FINAL DRAFT

Seal Rock Water District

Drinking Water Protection Plan

May 2026

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Abbreviations and Acronyms

AMI	Advanced Metering Infrastructure
AWWA	American Water Works Association
BLM	Bureau of Land Management
BRAT	Beaver Restoration Assessment Tool
cfs	cubic feet per second
DEQ	Department of Environmental Quality
District	Seal Rock Water District
DOGAMI	Department of Geology and Mineral Industries
DWPP	Drinking Water Protection Plan
DWSA	drinking water source area
EQIP	Environmental Quality Incentives Program
ERP	Emergency Response Plan
FERNS	Forest Activity Electronic Reporting and Notification System
GAC	granular activated carbon
HMP	Hazard Mitigation Plan
NRCS	Natural Resources Conservation Service
NWQI	National Water Quality Initiative
ODF	Oregon Department of Forestry
ODFW	Oregon Department of Fish and Wildlife
ODOT	Oregon Department of Transportation
OHA	Oregon Health Authority
OPRD	Oregon Parks and Recreation Department
ORWARN	Oregon Water/Wastewater Agency Response Network
OWEB	Oregon Watershed Enhancement Board
SWA	Source Water Assessment
SWAT	Soil and Water Assessment Tool
SWCD	Soil and Water Conservation District
TMDL	Total Maximum Daily Load
USFS	United States Forest Service
WMCP	Water Management and Conservation Plan
WMP	Water Master Plan

SECTION 1: **Introduction**

This Drinking Water Protection Plan (DWPP) was developed by GSI Water Solutions, Inc (GSI) on behalf of Seal Rock Water District (District) with guidance from a team of technical advisors and community members, as well as public input. The DWPP provides a framework for the District to identify and address potential risks to the Beaver Creek watershed, its drinking water source, while meeting the criteria for state approval of a DWPP.

1.1 Background and Goal

In Oregon, a public water system can voluntarily develop a DWPP to protect its drinking water supply from potential contaminant sources. By focusing on protecting the source watershed, communities can start with high quality water from the source, reducing the need for complex and costly treatment systems while protecting public health. The 1996 amendments to the federal Safe Drinking Water Act established new requirements and provided resources to the Oregon Department of Environmental Quality (DEQ) and Oregon Health Authority (OHA) to provide communities with assistance with drinking water protection. DEQ and OHA both review DWPPs; however, DEQ administers the approval process for DWPPs for surface water sources and OHA administers the certification process for DWPPs for groundwater sources.

The goal of this DWPP is to provide a practical, collaboratively developed guide for protecting the District's Beaver Creek water supply. The DWPP identifies risks in the source water area, lays out strategies to eliminate or mitigate those risks, and presents a phased implementation plan for the strategies. The DWPP also includes a contingency plan describing actions to be taken if the Beaver Creek water source is unavailable and considers the District's future water supply needs.

1.2 Seal Rock Water District Source Water Area

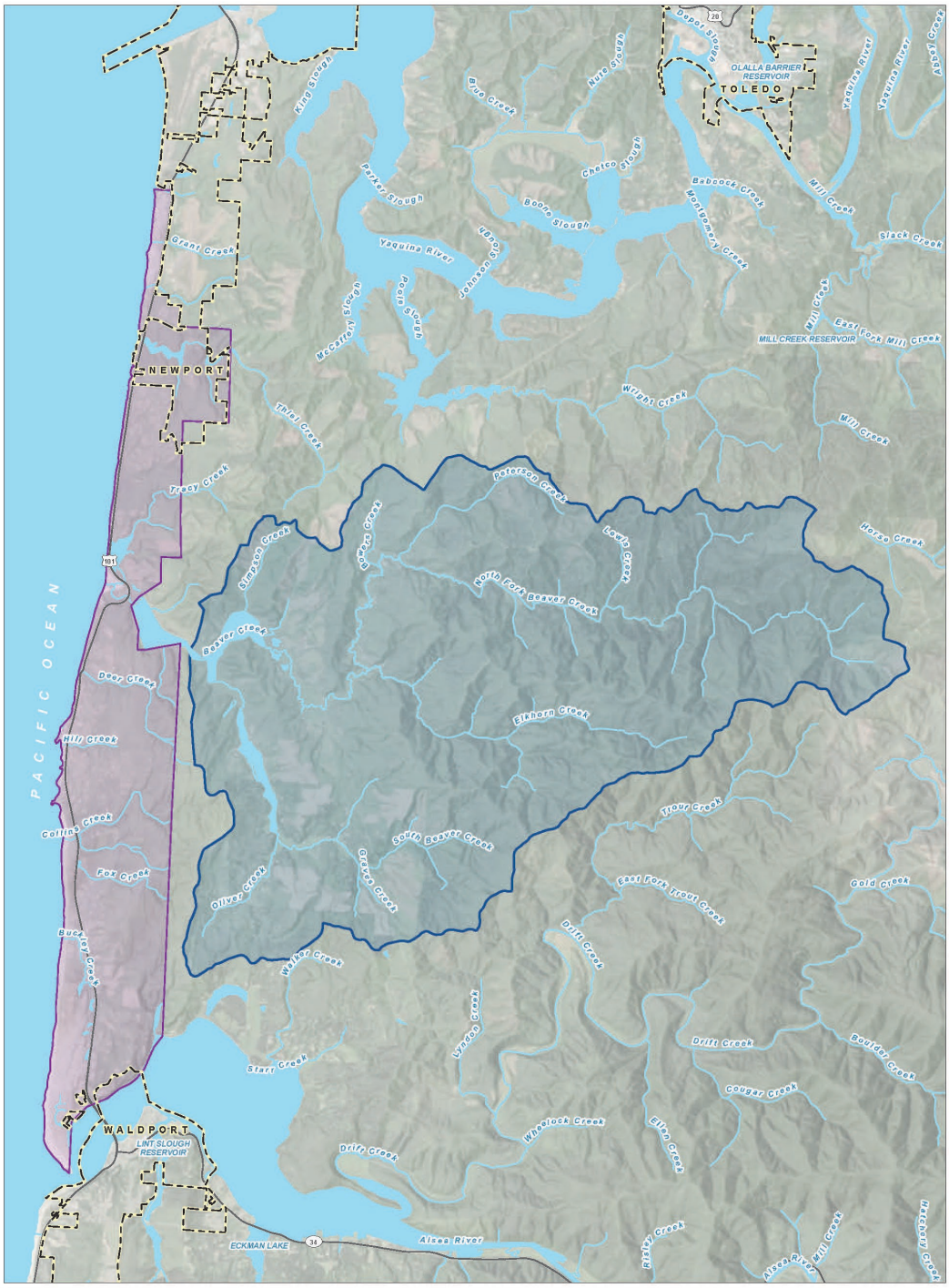
Seal Rock Water District serves an unincorporated area of Lincoln County in the Mid-Coast region of Oregon. The District's service area covers an 11.5-mile stretch of coastline from Henderson Creek south to the north side of Alsea Bay just north of Waldport. The District serves a population of approximately 5,983 through primarily residential connections (approximately 98 percent of accounts are single-family homes) with some commercial and institutional customers, such as the Seal Rock Fire Protection District and the Newport Municipal Airport. The Mid-Coast region is a popular tourist destination, and a portion of the residential service connections are understood to be vacation rentals or second homes that are not occupied year-round.

Prior to 2022, the District's primary water source was the Siletz River. Water was diverted under the District's water use permit at the City of Toledo intake, treated at a water treatment plant in the City of Toledo, and conveyed to the District's service area via a 7-mile transmission pipeline with an interconnection to the District's distribution system. The Oregon Water Resources Department (OWRD) issued the District a permit to divert water from Beaver Creek for municipal use in 2016. Following construction of the intake, water treatment plant, and associated infrastructure, the District transitioned to using Beaver Creek as its primary water source in 2022. The District maintains interconnections with the Cities of Toledo and Newport that can be used during water shortages. The Cities of Toledo and Newport both have approved DWPPs for their communities' drinking water source areas. Given that Beaver Creek is now the District's primary water source and DWPPs exist for the Siletz River drinking water source areas, this DWPP focuses on the Beaver Creek watershed.

The District's Drinking Water Source Area (DWSA) within the Beaver Creek watershed encompasses 30.49 square miles, with a little over half of the area (52.3 percent) falling within the Siuslaw National Forest

managed by the US Forest Service Central Coast Ranger District. Other major land ownership categories include private rural residential (23.4 percent), private industrial forest (17.6 percent), and agricultural (3.8 percent). About 2.6 percent of the DWSA is owned by the Oregon Parks and Recreation Department (OPRD) and managed as the Beaver Creek State Natural Area, part of Brian Booth State Park. About 0.2 percent of the DWSA is managed by the Bureau of Land Management. Exhibit 1-1 depicts the Beaver Creek DWSA and the District's service area. Exhibit 1-2 shows land ownership in and around the Beaver Creek DWSA as shown in the 2023 Source Water Assessment prepared by DEQ and OHA, which does not include OPRD lands acquired after 2017.

Exhibit 1-1. Beaver Creek Drinking Water Source Area Overview



LEGEND

- Seal Rock Water District Service Area
- Beaver Creek Drinking Water Source Area

All Other Features

- City Boundary
- Major Road
- Watercourse
- Waterbody

EXHIBIT 1-1

Beaver Creek Drinking Water Source Area Overview

Seal Rock Water District Drinking Water Protection Plan

Date: April 21, 2026
Data Sources: BLM, ESRI, ODOT, USGS, Imagery (2024)

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FEET

GSI Water Solutions, Inc.

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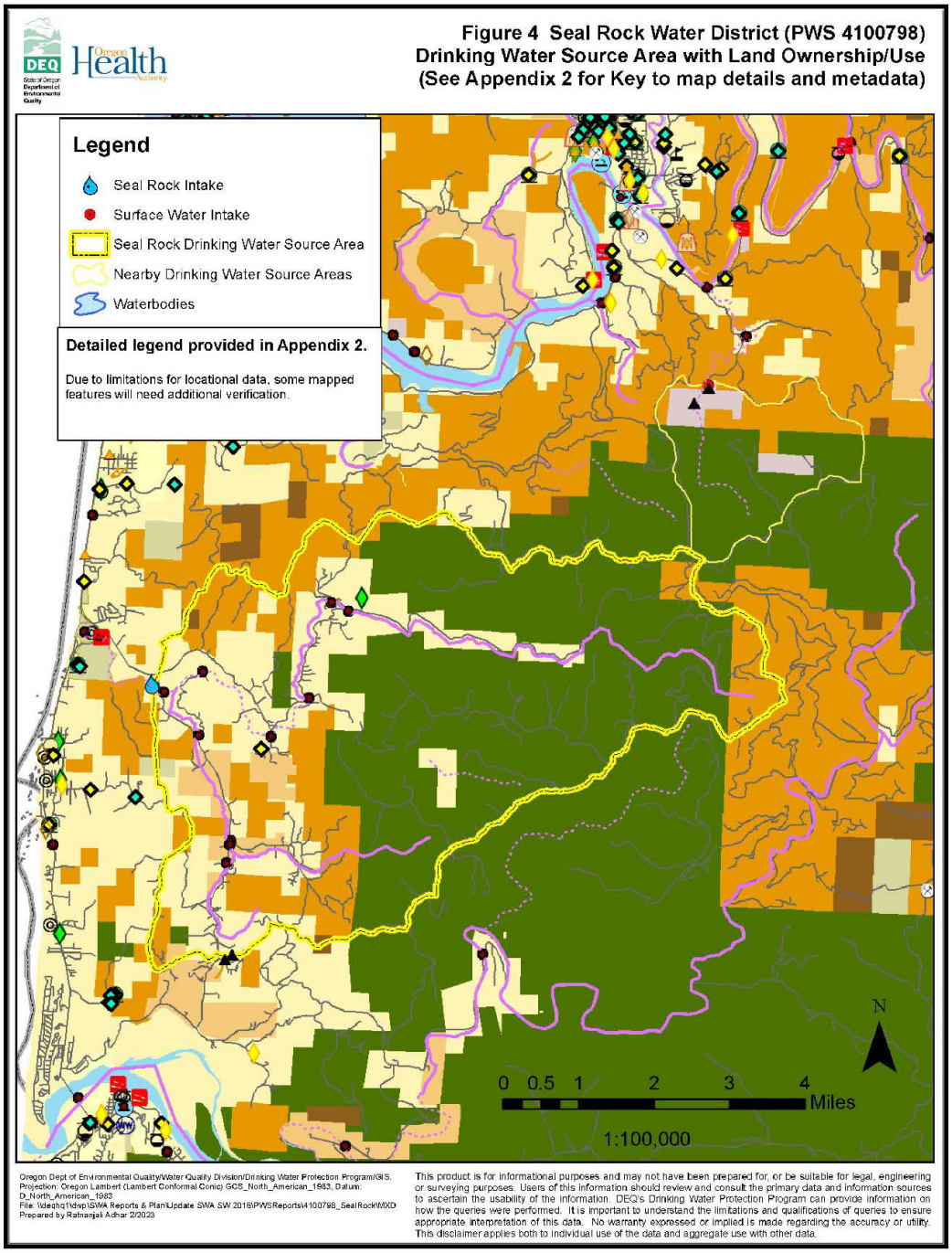
Exhibit 1-2. Map of Landownership



1.2.1 Water Rights

The District's primary water supply from Beaver Creek is authorized by a water use permit (Permit S-55012) that allows the use of up to 2.0 cubic feet per second (cfs) of water for municipal use, equivalent to about 1.3 million gallons per day (mgd). As mentioned above, prior to 2022 the District used the Siletz River as its source of supply through an interconnection with the City of Toledo, and the District holds a permit (Permit S-40277) authorizing the use of up to 2.6 cfs from the Siletz River. The permit for Beaver Creek includes a condition prohibiting the District from withdrawing water from the Siletz River unless water is not reasonably available under its Beaver Creek permit and limiting the total use of water under both permits to 2.6 cfs.

The District also holds water right certificates for the use of water from Hill Creek (also known as Deer Creek) and Henderson Creek. These water rights are protected instream through a 99-year time-limited instream transfer, and the District will not request early termination of the transfer before 2118 unless water is not available under the District's Beaver Creek permit and the water under these certificates is needed for municipal use. Therefore, these water rights do not currently authorize use for municipal water supply, and the Hill Creek and Henderson Creek watersheds are not considered part of the District's DWSA or considered further in this DWPP.

Appendix A presents a table of the District's water rights. Additional information about the District's water rights can be found in the District's 2024 Water Management and Conservation Plan (WMCP).

1.3 Drinking Water Protection Plan Development

1.3.1 Source Water Assessment

DEQ prepared Source Water Assessments (SWA) for public water systems throughout Oregon in the early 2000s to fulfill one of the requirements of the Safe Drinking Water Act. Between 2016 and 2020, DEQ updated the SWAs with additional information. As noted above, the District obtained its water supply through an interconnection with Toledo prior to 2022, and the SWAs that DEQ prepared for Toledo covered the District's drinking water source area in the Siletz River watershed, so DEQ did not prepare a separate SWA for the District until 2023.

The SWA contains: a delineation of the drinking water source area within the Beaver Creek watershed supplying the District's water system; maps showing highly erodible soils near streams, landslide hazard areas, patterns of land use and ownership, and potential point sources of pollution from human activities; tables with information about potential contaminant sources; and resources for developing drinking water protection strategies. During development of the DWPP, DEQ also provided an updated erosion sensitivity map for the watershed. The DWPP Team used the 2023 SWA along with the updated erosion sensitivity map as a starting point for the risk assessment described in Section 2.

1.3.2 Plan Development Process

DEQ awarded funding to the District in 2025 through a Clean Water State Revolving Fund planning loan to develop a DWPP. The District convened a team of community members, government agencies, local organizations, and watershed landowners to provide input to guide development of the DWPP, facilitated by the District's selected consultant, GSI Water Solutions, Inc. Exhibit 1-3 lists the DWPP Team members and their affiliations. Development of the plan began with a kickoff meeting in August 2025 and included multiple opportunities for public engagement as described further in Section 1.3.3. The District's Board of Directors reviewed the Final Draft DWPP and on [placeholder Date] approved submitting it to DEQ and OHA for approval.

Exhibit 1-3. Drinking Water Protection Plan Team Members

Name	Affiliation
Adam Denlinger	Seal Rock Water District
Baxter Call	Oregon Health Authority (Drinking Water Services)
Bill Montgomery	MidCoast Watersheds Council
Dave Young	Watershed resident and water user
Emily-Bell Dinan	Oregon Department of Fish and Wildlife
Evan Hayduk	MidCoast Watersheds Council
Jeff DeRoss	Golden Pond Timberlands LLC (Manulife)
Jennifer Beathe	Starker Forests
Jon French	Protect Oregon Watersheds
Josh Seeds	Oregon Department of Environmental Quality
Laura Johnson	Oregon Department of Environmental Quality
Margaret Treadwell	McKenzie River Trust
Matt Thomas	Oregon Department of Forestry
Mitchell LaChapelle	US Forest Service
Olivia Jasper	Oregon Department of Agriculture
Preson Phillips	Oregon Department of Parks and Recreation
Ted Dewitt	MidCoast Watersheds Council
Tyler Clouse	Lincoln Soil and Water Conservation District

1.3.3 Public Outreach and Engagement

Public outreach and engagement strengthened the DWPP by providing opportunities for individuals to contribute local knowledge about watershed conditions, potential contaminant sources, and preferred risk reduction strategies. The District hosted two public meetings on January 14, 2026, and April 29, 2026, with in-person and virtual attendance options to gather community feedback. The meeting on January 14 provided an overview of the planning process and discussed the risk assessment. The public meeting on April 29 focused on the draft DWPP. Information about the planning process and draft documents were available for public review at the meetings and online. Meeting recordings were posted online, and the District accepted comments during the meetings and via phone and email. Meeting announcements were promoted through social media, the District's website, a press release, and messages in water bills. In addition, DWPP Team members shared information about the meetings with their organizations and constituents. Appendix B provides examples of outreach materials about the public meetings.

1.4 Organization of the Plan

The remainder of this plan is organized into the following sections:

- Section 2: Risk Assessment
- Section 3: Strategies to Address Risks
- Section 4: Implementation Plan
- Section 5: Contingency Plan
- Section 6: Future Water Sources

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SECTION 2: **Risk Assessment**

2.1 Introduction to Risk Assessment

Section 1.3.1 describes the SWA that DEQ prepared in 2023 after the District began using the Beaver Creek water source. The SWA served as the starting point for the District and the DWPP Team to conduct a qualitative risk assessment for the drinking water source area. In addition to maps showing the source area, areas of high erosion potential and landslide potential, and land ownership, the SWA includes a table listing potential contaminant sources in the watershed derived from a search of regulatory databases, aerial photographs, topographic maps, and communications with District staff. Appendix C of this DWPP includes the 2023 SWA and the updated erosion sensitivity map provided during DWPP development in 2025. The DWPP Team considered the potential risks from identified sites and land uses presented in the SWA along with natural hazards, water system management concerns, and issues identified through local knowledge of watershed conditions.

Once the DWPP Team identified the range of potential risks, they prioritized the risks based on the likelihood of the identified risk affecting the water source and the severity of the potential impacts to the drinking water source (e.g., water quality and water quantity impacts) and infrastructure. Scores for likelihood and impact were assigned for each risk on a on a scale of 1-5, with 5 being the highest. The scores were based on a DEQ-provided guidance document on water quality impacts from specific contaminant sources and from the DWPP Team's expertise and local knowledge. The scores were combined using the matrix in Exhibit 2-1 to classify each risk as high, medium, or low priority. The District held a public meeting in January 2026 to share information about development of the DWPP, present the results of the preliminary risk assessment, and provide opportunities for public input on the potential risks and the prioritization. Community feedback from the public meeting was integrated into the final risk assessment.

Exhibit 2-1. Risk Prioritization Matrix

Likelihood	Impact				
	Insignificant (1)	Minor (2)	Moderate (3)	Severe (4)	Catastrophic (5)
Rare/very unlikely (1)	Low	Low	Low	Low	Medium
Unlikely (2)	Low	Low	Medium	Medium	Medium
Possible (3)	Low	Medium	Medium	Medium	High
Likely (4)	Low	Medium	Medium	High	High
Almost certain (5)	Medium	Medium	High	High	High

The final risk assessment incorporating DWPP Team expertise and public feedback is shown below. Risks are divided into nine general categories with associated subcategories:

- Natural Hazards
  - Drought
  - Low streamflow
  - Highly erodible soils

    - Landslides
    - Earthquakes
    - Tsunamis
    - Saltwater intrusion
    - Severe storms and flooding
    - Wildfire
    - Invasive species
- Municipal
    - Infrastructure
    - Vandalism and sabotage
    - Cybersecurity
- Forest Management
    - Clearcut harvest
    - Non-clearcut logging and thinning
    - Chemical applications
    - Access roads
    - Riparian impacts
- Rural Residential
    - Rural homes and landscaping
    - Domestic wells
    - Septic systems
- Transportation
    - Roads and stream crossings
- Recreation
    - Creek recreation
- Agriculture
    - Non-irrigated crops
    - Livestock
- Industrial
    - Electric power transmission lines
    - Rock quarry
- Off-grid Encampments
    - Encampments
    - Dumpsites

Sections 2.2 through 2.6 present the results of the risk assessment. Section 2.11 describes the process for identifying and responding to new risks that could arise in the Beaver Creek watershed due to changes in land uses and activities.

2.2 Natural Hazards

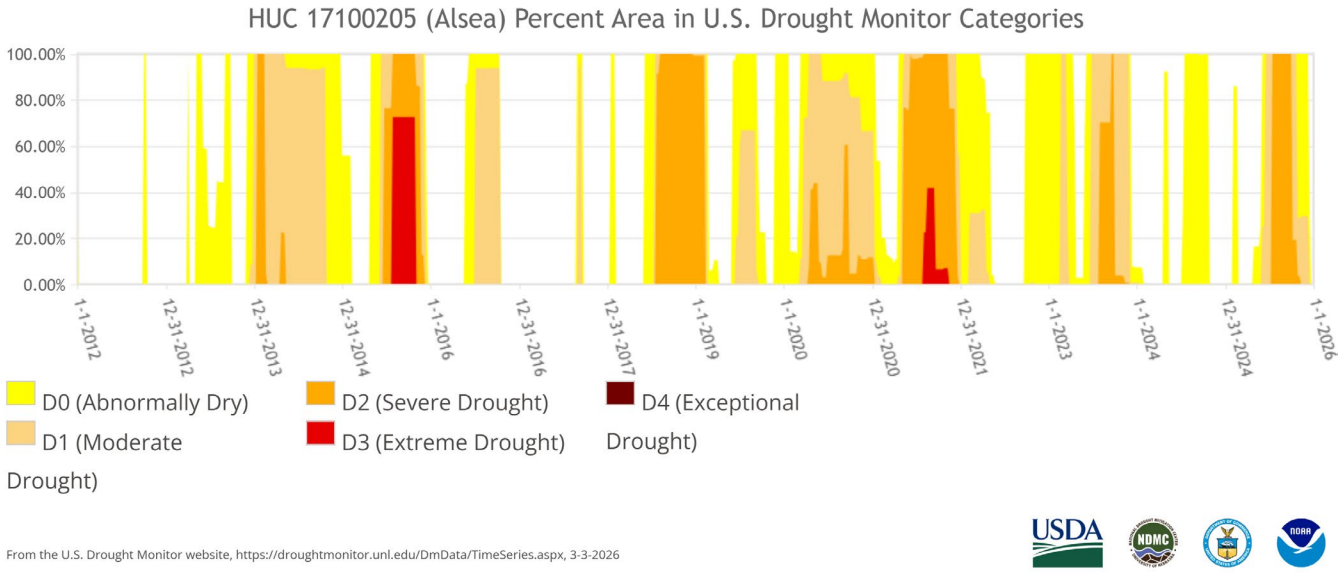
2.2.1 Drought

Likelihood	Impact	Overall Risk
4	4	High

Beaver Creek relies on rainfall and has limited natural storage. Drought conditions can reduce precipitation input to the creek while also reducing soil moisture and affecting vegetation conditions and evapotranspiration in the watershed, which may increase the risk of wildfire. Seasonal drought conditions are becoming increasingly frequent in the Mid-Coast region, and climate change projections show a higher

likelihood of prolonged, intense drought in the future. As shown in Exhibit 2-2, the Alsea basin containing Beaver Creek has experienced periods of moderate to extreme drought several times in recent years.

