it resolved**, that the **Otter Rock Water District** adopts *the Lincoln County Multi-Jurisdictional Natural Hazards Mitigation Plan* as an official plan; and

**Be it further resolved,** that the **Otter Rock Water District** will submit this Adoption Resolution to the Oregon Department of Emergency Management and Federal Emergency Management Agency, Region X officials to enable final approval of the *Lincoln County Multi-Jurisdictional Natural Hazards Mitigation Plan*.

Adopted this 14 day of October, 2025

  
\_\_\_\_\_  
Lisa Hall, Board President

Attested:

  
\_\_\_\_\_  
Kellie Lombardie, Board Secretary

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# Introduction

## Purpose and Adoption

This is the Otter Rock Water District (Otter Rock WD) addendum to the Lincoln County Multi-Jurisdiction Natural Hazards Mitigation Plan (NHMP). This addendum is not intended to be a standalone document, rather information contained herein supplements information contained in Volume I (Basic Plan) which serves as the NHMP foundation and Volume III (Appendices), which provides additional information. This addendum meets the following requirements:

- Multi-jurisdictional **Plan Requirements: Participation** §201.6(a)(4),
- Multi-Jurisdictional **Plan Content: Risk Assessment** §201.6(c)(2)(iii),
- Multi-jurisdictional **Plan Content: Mitigation Strategy** §201.6(c)(3)(iv), and
- Multi-jurisdictional **Plan Content: Documentation** §201.6(c)(5).

This is the first addendum to the Lincoln County NHMP for the Otter Rock WD.

Otter Rock WD adopted their addendum to the Lincoln County Multi-jurisdictional NHMP on October 14, 2025. FEMA Region X approved the Lincoln County NHMP and the district’s addendum on December 17, 2025. With approval of this NHMP the district is now eligible to apply for the Robert T. Stafford Disaster Relief and Emergency Assistance Act’s hazard mitigation project grants through December 16, 2030.

## Process and Participation

This section of the NHMP addendum addresses 44 CFR 201.6(a)(3), *Participation and* 44 CFR 201.6(c)(5), *Plan Adoption*.

In addition to establishing a comprehensive community-level mitigation strategy, the Disaster Mitigation Act of 2000 (DMA2K), and the regulations contained in 44 CFR 201, require that jurisdictions maintain an approved NHMP to receive federal funds for mitigation projects. Local adoption and federal approval of this NHMP ensures that the Otter Rock WD will remain eligible for hazard mitigation assistance project grants.

The Oregon Partnership for Disaster Resilience (OPDR) at the University of Oregon’s Institute for Policy Research and Engagement (IPRE) collaborated with the Oregon Department of Emergency Management (OEM), Lincoln County, and Otter Rock WD to develop this addendum. Members of Otter Rock WD participated in the County NHMP update process (Attachment A and Volume II, Appendix B).

### Convener and Committee

One of the district’s commissioners serves as the NHMP addendum convener. The convener of the NHMP addendum will take the lead in implementing, maintaining, and updating the addendum in collaboration with the designated convener of the Lincoln County NHMP (Lincoln County Emergency Manager).

Representatives from the District met formally, and informally, to discuss the development of their addendum (Attachment A). They reviewed and developed the district's addendum, with a focus on their risk assessment and mitigation strategy (action items).

This addendum reflects decisions made at the designated meetings, and during subsequent work, and communication with OPDR.

The Otter Rock WD steering committee was comprised of the following representatives:

- Convener, Theresa Zawalski, Commissioner
- Beth Elliker, Commissioner

## Implementation and Maintenance

The Otter Rock WD Board of Directors will be responsible for adopting the addendum to the Lincoln County NHMP. This addendum designates the steering committee, and a convener to oversee the development, and implementation of action items. Because the District is part of the County's multi-jurisdictional NHMP, the District will look for opportunities to partner with the County. The district's steering committee will convene after adoption of the addendum on an annual schedule. The County is meeting on a quarterly basis and will provide opportunities for participating jurisdictions (cities and special districts) to report on NHMP implementation, and maintenance during their meetings. The steering committee, assembled by the convener, will be responsible for:

- Reviewing existing action items to determine suitability of funding;
- Reviewing existing, and new risk assessment data to identify issues that may not have been identified at NHMP creation;
- Educating, and training new steering committee members on the NHMP, and mitigation actions in general;
- Assisting in the development of funding proposals for priority action items;
- Discussing methods for continued public involvement;
- Evaluating effectiveness of the NHMP at achieving its purpose and goals (use Table 4-1, Volume I, Section 4, as one tool to help measure effectiveness); and
- Documenting successes, and lessons learned.

The convener will also remain active in the County's implementation and maintenance process (Volume I, Section 4).

The Steering Committee will be responsible for activities outlined in Volume I, Section 4.

The district will utilize the same action item prioritization process as the County (Volume I, Section 4 and Volume II, Appendix D).

## Implementation through Existing Programs

Many of the NHMP's recommendations are consistent with the goals and objectives of the district's existing plans and policies. Where possible, the Otter Rock WD will implement the NHMP's recommended actions through existing plans and policies. Plans and policies already in existence have support from residents, businesses, and policy makers. Many land-use, comprehensive, and strategic plans get updated regularly, allowing them to adapt to changing conditions and needs. Implementing the NHMP's action items through such plans and policies increases their likelihood of being supported and implemented.

This NHMP is strategic and non-regulatory in nature, meaning that it does not necessarily set forth any new policy. It does, however, provide: (1) a foundation for coordination and collaboration among agencies, residents, and the district; (2) identification and prioritization of future mitigation activities; and (3) aid in meeting federal planning requirements and qualifying for assistance programs. The Otter Rock WD currently has the following plan that relates to natural hazard mitigation. For a complete list visit the district's [website](#).

- Water System Feasibility Study ([2018](#))

## Capability Assessment

The Capability Assessment identifies and describes the ability of the Otter Rock WD to implement the mitigation strategy and associated action items. This is a key component of the 2024 Natural Hazard Mitigation Plan (NHMP) update. Capabilities can be evaluated through an examination of broad categories, including existing authorities, policies, programs, funding, and resources.

## Policies and Programs

The NHMP provides direction for the Otter Rock WD to explore integration into other planning documents and processes.

### **Feasibility Report, 2018**

This report is an evaluation of the potential upgrades to six aspects of Otter Rock WD's entire system: Rehabilitation or replacement of the water storage tanks; Upgrade to the existing tank valving and distribution piping; Installation of a booster pump station; Rehabilitation of the spring sources and appurtenances; Upgrade of existing distribution piping and appurtenances; and Installation of individual water service meters. Each project is summarized and given an estimated cost for completion.

## Personnel

The district is governed by a board of five part-time commissioners. The board is responsible for the overall operations and performance of the district's water distribution.

## Mitigation Successes

This is a list of funding that Otter Rock WD has sought out or received, as well as recently completed projects to improve mitigation.

- 2018 Feasibility Study
- HMGP-DR-FM-4562-48
- Safe drinking water revolving loan fund for laterals, hydrants, and valves
- Lincoln County grant of \$50,000 for spring rehabilitation and chlorination

## Mitigation Strategy

This section of the NHMP addendum addresses 44 CFR 201.6(c)(3)(iv), *Mitigation Strategy*.

The Otter Rock WD adopts the mission and hazard mitigation goals described in Volume I.

To develop the district's mitigation strategy (action items), the Steering Committee assessed the district's risk and identified potential issues to be addressed. The Steering Committee also noted what mitigation accomplishments have been made in recent years.