Exhibit 2-2. Drought Conditions 2012 to 2025



Prolonged dry conditions in the watershed can significantly reduce streamflow, impairing the District's ability to meet peak demands. The District has emergency backup interconnections with the Cities of Newport and Toledo, and 3.5 million gallons of water storage capacity.

2.2.2 Low Streamflow

Likelihood	Impact	Overall Risk
4	4	High

Low streamflow may increase the likelihood of water shortages or result in the need for curtailment to ensure that the available water supply can meet demands. Low flows may be caused by drought or other factors and are likely to become more prevalent as climate change continues to affect the region. Other factors, such as canopy cover and road density, may also affect streamflow and water quality.

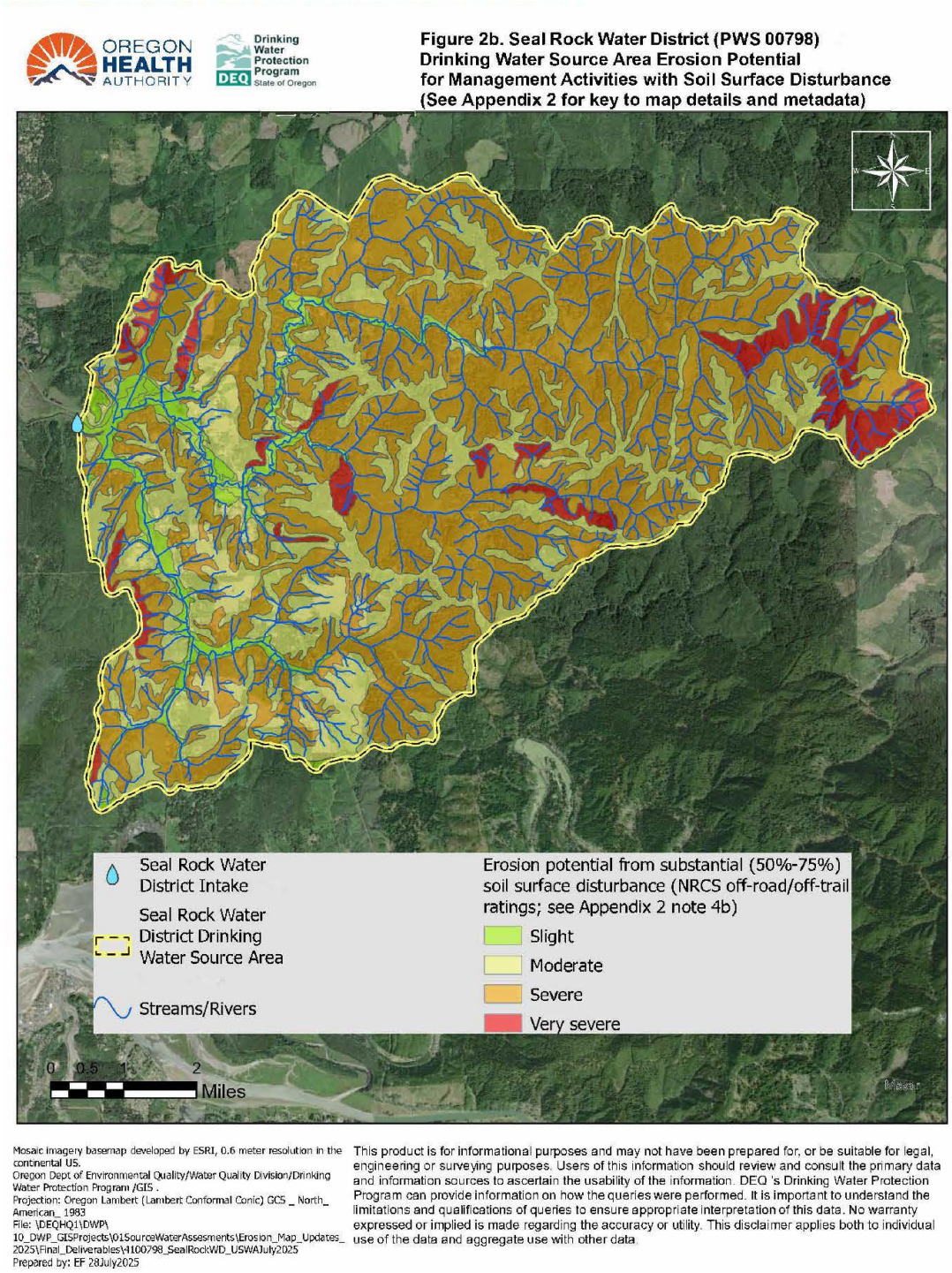
Low flows impact water quality by concentrating naturally occurring and human-influenced pollutants, such as nutrients and pathogens, because of decreased dilution capacity. Low flows are associated with increased stream temperatures, lower dissolved oxygen, and algae and bacterial growth, affecting the effectiveness of water treatment. Beaver Creek is listed under Section 303(d) of the Clean Water Act as impaired for dissolved oxygen, alkalinity, and temperature. DEQ has not yet prepared a Total Maximum Daily Load (TMDL) plan for addressing these limitations and does not anticipate having the resources to do so before the 2030s. The District's Permit S-55012, which authorizes the use of water from Beaver Creek, requires streamflow and water temperature monitoring, with annual reporting to OWRD to demonstrate that municipal diversions are not negatively impacting the creek. The Oregon Department of Fish and Wildlife (ODFW) has not yet applied for an instream water right on Beaver Creek as it does not meet ODFW's prioritization qualifications at this time. Because of the watershed's relatively high rate of public land ownership, limited agricultural activity, and low irrigation use, it is considered less at risk of development compared to other waters statewide. ODFW may consider the need for an instream water right when other prioritized areas have been addressed.

2.2.3 Highly Erodible Soils

Likelihood	Impact	Overall Risk
3	3	Medium

The District's 2023 SWA notes that 88 percent of the stream miles in the Beaver Creek watershed have highly erodible soils present within 300 feet of waterways, and updated erosion potential mapping from DEQ in 2025, reprinted below as Exhibit 2-3, shows significant portions of the watershed have severe or very severe erosion potential if ground-disturbing activities occur in these areas. Erosion and transport of sediment to waterways increase turbidity in the drinking water source. Higher turbidity levels may be associated with higher levels of bacteria.

Exhibit 2-3. Drinking Water Source Area Erosion Potential Map



2.2.4 Landslides

Likelihood	Impact	Overall Risk
3	4	Medium

Landslide deposits are mapped in the lower watershed. If a landslide occurred near the intake, it could potentially damage infrastructure, block stream channels, and increase turbidity beyond treatable levels. Landslide occurrence may be affected by land uses (e.g., road construction and timber harvest activities) and by other natural hazards (e.g., earthquakes and severe storms). Erosion from a landslide that occurred in the watershed in 2025 is still causing slightly elevated turbidity, but the District's water treatment plant is capable of treating water with currently observed turbidity levels.

2.2.5 Earthquakes

Likelihood	Impact	Overall Risk
3	4	Medium

Seal Rock is located in the Cascadia Subduction Zone, which has an approximately 37 percent chance of producing a major earthquake along the Oregon coast in the next 50 years. Information available from the Oregon Department of Geology and Mineral Industries (DOGAMI) shows that the soils in Lincoln City typically have low to moderate liquefaction potential (i.e., soils that lose their strength in response to ground shaking). The Lincoln County Natural Hazard Mitigation Plan (NHMP) notes that areas closer to the coastline are more vulnerable than areas farther inland and away from rivers.

A major earthquake could severely damage infrastructure, including the water intake, transmission and distribution pipelines, pump stations, storage tanks, and the water treatment plant, as well as roads and bridges needed to access water infrastructure. In addition, an earthquake could trigger landslides or affect stream courses. Subsidence and changes to the channel of Beaver Creek associated with a Cascadia Subduction Zone earthquake could cause the stream segment with the intake to become intertidal, increasing salinity and conductivity in the source water.

2.2.6 Tsunamis

Likelihood	Impact	Overall Risk
3	5	High

The District's water treatment plant is outside of the mapped tsunami hazard zone; however, the intake on Beaver Creek and nearby access roads and infrastructure are located within the evacuation zone for a local or distant tsunami. A local tsunami caused by an earthquake at the Oregon coast could reach the shore within 15 to 30 minutes after the earthquake, while a tsunami caused by a distant earthquake could take 4 hours or more to reach the shore. A tsunami could cause water to back up Beaver Creek, inundating the intake with seawater and conveying debris, sediment, and pollutants to the water source. Direct damage to infrastructure or pollution of the water source would likely lead to severe operational disruptions.

2.2.7 Saltwater Intrusion

Likelihood	Impact	Overall Risk
5	3	High

Beaver Creek has intermittently experienced elevated levels of conductivity and salinity at the intake location, although water quality is generally suitable for treatment to drinking water standards. The District regularly measures conductivity in the raw water source and in its treated water. The water treatment plant can treat water with a conductivity level of up to 600 µS, with a target of no more than 200 µS. High salinity increases chemical treatment costs and requires additional operator time to monitor and adjust treatment

processes. When needed, the District is able to switch to alternative backup water sources during high salinity events.

2.2.8 Severe Storms and Flooding

Likelihood	Impact	Overall Risk
4	4	High

Severe storms may produce rapid runoff, flooding, and debris flows that carry sediment, nutrients, and contaminants into waterways. This risk may interact with other risks, such as areas prone to landslides, recently burned areas, and recent timber harvest. The intake could potentially be damaged by large logs coming downriver. Projected increases in winter rainfall and severe, intense storms resulting from climate change could increase runoff, streamflow, and turbidity. In the past, minor but not severe flooding has occurred in the watershed.

Ice storms and high wind events may cause downed trees and powerlines, resulting in loss of electricity and hazardous conditions for personnel working on infrastructure in the watershed. The District has backup generators available for use at the intake and other infrastructure as long as fuel supplies are available.

2.2.9 Wildfire

Likelihood	Impact	Overall Risk
3	4	Medium

A wildfire in the Beaver Creek watershed would remove or damage vegetation, exposing soil and accelerating erosion. Soil can also be damaged by high intensity wildfire, leading to decreased infiltration and soil moisture retention. Post-fire runoff from wildfire may contain fine sediment, ash, heavy metals, and nutrients. If developed areas are burned, runoff may also include toxic substances released from buildings, vehicles, stored hazardous materials, and plastics. Fire suppression chemicals can impact water quality and affect aquatic life. PFAS is a component in some firefighting foams used for extinguishing flammable liquid fires, but it would not be used for suppression of wildfire in forested areas. Depending on the severity and location of the wildfire, water quality may be impaired for several years.

2.2.10 Invasive Species

Likelihood	Impact	Overall Risk
4	2	Medium

Aquatic invasive invertebrates, such as mussels and snails, can clog pumps, intake pipes, and other water infrastructure. Aquatic invasive plants can alter nutrient cycling and affect water quality characteristics, including temperature, pH, and dissolved oxygen. Invasive riparian plants, such as knotweed and yellow flag iris, can increase soil erosion and sedimentation, fouling intakes and increasing chemical needs for water treatment. Nutria and other rodents may contribute to bank erosion, reduction of riparian vegetation, and introduction of pathogens into the water source. Specific impacts depend on the species involved.

2.3 Municipal

2.3.1 Infrastructure

Likelihood	Impact	Overall Risk
3	3	Medium

Xylene and ethylbenzene have been detected during routine water quality monitoring. These volatile organic compounds were likely introduced into the water system from construction sealants used in new system

infrastructure. All detections were below the maximum contaminant level and have been decreasing over time.

The District's addendum to the Lincoln County Multi-Jurisdictional Hazard Mitigation Plan included recommendations to develop a preventative maintenance program for water and communication infrastructure, to evaluate the relocation of utility infrastructure in identified erosion hazard and tsunami hazard zones, and to design underground and distribution systems with consideration of potential landslides. Preventive maintenance of infrastructure is a priority. Leaks in water infrastructure could unnecessarily increase the amount of water that needs to be diverted to meet system demands.

2.3.2 Vandalism and Sabotage

Likelihood	Impact	Overall Risk
2	4	Medium

Deliberate damage to water infrastructure may impact the ability to divert, treat, and deliver water. The Beaver Creek intake has limited aboveground exposure, reducing the risk of vandalism. A video surveillance system is in place to increase security at the water treatment plant.

2.3.3 Cybersecurity

Likelihood	Impact	Overall Risk
3	4	Medium

Cybersecurity threats can disrupt water system operations and communications technology. Remote access to supervisory control and data acquisition (SCADA) systems, insufficient firewall protections, or phishing attacks may lead to loss of monitoring control, false data reporting, or exposure of customer and water system information. The District is currently developing a systemwide cybersecurity plan.

2.4 Forest Management

2.4.1 Clearcut Harvest

Likelihood	Impact	Overall Risk
3	3	Medium

Clearcut harvest in the Beaver Creek watershed may alter flow patterns (e.g., near-term increased runoff in winter and decreased streamflow in summer) and increase erosion and delivery of sediment and organic matter to waterways. While treatment of water with high organic matter content can lead to higher levels of disinfection byproducts in finished water, the District considers the most likely cause of disinfection byproduct exceedances observed in recent years to be related to startup of the new water treatment plant, not to clearcuts in the DWSA, and these issues are not expected to continue. The types of treatment systems installed at the plant are capable of safely treating water with somewhat elevated organic matter.

The effects of clearcut harvest on soil moisture retention, sediment transport, stream temperature, and streamflow will depend on multiple factors, such as the location of the clearcut and other harvesting practices; slope steepness, elevation, and aspect; riparian buffer widths; and length of time since previous harvest. Shorter harvest rotations (e.g., 40 years) are more likely to impact water quality and quantity compared to longer rotations (e.g., 80 years). Slightly over half of the DWSA (52.3 percent) is owned and managed by the US Forest Service (USFS) as part of the Siuslaw National Forest, while about 17.9 percent of the DWSA is private industrial forestland. The lower percentage of private forestland is anticipated to reduce the potential risks to streamflow and water quality compared to other watersheds in the region with more intense and widespread private forest management.

The Oregon Forest Practices Act, recently revised by the Private Forest Accord, applies to private forestlands but not federally managed forests. Changes include increased protective buffers along waterways, new design standards for forest roads, and more retention of trees on steep slopes to improve slope stability, reduce erosion, and benefit habitat. As a large fish-bearing stream for most of its length (including the North Fork and South Fork tributaries), the required buffer around most of Beaver Creek is 110 feet. Implementation of the new requirements is expected to reduce risks from clearcut harvest practices over time.

2.4.2 Non-Clearcut Harvest

Likelihood	Impact	Overall Risk
3	2	Medium

Non-clearcut logging and thinning refer to a variety of timber harvest practices. These activities have the potential to increase erosion, resulting in increased runoff and creek turbidity, although generally not to the same extent as clearcutting. Implementation of the revised requirements under the Oregon Forest Practices Act are anticipated to result in lower impact to water quality compared with historical practices, as noted in Section 2.4.1.

2.4.3 Chemical Applications

Likelihood	Impact	Overall Risk
3	3	Medium

Herbicides may be applied following timber harvest to suppress competing vegetation in areas replanted with conifers. Chemical applications are regulated under the Forest Practices Act and pesticide label laws, applicators must be licensed, and waterways have required buffers where application is excluded. During a 40-year harvest rotation, stands would typically be treated 1-3 times depending on the forest manager's practices.

Chemical applications may pose a risk to water quality if over-application or improper handling (e.g., spills) occur. The impact depends on the nature and location of the incident. Applications closer to waterways or prior to high wind or rainfall events increase this risk, and aerial applications pose a higher risk than manual applications.

Chemical applications may also be conducted outside of forestry practices, such as for control of riparian and aquatic invasive species by licensed applicators using approved pesticides following safety practices to protect water quality. The District is working to develop relationships with property owners to understand practices and potential concerns. For example, OPRD has notified the District prior to conducting targeted, ground-based spraying for noxious weeds like yellow flag iris downstream of the intake, and the District would like to continue receiving notifications of spraying, particularly if any activities upstream of the intake are planned.

2.4.4 Access Roads

Likelihood	Impact	Overall Risk
3	2	Medium

Road construction, maintenance, and usage may increase erosion and stream turbidity, particularly from large vehicles like logging trucks transporting heavy loads near waterways and stream crossings during wet weather. Vehicle usage increases the risk of leaks or spills of petroleum products or other hazardous materials. The revised Forest Practices Act requires improved standards for new roads and requires forest managers to inventory and upgrade existing roads over the next 20 years. Logging trucks are prohibited from

using forest roads that are deeply rutted or covered by a layer of mud during wet weather. Legacy impacts from access roads may be present in the watershed. Herbicides may be used for roadside vegetation management, but buffers are required near waterways. Public access can present opportunities for human-related fire ignition and for dumping of trash and other materials; however, good road networks can allow for rapid response to fires, decreasing fire size and impact.

2.4.5 Riparian Impacts

Likelihood	Impact	Overall Risk
3	2	Medium

Riparian vegetation provides shade, bank stabilization, and filtration of sediment and pollutants. Removal or damage to riparian vegetation can increase water temperature and turbidity. The revised Forest Practices Act standards have increased protective buffers based on the size of stream, fish populations, and use by salmonids. The revised regulations also include buffers for seeps and springs, wetlands, and other critical habitat for amphibians, many of which did not previously require buffers. Salmonids are present above the District's intake. The new standards are expected to reduce impacts on riparian areas significantly, although legacy impacts from previous forestry activities are visible in the watershed.

2.5 Rural Residential

2.5.1 Rural Homes and Landscaping

Likelihood	Impact	Overall Risk
3	3	Medium

Construction of buildings and roads can lead to erosion and sediment delivery to nearby streams, especially on steeper slopes or if vegetation is removed in riparian areas. Removal or disturbance of riparian vegetation during property landscaping activities could increase turbidity and stream temperatures. Stormwater from roofs, driveways, and other impervious surfaces can carry contaminants to surface water. Excessive use or improper disposal of household and landscaping chemicals can also contaminate waterways.

2.5.2 Domestic Wells

Likelihood	Impact	Overall Risk
4	2	Medium

Improperly constructed, poorly maintained, or abandoned wells can create vertical pathways for contaminants to reach groundwater, which may be connected to stream baseflow. Wells lacking anti-backflow devices may allow contaminants to enter groundwater.

2.5.3 Septic Systems

Likelihood	Impact	Overall Risk
4	4	High

When functioning properly, septic systems pose minimal risk to surface water. Improper design, siting on shallow or saturated soils, and lack of maintenance can cause failure of septic systems, allowing waste to leach into groundwater. Surfacing effluent, clogged drainfields, and interconnections of groundwater and surface water can contribute pathogens (e.g., fecal coliforms and harmful bacteria), nitrates, organic material, and potentially other contaminants (e.g., PFAS) to the water source. There is a higher potential impact when septic systems are sited near surface water.

2.6 Transportation

2.6.1 Roads and Stream Crossings

Likelihood	Impact	Overall Risk
4	2	Medium

Road construction and maintenance may contribute to erosion and stream turbidity. Unpaved roads, undersized or failing culverts, and inadequately maintained roads may further increase turbidity. Vehicle usage presents the risk of spills or leaks of petroleum products or hazardous materials being transported, particularly at stream crossings near the intake. Vehicle accidents may lead to vehicles entering Beaver Creek, presenting similar risks. Tire wear releases chemicals that may include polycyclic aromatic hydrocarbons, heavy metals, and 6PPD-quinone. Herbicides may be used as part of roadside vegetation management, presenting a risk of potential contamination.

2.7 Recreation

2.7.1 Creek Recreation

Likelihood	Impact	Overall Risk
3	2	Medium

Beaver Creek is a popular recreational destination in the area for kayaking, paddleboarding, hiking, birdwatching, and other outdoor activities. Motorized boating is less common on Beaver Creek but does occur, which poses a risk from spills or leaks of fuel and other contaminants. Beaver Creek State Natural Area includes portions of the creek upstream from the District's intake. Some fishing occurs around the intake and from the intake platform. Recreational visits present opportunities for contamination through littering, leaks and runoff from vehicles, riparian impacts, streambank erosion, increased risk of human-caused fires, and spread of invasive species.

2.8 Agriculture

2.8.1 Non-Irrigated Crops

Likelihood	Impact	Overall Risk
2	2	Low

Total cropland is limited in the watershed, and it is generally not irrigated. Drip-irrigated or non-irrigated crops present a lower risk of transporting contaminants compared to other irrigation systems. Over-application, misuse, or spills of pesticides, herbicides, and fertilizers can contribute contaminants and nutrients to waterways. Applicants must be licensed (unless applying chemicals on private property) and must follow chemical labels and laws.

2.8.2 Livestock

Likelihood	Impact	Overall Risk
4	4	High

Horses and cattle are pastured in the South Beaver Creek watershed and wetland area for grazing. Livestock may damage riparian vegetation, contributing to erosion of streambanks and sedimentation of waterways. Improper storage and management of manure can release nutrients and pathogens.

2.9 Industrial

2.9.1 Electric Power Transmission Lines

Likelihood	Impact	Overall Risk
2	2	Low

Electric power transmission lines managed by Central Lincoln People's Utility District cross the Beaver Creek watershed. Vegetation management under powerlines may involve herbicide application. Wood treatment chemicals used on poles can leach into nearby soils and water under certain conditions. Downed powerlines or equipment failures may increase the risk of wildfire.

2.9.2 Rock Quarry

One rock quarry with a stormwater discharge permit in the Beaver Creek watershed was identified in the 2023 SWA. More recent information shows that the quarry is no longer operating and does not appear to pose any active risks to the drinking water source. This risk will be re-evaluated during future updates of the DWPP if conditions change.

2.10 Encampments and Dumpsites

2.10.1 Off-Grid Encampments

Likelihood	Impact	Overall Risk
3	2	Medium

Informal off-grid encampments are established in the DWSA, presenting risks of improper disposal of garbage and other wastes. Lack of sanitation facilities could allow human waste to enter waterways directly or via stormwater, which could cause *E. coli* contamination. It is unknown whether adequate sanitation is available for individuals camping in recreational vehicles in the watershed.

2.10.2 Dumpsites

Likelihood	Impact	Overall Risk
3	3	Medium

There are some known dumpsites in the DWSA, including a wide spot along the road just south of the bridge on South Beaver Creek where tires and vehicles have been dumped, and an area where hunters have left unwanted portions of animal carcasses after field dressing. An elk carcass was dumped in Beaver Creek and the District preemptively shut down its intake temporarily, although the water treatment plant can treat these contaminants if the situation arises again and a shutdown is not feasible. Local residents and law enforcement have made efforts to clear dumpsites as they occur. Dumping or storage of abandoned cars, tires, and appliances may also occur on private property.

2.11 Identifying and Addressing New Risks

The District will review the risks identified in the DWPP on an annual basis to assess whether changes have occurred, new risks need to be addressed, or strategies to address risks have been effective. This review will include verifying whether the closed mining operation (or new operations) noted in Section 2.9.2 has become active again. DEQ reviews DWPPs every 5 years to evaluate source water protection and approve renewal of the plan. The District will review the DWPP more thoroughly during the fourth year of implementation to determine whether to pursue renewal of the plan with minor updates or whether more

substantial changes may be needed due to changing conditions in the watershed. Any updates to the SWA prepared by DEQ will also be incorporated into future plan updates and risk assessments.

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SECTION 3: **Strategies to Address Risks**

3.1 Introduction to Strategies

The DWPP Team developed strategies to mitigate each of the risks described in Section 2. Each risk may be addressed by multiple strategies, and each strategy may mitigate a variety of risks. To develop the strategies, the DWPP Team considered drinking water protection strategies implemented by other water providers, guidance documents created by DEQ and other agencies, and the technical expertise and local knowledge of the District and the Team members. The major categories of strategies are:

- District Activities
- Monitoring
- Landowner Coordination
- Outreach
- Pollution Prevention
- Critical Area Protection and Restoration
- Emergency Planning

Exhibit 3-1 shows how each of the strategies identified can be implemented to mitigate one or more risks in the Beaver Creek DWSA or the District's service area. The remainder of Section 3 describes the strategies.

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Exhibit 3-1. Overview of Risks Addressed by Strategy

Risk Category	Specific Risks	Risk Level	District Activities	Monitoring	Landowner Coordination	Outreach	Pollution Prevention	Critical Area Protection and Restoration	Emergency Planning
Natural Hazards	Drought	High	•	•	•	•		•	
	Low streamflow	High	•	•	•	•		•	
	Highly erodible soils	Medium		•	•			•	
	Landslides	Medium		•				•	•
	Earthquakes	Medium		•		•		•	•
	Tsunamis	High		•		•		•	•
	Saltwater intrusion	High	•	•					
	Severe storms and flooding	High		•	•			•	•
	Wildfire	Medium		•	•	•		•	•
	Invasive species	Medium		•				•	
Municipal	Infrastructure	Medium	•						
	Vandalism and sabotage	Medium	•						•
	Cybersecurity	Medium	•						•
Forest Management	Clearcut harvest	Medium			•			•	
	Non-clearcut harvest	Medium			•			•	
	Chemical applications	Medium		•	•		•		
	Access roads	Medium			•				
	Riparian impacts	Medium			•			•	
Rural Residential	Rural homes and landscaping	Medium			•		•		
	Domestic wells	Medium			•				
	Septic systems	High			•				
Transportation	Roads and stream crossings	Medium			•		•		•
Recreation	Creek recreation	Medium				•		•	
Agriculture	Non-irrigated crops	Low			•		•		
	Livestock	High			•				
Industrial	Electric power transmission lines	Low			•				
Encampments and dumpsites	Off-grid encampments	Medium		•			•	•	•
	Dumpsites	Medium		•			•	•	•

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3.2 District Activities

Water system infrastructure management, water supply planning, and District facility security and cybersecurity are key areas of responsibility through which the District can safeguard its drinking water supply.

The District anticipates updating its Water Master Plan (WMP) in the near future. As part of this process, the District will identify infrastructure projects that will reduce water loss, increase system reliability, and protect water quality. Examples could include leak detection, pipeline repair and replacement, and water treatment plant upgrades, along with scheduling regular condition assessments and maintenance. Activities like replacing pipelines that are older or in poor condition will help reduce system leakage and thereby reduce the amount of water that must be diverted from Beaver Creek to meet customer demand. The updated WMP will inform capital improvement planning efforts by prioritizing projects to be implemented as resources and staffing allow.

The WMP will include water supply planning information to ensure that the District can continue to meet customer needs under a range of future conditions. This includes proactive planning for backup water supply options, codifying operational strategies for adjusting diversions when water quality issues arise, and integrating natural hazard planning into water supply projections. The District's WMCP also considers water supply planning, and the District integrates available information from the most recent WMP when the WMCP updated.

Security and cybersecurity measures protect infrastructure, such as the intake and the water treatment plant, to prevent contamination or disruption of the water supply. The WMP update may include recommendations for security enhancements, such as installation of fencing or surveillance cameras in critical locations. The District is working to develop a cybersecurity plan in 2026. Regular reassessments are prudent to ensure the water system's security and cybersecurity measures stay up-to-date for addressing emerging threats.

3.3 Monitoring

Monitoring programs can help the District understand and track water quality and quantity trends, assess potential upstream sources of contamination, and determine whether additional actions are needed to protect source water or to fill in data gaps. The District already conducts streamflow monitoring and water quality testing to comply with state and federal requirements and the conditions of its water right. Additional monitoring activities can be implemented to ensure that the District is able to quickly detect and respond to potential contamination risks in the Beaver Creek watershed.

In addition to continuing routine water quality monitoring, the District will seek to develop an expanded water quality monitoring plan that may include expanded protocols for post-event monitoring, such as evaluating water quality after a wildfire, severe storm, or chemical application in the watershed. Priority locations for streamflow monitoring may also be identified to complement the existing measurements taken at the District's water intake. Compiling long-term datasets of water quality and quantity into a centralized database will be valuable for future water supply planning efforts, source water protection projects, and as an input for modeling tools.

Other types of monitoring may be beneficial for addressing risks from soil erosion and invasive species. Mapping areas with highly erodible soils or high risk of landslides will help the District understand potential sources of turbidity and keep emergency response plans updated. Monitoring the occurrence of invasive species that can affect the water system will allow for prioritization of treatments.

3.4 Landowner Coordination

The District strives to be a good neighbor and prioritizes building collaborative relationships with landowners and land managers in the Beaver Creek watershed. One of the first steps of building relationships is to ensure that landowners are aware that they are located in the DWSA and that their activities and choices can help protect the watershed and the District's water supply. Land use planning and landowner activities in the watershed are outside of the District's jurisdiction, so the District seeks to stay informed about upcoming plans and general management practices in the DWSA to better understand activities that may have impacts on the water source. Communicating with landowners and building partnerships with entities that conduct watershed restoration, outreach, or technical assistance activities is critical to fostering good relationships and supporting projects that will protect source water quality.

Landowner coordination strategies and sharing technical assistance resources will vary depending on the type of landowner involved. For example, conversations with forestry companies may center around timber harvest plans, riparian buffers, or herbicide applications, while communication with rural residents may focus on promoting technical assistance resources for septic system education, domestic well maintenance, or best practices for household and garden chemical management. For agricultural properties, the District may share information about chemical applications, off-channel watering of livestock, and irrigation modernization. The District will support road maintenance practices for forest roads, County-maintained roads, and private drives and roadways that help reduce erosion and transport of sediment and pollutants to waterways. Outreach within the watershed may also focus on addressing natural hazard risks, such as flood preparedness or fire-wise property management, for a broad range of landowner types.

3.5 Outreach

Along with landowners in the DWSA, outreach and public education are valuable for residents in the District's service area and for people visiting and recreating in the watershed. Outreach to customers will raise awareness about the District's source watershed and highlight water conservation efforts. Water conservation helps reduce pressure on water resources, especially during the summer months when demand is typically highest, streamflows are at their lowest, and water quality issues may occur. The District is a member of the Mid-Coast Water Conservation Consortium (Mid-Coast Water), a group of water providers in Lincoln County working to promote water conservation and improve regional supply resilience. Through the partnership with Mid-Coast Water, the District has access to water conservation outreach materials for residents, businesses, and visitors. The District has installed Advanced Metering Infrastructure (AMI), which enables rapid detection and communication with customers about potential leaks, along with enabling customers to track their water consumption through an online portal. Outreach can also help residents with natural disaster preparedness.

Beaver Creek and the surrounding watershed are popular recreational destinations. The District will support outreach that shares best practices for recreation to avoid potential contamination risks, such as staying on trails and picking up after pets. Signage may also be installed to raise awareness of the location of the DWSA and to promote best practices and fire safety.

3.6 Pollution Prevention

Pollution prevention activities focus on promoting proper usage and disposal of hazardous substances and chemicals to reduce the risk of misuse, spills, or dumping that could contaminate source water. Collection events for items not accepted in typical household waste offer opportunities for residents and businesses to safely dispose of potentially hazardous items and chemicals that they no longer need. Lincoln County Solid Waste District holds household hazardous waste collection events twice per year. Examples of materials that

may be accepted include paint, motor oil, batteries, antifreeze, expired medications, and chemicals used in landscaping, agriculture, and forestry. In addition, Lincoln County Solid Waste District holds occasional tire collection events in partnership with local waste haulers. The District will promote these events to its customers and to landowners in the DWSA.

Trash, debris, and abandoned vehicles have been observed along roads or at encampments in the watershed. The District will coordinate with the Lincoln County Sheriff's Department and other partners on removal of abandoned vehicles, cleanup of dumpsites, and outreach about unauthorized camping, supporting these efforts where feasible to protect the drinking water source. District staff will monitor for new encampments and dumpsites to help determine when additional actions for deterrence or cleanup should be taken.

3.7 Critical Area Protection and Restoration

"Critical areas" in the DWSA are locations that are particularly sensitive to the presence of a potential contaminant source, making it more likely to impact water quality or water supply. These critical areas include land with highly erodible soil types, steep slopes, areas prone to landslides, riparian zones around Beaver Creek and its tributaries, and stream crossings along roads. The DWSA erosion potential map prepared by DEQ in 2025 provides an update of a similar figure in the 2023 SWA, and the Oregon Department of Forestry's (ODF's) Forest Practices Act Streams and Steep Slopes Viewer online mapping tool shows areas where soil-disturbing activities on steep slopes are more likely to cause erosion or debris flows. These maps can help prioritize areas with the most severe erosion potential where prevention of ground-disturbing activities is most critical to protect the drinking water source. Similarly, maps of riparian areas highlighting stream crossings show the locations with the highest potential for contaminants to reach the water source, whether through erosion and sediment transport, chemical use, or accidental releases. The Soil and Water Assessment Tool (SWAT)[1] can be used to model the effects of different land uses and land management practices on water quality and quantity at the watershed to basin scale. SWAT modeling can be used to identify opportunities to reduce risks related to soil erosion and non-point source pollution.

While some water providers own substantial portions of their source watersheds, the District is not a major landowner, and land use planning authority is under the jurisdiction of Lincoln County. In addition, over half of the DWSA is federally owned and managed by the US Forest Service. The District's Board of Directors has determined that it does not have the resources to acquire and manage private lands in the watershed through purchases or easements. Instead, the District focuses on building strong, collaborative relationships with public and private land managers as described in Section 3.4. However, the District also remains open to supporting entities that may be interested in acquiring land in the DWSA from willing sellers or holding conservation easements to ensure that land is managed for watershed protection. Through these partnerships, critical area protection and restoration strategies can be implemented to limit or carefully manage activities that could negatively impact the water source.

Existing groups in Lincoln County, such as the MidCoast Watersheds Council and Lincoln Soil and Water Conservation District (SWCD), are engaged in regional habitat restoration and enhancement projects that would protect water quality and quantity, and the District will coordinate with these groups to identify high-priority critical areas and support restoration projects as feasible. Examples of ecosystem restoration activities with co-benefits for drinking water supply include riparian planting, floodplain reconnection, invasive species removal, culvert maintenance and upsizing, and erosion control, among others. Natural

[1] More information is available at https://swat.tamu.edu/.

process restoration, such as installation of beaver dam analogs, may be implemented with due consideration for flood hazard and road access.

3.8 Emergency Planning

Emergency planning strategies help integrate source water protection into existing District and regional plans and help the District make its water system more resilient to natural hazards. Following the identification of risks during development of this DWPP, the District will ensure that its internal emergency response plans and procedures are updated as necessary to protect the water source and infrastructure. Expanding upon the relationship-building described in Sections 3.4 and 3.7, the District will coordinate with its neighbors and landowners in the watershed on emergency planning, such as wildfire or spill response plans. The District will also participate in regional efforts, including the Lincoln County Natural Hazards Mitigation Plan update and the Lincoln County Community Wildfire Protection Plan. Several other water providers in Lincoln County have established strategies in their DWPPs that call for communicating with the County about integrating emergency planning related to water supply into the County's Emergency Operations Plan, and the District would also benefit from this type of coordination. For example, the County's current plan describes procedures for contacting local fire departments and notifying the National Response Center in the event of an oil or chemical spill but not directly notifying local water suppliers. Closer coordination would enable the District to assess and respond to potential threats more rapidly, such as determining whether it needs to temporarily suspend operation of the Beaver Creek intake and rely on stored water or interconnections with other water suppliers. The District will explore funding opportunities for emergency preparedness activities, such as spill response training, cybersecurity plan testing, and emergency scenario exercises.

SECTION 4: **Implementation Plan**

The implementation plan section of this DWPP describes the activities to be implemented under each of the strategies outlined in Section 3 to reduce, avoid, or mitigate the risks identified in Section 2 of the plan. Implementation of specific activities is dependent on the availability of funding and staff resources, and Section 4.5 provides a non-exhaustive list of potential funding sources related to source water protection projects. The DWPP Team guided the development of the implementation plan, and public input also informed the implementation plan. The District will continue pursuing and strengthening partnerships with landowners, technical experts, and other interested entities during implementation. The District will review the implementation plan annually to track progress, assess effectiveness, and determine if new actions are needed to address any changes in the Beaver Creek watershed.

4.1 Overview of Timeline and Partnerships

The implementation plan is organized in three phases based on the priority of risks addressed, complexity of the activities and the District's readiness to proceed, and needs for additional funding or resources. Activities included in Phase 1 address high-priority risks and/or can be implemented relatively quickly, such as data collection to fill information gaps and inform future activities. Phase 1 activities are expected to be implemented within Years 1-2 following approval of the DWPP. Phase 2 includes activities that require additional preparation, such as building partnerships and obtaining funding. These activities are expected to occur during Years 2-4 after plan approval, depending on resources available. Activities requiring more substantial planning timeframes or funding, and actions addressing lower-priority risks, are included in Phase 3 and are anticipated to take place during Year 5 onward. Actions that would be triggered by a specific event rather than a planned timeframe, such as monitoring activities after a natural disaster, are listed in Phase 3 to occur "as needed."

The District is the responsible management authority for implementation of the DWPP. Many implementation actions will benefit from partnerships with landowners in the Beaver Creek watershed and local and regional organizations. Exhibit 4-1 presents an overview of the implementation plan by phase, including potential partner organizations, and the following sections describe each activity in more detail.

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Exhibit 4-1. Implementation Plan Overview by Phase

Strategy Category	Phase 1	Phase 2	Phase 3	Potential Partners (lead/supporting)
District Activities				
Infrastructure Management	▪ Maintain existing inspection and maintenance schedules and update as needed; build a comprehensive master schedule ▪ Continue leak detection and line repair and replacement efforts, including continuing to use AMI to identify potential leaks ▪ Implement upgrades to treatment infrastructure, such as granular activated carbon system	▪ Implement additional priority infrastructure repairs and upgrades as funding becomes available	▪ Explore long-term, remote leak detection tools and options ▪ Seek additional training and workforce development opportunities to support specific infrastructure	Local community colleges, OHA, OAWU
Water Supply Planning	▪ Continue to consider natural hazards and drought response in water supply planning ▪ Maintain interties and continue backup supply planning ▪ Monitor regional water supply planning efforts ▪ Continue streamflow monitoring ▪ Conduct planning to address saltwater intrusion ▪ Maintain operational strategies for pausing diversions and relying on stored water during high turbidity and chemical application events	▪ Refine drought and heat response procedures as conditions evolve ▪ Update WMP to include source water protection strategies and projects	▪ Maintain long-term water supply planning using updated hydrologic conditions ▪ Include source water protection goals in future iterations of District's WMP and other planning documents ▪ Evaluate whether existing infrastructure and storage have met demand during drought conditions over last decade	OHA, OWRD, Lincoln County
District Facility Security and Cybersecurity	▪ Continue and expand use of existing cameras and remote monitoring systems already installed at facilities ▪ Continue to periodically review monitoring coverage at all facilities and any need for cybersecurity protection updates ▪ Continue to consider maintenance and updating needs of property security systems and cybersecurity systems as part of routine capital planning and 2026 cybersecurity plan	▪ Expand camera coverage and monitoring capability where gaps are identified ▪ Seek training for security and cybersecurity	▪ Reassess facility vulnerability following major hazard events	District IT staff, OHA, AWWA

Strategy Category	Phase 1	Phase 2	Phase 3	Potential Partners (lead/supporting)
Monitoring				
Water Quality Monitoring	▪ Continue routine water quality monitoring, including turbidity and salinity ▪ Continue plans to conduct post-event monitoring after wildfire, storms, landslides, and chemical applications ▪ Develop a water quality monitoring plan for current and potentially more extensive monitoring ▪ Develop centralized database, including metadata and QA/QC, for water quality and hazard data	▪ Implement water quality monitoring as determined in plan ▪ Develop water quality monitoring protocols specific to various events (e.g., logging, fire, etc.) ▪ Train staff and partners in event-based monitoring methods	▪ Maintain long-term water quality datasets to inform future DWPP and other plan updates ▪ Consider modeling tools to understand impacts on water quality from changes in streamflow and disturbances ▪ As needed, implement water quality testing before and after chemical applications ▪ As needed, implement post-disaster or post-disturbance water quality monitoring	DEQ, ODF, USFS, landowners, Surfrider, Lincoln SWCD, MidCoast Watersheds Council
Water Quantity Monitoring	▪ Continue streamflow monitoring at the intake and identify priority locations for additional streamflow monitoring upstream ▪ Explore monitoring funding options	▪ Install additional streamflow monitoring stations as funding allows	▪ Maintain long-term datasets and use results to refine source water protection priorities ▪ Consider modeling tools to understand impacts on water quantity from changes in precipitation, air temperature, and disturbances	OWRD, DEQ, USFS, MidCoast Watersheds Council, OSU
Other Monitoring	▪ Train District staff on identification of invasive riparian plant species ▪ Map areas at high risk for landslides ▪ Map areas of highly erodible soils, including consideration of the ODF FPA Streams and Steep Slopes Viewer	▪ Continue monitoring for and treating invasive riparian plant species ▪ Discuss nutria monitoring, effects, and management options with ODFW	▪ Monitor for landslides if an earthquake occurs in the region ▪ Integrate monitoring results into emergency response planning as needed ▪ Support efforts of the Mid-Coast Cooperative Weed Management Area	ODFW, Lincoln SWCD, MidCoast Watersheds Council

Strategy Category	Phase 1	Phase 2	Phase 3	Potential Partners (lead/supporting)
Landowner Coordination				
Landowner Coordination and Technical Assistance	▪ Maintain subscription to FERNS notifications for forestry activities ▪ Build collaborative relationships and communicate with forestry landowners about plans and practices, partnerships and funding opportunities, and source water protection ▪ Conduct rural residential and agricultural landowner outreach about source water protection projects and coordination with partners ▪ Develop relationships with ODF, OPRD, and USFS, and maintain contact information ▪ Communicate with watershed restoration/source water protection partners about streamside evaluations and potential source water protection projects; discuss chemical applications with Lincoln SWCD	▪ Identify source water protection projects with landowners and partners, and pursue or support funding applications ▪ Share educational materials about household chemical management to reduce contamination and promote technical assistance programs ▪ Promote septic system education and technical assistance programs ▪ Promote domestic well education and technical assistance programs ▪ Communicate with powerline owners about management plans and practices	▪ Maintain communications and relationships with landowners in the watershed ▪ Maintain communications and relationships with conservation organizations ▪ Implement source water protection projects as funding allows ▪ Continue to identify source water protection projects and seek funding ▪ Support livestock fencing and off-channel watering projects ▪ Support road maintenance practices that prevent pollution and sediment transport ▪ Check for updates about mining operations annually	Landowners, ODF, USFS, OPRD, Lincoln SWCD, Lincoln County, MidCoast Watersheds Council, OSU Extension, OWRD, Lincoln County Emergency Management, OHA, DEQ, ODFW
Outreach				
Residential	▪ Conduct outreach about the District's drinking water source and water conservation, including raising public awareness of the District's water conservation efforts and targeting some outreach towards tourists ▪ Continue to participate in the Mid-Coast Water Conservation Consortium ▪ Conduct outreach about natural disaster preparedness ▪ Promote water customers sign up for water consumption monitoring	▪ Post emergency preparedness information or links on the District's website	▪ Continue conducting water conservation outreach ▪ Maintain membership in the Mid-Coast Water Conservation Consortium	Mid-Coast Water Conservation Consortium, community college
Recreation	▪ Conduct outreach about recreation best practices and the drinking water source watershed	▪ Install signage about the source watershed and recreation best practices ▪ Promote fire safety at public entry points to the Beaver Creek watershed	▪ Continue conducting outreach on recreation best practices	OPRD

Strategy Category	Phase 1	Phase 2	Phase 3	Potential Partners (lead/supporting)
Pollution Prevention				
Hazardous Waste and Vehicles	▪ Promote existing County hazardous waste and tire cleanup events ▪ Monitor for abandoned vehicles and roadside spill risks	▪ Explore MOUs for roadside vegetation management above intake ▪ Partner with solid waste district regarding best management practices for hazardous waste ▪ Promote hazardous waste collection events (pesticides and household chemicals) ▪ Coordinate with Sheriff's Department on removal of abandoned vehicles and RVs	▪ Maintain long-term pollution prevention contact list for technical assistance, outreach materials, and resources ▪ Promote Pesticide Stewardship Partnership collection events ▪ Continue to monitor for abandoned vehicles	Lincoln County Solid Waste District, Lincoln County Public Works, Lincoln County Sheriff's Department
Encampments and Dumpsites	▪ Monitor for new encampments and dumpsites ▪ Learn more about County ordinances and enforcement ▪ Conduct outreach regarding illegal campsites/dumpsites ▪ Coordinate with partners regarding response and funding ▪ Support installation of gates where feasible	▪ Support cleanup efforts in coordination with partners where feasible ▪ Develop a plan for minimizing the likelihood of unauthorized camping	▪ Maintain deterrence, monitoring, and cleanup efforts long-term	Lincoln SWCD, MidCoast Watersheds Council, landowners, Lincoln County Sheriff's Department, Lincoln County Public Works
Critical Area Protection and Restoration				
Critical Area Protection	▪ Identify and prioritize critical areas for protection, such as areas that could affect water retention and turbidity ▪ Conduct outreach to public entities about critical area protection activities in the watershed	▪ Build relationships with entities that may be interested in acquiring and managing land for watershed protection	▪ Support source water protection projects in critical areas ▪ Collaborate on management plans if land is acquired for watershed protection	Landowners, McKenzie River Trust, ODF, USFS, BLM, OPRD, Lincoln SWCD, Wetlands Conservancy, Sustainable Northwest, OSU researchers, and OSU Extension
Watershed Restoration and Enhancement	▪ Learn about existing restoration efforts ▪ Coordinate with Lincoln SWCD and MidCoast Watersheds Council to identify priority locations for riparian planting, floodplain reconnection, invasive species removal, erosion control projects, culvert maintenance or upsizing, road maintenance, cold water refugia enhancement, and other potentially beneficial projects ▪ Explore funding opportunities, and pursue funding ▪ Assess feasibility of natural-process restoration, such as beaver dam analogs or other projects supporting beavers with consideration of flood hazard and road access	▪ Implement riparian planting, erosion control projects, beaver projects, and other potentially beneficial restoration activities	▪ Maintain, monitor, and adaptively manage restoration sites ▪ Continue to identify source water protection projects in coordination with partners ▪ Support source water protection projects following a natural hazard event (e.g., wildfire)	Landowners, MidCoast Watersheds Council, Lincoln SWCD, USFS, BLM, OPRD

Strategy Category	Phase 1	Phase 2	Phase 3	Potential Partners (lead/supporting)
Emergency Planning				
Emergency Plans	▪ Update the District's emergency response plan for identified risks as appropriate, with particular attention to how emergencies may affect infrastructure and access roads ▪ Secure generators for backup electricity ▪ Coordinate with partners about emergency response planning ▪ Discuss current wildfire plans with timber owners and ODF and USFS ▪ Identify and pursue funding opportunities for emergency planning/preparedness, such as grants for spill response and training ▪ Continue participating in quarterly meetings of the Natural Hazard Mitigation Plan group	▪ Conduct tabletop or field exercises for emergency scenarios ▪ Develop regional coordination with other small water systems and County agencies	▪ Maintain ongoing training and update emergency plans after hazard events ▪ Participate in the next Lincoln County Natural Hazards Mitigation Plan update and the Lincoln County Community Wildfire Protection Plan ▪ Support restoration efforts after emergency events in the watershed as needed	Lincoln County Emergency Management, ODOT, MidCoast Watersheds Council, Lincoln SWCD

AMI = advanced metering infrastructure
AWWA = American Water Works Association
BLM = Bureau of Land Management
DEQ = Oregon Department of Environmental Quality
DWPP = Drinking Water Protection Plan
FERNS = Forest Activity Electronic Reporting and Notification System
FPA = Forest Practices Act
IT = information technology
MOU = memorandum of understanding
OAWU = Oregon Association of Water Utilities
ODF = Oregon Department of Forestry
ODFW = Oregon Department of Fish and Wildlife
ODOT = Oregon Department of Transportation
OHA = Oregon Health Authority
OPRD = Oregon Parks and Recreation Department
OSU = Oregon State University
OWRD = Oregon Water Resources Department
QA/QC = quality assurance/quality control
RV = recreational vehicle
SWCD = Soil and Water Conservation District
USFS = United States Forest Service
WMCP = Water Management and Conservation Plan
WMP = Water Master Plan

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4.2 Phase 1

4.2.1 District Activities

4.2.1.1 Infrastructure Management

The District conducts regular infrastructure maintenance and promptly repairs any leaks or other issues identified. These existing maintenance activities will continue, and the District will create a comprehensive master schedule for inspections and maintenance. The District will continue its leak detection and pipeline repair and replacement efforts, as described in its WMP and WMCP, to help reduce water loss. Customer meters in the service area have been upgraded to Advanced Metering Infrastructure (AMI) models, which are more accurate and allow for rapid identification of potential leaks, enabling the District to alert customers about sudden significant increases in their water use. The District has made plans to implement certain upgrades to its water treatment infrastructure, such as installing a granular activated carbon (GAC) system that can remove a wide range of potential contaminants.