### Priority Action Items

Table WD-1 presents a list of mitigation actions. The highest priority actions are shown with orange highlight. The District will focus their attention, and resource availability, upon these achievable, high leverage, activities over the next five-years. Although this methodology provides a guide for the steering committee in terms of implementation, the steering committee has the option to implement any of the action items at any time. This option to consider all action items for implementation allows the committee to consider mitigation strategies as new opportunities arise, such as capitalizing on funding sources that could pertain to an action item that is not currently listed as the highest priority.

Table WD-1 Action Items

Mitigation Strategies		Impacted Hazard											Implementation and Maintenance				
Action Item #	Statement	Air Quality	Coastal Erosion	Drought	Earthquake	Extreme Heat	Flood	Landslide	Tsunami	Volcanic Event	Wildfire	Windstorm	Winter Storm	Potential Funding Resources	Lead	Timeline	Cost
1	Replace aging water storage reservoirs with seismically resilient designs to ensure continued water service during and after a Cascadia Subduction Zone earthquake.				X									Operating Budget, HMA, IFA	Board of Commissioners	S	H
2	Replace AC water mains with modern, durable piping to reduce risk of failure during seismic and other hazard events.				X			X						Operating Budget, HMA, IFA	Board of Commissioners	S	H
3	Purchase and install backup generators and fuel storage tanks at all critical pump stations and chlorination facilities to ensure uninterrupted water service during power outages.										X	X	X	Operating Budget, HMA,	Board of Commissioners	M	L
4	Complete rehabilitation of Springs 1, 2, and 3 to restore full capacity and improve water quality, ensuring redundancy in the water supply system.				X			X						Operating Budget, HMA, IFA	Board of Commissioners	S	M
5	Identify and replace failing residential water distribution lines to reduce service interruptions and water loss.		X		X			X						Operating Budget, CRWD, USDA grants	Board of Commissioners	S	H
6	Establish a network of water districts within Lincoln County for partnership and education purposes													Operating Budget	Board of Commissioners	L	H
7	Launch a public outreach campaign to residential customers to reduce per capita water use.			X										Operating Budget	Board of Commissioners	S	L
8	Acquire land in the watershed to safeguard future water source availability and quality.													Operating Budget	Board of Commissioners	L	H

Source: Otter Rock WD steering committee, 2025.  
 Cost: L (less than \$50,000), M (\$50,000-\$499,999), H (\$500,000-\$5 million), VH (more than \$5 million),  
 Potential Funding Sources: HMA=FEMA’s Hazard Mitigation Assistance disaster and non-disaster grant programs  
 Timing: Short (1-4 years), Medium (4-10 years), Long (10 or more years)  
 Priority Actions: Identified with orange highlight  
 Dark Grey highlight indicates that the hazard does not impact the jurisdiction.

# Risk Assessment

This section of the NHMP addendum addresses 44 CFR 201.6(b)(2) - *Risk Assessment*. In addition, this chapter can serve as the factual basis for addressing Oregon Statewide Planning Goal 7 – Areas Subject to Natural Hazards. Assessing natural hazard risk has three phases:

**Phase 1:** Identify hazards that can impact the jurisdiction. This includes an evaluation of potential hazard impacts – type, location, extent, etc.

**Phase 2:** Identify important community assets and system vulnerabilities. Example vulnerabilities include people, businesses, homes, roads, historic places and drinking water sources.

**Phase 3:** Evaluate the extent to which the identified hazards overlap with, or have an impact on, the important assets identified by the community.

The local level rationale for the identified mitigation strategies (action items) is presented herein, and within Volume I, Section 2, and Volume II, Appendix C.

## Hazard Analysis

The district developed their [hazard analysis](#), using the County’s (Volume I, Section 2) as a reference. Where appropriate, changes were made to distinguish the district’s risks from those in the County’s hazard analysis, as detailed throughout this addendum.

Table WD-2 shows the hazard analysis matrix listing each hazard in rank from high to low. For local governments, conducting hazard analysis is a useful step in planning for hazard mitigation, response, and recovery. The method provides the jurisdiction with a sense of hazard priorities but does not predict the occurrence of a particular hazard. See Volume I, Section 2 for methodology details.

Landslide, wildfire, windstorm, drought, and Cascadia Subduction Zone earthquake are the **high hazard threats** to the district. Winter storm, coastal erosion, crustal earthquake, and volcanic event are the **low hazard threats**.

The water district’s primary responsibilities focus on the management, protection, and operation of water-related infrastructure. While the safety of people is important to the district’s mission, it does not serve as the lead agency for emergency response or public safety during hazard events.

Instead, the district works in close collaboration with county and city agencies that have broader responsibilities for managing community-wide impacts. The district provides technical expertise and support related to water infrastructure, while local jurisdictions lead efforts in emergency response, public safety, and disaster recovery.

Given this operational scope, the district is not directly affected by the following hazards and does not have infrastructure or responsibilities that warrant profiling them in its hazard analysis: air quality, extreme heat, coastal flood, riverine flood, local and distant tsunamis, and tornado. These hazards fall outside the district’s direct impact zone or operational purview and are more

appropriately addressed by other agencies within the broader emergency management framework.

In addition, hazards identified within the “bottom tier” have low vulnerability and/or low probability to the district. As such the district has elected to not include mitigation strategies. Instead the district will collaborate with the County and applicable cities to implement mitigation strategies related to these hazards.

**Table WD-2 Hazard Analysis Matrix**

Hazard	History	Vulnerability	Maximum		Total Threat Score	Hazard Rank	Hazard Tiers
			Threat	Probability			
Landslide	20	40	80	70	210	#1	Top Tier
Wildfire	20	25	90	70	205	#2	
Windstorm	20	35	80	70	205	#3	
Drought	20	30	80	70	200	#4	
Earthquake (Cascadia)	2	50	100	42	194	#5	
Winter Storm	16	20	50	63	149	#6	Bottom Tier
Coastal Erosion	20	15	40	70	145	#7	
Earthquake (Crustal)	10	20	40	21	91	#8	
Volcano	2	5	40	7	54	#9	

Source: Otter Rock WD steering committee, 2025.

## Community Characteristics and Assets

The following section provides information on Otter Rock WD specific demographics and assets (see Table WD-4). Many of these community characteristics can affect how natural hazards impact communities, and how communities choose to plan for natural hazard mitigation. Considering the District specific assets during the planning process can assist in identifying appropriate measures for natural hazard mitigation.

### Community Characteristics

The Otter Rock Water District serves a small coastal community located along the central Oregon coast, with an estimated population of approximately 200 permanent residents and a seasonal influx of up to 400 additional visitors due to tourism and vacation rentals. The district currently maintains around 160 active service connections, with the potential to expand by approximately 30 more over the next two decades. Land within the service area is primarily zoned residential, with a mix of full-time homes and short-term rentals. To the east, the district is bordered by forested land used for timber production.