4.2.1.2 Water Supply Planning

The District will continue to consider natural hazards and drought response in its water supply planning efforts. This may include updates of the WMP, water system operation plans, emergency operation plans, and the WMCP, which includes a curtailment plan for addressing water shortages. The District will continue to maintain its interties with the Cities of Newport and Toledo and will maintain up-to-date plans for backup water supply needs. This may include monitoring regional water supply planning efforts to improve coordination.

Currently, the District monitors streamflow and temperature at the Beaver Creek intake. This data collection will continue and will be used to inform water supply planning and to meet the requirements of the District's water use permit. The District will also continue planning to address the potential for saltwater intrusion. During high turbidity, high salinity, or chemical application events, the District will monitor water quality and pause diversions if needed. While diversions are paused, the District may rely on stored water or water obtained through its system interties.

4.2.1.3 District Facility Security and Cybersecurity

Cameras and remote monitoring systems are currently in place at some District facilities. The District will continue maintaining these systems, review monitoring coverage, and any need for enhancements of security systems, and include plans to address needs and upgrade systems as part of its routine capital planning processes. Development of a focused cybersecurity plan is underway, and any gaps identified during system reviews will be integrated into the new plan.

4.2.2 Monitoring

4.2.2.1 Water Quality Monitoring

The District will continue its current water quality monitoring activities, including routine monitoring required by the Safe Drinking Water Act and additional requirements under its water rights. The District monitors conductivity and water temperature at the intake to track potential saltwater intrusion and stream conditions. During Phase 1, the District will develop a water quality monitoring plan to consider expanding the current monitoring program with additional parameters and monitoring locations, along with plans to conduct post-event monitoring as needed after wildfire, storms, landslides, and chemical applications in the watershed. The plan will include details on development of a centralized database for tracking water quality

information, including metadata and QA/QC procedures. Chemicals to monitor will be selected, appropriate monitoring locations will be identified, and protocols and schedules will be developed as part of the plan.

4.2.2.2 Water Quantity Monitoring

The District currently monitors streamflow at the intake. During Phase 1, the District will identify priority locations for additional streamflow monitoring upstream in the watershed and will explore funding options for additional stream gaging. Streamflow data will be used to inform water supply planning and identify trends that may be related to climate change or land use activities in the watershed.

4.2.2.3 Other Monitoring

During Phase 1, District staff will be trained on identification of invasive riparian plant species to facilitate monitoring of their presence at the intake and on District property. The District will prepare maps of the Beaver Creek watershed showing areas with highly erodible soils and high landslide risk. These maps will be used to determine where additional monitoring of sediment sources may be needed.

4.2.3 Landowner Coordination

Coordinating with landowners in the DWSA and understanding their land management plans is a key strategy for the District. ODF's Forest Activity Electronic Reporting and Notification System (FERNS) notification service provides information about planned forestry activities, such as timber harvesting, chemical applications, and forest road construction. The District will maintain its annual subscription to FERNS (https://ferns.odf.oregon.gov/E-Notification/), which will provide alerts about planned activities in the DWSA and the ability to view the associated notifications, maps, and written plans. In addition, the District will register for email and text notifications for helicopter pesticide applications within 1 mile of the surface water intake using the same website. While FERNS notifications offer an opportunity for comment, they are not required to specify exactly when an activity will take place within the window of the notification.

To better understand forest management plans and how they may affect the DWSA, the District will prioritize building collaborative relationships and regularly communicating with forestry landowners. Topics of discussion may include timber harvest plans and practices, riparian area management and buffers, forest road management, chemical applications, critical area protection and restoration, and potential partnerships and funding to support source water protection projects. The District will also develop relationships and maintain contact information for local and regional ODF, OPRD, and US Forest Service (USFS) staff.

Source water protection will also rely on rural residential and agricultural landowners in the Beaver Creek watershed, and the District will conduct outreach about source water protection projects in coordination with partners. Examples of projects may include activities to support water retention (e.g., riparian planting and beaver habitat restoration), invasive species identification, turbidity reduction measures, streamflow restoration through water rights management, irrigation modernization, flooding preparedness, and fire-wise property management. The District will communicate with watershed restoration and source water protection partners about potential projects, particularly those related to technical assistance for reducing inputs of sediment and chemicals reaching waterways. Partners may also be able to offer streamside evaluations and project recommendations to rural landowners. Lincoln SWCD conducts some chemical applications as part of its habitat restoration activities, and the District will discuss these practices to learn more and promote source water protection.

4.2.4 Outreach

4.2.4.1 Residential

During Phase 1, the District will begin conducting outreach about the DWSA, source water protection, natural disaster preparedness, and water conservation. These efforts will raise awareness of the District's existing water conservation efforts and will extend beyond the DWSA to include residents in the District's service area who rely on Beaver Creek for their drinking water supply. The District will continue to participate in the Mid-Coast Water Conservation Consortium. As a member, the District has access to customizable outreach materials to encourage water conservation, such as handouts, newsletter articles, website content, and billing inserts and messages. Some of the Mid-Coast Water Conservation Consortium's water conservation outreach efforts target tourists through outreach to the hospitality industry to promote water conservation upgrades at lodging and dining facilities and to encourage them to provide outreach materials to visitors to the Seal Rock area. The Mid-Coast Water Conservation Consortium also collaborates with organizations in the region to support student education about water conservation and promotes water conservation at events.

The District will continue to promote its My Water Usage customer portal through the "Be in the Know, Monitor Your H_2O" campaign. The portal enables customers to monitor their water usage and set daily usage alerts if a target volume is exceeded. Alerts help customers understand their usage to conserve water and also help catch leaks quickly.

4.2.4.2 Recreation

The District will coordinate with OPRD to discuss conducting outreach about recreation best practices to protect water quality and raise awareness of the drinking water source watershed. This may include information available at the Beaver Creek State Natural Area Welcome Center or at popular trailheads in the State Natural Area.

4.2.5 Pollution Prevention

4.2.5.1 Hazardous Waste and Vehicles

During Phase 1, the District will promote the annual household hazardous waste collection events already being held by Lincoln County Solid Waste District and the drop-off sites for household hazardous waste at the Dahl Disposal Service transfer stations in Toledo and Waldport. The District will also promote special events sponsored by the Solid Waste District and local haulers, such as tire disposal events.

Vehicles are occasionally abandoned along roadways in the DWSA, and District staff will monitor for abandoned vehicles and roadside spill risks when they are working out in the watershed.

4.2.5.2 Encampments and Dumpsites

District staff working in the watershed will track the establishment of new encampments and dumpsites. When District staff encounter individuals who have established encampments, if it is safe to do so, staff will strive to connect them with resources, such as the Lincoln County Community Shelter and Resource Center, Coastal Support Services, Community Services Consortium, and Food Share of Lincoln County using existing outreach materials and contact information provided by these organizations.

The District will learn more about County ordinances and enforcement processes, and it will conduct outreach regarding illegal campsites or dumpsites as appropriate. The District will coordinate with partners and landowners regarding cleanups and the need for securing funding. Where feasible, the District will

support installation of gates to prevent trespassing and reduce the potential for trash and contaminants to enter waterways.

4.2.6 Critical Area Protection and Restoration

4.2.6.1 Critical Area Protection

Identifying and prioritizing critical areas in the Beaver Creek watershed is the first step in protecting and enhancing these areas. During Phase 1, the District will use the SWA, soil erosion maps, steep slope mapping tools, and maps of riparian buffers and stream crossings described in Section 3.7, and tools related to any additional criteria selected, to identify critical areas for protection. This may be done using the SWAT modeling tool to model the potential impacts of various land management practices on water quality or through other types of GIS analysis.

With more than half of the DWSA falling within the Siuslaw National Forest, the USFS is a critical partner in source water protection. Following the mapping analysis described above, the District will communicate with the USFS and other public entities about management practices that can protect water quality in critical areas identified on public lands.

4.2.6.2 Watershed Restoration and Enhancement

During Phase 1, the District will learn about existing restoration and habitat enhancement efforts in the watershed that may have co-benefits for drinking water source protection. Building on these efforts, the District will coordinate with Lincoln SWCD and the MidCoast Watersheds Council to identify the highest priority locations for new projects, such as riparian planting, floodplain reconnection, invasive species removal, culvert maintenance or upsizing, road maintenance, cold water refugia enhancement, beaver habitat restoration, and other potentially beneficial projects.

The District will encourage restoration partners to assess the feasibility of natural-process restoration through beaver habitat restoration, including exploring use of analytical tools. Projects to support enhancement of beaver habitat or installation of beaver dam analogs can help restore natural processes but must be carefully sited to avoid increasing flood risk and affecting road access. The Beaver Restoration Assessment Tool (BRAT) is a spatial modelling tool that can show the capacity of stream systems to support dam-building by beavers. The BRAT model may be used by land managers to determine where beaver habitat can best be supported and enhanced to promote watershed health and limit impacts from unsuitable dam building sites. Where suitable habitat can be protected and enhanced, beaver-based restoration projects can increase the watershed's resilience to drought, fire, and climate change.

The District will explore funding opportunities and pursue or support funding applications for watershed restoration and enhancement efforts, such as through letters of support.

4.2.7 Emergency Planning

When the District next updates its Emergency Response Plan, WMP, and any other emergency planning documents, it will incorporate the discussion of risks and response strategies identified in this DWPP as appropriate. This will help ensure that source water protection is considered during emergency planning processes and that plans give particular attention to how various types of emergencies may affect water system infrastructure and road access for District staff who may need to make emergency repairs or assess conditions in the watershed. OHA has a webpage dedicated to emergency preparedness: https://www.oregon.gov/oha/PH/HEALTHYENVIRONMENTS/DRINKINGWATER/PREPAREDNESS/Pages/emergency.aspx. The webpage includes a document called "Local Water Supply Emergency Planning Guidance

for Emergency Managers," which provides a list of resources for community water system operators. Recommendations in emergency plans may include securing additional generators or fuel storage to ensure that a backup electricity source is available when needed. Fuel storage facilities will be carefully designed and monitored to avoid potential contamination risks from leaks or spills.

In addition to updating its own plans, the District will coordinate with other local agencies and landowners about incorporating source water protection into their emergency response plans and wildfire protection plans, as applicable. Potential partners include forestry landowners, ODF, USFS, Lincoln County, USFS, BLM, ODOT, and potentially others that the District identifies. The District will provide a map of the DWSA and water infrastructure to be protected during an emergency. The Lincoln County Natural Hazard Mitigation Plan group meets quarterly, and the District will continue to participate in meetings and will track recommendations for future implementation. The District will identify and pursue funding opportunities for emergency planning and preparedness programs, such as grants for spill response training. These training programs may be specific to District staff or may include other partners in the watershed.

4.3 Phase 2

4.3.1 District Activities

4.3.1.1 Infrastructure Management

Following the update of the District's WMP, the District will seek funding to implement recommended high priority infrastructure projects and will continue conducting system repairs as needed.

4.3.1.2 Water Supply Planning

As conditions evolve, the District will refine the drought and heat response procedures in its water supply planning efforts. During the planned update of the WMP, the District will consider including source water protection strategies and projects as applicable.

4.3.1.3 District Facility Security and Cybersecurity

Where gaps are identified during Phase 1, the District will seek to expand camera coverage and monitoring capabilities during Phase 2, along with seeking funding to address any identified security or cybersecurity vulnerabilities. This could include fencing, software upgrades, and staff training for cybersecurity threats.

The American Water Works Association (AWWA) offers seminars, workshops, and online training resources for water systems (http://www.awwa.org/Events-Education). The Oregon Water Utility Council is a committee of the Pacific Northwest Section of AWWA that monitors legislation and regulations that affect water utilities in Oregon. Members receive discounted training, industry publications, and opportunities to network and learn from shared experiences with other water providers (http://www.pnws-awwa.org/member-groups/committees/oregon-water-utility-council/). The US Environmental Protection Agency also offers training for water utility resilience and cybersecurity (https://www.epa.gov/waterresilience).

4.3.2 Monitoring

4.3.2.1 Water Quality Monitoring

During Phase 2, the District will implement the water quality sampling plan developed during Phase 1. Additional water quality monitoring protocols may need to be developed specific to particular events, such as

after extensive logging operations or after an event like a wildfire. District staff and partners would then be trained in event-specific monitoring methods.

4.3.2.2 Water Quantity Monitoring

The District will install additional streamflow monitoring stations in the priority locations identified during Phase 1 as funding allows.

4.3.2.3 Other Monitoring

The District will continue monitoring for and treating occurrences of invasive riparian plant species as they are detected near the intake or on District property. During Phase 2, the District will discuss the potential effects of nutria in the riparian zone with the Oregon Department of Fish and Wildlife (ODFW) and determine whether monitoring is needed. If nutria are present and are likely to be negatively affecting the drinking water source, the District will discuss management options with ODFW.

4.3.3 Landowner Coordination

The District will continue to build and strengthen relationships with landowners in the Beaver Creek watershed and with watershed restoration partners. During Phase 2, specific source water protection projects will be identified in coordination with landowners and partners, and the District will support pursuing funding as feasible to support implementation. For example, the District can provide letters of support for partner organizations' grant applications.

The District will help connect rural landowners and watershed residents with existing technical assistance programs and educational programs. This will include sharing educational materials and promoting technical assistance programs focused on household and garden chemical management to reduce the risk of contamination from overuse, spills, or improper disposal. Additional technical assistance topics to be addressed include proper use and maintenance of septic systems and domestic wells. During Phase 2, the District will also communicate with Central Lincoln People's Utility District regarding powerline management plans and maintenance practices in the Beaver Creek watershed.

4.3.4 Outreach

4.3.4.1 Residential

The District will post emergency preparedness information or links on its website. This information will help customers understand how much drinking water to store per person in case of emergencies and how to make it safe to drink.

4.3.4.2 Recreation

During Phase 2, the District will work with OPRD on potential installation of signage about Beaver Creek's connection to the District, the importance of protecting water quality in the DWSA, and recreation best practices. Examples include staying on trails, packing out trash, and picking up after pets. Signage may also focus on promoting fire safety at public entry points to the Beaver Creek watershed.

4.3.5 Pollution Prevention

4.3.5.1 Hazardous Waste and Vehicles

During Phase 2, the District will communicate with Lincoln County Public Works about vegetation management in County rights-of-way upstream of the District's water intake. The goal of these discussions will be to explore the potential for developing a memorandum of understanding that requires vegetation management practices through mechanical methods (e.g., mowing) rather than herbicide chemical applications.

The District will continue to partner with the Lincoln County Solid Waste District regarding best management practices for hazardous waste disposal and will promote any drop-off events through the Pesticide Stewardship Partnership or similar one-day events, including those for agricultural and forestry chemicals.

The District will coordinate with the Lincoln County Sheriff's Department on the removal of any abandoned vehicles observed in the DWSA.

4.3.5.2 Encampments and Dumpsites

District staff will continue monitoring for and coordinating cleanup of dumpsites and encampments as feasible, connecting unsheltered individuals with resources as appropriate. During Phase 2, the District will work with partner organizations and the County to develop a plan to minimize the likelihood of unauthorized camping in the DWSA.

4.3.6 Critical Area Protection and Restoration

4.3.6.1 Critical Area Protection

While the District itself does not have capacity to acquire and manage land in the DWSA, other entities may be interested in acquiring and managing land for watershed protection and habitat enhancement. Projects focused on supporting cold, clean water and thriving native habitat for fish and wildlife would have significant co-benefits for drinking water supply and water quality, and the District would be interested in building relationships with entities interested in acquiring land or conservation easements for such purposes, especially in identified critical areas. The District will also continue to strengthen relationships with managers of public lands in the watershed regarding protective management plans for critical areas.

4.3.6.2 Watershed Restoration and Enhancement

During Phase 2, the District will support implementation of the watershed restoration and enhancement projects identified during Phase 1. This may include riparian planting, erosion control projects, beaver habitat restoration, and other potentially beneficial restoration activities.

4.3.7 Emergency Planning

During Phase 2, the District will plan and conduct tabletop or field exercises for emergency scenarios outlined in its Emergency Response Plan. These scenario exercises will offer training opportunities for District staff and a test of the effectiveness of the plan. Lessons learned or deficiencies identified will be addressed as soon as possible and incorporated into future plan updates.

The District will communicate with Lincoln County about integrating emergency planning related to its water source into the County's Emergency Operations Plan, such as requesting that the County notify the District of an oil or chemical spill in the DWSA when the County notifies the fire department and the National Response

Center. Rapid notification will help the District determine when emergency response actions are needed, such as temporarily ceasing diversion from Beaver Creek, or whether the situation should be monitored for future actions. The District is a member of the Oregon Water/Wastewater Agency Response Network (ORWARN) and will maintain this membership. ORWARN helps water suppliers organize emergency response actions and provide or receive mutual aid during localized emergencies. Water suppliers that are members of ORWARN may be able to rapidly provide very specialized equipment, water system parts, or loaned personnel, while state and federal assistance following a disaster may take time to obtain.

4.4 Phase 3

4.4.1 District Activities

4.4.1.1 Infrastructure Management

As funding allows, the District will continue implementing the recommended leak detection and infrastructure projects in its WMP. This may include exploring remote leak detection tools, such as satellite leak detection systems. The District may seek out additional workforce development and training opportunities to support specific infrastructure projects through partnerships with local community colleges and other training programs.

4.4.1.2 Water Supply Planning

Long-term water supply planning will incorporate data collected about hydrologic conditions and past drought impacts. The District will include source water protection goals and strategies, such as streamflow monitoring, in future iterations of its WMP, WMCP, and other planning documents. As these documents are updated, the District will evaluate whether existing infrastructure and storage facilities have been sufficient to meet demand during drought conditions over the last decade.

4.4.1.3 District Facility Security and Cybersecurity

The District will reassess facility vulnerability and cybersecurity needs following any major hazard events that occur during the implementation period.

4.4.2 Monitoring

4.4.2.1 Water Quality Monitoring

Water quality monitoring will continue during Phase 3 and beyond. The District will maintain long-term water quality datasets to inform future DWPP and other plan update processes. The District will consider the use of modeling tools, such as the SWAT model, to understand impacts on water quality related to changes in land use, climate, streamflow, and disturbances in the watershed. As needed, the District will implement water quality testing before and after chemical applications in the watershed and after natural disasters or other major disturbances.

4.4.2.2 Water Quantity Monitoring

The District will continue streamflow monitoring and maintain long-term datasets to use in refining source water protection priorities. The SWAT model and other tools may also be considered for gaining a better understanding of impacts on water quantity related to changes in climate (e.g., precipitation, air temperature), land use, and disturbances.

4.4.2.3 Other Monitoring

Monitoring for erosion and landslides will be integrated into emergency response planning as needed. The District will support the efforts of the Mid-Coast Cooperative Weed Management Area in controlling invasive plant species that negatively impact ecosystems and the drinking water source.

4.4.3 Landowner Coordination

The District will maintain communications and relationships with landowners in the DWSA for the long-term, along with maintaining relationships with restoration partners and conservation organizations. During Phase 3 and beyond, source water protection projects will be implemented as funding allows, and the District and its partners will continue to identify new projects and seek funding for implementation.

In agricultural areas, the District will support livestock fencing and off-channel watering projects to benefit riparian areas in the watershed. The District will continue supporting road maintenance practices, erosion control, and culvert replacement projects that prevent pollution and sediment transport from forest access roads, private roads, and County-maintained roads. When large forest landowners complete their required Forest Road Inventory & Assessments (due in 2029 with some data due to ODF sooner), the District will coordinate with ODF and the landowners to discuss road conditions that may contribute sediment and develop collaborations for new projects.

On an annual basis, the District will verify with DOGAMI whether any new mining operations or rock quarries are operating within the DWSA.

4.4.4 Outreach

The District will continue supporting residential water conservation outreach and recreation best practices outreach during Phase 3 and beyond. The District will maintain membership in the Mid-Coast Water Conservation Consortium and continue its outreach about water conservation for customers.

4.4.5 Pollution Prevention

4.4.5.1 Hazardous Waste and Vehicles

During Phase 3, the District will maintain its list of contacts and outreach materials for technical assistance providers and pollution prevention resources and events. If any Pesticide Stewardship Partnership chemical collection events are held in the area, the District will promote these events to provide safe disposal. The District will continue monitoring for abandoned vehicles in the DWSA.

4.4.5.2 Encampments and Dumpsites

The District will continue monitoring for new encampments and dumpsites in the DWSA. Any deterrence efforts developed in the plan in Phase 2 will be implemented, and cleanup efforts will proceed as needed in coordination with partner organizations and the County.

4.4.6 Critical Area Protection and Restoration

4.4.6.1 Critical Area Protection

The District will continue to support source water protection projects in critical areas during Phase 3 and beyond. If properties in the watershed are acquired by other entities for watershed protection, the District

will seek to collaborate during development of management plans and identification of restoration projects to ensure they include consideration of source water quality and quantity benefits.

4.4.6.2 Watershed Restoration and Enhancement

During Phase 3, the District will continue to support partner organizations in maintaining, monitoring, and adaptively managing habitat restoration and enhancement sites in the DWSA, along with identifying new source water protection projects to be implemented. The District will also support source water protection projects following a natural hazard event (e.g., landslide or wildfire), as applicable.

4.4.7 Emergency Planning

The District will continue to provide ongoing training to its staff as resources allow. After any natural disasters or human-related emergency incidents occur, the District will keep its Emergency Response Plan updated. When other local entities, such as Lincoln County, update their emergency plans, the District will coordinate with them and advocate for consideration of source water protection in emergency plans. For example, the District may request inclusion of a map of the Beaver Creek DWSA and contact information for its water treatment plant in the event of emergencies that may affect its water supply. The District will participate in the next update of the Lincoln County Natural Hazards Mitigation Plan and development of the Lincoln County Community Wildfire Protection Plan. Following any emergency events affecting the Beaver Creek watershed, the District will communicate with landowners and restoration partners, such as the MidCoast Watersheds Council and Lincoln SWCD, about the need for watershed restoration, revegetation, and erosion control projects.

4.5 Potential Funding Sources

The following is a list of potential funding sources for supporting implementation of this DWPP. Funding sources are subject to change and should be revisited regularly. The District's SWA also contains a list of funding sources, as does DEQ's webpage on funding for water systems: https://www.oregon.gov/deq/wq/programs/Pages/DWP-Funding.aspx. The funding opportunities below are well-aligned with the District's priorities for DWPP implementation. The District may consider applying for specific opportunities or sharing information about these funding sources with partner organizations.

Drinking Water Source Protection Fund, Oregon Health Authority

- Provides grants of up to $70,000; grants can be received in two consecutive years, then there must be at least one year before another grant is awarded
- Provides loans up to $100,000 per project
- Funding must be used within two years
- Emergency grants may be available to address threats to drinking water supplies outside of the standard Letter of Interest submission timeline
- Letters of Interest due from January through March
- Example projects: land acquisition, incentive-based protection measures, community outreach, riparian restoration, waste collection, and watershed planning
- http://www.oregon.gov/oha/ph/healthyenvironments/drinkingwater/srf/pages/spf.aspx

Clean Water State Revolving Fund, Oregon DEQ and US EPA

- Provides below-market rate loans for planning, design, and construction projects that protect public health, restore natural areas, and promote economic development
- Applications reviewed twice a year

- Example projects: establishing monitoring programs and outreach programs, watershed restoration, loans for septic system upgrades/replacements, land purchase and conservation easements, and nonpoint source control activities
- https://www.oregon.gov/deq/wq/cwsrf/pages/default.aspx

Oregon 319 Nonpoint Source Implementation Grants, Oregon DEQ

- Requires a 40% non-Federal match (i.e., 40% of the total project cost must be covered by non-federal funds and/or in-kind services)
- Application period typically in spring
- Supported activities include technical assistance, financial assistance, education, training, technology transfer, demonstration projects, and monitoring
- Projects that involve collaborative stakeholder partnerships are encouraged
- Projects that protect or replace failing infrastructure on USFS or BLM roads or lands are not eligible
- https://www.oregon.gov/deq/wq/programs/pages/nonpoint-319-grants.aspx

Oregon Watershed Enhancement Board Grants

- Monitoring grants: Eligible monitoring projects include status and trend, project effectiveness, landscape effectiveness, and Rapid Bio-Assessment; 5 percent match required; apply in the fall
- Restoration: Priorities include altered watershed function affecting water quality, water flow, and fish production capacity; 25 percent match required; apply in the summer or winter
- Engagement: Eligible projects increase awareness and understanding in watersheds to support implementation of specific restoration, monitoring, and conservation activities; 5 percent match required; apply in spring or fall
- Technical Assistance: Technical design and planning assistance to implement restoration projects; 5 percent match required; apply in summer or winter
- Land Acquisition Grants: Eligible projects involve purchase of interests in land from willing sellers for maintenance and restoration of watersheds and fish and wildlife habitat; 25 percent match required; apply in fall
- Water Acquisition Grants: Eligible projects involve purchase of an interest in water from a willing seller to increase in streamflow for habitat and species conservation benefits and to improve water quality; 25 percent match required; apply in fall
- Small Grants: Provides up to $20,000 for less complex, on-the-ground restoration projects with 20 percent match; continuous open solicitation
- https://www.oregon.gov/oeb/grants/Pages/grant-programs.aspx

Feasibility Study Grants and Water Project Grants and Loans, Oregon Water Resources Department

- Water Project Grants and Loans: Applications are reviewed twice a year; supports projects that address instream and out-of-stream water supply needs now and into the future
- Feasibility Study Grants: Reimburse up to 50 percent of the costs of studies to evaluate the feasibility of developing water conservation, reuse, and storage projects; Applications are usually due in fall
- https://www.oregon.gov/owrd/programs/FundingOpportunities/Pages/default.aspx

Various Financial Assistance Programs, USDA Natural Resources Conservation Service (NRCS)

- Environmental Quality Incentives Program (EQIP): Financial and technical assistance to agricultural and forestry producers to address natural resources concerns and provide environmental benefits, such as water quality improvements, reduce soil erosion and sedimentation, and improved wildlife habitat
  - https://www.nrcs.usda.gov/programs-initiatives/eqip-environmental-quality-incentives

- Conservation Stewardship Program: Encourages farmers, ranchers, and woodland owners to implement additional conservation activities and enhancements
- National Water Quality Initiative (NWQI): Provides funding for a detailed watershed assessment and an outreach strategy to address agricultural-related impacts, and following completion, funding to implement projects becomes available through EQIP
  - https://www.nrcs.usda.gov/wps/portal/nrcs/main/or/programs/
- Watershed Protection and Flood Prevention Operations Program: Provides financial and technical assistance for erosion and sediment control, watershed protection, flood prevention, water quality improvements, water management, fish and wildlife habitat enhancement, hydropower sources, and rural, municipal, and industrial water supply; the project must have agricultural benefits
  - https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/landscape/wfpo/
- Emergency Watershed Protection Program: Provides technical and financial assistance for communities following natural disasters that impair a watershed. Examples of activities that could be funded include removal of debris from stream channels and culverts, restoration of streambanks, establishing vegetative cover on critically eroding lands, repairing levees, and purchase of floodplain easements
  - https://www.nrcs.usda.gov/programs-initiatives/ewp-emergency-watershed-protection
- Wetland Reserve Enhancement Partnership: Voluntary agreements with NRCS to enroll farmed or converted wetland habitat in an NRCS Wetland Reserve Easement. This allows leveraging of resources for wetland protection, restoration, and enhancement projects using a variety of conservation practices.
  - https://www.nrcs.usda.gov/programs-initiatives/wetland-reserve-enhancement-partnership
- Conservation Reserve Enhancement Program: Provides incentive payments to agricultural landowners to establish riparian buffers and implement conservation measures like planting trees and shrubs, installing fencing, or installing livestock watering facilities. The program is jointly administered by NRCS and OWEB.
  - https://www.oregon.gov/oweb/grants/pages/crep.aspx

Environmental Education Grants Program, US EPA

- Supports projects that promote environmental awareness and stewardship and help provide people with skills to protect the environment
- Applicants must represent at least one of the following types of organizations: local education agency, state education or environmental agency, college or university, non-profit organization, tribal education agency, or noncommercial educational broadcasting entity; the District could partner with one or more of these organizations
- Applications are reviewed once a year
- https://www.epa.gov/education/grants

Various Grants, Oregon Office of Emergency Management

- Emergency Management Performance Grant: Makes grants from the federal government available to state, local, and tribal governments to assist in preparing for all hazards
- Hazard Mitigation Assistance Grant: Provides funds from the federal government to assist in hazard mitigation planning, projects, and other activities to reduce vulnerability to hazards
- Homeland Security Grant Program: Provides funds from the federal government for planning, organizing, equipment purchasing, training, and exercises for emergencies
- State and Local Cybersecurity Grant Program: Funds projects that prevent, prepare for, protect against, and build capacity to respond to cybersecurity incidents
- https://www.oregon.gov/oem/emresources/Grants/Pages/default.aspx

Various Grants, Oregon Department of Fish and Wildlife

- Private Forest Accord Grant Program: Supports projects that benefit fish and aquatic wildlife species and habitats anticipated to be covered by the pending ODF Habitat Conservation Plan. Examples of supported project types include (but are not limited to) fish passage, riparian restoration, conservation easements or flow/land acquisition, and invasive species removal. Applications accepted once per year; most projects expected to request at least $50,000.
    - https://www.dfw.state.or.us/habitat/PFA/grant_program.html#GrantProgram
- Oregon Conservation and Recreation Fund: Supports projects that protect and enhance the species and habitats identified in the Oregon Conservation Strategy and address statewide conservation and/or recreation needs.
    - https://www.dfw.state.or.us/conservationstrategy/OCRF/
- Riparian Lands Tax Incentive Program: Property tax incentive for improving or maintaining riparian lands up to 100 feet from a waterway.
    - https://www.dfw.state.or.us/lands/tax_overview.asp
- ODFW Fish Screening and Passage Grant Program: Cost share funding and/or tax credits for installing fish screens, bypass devices, and fishways.
    - https://www.dfw.state.or.us/fish/passage/grants.asp

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SECTION 5: **Contingency Plan**

A contingency plan for responding to the loss or substantial reduction of a drinking water source is a required element of a state-approved Drinking Water Protection Plan. Oregon Administrative Rule OAR 333-061-0057(5) specifies that a contingency plan must include the following elements:

1. Inventory/prioritize all threats to the drinking water supply
2. Prioritize water usage
3. Anticipate responses to potential incidents
4. Identify key personnel and develop a notification roster
5. Identify short-term and long-term replacement potable water supplies
6. Identify short-term and long-term conservation measures
7. Provide for plan testing, review, and update
8. Provide for new and ongoing training of appropriate individuals
9. Provide for education of the public
10. Identify logistical and financial resources

These elements are addressed below.

This contingency plan has been developed in coordination with the Seal Rock Water District's Emergency Response Plan (2021), the Seal Rock Water District Addendum to the Lincoln County Multi-Jurisdictional Hazard Mitigation Plan (2021), and Seal Rock Water District Water Management and Conservation Plan (2024), which includes a curtailment plan describing measures to be implemented in the event of a water shortage.

5.1 Threats to the Drinking Water Supply

The District identified several risks to its drinking water source area in Section 2 of this Plan. Of the identified risks, the following could cause the potential temporary or permanent loss or reduction of supply available from the drinking water source:

- Drought
- Low streamflow
- Landslides
- Earthquakes
- Tsunamis
- Saltwater intrusion
- Severe storms and flooding
- Wildfire
- Infrastructure (Major break or facility failure)
- Vandalism and sabotage
- Cybersecurity
- Chemical applications
- Septic systems
- Roads and stream crossings
- Encampments
- Dumpsites

5.2 Prioritization of Water Usage

If an emergency results in an insufficient water supply to meet all needs, the District may need to prioritize water use. The prioritization may be as follows:

- Fire protection and Residential
- Commercial
- Irrigation

5.3 Responses to Potential Incidents

Seal Rock Water District's Emergency Response Plan (ERP) inventories and outlines the District's safety measures and emergency response procedures for water system operations. The ERP is based on the Environmental Protection Agency's template emergency response plan for drinking water utilities.

Section 2 in the ERP describes emergency plans and procedures. Core response procedures are detailed for the following categories: access, physical security, cybersecurity, power loss, emergency alternate drinking water supplies, sampling and analysis, local laboratory, and family and utility personnel well-being. Section 3 in the ERP describes mitigation actions that can lessen the impact of an emergency, such as alternative source water options, interconnected utilities, water intake relocation, emergency valves, and earthquake valves.

In addition to the District's ERP, emergency response is also addressed in the Seal Rock Water District Addendum to the Lincoln County Multi-Jurisdictional Hazard Mitigation Plan (HMP). The mitigation strategy component of the HMP includes priority action items, such as strengthening local redundancy in municipal source water supply systems (See HMP Table SWRD-1).

The District operates a Level 2 water treatment plant that requires a certified operator. The District has a water treatment plant operations and maintenance manual that provides instructions for operations and maintenance of the facility, including emergency procedures to respond to potential incidents. One manual is stored at the water treatment plant, and another copy is stored at the District office. The manual is intended for use by individuals trained to operate water treatment plants.

5.4 Key Personnel and Notification Roster

5.4.1 Key Personnel

The District's staff are listed in the ERP under section ii. Personnel Information, including job duties, contact information, and emergency information. The District currently has a General Manager, an operations lead, three distribution system operators, and one water treatment plant operator, as well as office staff. The ERP also identifies the utility emergency response team members under section 1.3.1 Internal Communication, which includes the General Manager, Finance Manager, Operations Lead, bookkeeper, billing clerk, distribution operators, and water treatment plant operator. The General Manager has the authority to respond to the emergency and then reports on conditions to the District's Board of Commissioners. Emergency response team members can be contacted at 541-563-3529, and this contact number is available on the District's website. The District's on-call emergency phone number for emergencies after regular business hours during the week or on weekends is 541-265-1935.

5.4.1.1 Emergency Response Partners

Section 1.1 Emergency Response Roles of the ERP describes external response partner roles. The ERP states that the Lincoln County Emergency Manager is responsible for coordinating regional incident response activities, including developing strategies and tactics for emergency response and recovery. Other external response partners include:

- Public Safety Answering Point (9-1-1 Dispatch)
- Lincoln County Emergency Management (541) 265-4199
- Seal Rock Rural Fire Protection District (541) 563-4441
- Lincoln County Sheriff's Office (541) 265-4277
- Pacific Communities Hospital (541) 265-2244
- Lincoln County Health Department (541) 994-0227
- Central Lincoln PUD (541) 265-3211
- City of Toledo (541) 336-2247
- OHA – Drinking Water Services (971) 673-0405
  - OHA-Drinking Water Services is the regulatory agency for public water systems operations, primarily related to water quality. It should be notified of water-related emergencies (e.g., shortages, line-breaks, loss of pressure, and water treatment failure) and it would directly respond and require notification of incidents.
- DEQ – Drinking Water Program (503) 229-5954

In addition, the District can contact the City of Newport at 541-574-0611 about backup supply and may reach out to the Oregon Water/Wastewater Agency Response Network (ORWARN) for aid (www.orwarn.org). The District is a member of ORWARN. The District maintains an emergency contact list that includes contact information for 18 water providers on the Oregon coast.

5.5 Short-term and Long-term Replacement Potable Water Supplies

5.5.1 Short-term Actions

The District may rely on interconnections or system storage, or it may implement the water curtailment plan in its WMCP in the event of a short-term loss of water supply.

The District has interconnections with the Cities of Newport and Toledo to enable the District to use their water during events only affecting the District, such as a water treatment plant failure or during the period of high salinity in Beaver Creek. If an event affects surface waters and/or water infrastructure in the region, such as drought or an earthquake, the Cities of Newport and Toledo may not be able to provide water to the District. In this case, the District may rely on its storage capacity in the short-term assuming its water infrastructure is intact. If the storage reservoirs are full (storing 3 million gallons) and demand is near its historical average day demand of 0.3 mgd, that supply could last for approximately 10 days. Implementing curtailment measures would reduce demand, extending the length of time the District could rely on stored water.

The District's 2024 WMCP includes a Water Curtailment element (i.e., plan) that describes the District's four stages of curtailment based on the severity of the incident requiring demand reductions, the conditions or events that would trigger each stage of curtailment, and the planned measures that the District can take to reduce demand in response to the reduction or loss of water supply under each curtailment stage. Stages could be implemented in progressive steps, or a later stage could be implemented directly.

Stage 1 focuses on encouraging water customers to voluntarily conserve water indoors and outdoors. Stage 2 involves imposing initial levels of mandatory water conservation measures, including suspending some District activities and requiring high-volume water customers and commercial/industrial customers to take

some water conservation actions. Stage 3 involves implementing greater levels of mandatory water conservation, including prohibiting certain water uses. Stage 4 involves prohibiting non-essential water consumption, rationing District water if available and deliverable, arranging delivery and emergency distribution if District water is not available, and seeking state and/or federal assistance.

5.5.2 Long-term Actions

In the event of a long-term water supply emergency, the District may need to rely on its interconnections with other water providers for longer periods of time, to construct or repair water system infrastructure, and/or to continue implementing an appropriate stage in its Water Curtailment Plan until its drinking water supply is restored. As noted in Section 1.2.1 of this DWPP, while Beaver Creek is the current source of supply, the District holds water rights for other sources in reserve. If a catastrophic event caused long-term loss of supply from Beaver Creek, the District could potentially return to using water from the Siletz River under Permit S-40277.

5.6 Short-term and Long-term Conservation Measures

The District's water curtailment plan detailed in Section 4 of its 2024 WMCP describes the following water conservation measures required under the four levels of curtailment.

Stage 1 (Voluntary)

The District will issue a general request for voluntary reductions in water use by all users using the following curtailment measures:

1. Inform community of the curtailment stage, such as through billing inserts, social media, signage, and the District website.
2. Strongly encourage effective water conservation practices, such as repairing indoor leaks and installing more water-efficient water fixtures, like showerheads and faucet aerators. Offer water conservation items (e.g., conservation kits, showerheads, and faucet aerators) to customers.
3. Request voluntary reduction in water consumption, such as:
    - Restrict irrigation of lawns, gardens, and landscaping to the hours from 9:00 PM to 7:00 AM).
    - Cease outdoor washing of equipment, vehicles, pavement, or other facilities.
    - Cease draining or filling pools and ponds.
    - Cease operation of public-display fountains and waterfalls and irrigation of public lands.
    - Cease scheduled flushing of water lines and fire-fighting drills.

Stage 2 (Mandatory)

In Stage 2, voluntary measures from Stage 1 become mandatory and the District adds the following:

1. Require high-volume consumers (e.g., restaurants, hotels/motels, recreation centers) to post notices about mandatory conservation measures; and require restaurants to only serve drinking water served upon request.
2. Suspend any planned expansions of water system, including the addition of new connections.
3. Cease flushing of water lines.
4. Work with commercial and industrial customers to reduce non-essential water use.

Stage 3 (Mandatory)

In Stage 3, mandatory measures are carried over from Stage 2 unless modified below and new measures are added.

1. Prohibit use of non-recirculating hot tubs, whirlpools, or spas.
2. Prohibit water usage for all outdoor purposes (unless gray water is utilized).
3. Prohibit use of water from a fire hydrant except for firefighting.
4. Cease non-essential commercial and industrial water use; impose usage limits for commercial and industrial customers.
5. Post notices of the curtailment stage in commercial facilities and rental units.

Stage 4 (Mandatory)

In Stage 4, mandatory measures are carried over from Stage 3 unless modified below and new measures are added.

1. Prohibit all non-essential consumption of water until further notice.
2. Cease water use in commercial and industrial establishments except for critical functions, such as fire protection.
3. If available and deliverable, treated water may be rationed to consumers by periodic operation of the distribution system during designated hours on specified days.
4. Otherwise, another supply of treated water would be arranged, most likely requiring water to be shipped to the community by vehicles and made available at emergency distribution centers.
5. Seek immediate state and/or federal assistance for a rapid restoration of the normal water supply and delivery system for the community.

5.7 Plan Testing, Review, and Update

This Contingency Plan will be reviewed at a minimum of every five years to comply with State requirements and updated more frequently as needed when changes to emergency operations occur or following evaluation of lessons learned from exercises or events.

5.8 Personnel Training

The District's training program includes conducting emergency response exercises with District staff annually, participating in emergency preparedness/response exercises held by other organizations, and participating in cybersecurity training as needed. District staff attend Oregon Association of Water Utilities emergency preparedness/response and safety trainings 2 to 3 times per year. District staff also attend local emergency preparedness/response and safety trainings provided by the Special Districts Association of Oregon, Special Districts Insurance Services, and ORWARN.

5.9 Public Education

Communicating with the public about a water supply issue or emergency is a high priority for the District. The District's ERP describes its media outlet contact list under Section 1.4 Media Outreach to help the District share emergency information with water customers. The District can contact water customers by phone and through mailings. In addition, the District can utilize the Lincoln County Everbridge system for emergency notifications to notify the public of a water situation (e.g., emergency shutdown or boil water notice) by phone. The District also has a Water Curtailment webpage, Water Outages/Low Water Pressure webpage, Boil Water Advisory webpage, and a Water Conservation webpage on its website to keep water customers

informed about water supply issues and to help them learn more about actions they can take to conserve water.

5.10 Logistical and Financial Resources

The District will continue to maintain its ERP, to sustain partnerships that can assist in an emergency, and to explore funding to support water supply emergency preparedness.

The District can seek emergency assistance from the Lincoln County Emergency Manager, which may be able to help the District obtain state or federal funding. The Federal Emergency Management Agency provides resources to local jurisdictions in Oregon when requested by the Governor.

In the case of fire emergencies, the Seal Rock Rural Fire Protection District can notify the State Fire Marshall to request fire resources.

The authority to adjust budgets to prepare for and address emergencies is held by the District's Board of Commissioners. The District has a Water Master Plan and associated Capital Improvement Plan and budgets for implementation of the Capital Improvement Plan, which supports the functioning and resiliency of the water supply system.

SECTION 6: **Future Water Sources**

If a water provider anticipates the need to develop additional sources of water supply within the 20-year planning period of its DWPP, the DWPP provides an opportunity to proactively identify risks in the new source watershed and propose strategies that could protect the future source. During this planning period, the District's Beaver Creek water right is currently expected to be sufficient to meet projected demands. The District does not anticipate seeking new water rights, using water rights on Henderson Creek and Hill Creek held in reserve, or relying on its Siletz River water right beyond temporary situations as previously described. In the event that another water source is needed temporarily, the District will communicate with the Cities of Newport or Toledo about using the system interconnections. The District expects that its well-rounded water conservation program will help reduce peak day demand, and any infrastructure improvements recommended in the forthcoming updated WMP will help the District manage water supply challenges that arise during the 20-year planning period and potentially beyond. Therefore, this DWPP does not identify risks and strategies related to a future water source.

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APPENDIX A

Seal Rock Water District Water Rights

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Seal Rock Water District Water Rights

Source	Application	Permit	Certificate	Transfer	Priority Date	Development Deadline	Type of Use	Authorized Rate (cfs)	Notes
Beaver Creek	S-88124	S-55012	N/A	N/A	8/26/2015	10/3/2036	Municipal	2.0	Primary source of water supply
Siletz River	S-50094	S-40277	N/A	N/A	2/28/1973	10/1/2043	Municipal	2.6	Development limitation of 0.96 cfs until additional water use is requested in a future WMCP (per final order approving WMCP dated August 1, 2024)
Henderson Creek	S-23182	S-18315	21390	Time-limited transfer T-12765 (Approved)	5/17/1948	N/A	~~Municipal~~ Instream (through 12/31/2118)	1.0	Time-limited instream transfer T-12765 transfers Certificates 21390 and 32199 instream for 99 years. Seal Rock Water District may request early termination if the water is needed for municipal purposes and is not reasonable available from Beaver Creek under Permit S-55012.
Hill Creek	S-33398	S-26489	32199	Time-limited transfer T-12765 (Approved)	10/1/1959	N/A	~~Municipal~~ Instream (through 12/31/2118)	0.4	

cfs = cubic feet per second
WMCP = Water Management and Conservation Plan

APPENDIX B

Public Outreach Examples

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SEAL ROCK WATER DISTRICT

IS DEVELOPING A DRINKING WATER PROTECTION PLAN AND WE WANT YOUR INPUT.

JOIN US FOR A PUBLIC MEETING

When: Wednesday, January 14 from 11 AM-12 PM
Where: Seal Rock Water District Office and online (Zoom)
Attend Online: https://www.srwd.org/

Public Meeting about the District's Drinking Water Protection Plan

Seal Rock Water District invites you to a public meeting about our Draft Drinking Water Protection Plan. The District is seeking input from the community during the Plan development process to inform the District's drinking water source protection efforts in the Beaver Creek watershed.

When: Wednesday, April 29 from 11 AM-12 PM

Where: Seal Rock Water District office (1037 NW Grebe Street) and remotely via Zoom

To attend the meeting, **PLEASE REGISTER** using the following link:
https://zoom.us/meeting/register/3czqO4w-SlmcyU1C5RX6qQ

The District received funding from the Oregon Department of Environmental Quality's Clean Water State Revolving Fund to develop a Drinking Water Protection Plan. The Drinking Water Protection Plan will describe potential threats to the District's water source, identify strategies to mitigate or eliminate these risks, and describe the District's approach and timeline for implementing the strategies. Our water source is Beaver Creek.

The District has assembled a team of local organizations, community members, and technical experts to help guide development of the Drinking Water Protection Plan. The District is also holding **two public meetings** to seek additional input from the community. The first public meeting held on January 14 discussed the planning process and risks to our drinking water source. At the second public meeting on April 29, we will discuss the Draft Drinking Water Protection Plan, including the proposed strategies and implementation plan to address risks to the District's water source. Community members are invited to ask questions about the Draft Plan and to provide feedback on the Draft Plan. The April 29 public meeting will be from 11 AM-12 PM at the District office, 1037 NW Grebe Street. Remote access via Zoom will be available, and a recording of the meeting will be posted online.

If you have questions about the meeting or if you want to share feedback but are unable to attend, please contact Suzanne de Szoeke at sdeszoeke@gsiws.com or 541-257-9006.

APPENDIX C

Seal Rock Water District Source Water Assessment (2023)

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Source Water Assessment

Seal Rock Water District

PWS # 4100798

February 2023

Prepared for:

Seal Rock Water District

Prepared by:

DEQ

State of Oregon
Department of Environmental Quality

Oregon
Tina Kotek, Governor

Dept of Environmental Quality Agency
Headquarters
700 NE Multnomah Street, Suite 600
Portland, OR 97232
(503)229-5696
FAX (503) 229-6124
TTY 711

February 28, 2023

Seal Rock Water District
Attn: Adam Denlinger
General Manager Seal Rock Water District
1037 NW Grebe Street| Seal Rock OR, 97376

Re: **Source Water Assessment for PWS # 4100798**

Dear Adam Denlinger,

On behalf of the Oregon Health Authority (OHA), the Oregon Department of Environmental Quality (DEQ) is pleased to provide your community with important information in this Source Water Assessment. The assessment is intended to provide information and resources to assist you and your community to **implement local drinking water protection efforts**. DEQ and OHA have been completing source water assessments since 2005 and are pleased to provide this information for your new system and surface water source area.

As you know, assuring safe drinking water depends on public water suppliers implementing multiple successful practices. **First, protect the drinking water source.** Second, practice effective water treatment. Third, conduct regular monitoring for contaminants to assure safety. Fourth, protect the distribution system piping and finished water storage from recontamination. Finally, practice competent water system operation, maintenance, and construction. These practices are collectively called "multiple barrier public health protection". **Source water protection is an important first step because starting with the best possible quality source water helps assure that water treatment can be effective at all times.**

Source water protection is accomplished by effective state public health programs, environmental protection, land use policies, pro-active land stewardship, and by implementation of local drinking water protection efforts. The susceptibility of the public drinking water system source depends on both the natural conditions in the watershed as well as the anthropogenic activities in the watershed.

This letter, with attached figures and technical information, constitutes your **Source Water Assessment**.