### Facilities and Property Assets Inventory

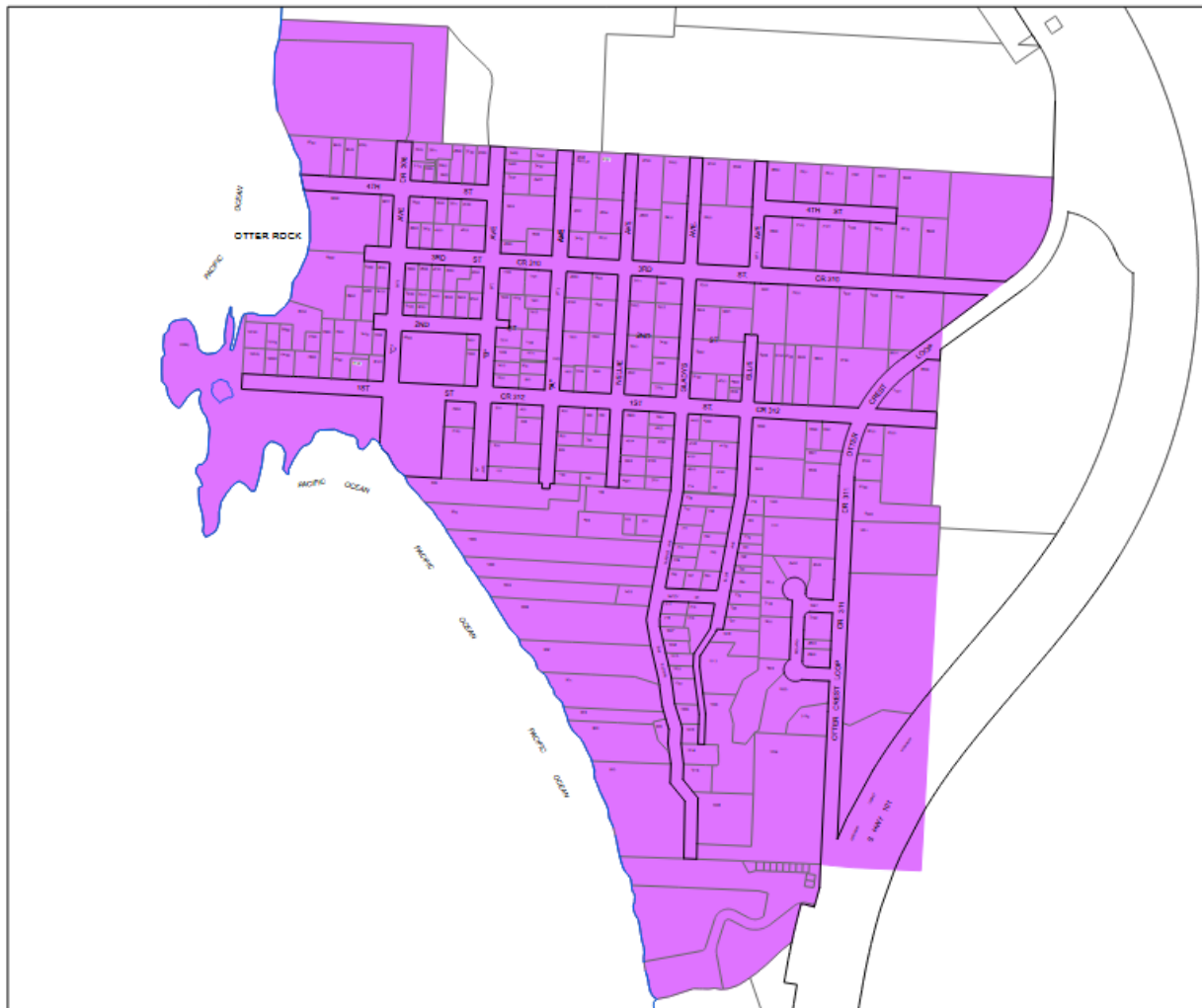
This section provides information on district specific assets. Assets that may be affected by hazard events include residential and nonresidential buildings, critical facilities, and infrastructure. Considering the district specific assets during the planning process can assist in identifying appropriate measures for natural hazard mitigation.

The district sources its water from three natural springs located at the base of Cape Foulweather. These springs are classified as groundwater and provide high-quality, great-tasting water that historically has not required treatment. However, the district has implemented chlorination at this point. The water system includes two reservoirs—one 300,000-gallon concrete tank from the 1970s and an older 30,000-gallon octagonal tank from the 1940s—along with aging AC mains and 12 fire hydrants, some of which are non-functional. The district is actively pursuing infrastructure upgrades to improve seismic resilience, water pressure, and emergency preparedness.

Table WD-4 lists the resources, facilities, and infrastructure that, if damaged, could significantly impact the public safety, economic conditions, and environmental integrity of the district.

The district’s facilities are located within their service area (Map WD-1) which includes the Lincoln County unincorporated communities of Otter Rock.

### Map WD-1 District Boundaries



Source: Lincoln County GIS - Click [link](#) for more information

## Hazard Identification

This section profiles the district’s hazards and assesses their vulnerabilities, distinct from the countywide planning area. Detailed hazard profiles of the most significant countywide hazards are described in Volume I, Section 2. The detailed profiles include hazard characteristics, history, location, extent, previous occurrences, and probability of future occurrences. An event that affects the County is likely to affect the district as well. However, not all hazards impact the district assets. The district chose to profile the hazards shown in Table WD-2 due to the impact these hazards have upon their assets. Factors included during discussions by the district included the number of potential assets damaged, extent of damage, and length of time required for repairs (economic losses were also considered).

Hazards that were determined to not impact the district include: Air quality, tornado, extreme heat, coastal flood, riverine flood, distant tsunami, and local tsunami.

Additional information is found in the [Risk Assessment for Region 1, Oregon Coast, Oregon SNHMP \(2020\)](#).

### **National Flood Insurance Program (NFIP)**

The district does not have the authority to adopt and enforce floodplain management or other land use regulations for the areas within its jurisdiction. For more information on National Flood Insurance Program (NFIP) claims and other potential flood impacts, see the County plan (Volume I).

## Vulnerability Assessment

Development and population forecasts are not expected to increase or decrease the impact of their profiled hazards.

The district’s concentrated population and resources, as well as the soil characteristics and relative earthquake hazards described herein and in Volume I, Section 2 are cause for significant effort toward mitigating the earthquake hazard. The district’s infrastructure (water lines, tanks, treatment plant, etc.) is highly vulnerable to a severe earthquake event. No quantitative assessment of the risk of natural hazards has been conducted at a district wide scale. However, there have been several reports conducted for the unincorporated region of the county that include the district’s service area.

Table WD-3 provides the ranking of hazards of concern based on total threat score and Table WD-4 shows hazard impact to the district’s assets.

Hazard area extent and location maps are included in Attachment B. Information shown on the maps is for planning purposes, represents the conditions that exist at the map date, and is subject to change. Refer to the original source documentation to better understand the data sources, results, methodologies and limitations of each dataset presented.

**Table WD-3 Hazard Risk and Description of Impact**

Hazard	Description of Impact	Total Threat Score
Landslide	Landslides pose a significant threat to Otter Rock Water District infrastructure, particularly due to the steep terrain along Highway 101 and the location of the district’s reservoirs and springs above this area. The aging concrete reservoirs and AC mains are especially vulnerable to ground movement triggered by heavy rainfall or seismic activity.	210
Wildfire	The eastern boundary of the district borders forested land, increasing the risk of wildfire. While the district has a 300,000-gallon reservoir that could support firefighting efforts, inadequate water pressure and non-functioning hydrants limit effectiveness. Wildfire could also threaten above-ground infrastructure and compromise water quality through ash and debris runoff.	205
Windstorm	High winds frequently cause power outages in the area, which directly impact the district’s ability to chlorinate water. During a recent five-day outage, the district had to issue a boil water notice. The lack of a backup generator and limited access to fuel during extended outages are ongoing concerns.	205
Drought	Drought is a growing concern for ORWD, as the district relies on rain-fed springs from the Cape Foulweather watershed. Water availability decreases significantly in summer, and although restrictions haven’t been necessary in recent years, increased demand from tourism and development could strain supplies in the future.	200
Earthquake (CSZ Event)	A Cascadia Subduction Zone earthquake could severely damage the district’s infrastructure. The 1970s-era concrete reservoir is seismically vulnerable and currently leaking. AC mains and other aging components are also at high risk of failure, potentially leading to long-term service disruptions.	194
Winter Storm	Severe winter storms can bring high winds and ice, which have historically caused power outages and operational disruptions. While snow is rare, the combination of saturated soils and wind can lead to landslides and access issues, particularly affecting the community center and water infrastructure.	149
Coastal Erosion	Although the district’s core infrastructure is not currently threatened by coastal erosion, some residential properties in the community may be impacted over the next 20+ years. The	145

Hazard	Description of Impact	Total Threat Score
	district is monitoring these changes but does not anticipate direct effects on water facilities in the near term.	
<b>Earthquake - Crustal</b>	A crustal earthquake could damage the district’s pipelines, reservoirs, and springs, especially if it triggers landslides. The brittle AC mains and aging tanks are particularly susceptible to shaking and ground displacement.	91
<b>Volcanic Event</b>	While Otter Rock is not near active volcanoes, ashfall from a distant eruption could contaminate spring sources, as the district does not have any filtration systems. Emergency chlorination and water quality monitoring would be necessary in such an event.	54

Source: Otter Rock WD steering committee, 2025.