One of the most important assets a public water system can have is accurate source water area mapping and visual resources to share with the community citizens and officials. The figures include a regional map view of your watershed, topographic basemap with the source area delineated, and maps with natural characteristics, anthropogenic land uses, potential sources of pollutants, and historic landslides. Information on anthropogenic land uses in a drinking water source area is important for evaluating potential pollutant sources and working with stakeholders upstream. Tables are provided that include a summary of the types of potential pollutant sources present in your drinking water source area.

Oregon
Tina Kotek, Governor

Dept of Environmental Quality Agency
Headquarters
700 NE Multnomah Street, Suite 600
Portland, OR 97232
(503)229-5696
FAX (503) 229-6124
TTY 711

There are also a variety of resources included in this document to assist you with drinking water source protection efforts. **Appendix #1** provides a summary of how to use the information provided in the assessment to move forward to develop and implement source water protection. **Appendix #2** provides detailed legends for the maps, a list of acronyms and information on methods and limitations of the data. Each of the data layers listed in Appendix #2 is available in a GIS layer and can be provided upon request. **Appendix #3** lists websites and resources available to public water systems and community members seeking technical assistance for work on watershed protection. **Appendix #4** provides brief descriptions and contact information for grants and loans to fund both drinking water infrastructure and source protection projects.

State agency resources are available to help you with mapping and information needs. Larger sizes of the source area maps and more details of landslide potential and other natural characteristics are available for you upon request (contact Laura Johnson at 503-803-2839). In addition, DEQ has developed "Resource Guides" with more extensive information to assist public water systems in protecting their source waters. Both the Surface Water and Groundwater Resource Guides are posted at http://www.oregon.gov/deq/wq/programs/Pages/dwp.aspx.

For direct assistance and/or additional information regarding watershed protection, call Laura Johnson at DEQ (at 503-803-2839). For more information on drinking water policies and procedures, call Casey Lyon at OHA (541-726-2587).

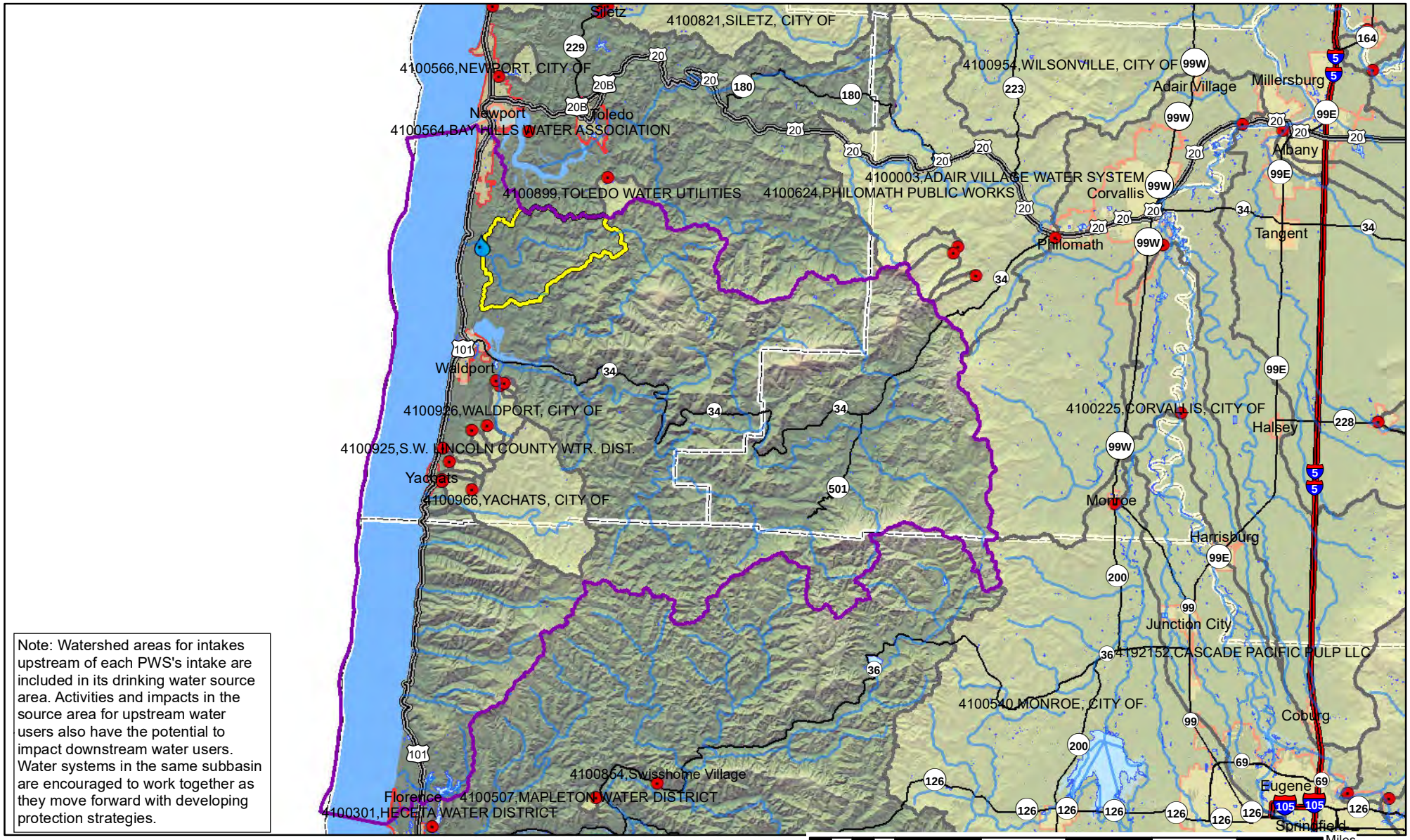
Sincerely,

Julie Harvey, Drinking Water Protection Coordinator

Water Quality Division

cc: Casey Lyon, Technical Services Manager, Oregon Health Authority;

Figure 1. Alsea Basin Public Water Systems (PWSs) Drinking Water Source Areas and Adjacent Source Areas



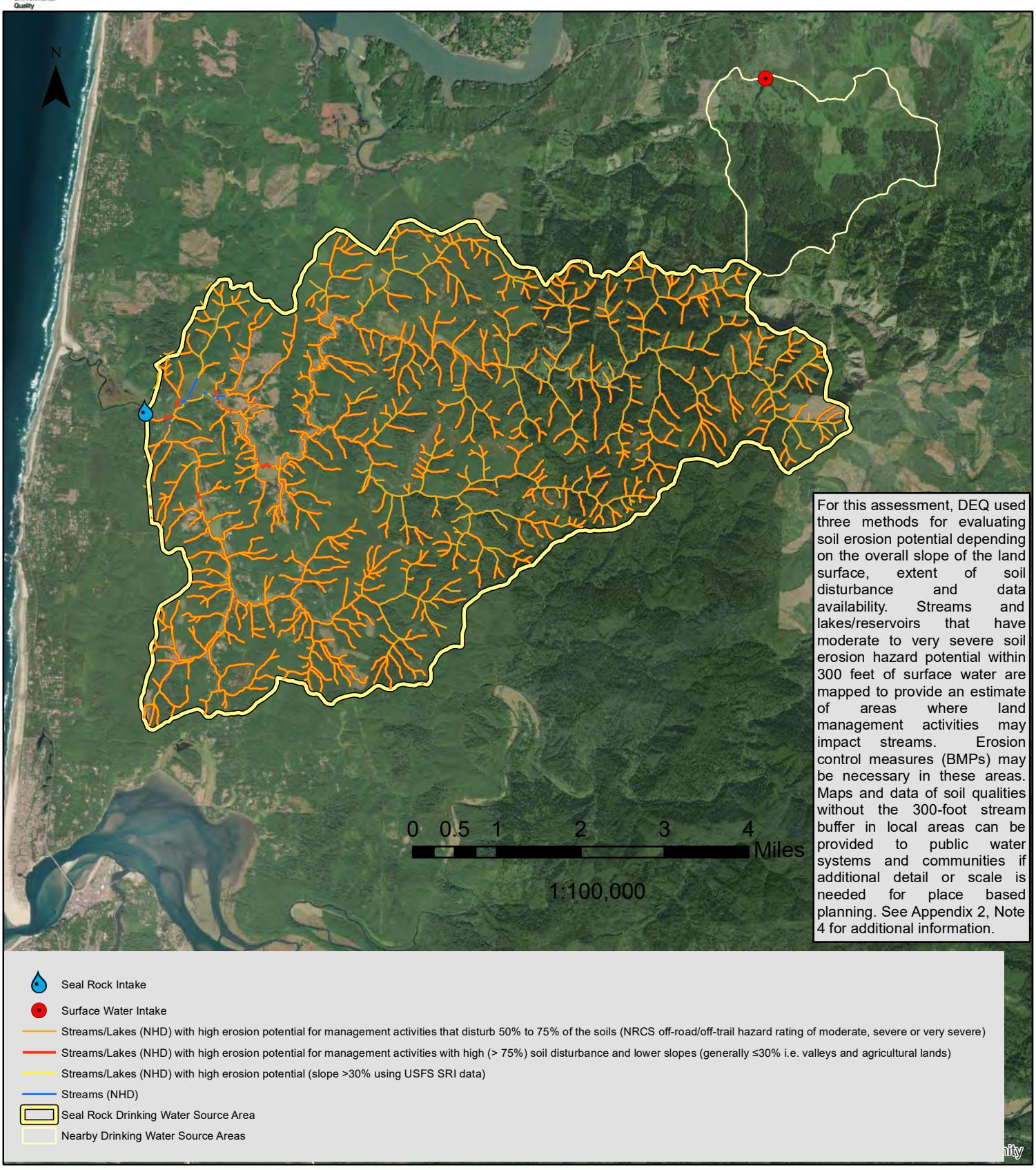
Note: Watershed areas for intakes upstream of each PWS's intake are included in its drinking water source area. Activities and impacts in the source area for upstream water users also have the potential to impact downstream water users. Water systems in the same subbasin are encouraged to work together as they move forward with developing protection strategies.

This data analysis was conducted for strategic planning purposes in drinking water protection. If other uses are considered for the data, please contact DEQ's Drinking Water Protection Program for details on how this query was performed. It is important to understand the limitations and qualifications of queries to ensure appropriate interpretation of this data. No warranty expressed or implied is made regarding the accuracy or utility. This disclaimer applies both to individual use of the data and aggregate use with other data.

Oregon Dept of Environmental Quality/Environmental Solutions Division/Water Quality Program Drinking Water Protection Program/GIS.
Projection: Oregon Lambert (Lambert Conformal Conic) GCS_North_American_1983, Datum: D_North_American_1983
File:\\deqhq1\SWA Reports & Plan\Update SWA SW 2016\PWSReports\4100798_SealRock\MXD

Note on Base Layer: The hillshade color effect shown here is the result of additional processing of digital elevation models (DEM - 30 meter grid) data from 1:24000 topographic maps. A "hillshade" was produced first and then color adjusted. The original DEM files were developed by the OR Dept. of Forestry. Additional processing of the hillshade data with Red, Green, Blue (RGB) color scheme resulted

Figure 2 Seal Rock Water District PWS 4100798 Drinking Water Source Areas with Erosion Potential for Management Activities with Soil Surface Disturbance

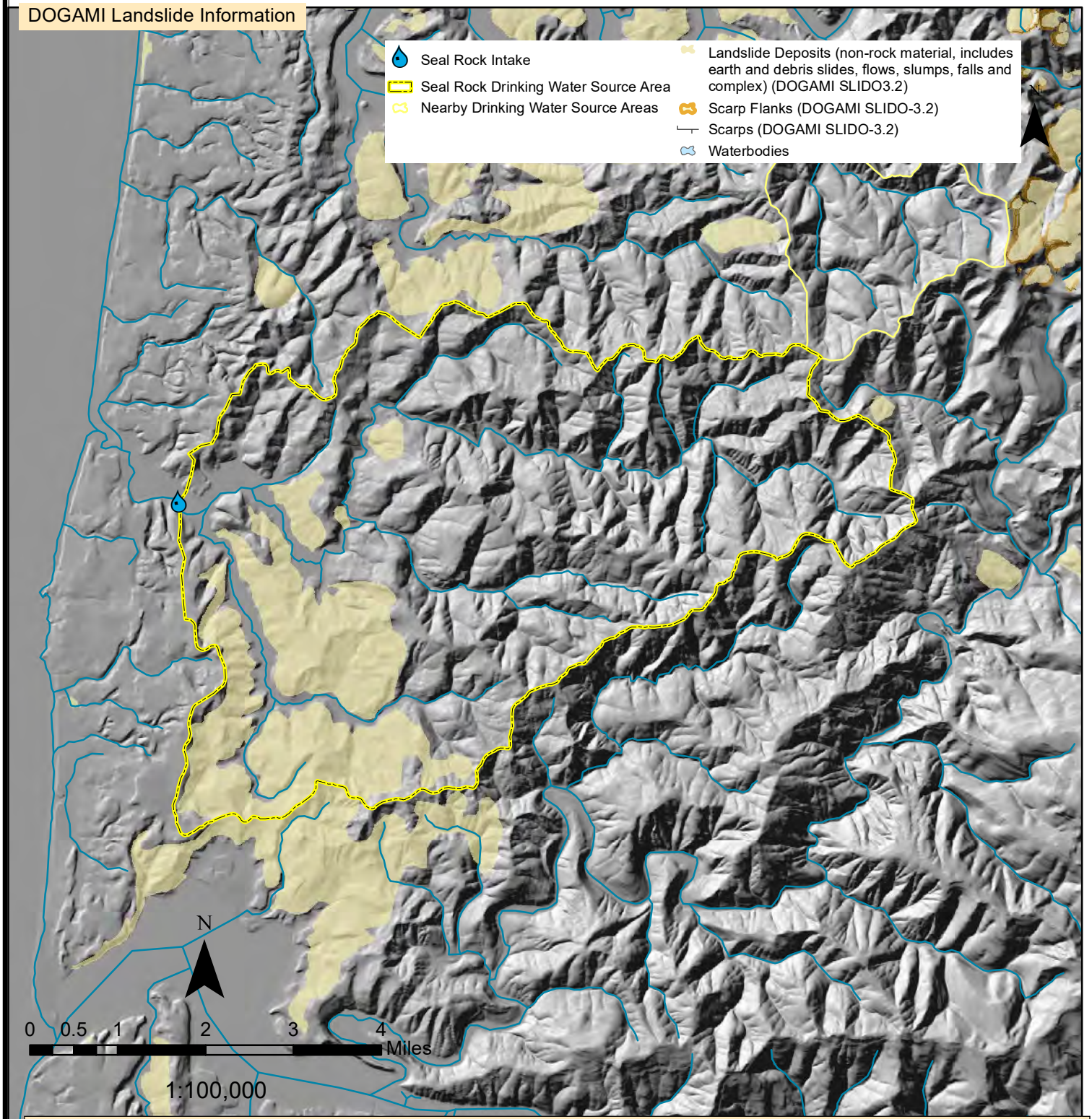


Basemap source:Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community.

Oregon Dept of Environmental Quality/Water Quality Division/Drinking Water Protection Program/GIS. Projection: Oregon Lambert (Lambert Conformal Conic) GCS_North_American_1983, Datum: D_North_American_1983 File:\\deqhq1\dwp\SWA Reports & Plan\Update SWA SW 2016\ PWSReports\ 4100236_CottageGrove\ USWA_Fig2a_CottageGrove_SensitiveAreas.mxd Prepared by: jds15MAY2018

Figure 3. Seal Rock Water District (PWS 4100798) Drinking Water Source Area Landslide Hazards Map (See Appendix 2 for Key to map details and metadata)

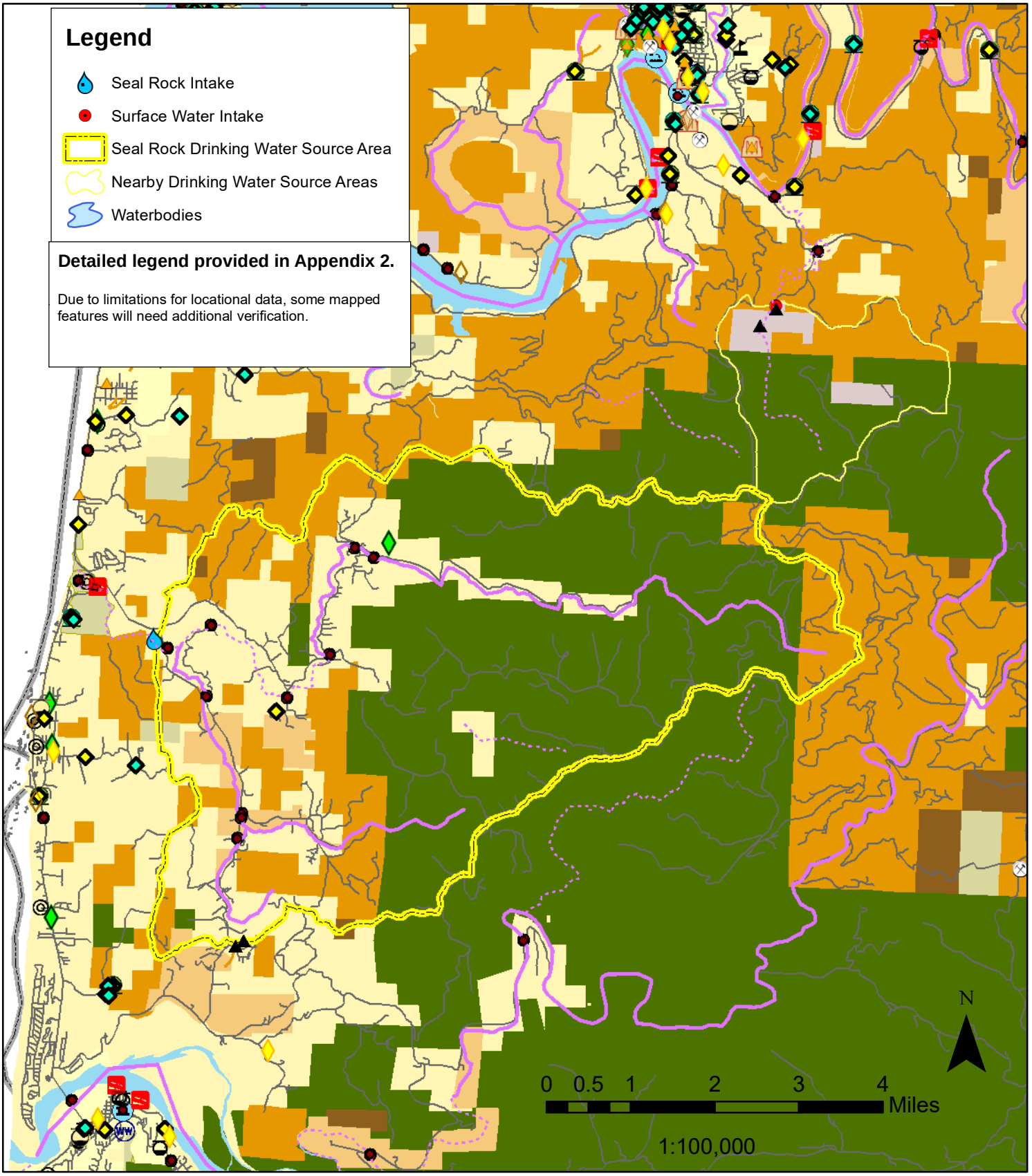
DOGAMI Landslide Information



The data set is published by DOGAMI to improve the understanding of landslide hazards in Oregon and to provide a statewide base level of landslide data. This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information. This publication cannot substitute for site-specific investigations by qualified practitioners. Site-specific data may give results that differ from the results shown in the publication. For more information see: http://www.oregongeology.org/sub/slido/ OR DEQ's Water Quality Program is currently working with DOGAMI to develop and provide a more detailed landslide potential analysis for public water systems. Contact Oregon DEQ's Environmental Solutions Division/Water Quality Program for further information on the analysis. If data is available for the specific area, DEQ will provide the more detailed landslide analysis to the PWS.

Notes on DOGAMI LiDAR or DEM Hillshade base layer: Digital Elevation Model (DEM 10 meter) data from Light Detection and Ranging (LiDAR)) studies or, if no LiDAR data is available, USGS 1:24000 DEM data was converted to hillshade by OR Dept. of Forestry (2008-12-23). The LiDAR dataset is available at the website noted in the Key to Figures & Tables.
Oregon Department of Environmental Quality/Water Quality Division/Drinking Water Protection Program/GISProjection: Oregon Lambert (Lambert Conformal Conic), GCS_North_American_1983, Datum: D_North_American_1983.
File: \\deqhq1\dwp\SWA Reports & Plan\Update SWA SW 2016\PWSReports\4100798_SealRock\MXD\Seal_Rock
Prepared by:Ratnanjali Adhar 2/2023

Figure 4 Seal Rock Water District (PWS 4100798) Drinking Water Source Area with Land Ownership/Use (See Appendix 2 for Key to map details and metadata)



Oregon Dept of Environmental Quality/Water Quality Division/Drinking Water Protection Program/GIS.
Projection: Oregon Lambert (Lambert Conformal Conic) GCS_North_American_1983, Datum: D_North_American_1983
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Prepared by Ratnanjali Adhar 2/2023

Table 1. Public Drinking Water System Land Use and Susceptibility Analysis Summary

(See Appendix 2 for Key to Tables and Notes)

Public Water System Name	**Seal Rock Water District**
PWS ID	4100798
Drinking Water Source Name	Beaver Creek
County Served	Lincoln
Subbasin	Alsea
Population (includes wholesale buyers) [2]	5,500
Number of Public Water Systems Served [2]	1
Drinking Water Source Area (DWSA) Size[1] (sq. miles)	30.49
Stream Miles (NHD) in DWSA	194

	Owner Type	Area (sq.mi.)	% of DWSA	Notes
Land Use / Ownership [3]	Agricultural	1.16	3.8%	The data on land uses is only approximate due to limitations within the GIS layers. Public water systems and communities could use tax lot data available from the counties or other datasets to further refine the analysis if higher accuracy is needed.
	Private Industrial Forest	5.46	17.9%	
	Private (Urban)			
	Private (Rural)	7.78	25.5%	
	Local Govt			
	State Forest	0.06	0.2%	
	Other State Lands			
	BLM	0.08	0.2%	
	USFS	15.95	52.3%	
	Other Federal Lands			
	Tribal			
	Other			

Potential Pollutants (see Table 2 for potential pollutants based on regulatory database search and Figures for approximate locations)	Stream Miles in Erodible Soils [4]	170	Erosion control measures ("best management practices") may be necessary for land management activities that disturb or leave bare soils in these areas. Maps and data of soil qualities without the 300-foot stream buffer in local areas can be provided to public water systems and communities if additional detail or scale is needed for place-based planning. See Note 4 in Appendix 2.
	High Soil Erosion Potential Percent [4] (% stream mi w/ high erosion located w/in 300' of the stream)	88.0%	
	Shallow Landslide Potential	see note	More details on shallow landslide susceptibility may be available. Contact DEQ Drinking Water Protection for additional information.
	Landslide Deposits [5] (DOGAMI - SLIDO 3.2)	present- see map and note	Includes earth and debris slides, flows, slumps, falls and complex landslide types. Does not include rock material landslide deposits.

		Notes
Water Quality Monitoring Data and Treatment Method	Treatment Process	Microfiltration and hypochlorination
	Safe Drinking Water Information System Results [6]	**MCL Violations and Significant Detections (2022-2023)**
	Regulated volatile organic chemicals, synthetic organic chemicals and inorganic compounds	xylene (0.00162 to 0.00068 mg/L) (9/22 and 11/22) (below MCL of 0.0005 mg/l) ethylbenzene (0.00162 mg/l) (9/22)(below MCL of 0.0005 mg/l) Note: Construction sealants for new system suspected to be the source of VOCs. System and OHA monitoring levels to verify they decrease over time. VOCs not detected in samples collected 1/11/2023)
	Disinfection byproducts (Total Trihalomethanes (TTHM), Haloacetic acids (five) (HAA5), bromate, and chlorite)	TTHM (0.0834 mg/l) (9/2022) exceeds MCL of 0.08 mg/l
	Bacteria (Ecoli and TCR=Total Coliform Rule)	none
	Additional raw water quality monitoring data for the drinking water source may be available from other sources including USGS, DEQ's LASAR database, individual water providers, local partners (i.e. soil and water conservation districts or watershed councils) or local volunteer monitoring.	

Table 2: Inventory of Potential Sources of Pollution as identified in readily accessible state and federal databases and GIS layers
Source Water Assessment
see Appendix 2 for Key to Tables for Notes and Descriptions of Acronyms

PWS NAME: Seal Rock Water District
PWS Number: 4100798

Sites and areas identified in this Table are only potential sources of contamination to the drinking water. Environmental contamination is not likely to occur when contaminants are used and managed properly. Note that due to state database limitations, some sites will require further research to verify presence and location.

Primary Land Ownership/Use(s)	Data Source
Upper watershed is USFS land with large swaths of private industrial forests, agricultural lands and rural residential in lower watershed.	Land use map - Figure 4

Other potential sources of pollution identified based on aerial photographs, topographic maps or local knowledge.

Name	Location/County	Data Source
Rural residential - Potential for erosion, pesticide use, septic system systems	Lots adjacent to Beaver Creek or tributaries/Lincoln Co.	aerial photograph
Encampments of off-grid living - Heavy use may contribute to erosion and increased turbidity. Inadequate disposal of waste materials and human wastes especially in or near the stream contributes nutrients, bacteria and potentially hazardous materials.	Adjacent to South Beaver Creek located at the end of South Low Road/Lincoln Co.	aerial photograph and PWS interview
River Recreation - Heavy use may contribute to erosion and increased turbidity. Inadequate disposal of human wastes may contribute nutrients and bacteria.	Lincoln Co.	aerial photograph
Agricultural lands - potential for erosion and pesticide/fertilizer applications and use. Excessive irrigation may transport contaminants or sediments to groundwater/surface water through runoff. Drip-irrigated crops are considered to be a low risk.	Valleys adjacent to Beaver Creek and tributaries/Lincoln Co.	aerial photograph
Forest management and roads - Cutting and yarding of trees may contribute to increased erosion, resulting in turbidity and chemical changes in drinking water supply. Road building, maintenance, and usage may contribute to erosion and slope failure causing turbidity in drinking water supply. Higher potential risk from roads near stream crossings. Vehicle usage increases the risks of leaks or spills of petroleum products and other hazardous materials. Over-application or improper handling of pesticides or fertilizers may impact drinking water source.	Large portion of watershed is private timber and USFS lands/Lincoln Co.	aerial photograph

Regulatory Database Results for Drinking Water Source Area - State and Federal

Additional potential sources may be present upstream, PWS should verify location and potential risk

Database Identifier (DB_ID)	Site Identifier	Status	Common Name	Address	City	County	Retrieval Date (RET_DATE)	Data Source	DEQ PCS Code	DEQ Potential Contaminant Source (PCS) Type	Relative Risk
Regulatory Database Results											
SFM - HSIS - JIM HOLT TIMBER CUTTING	064503	LOGGING	JIM HOLT TIMBER CUTTING	376 N BEAVER VALLEY DR	SEAL ROCK	LINCOLN	09/29/2008	OR State Fire Marshall Hazardous Substance Information System database (SFM/HSIS - 2009)	C60	Maintenance Shop/Equipment Storage - Not Transportation Related	M
SFM_HSIS_CENTRAL_LINCOLN PUD	87541	221122- Electric Power Distribution	Central Lincoln PUD	396 NW Cross St	Seal Rock	Lincoln	7/5/2019	OR State Fire Marshall Hazardous Substance Information System database (SFM/HSIS - 2019)			
WQ SIS - CEDAR CREEK QUARRIES, INC.	111854	GEN12A - STORMWATER MINOR	CEDAR CREEK QUARRIES, INC.	1/2 MILE OFF 23RD ST	N/A	LINCOLN	43404	OR Dept. of Environmental Quality - Water Quality SIS database	M57	DEQ Permitted Stormwater Discharges (NPDES or WPCF)	H

DWP - PCS - Rural Homes	12555	M09 - Homesteads - Rural - Septic Systems < 1/Acre	Rural Homes	Throughout DWPA	Waldport	Lincoln	2005	OR Dept. of Environmental Quality and OR Health Authority Source Water Assessment database (DEQ/OHA SWA 2000 - 2005)	M09	Homesteads - Rural - Septic Systems < 1/Acre	L
Transportation Corridors, Stream Crossings & Municipalities: (highways, railways, bridge)											
Road - USDA Siuslaw National Forest	5582380	Roads	USDA Siuslaw National Forest	Not Applicable	Not Applicable	Lincoln	2012	ESRI Roads	M56	Transportation Corridors - High use roads/streets	H
Road - Bureau of Land Management	5582368	Roads	Bureau of Land Management	Not Applicable	Not Applicable	Lincoln	2012	ESRI Roads	M56	Transportation Corridors - High use roads/streets	H
Road - Lincoln County Public Works	8049219	Roads	Lincoln County Public Works	Not Applicable	Not Applicable	Lincoln	2012	ESRI Roads	M56	Transportation Corridors - High use roads/streets	H
Bridge - Worth Creek, Beaver Valley Dr	12077	Highway, major road, bridge, or stream crossing	Worth Creek, Beaver Valley Dr	Not Applicable	UNKNOWN	Lincoln	2013	Oregon Dept. of Transportation, Technical Services Branch, Bridges Section (ODOT)	M22	Transportation Corridors - Stream Crossing - Perennial	H
Bridge - Beaver Creek, South Beaver Creek Rd	12079	Highway, major road, bridge, or stream crossing	Beaver Creek, South Beaver Creek Rd	Not Applicable	UNKNOWN	Lincoln	2013	Oregon Dept. of Transportation, Technical Services Branch, Bridges Section (ODOT)	M22	Transportation Corridors - Stream Crossing - Perennial	H
Bridge - South Fork Beaver Creek, South Beaver Creek Rd	12081	Highway, major road, bridge, or stream crossing	South Fork Beaver Creek, South Beaver Creek Rd	Not Applicable	UNKNOWN	Lincoln	2013	Oregon Dept. of Transportation, Technical Services Branch, Bridges Section (ODOT)	M22	Transportation Corridors - Stream Crossing - Perennial	H
Bridge - North Fork Beaver Creek, North Beaver Creek Rd	12086	Highway, major road, bridge, or stream crossing	North Fork Beaver Creek, North Beaver Creek Rd	Not Applicable	UNKNOWN	Lincoln	2013	Oregon Dept. of Transportation, Technical Services Branch, Bridges Section (ODOT)	M22	Transportation Corridors - Stream Crossing - Perennial	H
Bridge - North Beaver Creek, Wolkau Rd	12196	Highway, major road, bridge, or stream crossing	North Beaver Creek, Wolkau Rd	Not Applicable	UNKNOWN	Lincoln	2013	Oregon Dept. of Transportation, Technical Services Branch, Bridges Section (ODOT)	M22	Transportation Corridors - Stream Crossing - Perennial	H
Bridge - North Fork Beaver Creek, North Beaver Creek Rd	12197	Highway, major road, bridge, or stream crossing	North Fork Beaver Creek, North Beaver Creek Rd	Not Applicable	UNKNOWN	Lincoln	2013	Oregon Dept. of Transportation, Technical Services Branch, Bridges Section (ODOT)	M22	Transportation Corridors - Stream Crossing - Perennial	H
Bridge - S Fork Beaver Creek, S Beaver Creek Rd at MP 2.65	19158	Highway, major road, bridge, or stream crossing	S Fork Beaver Creek, S Beaver Creek Rd at MP 2.65	Not Applicable	UNKNOWN	Lincoln	2013	Oregon Dept. of Transportation, Technical Services Branch, Bridges Section (ODOT)	M22	Transportation Corridors - Stream Crossing - Perennial	H
Bridge - S Fork Beaver Creek, S Beaver Creek Rd at MP 2.75	19159	Highway, major road, bridge, or stream crossing	S Fork Beaver Creek, S Beaver Creek Rd at MP 2.75	Not Applicable	UNKNOWN	Lincoln	2013	Oregon Dept. of Transportation, Technical Services Branch, Bridges Section (ODOT)	M22	Transportation Corridors - Stream Crossing - Perennial	H
Bridge - Oliver Creek, S Beaver Creek Rd	19160	Highway, major road, bridge, or stream crossing	Oliver Creek, S Beaver Creek Rd	Not Applicable	UNKNOWN	Lincoln	2013	Oregon Dept. of Transportation, Technical Services Branch, Bridges Section (ODOT)	M22	Transportation Corridors - Stream Crossing - Perennial	H
Bridge - Beaver Creek Bridge 1 OPRD	21428	Highway, major road, bridge, or stream crossing	Beaver Creek Bridge 1 OPRD	Not Applicable	UNKNOWN	Lincoln	2013	Oregon Dept. of Transportation, Technical Services Branch, Bridges Section (ODOT)	M22	Transportation Corridors - Stream Crossing - Perennial	H

Water Quality Limited streams

Water Quality Limited streams - Cat 4A & Cat 5 - Beaver Creek	OR_SR_1710020505_02_106047	Category 5 Water quality limited, 303(d) list, TMDL needed for Dissolved Oxygen- spawn, Temperature- year_round, Temperature- spawn, Alkalinity- Aquatic Life Toxics	Beaver Creek	Not Applicable	Not Applicable	Lincoln	2022	OR Dept. of Environmental Quality Water Quality Assessment (DEQ/WQ)	M54	Surface Water on 303d list	H
Water Quality Limited streams - Cat 3 - Beaver Creek	OR_SR_1710020505_02_106047	Category 3 - Insufficient data for Aldrin- Aquatic Life Toxics Gamma (Lindane)- Aquatic Life Toxics, Chlordane- Aquatic Life Toxics, Chlorpyrifos- Aquatic Life Toxics, DDT 4,4'- Aquatic Life Toxics, Dieldrin- Aquatic Life Toxics, Endrin- Aquatic Life Toxics, Guthion- Aquatic Life Toxics, Heptachlor- Aquatic Life Toxics, Heptachlor Epoxide- Aquatic Life Toxics, Malathion- Aquatic Life Toxics, Methoxychlor- Aquatic Life Toxics, Pentachlorophenol- Aquatic Life Toxics, Endosulfan- Aquatic Life Toxics, Aldrin- Human Health Toxics, BHC Alpha- Human Health Toxics, BHC Beta- Human Health	Beaver Creek	Not Applicable	Not Applicable	Lincoln	2022	OR Dept. of Environmental Quality Water Quality Assessment (DEQ/WQ)	M54	Surface Water on 303d list	M
Water Quality Limited streams - Cat 4A & Cat 5 - North Fork Beaver Creek	OR_SR_1710020505_02_106050	Category 5 Water quality limited, 303(d) list, TMDL needed for Dissolved Oxygen- spawn, BioCriteria	North Fork Beaver Creek	Not Applicable	Not Applicable	Lincoln	2022	OR Dept. of Environmental Quality Water Quality Assessment (DEQ/WQ)	M54	Surface Water on 303d list	H
Water Quality Limited streams - Cat 3 - North Fork Beaver Creek	OR_SR_1710020505_02_106050	Category 3 - Insufficient data for Chlorophyll-a, Temperature- spawn, Alkalinity- Aquatic Life Toxics	North Fork Beaver Creek	Not Applicable	Not Applicable	Lincoln	2022	OR Dept. of Environmental Quality Water Quality Assessment (DEQ/WQ)	M54	Surface Water on 303d list	M

Water Quality Limited streams - Cat 4A & Cat 5 - South Beaver Creek	OR_SR_1710020505_02_106051	Category 5 Water quality limited, 303(d) list, TMDL needed for E. coli, Dissolved Oxygen-year_round, Dissolved Oxygen-spawn,pH,Temperature-year_round,Temperature- spawn, Alkalinity-Aquatic Life Toxics	South Beaver Creek	Not Applicable	Not Applicable	Lincoln	2022	OR Dept. of Environmental Quality Water Quality Assessment (DEQ/WQ)	M54	Surface Water on 303d list	H
Water Quality Limited streams - Cat 3 - South Beaver Creek	OR_SR_1710020505_02_106051	Category 3 - Insufficient data for Temperature-year_round,Temperature- spawn	Elkhorn Creek	Not Applicable	Not Applicable	Lincoln	2022	OR Dept. of Environmental Quality Water Quality Assessment (DEQ/WQ)	M54	Surface Water on 303d list	M

Appendix #1

Developing Strategies For Drinking Water Protection

Many[1] public water systems in Oregon will receive an Updated Source Water Assessment (USWA) developed by the Oregon Department of Environmental Quality (DEQ) and the Oregon Health Authority (OHA) drinking water protection team by 2017. USWAs provide the water systems and communities more detailed information on the watershed or recharge area that supplies their well, spring or intake (the "drinking water source area"). Public water systems and local communities can use the information in the assessments to voluntarily develop and implement drinking water protection strategies.

Requirements for water quality monitoring of public water systems in Oregon provide some degree of assurance of safe drinking water; however, all systems are vulnerable to potential contamination. **One of the best ways to ensure safe drinking water and minimize future treatment costs is to develop local strategies designed to protect against potential contamination.** Not only will this add a margin of safety; it will also raise local community awareness of drinking water contamination risks and provide information about how communities and local landowners can help protect their drinking water sources.

Using Place-Based Planning to Develop Protection Strategies

The drinking water source area for most communities lies partially, if not entirely, outside of their jurisdiction and may include several different governing agencies as well as a diverse mix of landowners, businesses and residents. When developing protection strategies, DEQ and OHA highly recommend that the water system and community involve potentially affected stakeholders early in the process to foster stakeholder awareness and trust in the resulting strategies.

Oregon adopted an "Integrated Water Resources Strategy (IWRS)" in 2012 that provides recommendations for how to do a place-based and integrated approach to water resources planning. This approach helps communities achieve the level of coordination and collaboration to successfully address local water quality and water quantity challenges, such as developing and implementing strategies to protect their drinking water sources. The IWRS Place-Based Planning guidelines describe elements to consider for building a collaborative process, characterizing water-related issues, quantifying existing and future water needs, developing a suite of solutions, and adopting and implementing the plan. More information about the process can be found in this Water Resources Department document: https://www.oregon.gov/OWRD/programs/Planning/PlaceBasedPlanning/Pages/default.aspx

Strategies to Achieve Risk Reduction

The primary goal of the drinking water protection strategies should be to reduce or minimize the risks of pollution in the source water. It is highly improbable that one can *eliminate* risks in any area, but by applying one or more protection strategies, a community will be able to reduce the likelihood of pollutants affecting the water supply in the future. Potential strategies include both general management practices such as conservation or efficiency measures that will apply to the entire drinking water protection area and management practices that can be applied most appropriately by land-use category (commercial/industrial,

[1] All community water systems using surface water will receive a USWA. Because of the number of water systems using groundwater in Oregon, the Oregon Health Authority has prioritized completing assessments for new Community and Non-Transient Non-Community water systems and systems that have added a new water source since their original source water assessment was completed.

State of Oregon Department of Environmental Quality

Water Quality - Drinking Water Protection
700 NE Multnomah St.
Suite 600
Portland, OR 97232
Phone: 503- 229-5664
800- 452-4011
Fax: 503- 229-6037
Contact: Julie Harvey
http://www.oregon.gov/DEQ/wq/programs/Pages/DWP.aspx

Oregon Health Authority Drinking Water Program
444 "A" Street
Springfield, OR 97477
Phone: 541- 726-2587
Fax: 541- 726-2596
Contact: Tom Pattee
http://www.healthoregon.org/dwp

Last Updated 8/29/2018
By: J. Harvey

agricultural/rural, forestry, residential/ municipal, and miscellaneous). The following list provides some of the most common management options as an example to public water suppliers and communities:

Example Strategies for Drinking Water Protection
Non-Regulatory Options
Notify and Educate the Public: Contact property owners within the protection area so they are aware of the need for protection measures. Let them know this is voluntary. Focus educational efforts on basic information about the source water and the relationship between surface activities and the water quality; familiarity with the location of the protected area; basic information on sources of contamination; and effective strategies for safe management of all potential contaminants. Public education/notification can be accomplished using local news outlets, letters to residents, letters to land owners/operators, and bill stuffers/customer mailings. Information signs could be placed adjacent to roadways entering the protection area. Include on the sign the name of the water system/jurisdiction and a phone number where callers can obtain more information or report releases.
Use Technical Assistance Resources: Work with local or state providers of technical assistance (e.g., DEQ's regional offices, Soil and Water Conservation Districts, OSU Extension) to encourage the use of best management practices for pollution prevention and waste reduction. Apply for grants or funding to provide financial incentives such as pollution prevention tax credits, low-interest loans or direct subsidies/cost sharing. Provide recognition for environmental friendly businesses and operations (e.g., green awards, plaques/door signs).
Sponsor Hazardous Waste/Unused Chemical Collection: Establishing a permanent location or holding one-day events to collect hazardous wastes from community residents (including households and small businesses) is an effective way to reduce risks posed by storing hazardous wastes or other chemicals within the protection area. Hold an amnesty (free-disposal) event for unused business or agricultural chemicals stored in the protection area. Set up a local materials exchange program (or publicize existing programs).
Develop Spill Response Plans: Encourage and assist your local fire department and transportation department with spill response planning. Jurisdictions within protection areas could develop specific spill response procedures to allow quicker response and notifications should a hazardous material spill or release occur. These can be integrated into your county's Emergency Management Plan. Contact the Oregon Department of Transportation (ODOT) for state highways.
Acquire Land or Rights to Development: Community ownership of as much as possible of the critical land areas within the protection area and managed for water quality protection provides some of the best assurance of long-term protection of the public water supply. Protection could be provided by ownership accomplished through methods such as capital or bond fund programs, or through easements and deed restrictions. Private non-profit land conservation organizations or local land trusts in your area can assist you in acquiring land within your protection area by conveyance to a trust, seeking donations, or direct land purchases for conservation.
Local Regulatory Options
Existing Regulations and Permits: Take advantage of opportunities to provide public comment and input when existing regulatory programs are reviewing permits or programs which affect the siting, design, construction, operation or closure of facilities within your protection area. Ensure you are included on regulatory agency contact lists so that you receive announcements for public involvement opportunities. Consider participating in advisory group meetings for specific topics of interest. Ensure that the regulatory programs are aware of your protection area and request that compliance inspections or technical assistance is prioritized in critical areas.
Land Use Controls (Zoning/Health Ordinances): There are many different types of zoning tools. Your community can identify the protection area with an overlay map and enact specific requirements for land uses and development within these boundaries in order to protect public health. Ordinances applying to sites that pose a risk to water quality within the overlay area may include prohibition of various land uses (such as landfills or underground fuel storage tanks); subdivision controls (such as limiting density or requiring larger lot sizes); special permitting or siting requirements (i.e. placing limitations on the use of toxic and hazardous materials, pesticides, salts); and performance standards (i.e. requiring secondary containment for petroleum or chemical storage over a certain volume).

How do communities use the Updated Source Water Assessments?

The Updated Source Water Assessment (USWA) provides the information for developing local protection strategies. The USWAs include details characterizing the source area and potential source water risks. It also provides key information that will allow the community to focus limited resources on higher-risk areas within the watershed or recharge zones for wells. The USWA information should be supplemented with local knowledge of the water system and community. The water system and community can refine the delineation of sensitive areas and identification of potential contamination sources through further research, local input and coordination with state agencies.

The USWA source area characterization should be reviewed to clarify the presence, location, operational practices, and actual risks of the identified facilities and land-use activities. Additional potential contaminant sources or sensitive areas may also be added based on local knowledge or additional research. Potential sources with low or no risk (such as landowners who have already incorporated best management practices into their operations to protect your source of drinking water) can be screened out or selected for low priority outreach or technical assistance. Local and state resources can then be directed to the highest priority potential problems in the drinking water source area.

Another way to use the information in the USWA is in developing the water system's contingency plan. Contingency planning focuses on potential threats to the drinking water supply (such as mechanical problems, chemical detections in the source water, chemical spills in the source area, or natural disasters) and the development of procedures to be followed should these events occur. Guidance for preparing a contingency plan and examples are available from OHA. Many contingency plan elements may have already been completed by public water systems as part of their required Emergency Response Plan. Additional elements can be added as drinking water source protection strategies are developed.

Public water systems may also find it necessary, as a result of either existing or projected increased demand, to explore the development of additional sources for drinking water. Drinking water source protection provides a mechanism that can be used to help select the best site and identify areas that should be protected now so they will provide quality drinking water in the future. Additionally, development of a new groundwater source in the vicinity of existing sources may modify the movement of groundwater in the subsurface, perhaps changing the shape and orientation of existing drinking water source areas. Evaluation of the significance of those changes should be addressed in the protection planning process to ensure that the management strategy in place will continue to protect the community's drinking water supply.

Need assistance?

Drinking water source protection is already at work in Oregon. A number of Oregon communities are currently developing and implementing strategies to protect their drinking water source areas. Successful drinking water protection plans developed in Oregon are available to communities as templates or examples. Staff members at OHA and DEQ are available to provide assistance, and extensive written materials are available to local community groups or consultants to assist in developing drinking water protection plans or strategies.

Detailed information about developing drinking water source protection strategies can be found on DEQ's Drinking Water Protection Program website. The website also includes Updated Source Water Assessment methods and results, Resource Guides for both surface water and groundwater, sample Drinking Water Protection Plans,

information for schools, and links to many other useful sites:http://www.oregon.gov/deq/wq/programs/Pages/DWP.aspx

The OHA – Drinking Water Program website includes system characteristics, monitoring data, contacts for all public water systems in Oregon, drinking water standards, fact sheets on contaminants, information on the Safe Drinking Water Revolving Loan Fund (including Source Protection Fund Grants), Consumer Confidence Reports, and more: http://www.healthoregon.org/dwp

Water systems or community members interested in the potential of developing drinking water protection strategies should contact the respective DEQ and OHA coordinators. Those systems using surface water sources should initially contact Julie Harvey, Drinking Water Protection Program Coordinator, DEQ, Portland, (503) 229-5664. Groundwater-based water systems should initially contact Tom Pattee, Groundwater Coordinator, OHA, Springfield, (541) 726-2587 x24. As the state moves further into the protection phase of the Oregon program, DEQ and OHA will be able to direct individual requests for assistance to specific staff trained and experienced in that area, both within the state agencies and in other partner organizations.

Alternative formats

Documents can be provided upon request in an alternate format for individuals with disabilities or in a language other than English for people with limited English skills. To request a document in another format or language, call DEQ in Portland at 503-229-5696, or toll-free in Oregon at 1-800-452-4011, ext. 5696; or email deqinfo@deq.state.or.us.

Appendix # 2

Key to Figures and Tables including Notes and Symbols
Updated Source Water Assessments

General Legend:

- Public water system surface water intake
- Public water system drinking water source area for surface water
- Nearby public water system, surface water intake
- Nearby public surface water system drinking water source area
- Groundwater 2-yr TOT (Zone 1 for Springs)
- Groundwater Drinking Water Source
- Interstate
- U.S. Routes
- Oregon Routes
- Roads (BLM)
- Railways (USGS - 2009)
- Stream (NHD)
- City limits (ODOT, 2013)
- Urban Growth Boundary
- County Boundary

Erosion Potential:

Streams near soils with significant erosion potential. Erosion control measures (BMPs) may be necessary for land management activites that disturb or leave bare soils in these areas.

- Streams (NHD) with significant erosion potential from intensive (>75%) soil surface disturbance (i.e.tilled or bare soils) (NRCS-RUSLE2/ODA-EVI; see Note 4a).
- Streams (NHD) with significant erosion potential from substantial (50-75%) soil surface disturbance (NRCS off-road/off-trail ratings; see Note 4b).
- Streams (NHD) with significant erosion potential (slope>30% using USFS SRI data, NRCS SSURGO data not avaliable; see Note 4c).