**Table WD-4 Facilities Summary**

Name/Number	Address	Identified Hazard Exposure											
		AQ	CE	DR	EQ	EH	FL	LS	TS	VE	WF	WS	WT
<b>Water Treatment</b>													
Springs 1, 2, 3	Otter Crest Loop			X				X					
Chlorination system					X						X	X	
<b>Storage Tanks</b>													
30,000 gallon tank (ca. 1970s) – main storage	Otter Crest Loop			X	X			X			X		
300,000 gallon tank (ca. 1940s)	Otter Crest Loop			X	X			X			X		
<b>Pump Stations</b>													
Pump Stations					X						X		
<b>Piping, Hydrants, Generators, and other infrastructure</b>													
6" AC main – 8,258 feet					X			X					
12 fire hydrants					X							X	
Community Center/Office	6515 Gladys Avenue				X						X	X	X
Generator											X	X	

Source: Information provided by Otter Rock WD

Dark Grey highlight indicates that the hazard does not impact the jurisdiction.

**Table Key:**

"X" – Facility may be exposed and may be impacted by the identified hazard per a visual inspection of the mapped hazard area

[blank] = facility exposure has not been assessed for this hazard

**Hazard Descriptions:**

AQ = Air Quality

EH = Extreme Heat

LS = Landslide

WF = Wildfire

CE = Coastal Erosion

EQ = Earthquake

TS = Tsunami

WS = Windstorm/Tornado

DR = Drought

FL = Flood

VE = Volcanic Event

WT = Winter Storm

# Attachment A: Public Involvement Summary

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Members of the Steering Committee provided edits and updates to the NHMP prior to the public review period as reflected in the final document. In addition, a survey was distributed that included responses from residents of the district (Volume II, Appendix F).

To provide the public information regarding the draft NHMP addendum, and provide an opportunity for comment, an announcement was provided from August 7 through 21, 2025 on the County's website and publicized by the district. Comments were reviewed and integrated into the NHMP as applicable. Additional opportunities for stakeholders and the public to be involved in the planning process are addressed in Volume II, Appendix B.

Various agencies and organizations contributed input through multiple channels, including comments on the draft. These groups include local and regional hazard mitigation agencies, development regulators, neighboring communities, businesses, academia, nonprofits, and community-based organizations serving underserved and socially vulnerable populations (see Volume II, Appendix B).

## Steering Committee

Steering Committee members possessed familiarity with the district and how it is affected by natural hazard events. The Steering Committee guided the update process through several steps including goal confirmation and prioritization, action item review and development, and information sharing, to update the NHMP and to make the NHMP as comprehensive as possible. The Steering Committee met formally on the following dates:

### **Meeting #1: April 17, 2025 (virtually via Zoom)**

During this meeting, the Steering Committee was provided updates on hazard mitigation planning, the NHMP update process, and project timeline. The Steering Committee meeting details include:

- Reviewed and provided feedback on recent history of hazard events.
- Reviewed and confirmed the County NHMP's mission and goals.
- Discussed the NHMP public outreach strategy.
- Reviewed and provided feedback on the draft risk assessment including community vulnerabilities and hazard information.
- Developed their mitigation strategy (actions).
- Reviewed and provided feedback on their implementation and maintenance program

**Meeting Attendees:**

- Convener, Theresa Zawalski, Commissioner
- Beth Elliker, Commissioner

**Meeting Summary:**

The agenda focused on reviewing and enhancing the ORWD-specific addendum by assessing local hazard vulnerabilities, identifying critical infrastructure and community assets, and developing new mitigation strategies. Key discussion points included the district's exposure to top-tier hazards such as windstorms, landslides, wildfires, drought, and the Cascadia Subduction Zone earthquake. The group also reviewed existing capabilities, including water infrastructure, emergency power needs, and community demographics.

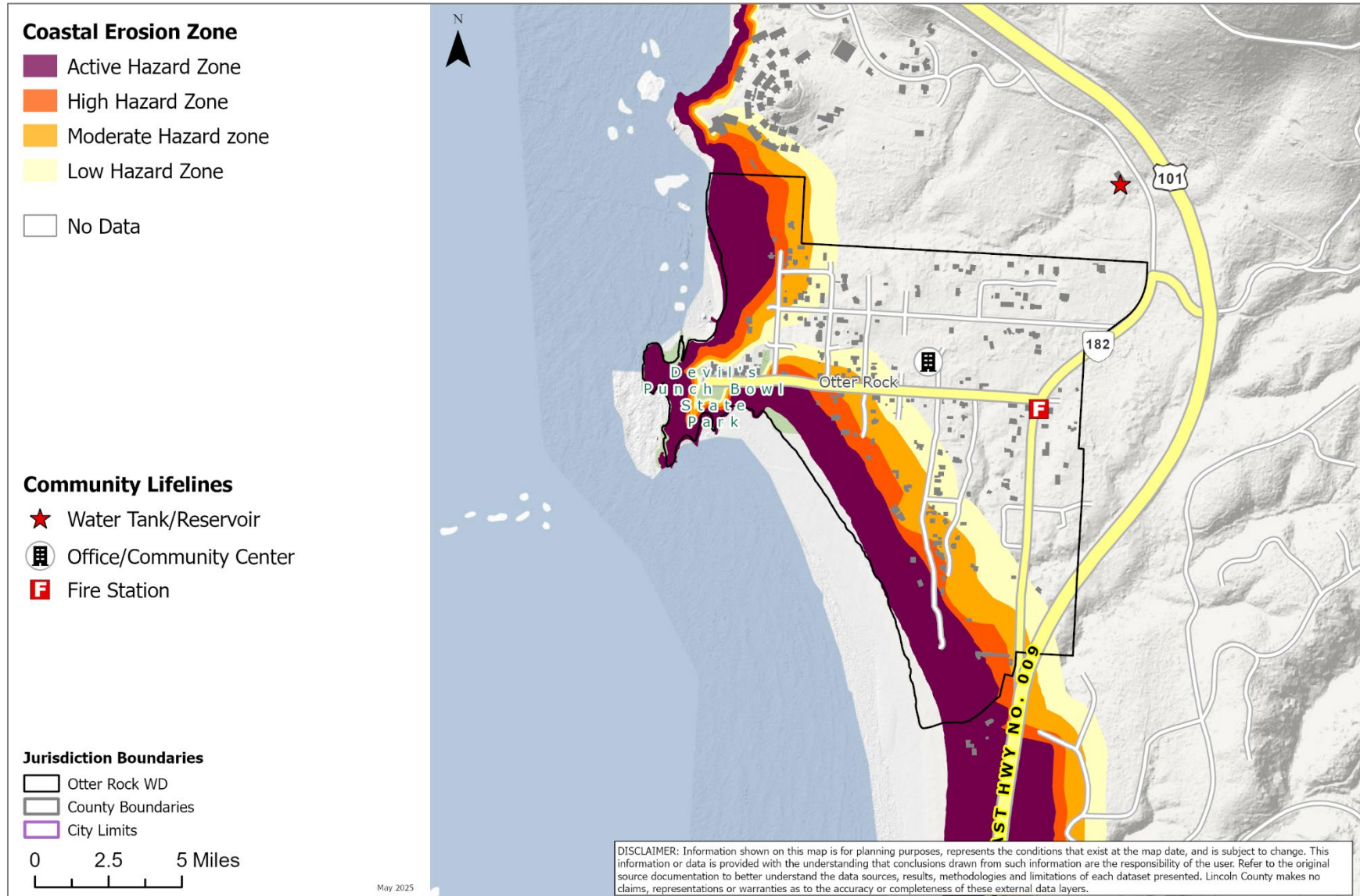
The meeting emphasized the importance of updating the Hazard Vulnerability Assessment (HVA) and aligning mitigation actions with identified risks. Infrastructure vulnerabilities—such as aging reservoirs, AC water mains, and limited emergency power—were highlighted, along with the need for improved fire hydrant pressure and seismic resilience. Participants also discussed future development impacts, seasonal population surges, and the need for inter-district collaboration. The session concluded with next steps for reviewing the addendum and preparing for the upcoming County Steering Committee meeting.

# Attachment B: Hazard Maps

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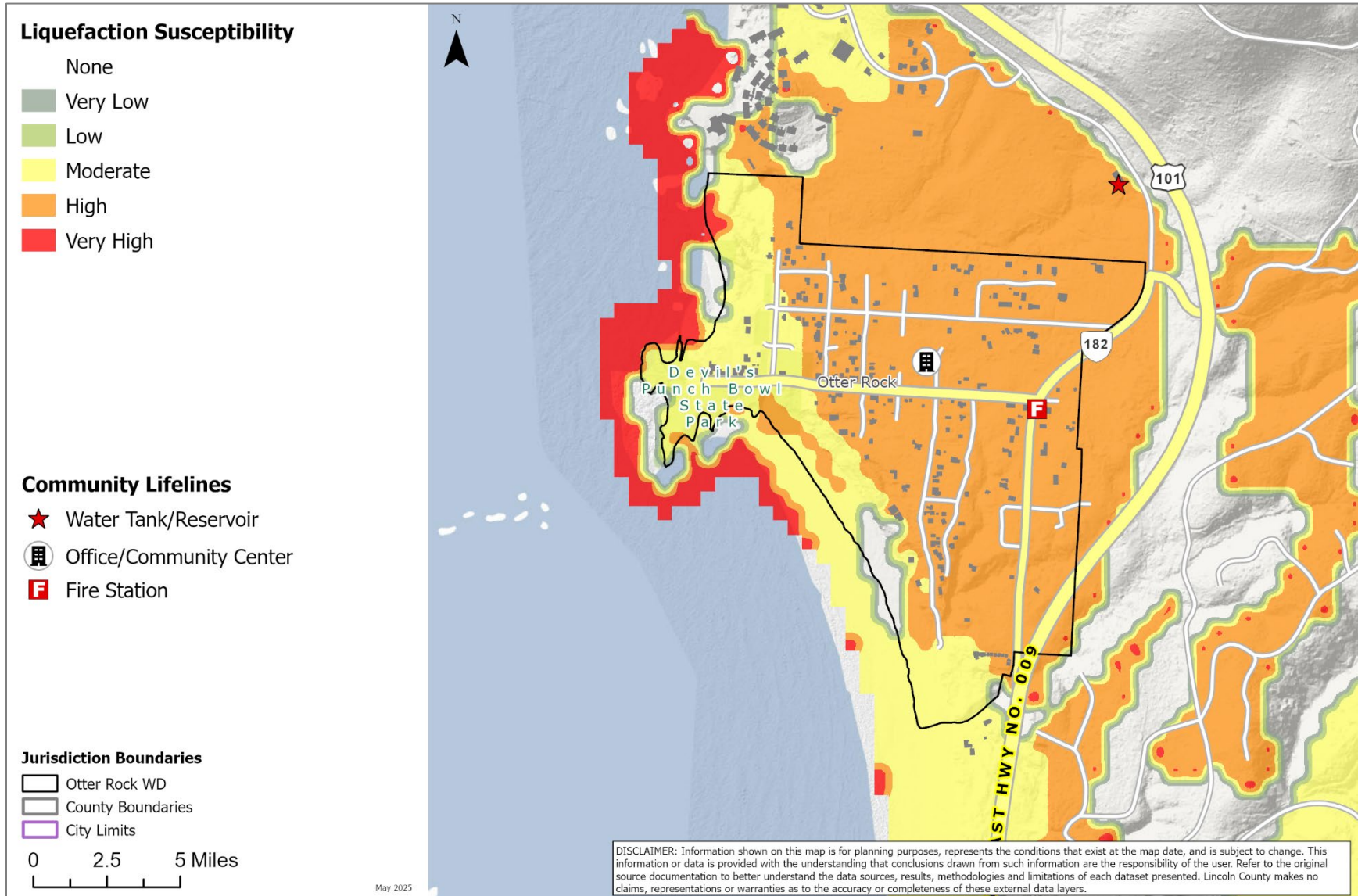
MAP WD-2 COASTAL EROSION HAZARD .....	16
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## Map WD-2 Coastal Erosion Hazard



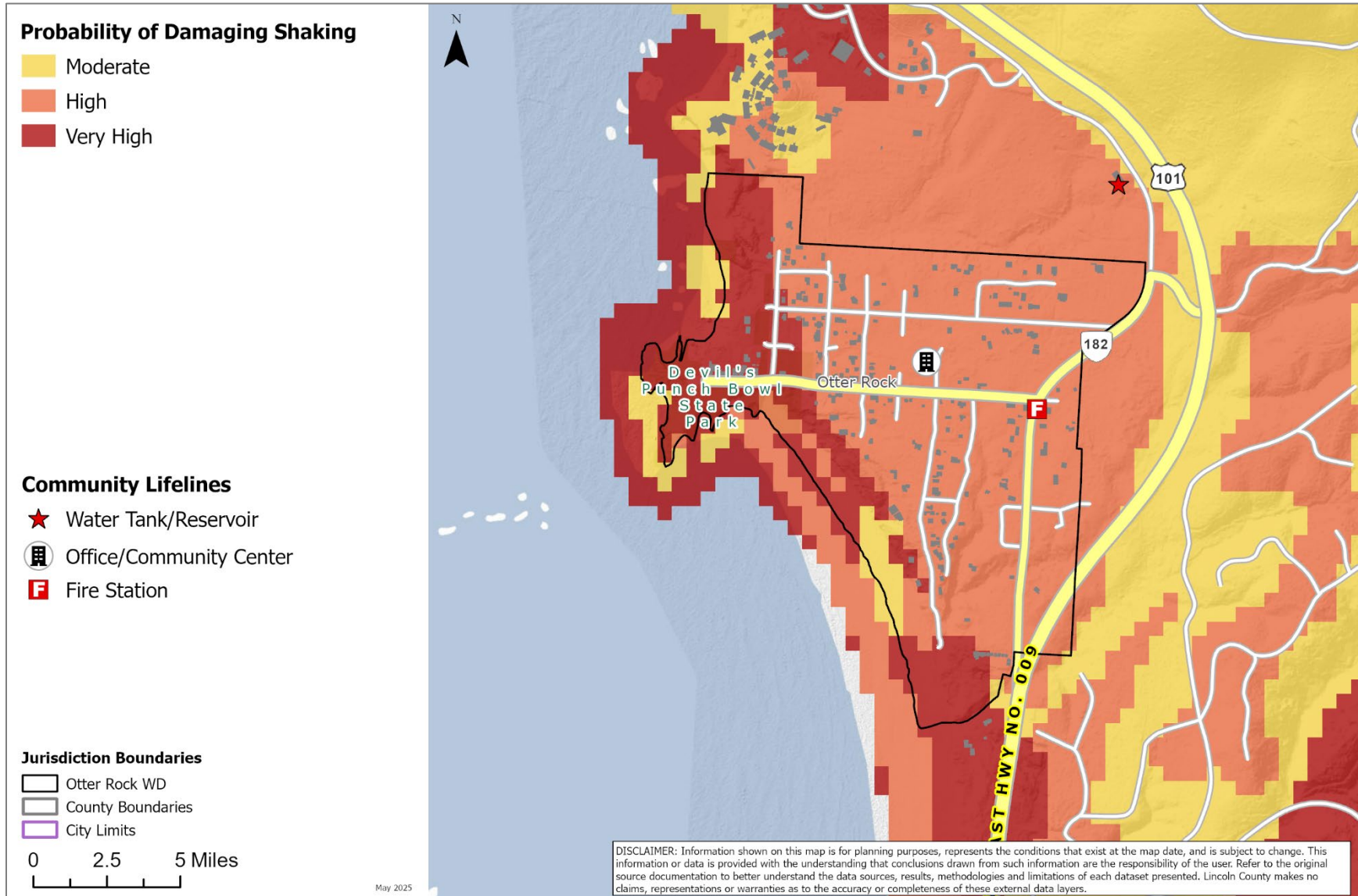
Source: [Oregon Explorer: Map Viewer](#) – To view map detail click hyperlink to left.

## Map WD-3 Earthquake Liquefaction (Soft Soil) Hazard and Active Faults



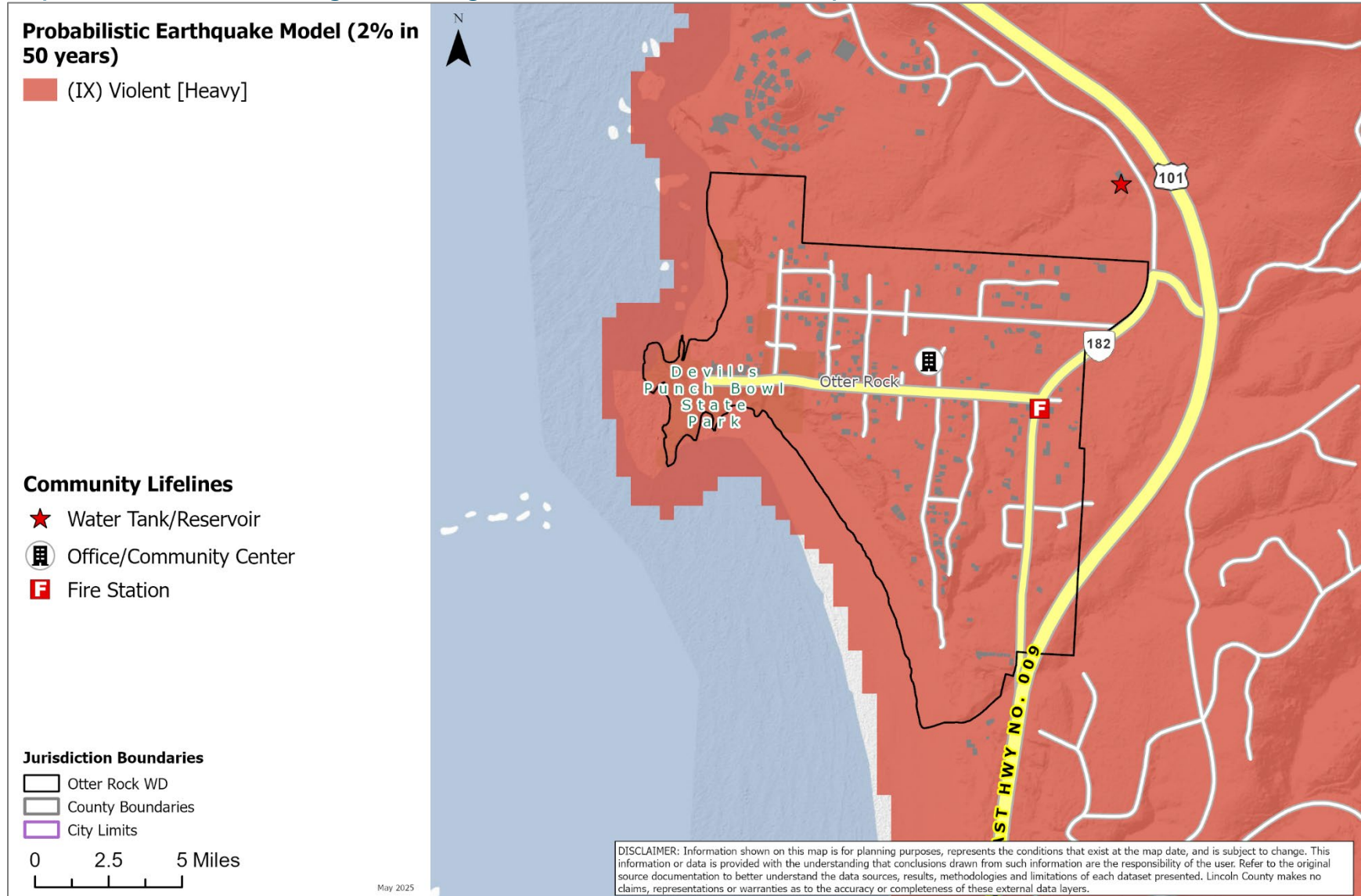
Source: [Oregon Explorer: Map Viewer](#) – To view map detail click hyperlink to left.

## Map WD-4 Probability of Damaging Shaking



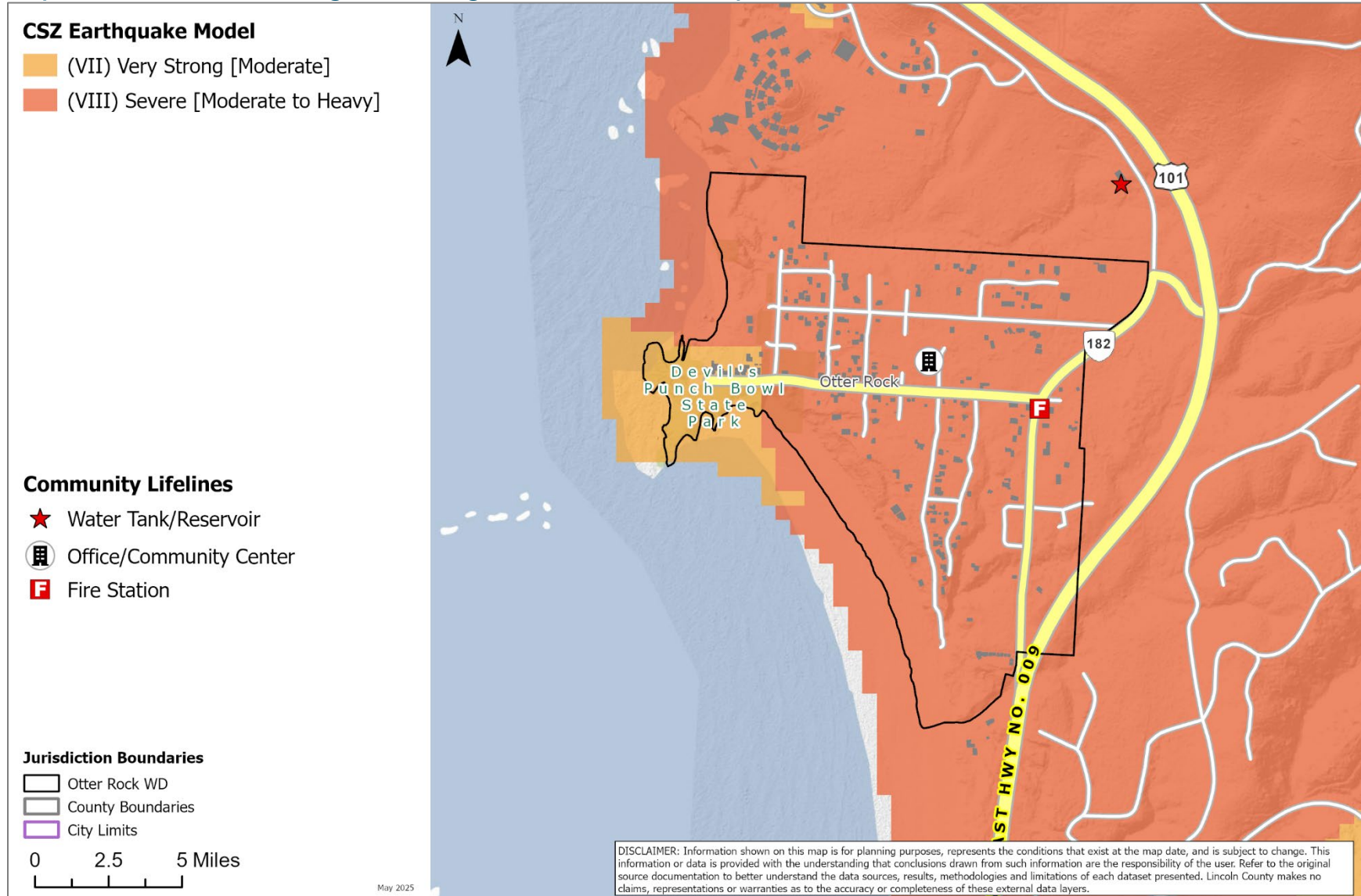
Source: [Oregon Explorer: Map Viewer](#) – To view map detail click hyperlink to left.

## Map WD-5 Perceived Shaking and Damage Potential, Probabilistic Earthquake Model



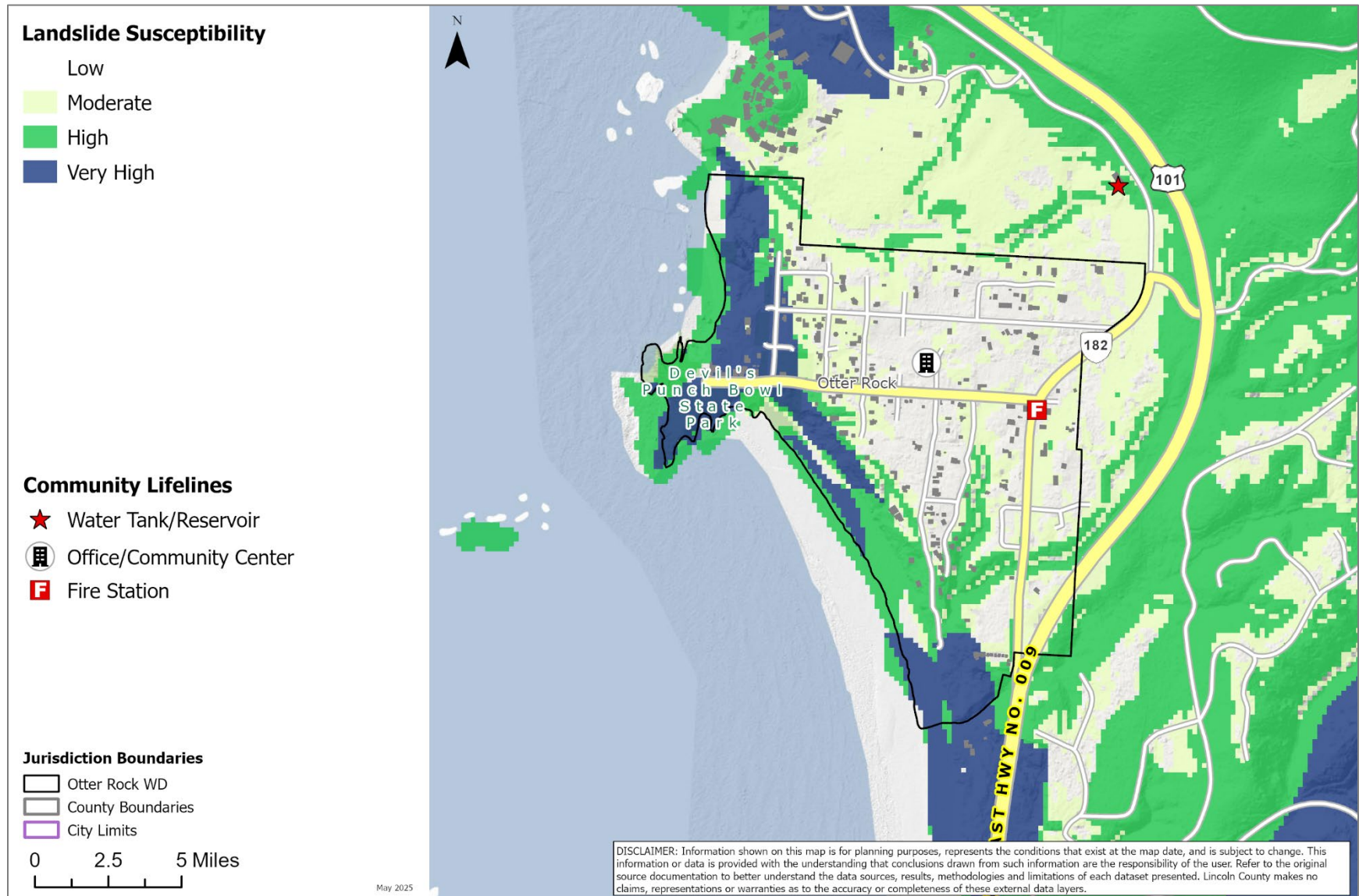
Source: [Oregon Explorer: Map Viewer](#) – To view map detail click hyperlink to left.

## Map WD-6 Perceived Shaking and Damage Potential, CSZ Earthquake Model



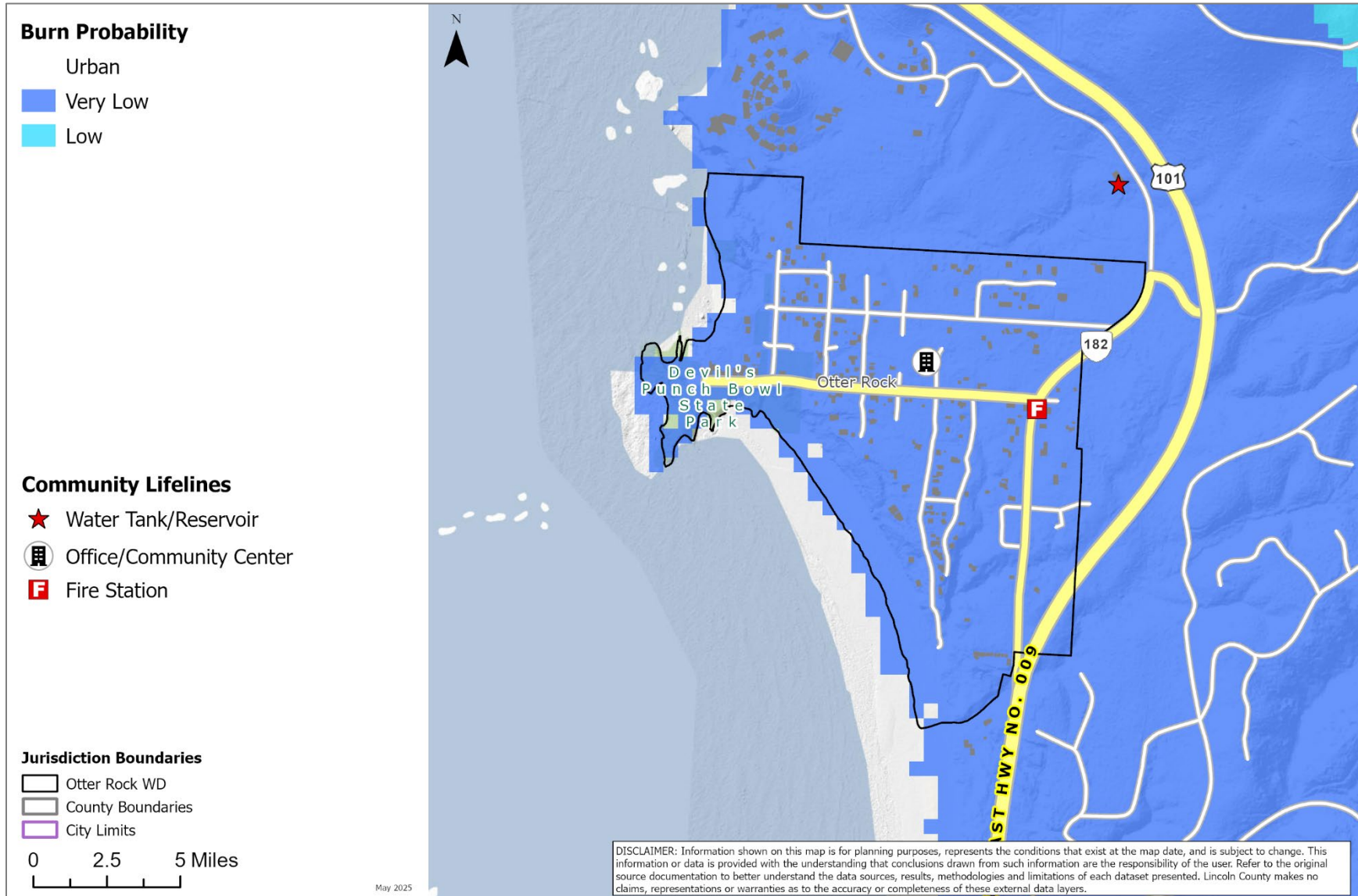
Source: [Oregon Explorer: Map Viewer](#) – To view map detail click hyperlink to left.

## Map WD-7 Landslide Susceptibility Exposure



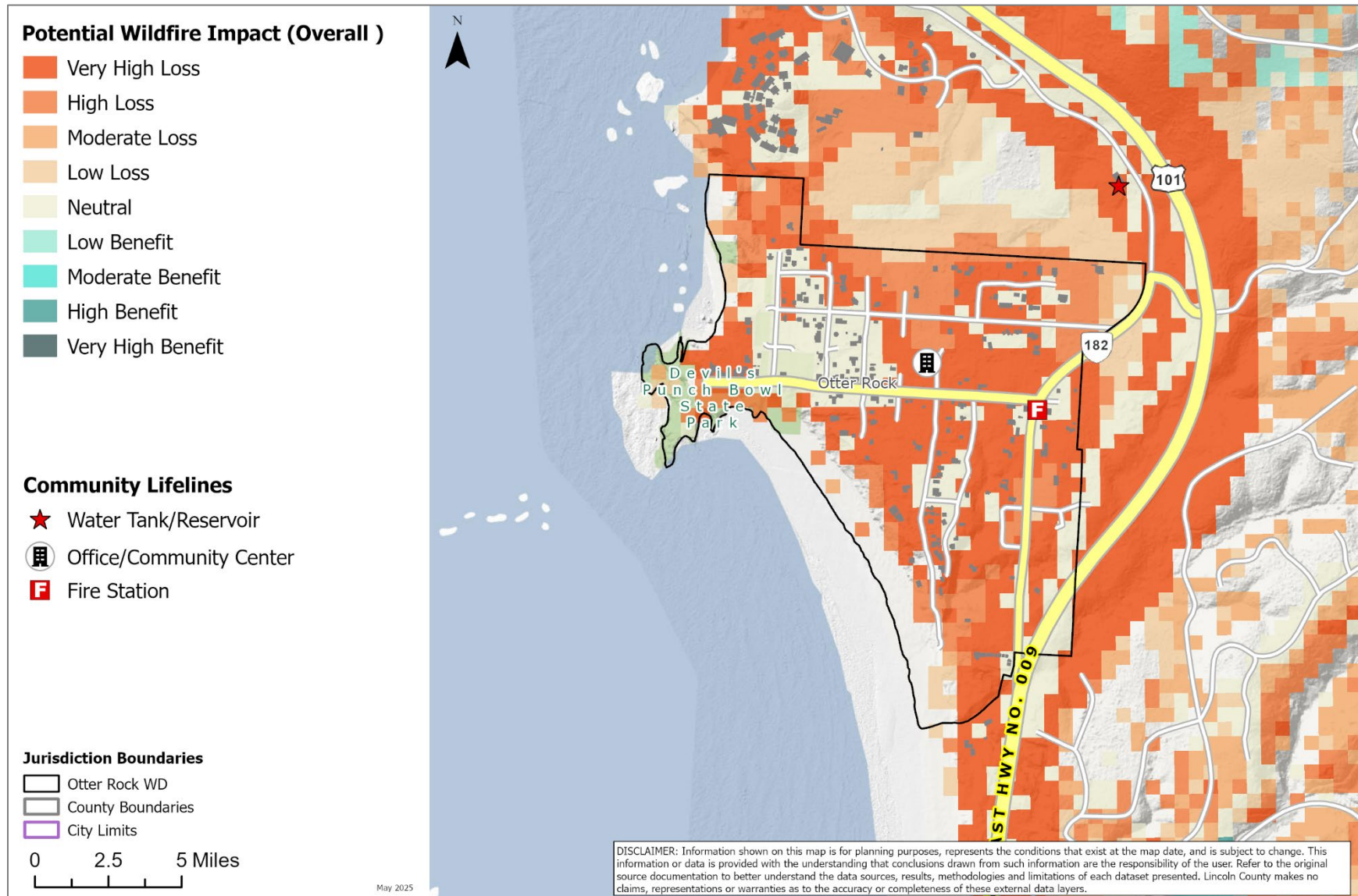
Source: [Oregon Explorer: Map Viewer](#) – To view map detail click hyperlink to left.

## Map WD-8 Burn Probability and Fire History (1992-2022)



Source: [Oregon Explorer: Map Viewer](#) – To view map detail click hyperlink to left.

## Map WD-9 Potential Wildfire Impact (Overall)



Source: [PNW Quantitative Wildfire Risk Assessment](#) (2023, layer name = icNVC), To view map detail click hyperlink to left..