Landslide Information

- Landslide Deposits (non-rock material, includes earth and debris slides, flows, slumps, falls and complex) (DOGAMI SLIDO3.2)
- Scarp Flanks (DOGAMI SLIDO-3.2)
- Scarps (DOGAMI SLIDO-3.2)

Land Ownership/Use:

- Private Urban Lands (within city limits)
- Private Rural Lands (private non-industrial outside city limits)
- Agriculture (Ag Zoning (BLM) and NASS 2013)
- Private Industrial Forests (ODF data); Lands Managed by Private Industry (BLM)
- Local Government
- State Dept. of Forestry
- State - Other
- Bureau of Land Management
- U.S. Forest Service
- Federal - Other
- Bonneville Power Administration
- Bureau of Indian Affairs
- Undetermined
- Water

Potential Sources of Pollutants identified in State and Federal Regulatory Databases:

- Confined Animal Feeding Operations (ODA as of 1/20/216)
- Dry Cleaner, Active (DEQ as of 2015)
- Dry Cleaner, Dry Store (DEQ as of 2015)
- Dry Cleaner, Closed (DEQ as of 2015)
- Dry Cleaner, Inactive (DEQ as of 2015)
- Dry Cleaner, Solvent Supplier (DEQ as of 2015)
- Environmental cleanup site with known contamination (DEQ as of 01/2016)
- Environmental cleanup site No Further Action required or otherwise lower risk (DEQ as of 01/2016)
- Hazardous Material Large Quantity Generator (DEQ - HW as of 1/02/2016)
- Hazardous Material Small Quantity or Conditionally Exempt Generator (DEQ - HW as of 1/02/2016)
- Hazardous Material Transport, Storage, and Disposal sites (DEQ - HW as of 1/2016)
- Hazardous Substance Information System (OSFM as of 2009)
- Hazardous Substance Information System - AST (OSFM as of 2009)
- Leaking underground storage tank - Confirmed (DEQ as of 9/2012) (Locaton will likely need verification.)
- Leaking underground storage tank with No Further Action required or otherwise lower risk (DEQ as of 9/2015) (Location will likely need verification.)
- Mining permits (DOGAMI as of 1/16/2014)
- Oil and Gas wells (permitted only) (DOGAMI as of 7/2016)
- Updated Source Water Assessment Potential Contaminant Source - Area-wide source (DEQ as of 2017)
- Updated Source Water Assessment Potential Contaminant Source - Point source (DEQ as of 2017)
- Original Source Water Assessment Potential Contaminant Source - Area-wide source (DEQ as of 2005)
- Original Source Water Assessment Potential Contaminant Source - Point source (DEQ as of 2005)
- School Locations OR (DHS as of 2015)
- Solid Waste sites (DEQ - SW as of 1/25/2016)
- Underground Injection Control (DEQ as of 1/12/2016)
- Underground Storage Tanks (DEQ as of 1/25/2016) (Location will likely need verificaton.)
- Water Quality domestic wastewater treatment sites (DEQ - SIS as of 1/25/2016)
- Water Quality permits (DEQ - SIS as of 1/25/2016)
- Water Quality effluent outfalls (DEQ -WQ as of 2009)
- Harmful Algal Bloom (HAB) Advisory from Oregon Health Authority (OHA)
- Boating access sites (OSMB as of 1/2016)
- Major route stream crossings and bridges (ODOT - 2013)
- Water quality limited stream, Cat. 4A or 5, TMDL needed (DEQ - 2022)
- Water Quality Concern; Streams - Cat3 (DEQ - 2022)
- Maximum extent of historic fire perimeters (2008 - 2021)

Key to Figures and Tables including Notes and Symbols
Updated Source Water Assessments

Notes

(1) DWSA - drinking water source area - delineated as the 5th-field watershed upstream of the intake. Oregon's surface water source areas are delineated intake to intake. For watersheds with more than one intake, the DWSA is the watershed segment from the PWSs intake to the next intake upstream. All protection areas upstream of a specific water system's intake are included in the drinking water source area for that water system and PWSs are encouraged to work with other water providers and other entities within the Subbasin as they evaluate potential sources and move forward with developing protection strategies.

Time of travel to the intake (8-hour TOT estimate): For surface water systems that encompass an area greater than 100 square miles DEQ has also estimated the area within an 8-hour time of travel from the intake. The 8-hour time of travel distance was estimated using Extended Unit Runoff Method (EROM) for the intake's stream segment in the National Hydrography Dataset (NHDPlus V2). Input data for EROM includes runoff, temperature, precipitation and the model is calibrated using stream gage flow records. For estimating the 8-hour time of travel distance, DEQ used the NHDPlus-V2 mean annual flow estimate (V0001E) attribute which provides a calculated stream velocity in the reach at mean flow. For purposes of this assessment, the 8-hour time of travel is calculated only for the intake's reach segment and is shown as a radial ring originating at the intake which conservative estimate of the upstream 8-hr time of travel distance. For lakes and reservoirs, the 8-hour time of travel includes both the lake/reservoir length and an 8-hr time of travel distance calculated based on the nearest stream segment upstream of the reservoir or lake. This conservative method is used for lakes and reservoirs because data for residence times and dilution are not readily available. The 8-hour time of travel area is provided as a planning tool for the public water system and community since eight hours should provide adequate response time to protect the integrity of the public water system intake after a spill or release at any crossing or discharge point to the stream. Although potential risks to the water supply can exist throughout the watershed, the area within an 8-hour time of travel from the intake is the area where contamination poses the greatest threat to the drinking water supply. It is recommended the water system and community considers increased protection within this 8-hour travel time from the intake for spills and other acute risks. Focus may need to extend further upstream for contaminants that are contributed to the stream over long time periods or recur frequently.

(2) There are independent public water systems that purchase water from the water systems listed and distribute it within their service areas. The total population served listed includes these "wholesale" customers and the total number of PWSs using the source water is also provided.

(3) Land Ownership/Use

The dataset is a combination of multiple datasets and was developed by DEQ in 02/2015 and updated 03/2017. The primary dataset is from Bureau of Land Management BLM (OWNERSHIP_POLY.shp dated 06/20/2013) obtained from BLM at: http://www.blm.gov/or/gis/data-details.php?id=425. Publication date: 20130718. The dataset has been modified by grouping land owner categories in order to simplify data display on the map and using geospatial techniques to add additional data to capture the following land uses:

- agricultural land using a combination of the National Agricultural Statistics Service (NASS) data from Natural Resource Conservation Service (2007 " cdl_awifs_r_or_2007.tif") and agricultural land zoning from OR Dept. of Land Conservation and Development (note that public water systems may obtain more detailed information on potential crop types using the US Department of Agriculture National Agricultural Statistics Service "CropScape-cropland data layer." Available at https://nassgeodata.gmu.edu/CropScape/),
- private industrial forests using Oregon Dept. of Forestry's (ODF) Private_Industrial_2006_ ORLambert.shp" last updated in 2013,
- local government land combined from BLM ownership, tax lot ownership information from local county tax lot data and "OR Map" on-line application: http://www.ormap.net/,
- private urban lands based on private lands located within 2016 city limits, and
- all other categories (BLM, USFS, State, etc) from BLM 06202013 data. Note that Private urban lands may include residential, municipal, commercial, and industrial land uses. Private non-urban lands typically include rural residential land but may also include commercial and industrial land uses.

Because of the nature of combining multiple datasets, minor discrepancies will be seen in some maps especially at larger scales. Public water systems and communities could use tax lot data available from the counties or other datasets to further refine the analysis if higher accuracy is needed.

(4) High Soil Erosion Potential

For this updated source water assessment, DEQ used three different soil evaluation methods for estimating soil erosion potential depending on the overall slope of the land surface and data availability. These datasets are as follows:

(4a) For areas with > 75% soil disturbance (such as tilled or bare soils) AND lower slopes (generally ≤30%, i.e. valleys and agricultural lands): Potential erosion rates are predicted using USDA Natural Resource Conservation Service (NRCS) Revised Universal Soil Loss Equation -2 (RUSLE2), under conditions of exposed soil lacking both plant roots and conservation practices to reduce or control erosion. The Oregon Dept. of Agriculture's Erosion Vulnerability Index (EVI) utilizes the same approach, and erosion rate classifications used are from ODA's EVI documentation. The NRCS-RUSLE2/ODA-EVI method utilizes the whole soil erodibility (K_w), rainfall erosivity (R), and length and gradient of slope (LS) factors from NRCS's RUSLE with the soil cover (C) and conservation practice (P) factors set at a value of 1. Setting soil cover and conservation practice factors to "1" illustrates a worst-case scenario where soil is uncovered and exposed directly to precipitation forces and where no conservation practices are in place. Therefore, this index reflects erosion risk from severe agricultural disturbance without mitigating measures in place. It does not evaluate delivery to surface waters. In the Updated Source Water Assessments, DEQ mapped locations where RUSLE2 values are >5 (indicating moderate to very high erosion vulnerability), slopes are low enough for intensive agriculture (≤30%), AND within 300 feet of surface water to estimate where delivery to water is possible. Maps and data of soil qualities without the 300-foot stream buffer in local areas can be provided to public water systems and communities if additional detail or scale is needed for place-based planning.

(4b) For management activities such as silviculture, grazing, mining, urban development, fire, firebreaks, etc. with < 75% soil surface disturbance – the risk of soil loss after disturbance activities that expose the soil surface is based on the "off-road/off-trail erosion hazard rating" developed by the USDA NRCS as shown in the Web Soil Survey online viewer (https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx) . Surface erosion hazard potential for non-Forest Service lands with soil disturbance is determined by combining the effects of slope and the whole soil erodibility factor ("K_w-factor") using 1:24,000 Soil Survey Geographic Database (SSURGO) data. The K_w-factor estimates the susceptibility of soil particles to detachment and movement by water including the effects of rainfall, surface runoff, and infiltration. *Soils with erosion hazard ratings of Moderate, Severe, and Very Severe are more sensitive to extensive ground disturbance such as uncontrolled grazing, forestry, heavy equipment use, fire control, mining, and urban development.* In the Updated Source Water Assessments, DEQ mapped locations where erosion hazard is moderate or higher AND that are within 300 feet of surface water to estimate where delivery to water is possible. Maps and data of soil qualities without the 300-foot stream buffer in local areas can be provided to public water systems and communities if additional detail or scale is needed for place based planning.

According to NRCS, the ratings are:

Slight—Erosion is unlikely under ordinary climatic conditions.

Moderate—Some erosion is likely; control measures may be needed.

Severe—Erosion is very likely; control measures for vegetation re-establishment on bare areas and structural measures are advised.

Very Severe—Significant erosion is expected; loss of soil productivity and off-site damages are likely; control measures are costly and generally impractical.

Note that the off-road/off-trail erosion hazard rating assumes up to 75% of the soil surface is bare. Gully erosion, plowing or other disturbances that "disturb up to nearly 100 percent of the area and change the character of the soil", and Histosol soils containing primarily organic materials are not adequately characterized by this method and effects will be underestimated. Erosion hazard from roads and trails can also be accessed using the USDA

NRCS Web Soil Survey online viewer (https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx). Areas with >75% disturbance and lower slopes are addressed using the NRCS-RUSLE2/ODA-EVI method – see info in 4a).

(4c) Where NRCS SSURGO data is not available (typically National Forest lands), Soil Resource Inventory (SRI) information from the US Forest Service was used to determine erosion potential. Erosion potential for soils represented in the SRI data is based on available representative data attributes such as sedimentation yield potential, sediment, or surface soil erosion potential. Specific information on the factors used for each National Forest to evaluate sensitivity is available from DEQ upon request. In the Updated Source Water Assessments, DEQ mapped locations where soils with erosion risk is within 300 feet of surface water to estimate where delivery to water is possible.

(5) Landslide Information

OR Department of Geology and Mineral Industries (DOGAMI) Statewide Landslide Information Database of Oregon Release 3.2 (SLIDO-3.2). Includes earth and debris slides, flows, slumps, falls and complex landslide types. Does not include rock material landslide deposits. The landslide data set is published to improve the understanding of landslide hazards in Oregon and to provide a statewide base level of landslide data. This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information. This publication cannot substitute for site-specific investigations by qualified practitioners. Site-specific data may give results that differ from the results shown in the publication. For more information see: https://www.oregongeology.org/slido/

OR DEQ's Water Quality Program is currently working with DOGAMI to develop and provide a more detailed landslide potential analysis for public water systems. Contact Oregon DEQ's Water Quality Program for further information on the analysis. If data is available for the specific area, DEQ will provide the more detailed landslide analysis to the public water system.

(6) Safe Drinking Water Information System (SDWIS) data is obtained from Oregon Health Authority's Data Online available at https://yourwater.oregon.gov/.

- "Significant detections" indicate water quality tests with analytical results greater than the detection limit (for volatile and synthetic organic compounds (VOCs and SOCs)) or one-half of the maximum allowable contaminant level (for inorganic compounds (IOCs), arsenic and nitrate). Significant detections are not water quality violations but may require follow-up actions by the OHA Drinking Water Program. Significant detections are available as "alerts" in OHAs Data Online.
- Maximum Contaminant Level (MCL) Violations indicate samples that exceed the MCL and may be based on an average of samples or violation of a treatment technique (i.e. lead and copper rule). Maximum Contaminant levels and action levels for chemicals are available OAR 333-061-0030. Does not include violations for late/non-reporting or treatment/distribution system deficiencies.
- A full list of tested and regulated volatile organic chemicals, synthetic organic chemicals and inorganic compounds and disinfection byproducts is provided in OAR 333-061-0030 and OAR 333-061-0036. Only regulated chemicals are reported in SDWIS. It is important to note that public water system compliance data is collected after drinking water treatment, typically at the entry point to the distribution system.

(7) DEQ/OHA source water monitoring project samples were collected between 2008 and 2012 and analyzed for several hundred compounds, including Oregon-specific herbicides, insecticides, pharmaceuticals, volatile organic compounds (including cleaners), fire retardants, polycyclic aromatic hydrocarbons (organic compounds produced as byproducts of fuel burning) and plasticizers. Only the contaminants that were detected are listed. The concentrations of compounds listed were detected at very low levels well below existing standards and guidelines and are well within acceptable limits. The primary objective of this ongoing monitoring program is to identify priorities for drinking water protection through water quality data. Water quality samples are taken from raw source waters, not treated drinking water. A comprehensive list of analytical methods, compounds, and detection

limits is available in each Analytical Report (search DEQ database or by request) and information is summarized at http://www.oregon.gov/deq/wq/programs/Pages/DWPAssessments.aspx

Inventory of Potential Sources of Pollution (Table 2 and Figures)

This information is intended to supplement the original Source Water Assessment completed for the water system between 2000 and 2005 by DEQ and Oregon Health Authority. This update should be used in conjunction with the original inventory. DEQ can provide more information on potential impact, risk and status as the public water system moves into developing protection strategies.

The inventory of potential sources of pollution is based on the readily-available state and federal regulatory databases listed below and general categories of land use/ownership. The primary intent is to identify and locate significant potential sources of contaminants of concern. Areas with agricultural, septic systems, or managed forests are generally not identified in the regulated databases but are presented in the figures as a factor of land ownership/use.

It is important to remember that the sites and areas identified are only potential sources of contamination to the drinking water. Water quality impacts are not likely to occur when contaminants are used and managed properly and land use activities occur in such a way as to minimize erosion and contaminant releases.

It is highly recommended that the community "enhance" or refine the delineation of the sensitive areas and the identification of the potential contamination sources through further research and local input. If there were no potential sources of contamination identified during the review of regulatory databases or community's enhanced inventory, the water system and community should consider the potential for future development to impact the source water.

Table 2 Header	Description
Database Identifier (DB_ID)	Database Type and site name for identified potential pollutant
Site Identifier (Site ID)	Program specific identifier. This is the number or name used to look the site up in the programs regulatory database.
Status	Select information on the site that helps to evaluate potential risk to water quality
Common Name, Address, City	Common Name, Address and City as listed in the regulatory database. Note that some sites may have addresses associated with responsible party, not the physical location of the site.
County	County site is located in
Retrieval Date (Ret_Date)	Date the information was retrieved from the individual programs regulatory database
Data Source	Source for geographic information system (GIS) data

State and Federal Regulatory Database Information

CAFO 	Oregon Department of Agriculture's Confined Animal Feeding Operation database of livestock owners. Includes permitted, non-permitted, and applications. Status indicates facility designation and animal type. Permits typically address conditions for animal waste management. More information at http://www.oregon.gov/ODA/programs/NaturalResources/Pages/CAFO.aspx
DOGAMI 	Oregon Department of Geology and Mineral Industries list of mining sites. Status includes permit status and primary material extracted.
DC	DEQ Dry Cleaners list Status indicates Facility type and information on historic and current solvent use. Facility Type:

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Key to Figures and Tables including Notes and Symbols
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Active Dry Store Closed Inactive Solvent Supplier	*Dry Cleaner* - currently active *Dry Store*: current 'dry store': pickup and drop off point that does not have a dry cleaning machine on site. These sites may still pose a risk as the industry has consolidated over past decades, so many of these used to be dry cleaners and may have contamination. *Closed site:* There is no longer a dry cleaner or dry store on site, and the site has not opted to stay in the program as 'inactive'. Note that when a site changes ownership, the old Dry Cleaner ID (DCID) may be identified as Closed and a new dry cleaner record may be added for the new owner resulting in the potential for on address to have more than one status *Listed Inactive:* Site is no longer a dry cleaner or dry store but the property owner or former operator has opted to continue paying dry cleaner program fees in order to maintain their liability protection & cleanup coverage. *Solvent Supplier:* This may be a chemical supply businesses or individual dry cleaner that imports their own solvent from out-of-state SolventBefore1998: true if dry cleaning solvent was used at this site prior to spill prevention regulations that came in around 1998. If this field is true, there's a higher likelihood that there may be contamination on site. PercUseOngoing: true if perchloroethylene solvent is currently used at the site.
DWP-PCSs area wide point source	Potential sources of contamination (PCS) identified by the DEQ and Oregon Health Authority drinking water protection (DWP) program in the original source water assessments completed between 2000 and 2005. Status includes DEQ's potential contaminant source Code (i.e. M31 or R15), Source type (P= point source, A=Area wide source) and a description of the land use type. Note that sources classified as "Area-wide" were marked at a point on the map closest to the intake, well or spring. Additional detailed maps can be provided upon request for source areas where DWP PCSs are not shown on maps to improve map clarity.
DWP-PCS (update)	Potential sources of contamination (PCS) identified by the OHA or DEQ in the Source Water Assessment updates completed in 2016 - 2022. May include information from interviews with public water system operators, field visits, aerial photograph or topographic map review. . Note that sources classified as "Area-wide" were marked at a point on the map closest to the intake, well or spring.
ECSI	DEQ Environmental Cleanup Site Information database. Includes the U.S. EPA National Priorities List (NPL) and the U.S. EPA Comprehensive Environmental Response, Compensation and Liability Information System (CERCLA) list. Includes sites where further assessment or action is needed. More information available at http://www.oregon.gov/DEQ/Hazards-and-Cleanup/env-cleanup/Pages/ecsi.aspx
ECSI-NFA	DEQ Environmental Cleanup Site Information database site where no further action (NFA) is required. Public water system may consider verifying with DEQ that standards used during site investigation were protective of drinking water.
HW LQG SQG or CEG TSD	DEQ Hazardous Waste generators that submit an annual report to DEQ. This list includes active facilities in HazWaste.NET (http://www.oregon.gov/DEQ/Hazards-and-Cleanup/hw/Pages/HW-Reporting.aspx). Status includes information on generator size including LQG (Large Quantity Generator), SQG (Small Quantity Generator), CEG (Conditionally Exempt Generator), and Unknown (may be used oil or universal waste activities or old generators that require further assessment. TSD = DEQ Hazardous Waste Program registered sites that treat, store or dispose of hazardous waste. Includes both active and inactive sites in the process of closing or in post-closure care that are registered in HazWaste.NET
HAB Advisory	Harmful Algae Bloom (HAB) or Cyanotoxin detection or advisory based on OHA Recreational HAB Website through 2018; Previous cyanotoxin detections may also be based on 2018 or earlier public water system or watershed data.

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LUST 	DEQ leaking underground storage tank (LUST) list - includes sites that have reported releases from petroleum-containing underground storage tanks, including residential heating oil tanks, regulated tanks at gas stations and other commercial facilities, and non-regulated tanks.
LUST-NFA 	DEQ leaking underground storage tank (LUST) list where no further action (NFA) is required or cleanup is completed. PWS may consider verifying with DEQ that standards used during site investigation were protective of drinking water.
Oil & Gas Wells	Oil and Gas wells from OR Department of Geology and Mineral Industries. Only includes wells with a status of "permitted".
OSMB	Oregon State Marine Board's Boating Access Sites.
School 	School as identified by Department of Human Services. Further evaluation may be needed to identify if school has onsite/septic system, pesticide use, chemistry lab, vehicle maintenance, or other potential contaminant sources.
SFM-HSIS AST 	Aboveground storage tank(s) as identified in the State Fire Marshall Hazardous Material Information System (HMIS) site list. Aboveground tanks storing gas products were not included since gaseous compounds rarely pose a threat to surface water or groundwater. Additional information on material stored and tank size is available upon request.
SFM (HSIS) 	State Fire Marshall Hazardous Material Information System (HMIS) site list. Status indicates number of different chemicals stored on site. A full list of chemicals with information on storage type and a range of amounts is available on request. Information on materials in a gas-form was not included in the chemical counts since gaseous compounds rarely pose a threat to surface water or groundwater.
Stream Crossing/Bridge	Oregon Department of Transportation structure in the "Bridge" layer for interstates, highways, or Oregon Routes. Does not include crossings over ODOT 2012 Roads layer. Includes some culverts. Name indicates water body (or other structure) crossed and the highway/route name.
SW 	DEQ Active Solid Waste Disposal Permits list. Status includes permit type and activity (active, terminated, closure, pending). Solid waste disposal site permits are issued for the following facility types: landfill, solid waste treatment, transfer station/material recovery, composting, incincration, conversion technology, and energy recovery.
UIC – Stormwater 	DEQ Underground Injection Control (UIC) list of facilities with registered underground injection control systems that manage Stormwater. Status includes type and number of UIC wells registered.
UIC – Non-Stormwater 	DEQ Underground Injection Control (UIC) facilities with registered underground injection control systems that do not manage stormwater. Status includes type and number of UIC wells registered.
UST 	DEQ registered underground storage tank (UST) list with details on number of tanks upgraded to current standards, decommissioned and with unknown status that require further assessment.
WQ SIS 	DEQ Site Information System (SIS) which includes Water Pollution Control Facility (WPCF) permits where discharge to surface water is not allowed and National Pollutant Discharge Elimination System (NPDES) permits for "point source" discharges into surface water. Includes both individual permits (site specific) and general permits covering a category of similar discharges.
WQ SIS-WWTP 	Subset of water quality Site Information System (SIS) for domestic wastewater treatment plants that discharge to surface water
WQ SIS Outfalls 	Water quality effluent outfalls - location of permitted outfall to water body. May vary from facility address or permitted activity location.

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Key to Figures and Tables including Notes and Symbols
Updated Source Water Assessments

WQL Streams/ Lakes TMDL approved or needed Insuff-icient data	Streams and lakes identified by DEQ under Section 303(d) of the Clean Water Act as Water Quality Limited and either having (Category 4A) or needing (Category 5) a Total Maximum Daily Load pollutant load limit. Streams and lakes with insufficient data (Category 3) to make a determination are also shown. Based on Oregon's 2022 Integrated Report and 303(d) list. Contact DEQ basin coordinator for more information (http://www.oregon.gov/deq/FilterDocs/basincoordinators.pdf)
Wildfire (GeoMAC)	Maximum extent of historic fire perimeters (2008-2018) based on Geospatial Multi-Agency Coordination Group (GeoMAC\Fire Perimeters) and Oregon Department of Forestry Data.

Transportation Sources

Interstate/Highway Interstate U.S. Roads Oregon Routes	Oregon Department of Transportation interstate, highway, road or route identified in the Integrated Transportation Information System database.
Roads	Oregon Department of Transportation 2012 Roads layer - note roads are usually mapped by section so there will be many duplications of road names.
Railways	Railways
Stream Crossing/Bridge	Oregon Department of Transportation structure in the "Bridge" layer for interstates, highways, or Oregon Routes. Does not include crossings over ODOT 2012 Roads layer. Includes some culverts. Name indicates water body (or other structure) crossed and the highway/route name.

Acronyms

BLM - US Bureau of Land Management
BMP - Best Management Practices
CWS - Community Water System
DEQ - Department of Environmental Quality
DLCD - Department of Land Conservation & Development
DOGAMI - Department of Geology and Mineral Industries
DWS - Drinking Water Section of Oregon Health Authority
EPA - US Environmental Protection Agency
ESCI - Environmental Site Cleanup Information
IWRS - Integrated Water Resources Strategy
LUST - Leaking Underground Storage Tank
MCL - Maximum Contaminant Level
NRCS - Natural Resource Conservation Service
NTNC - Nontransient Noncommunity Water System
OAR - Oregon Administrative Rules
ODA - Oregon Department of Agriculture
ODF - Oregon Department of Forestry
ODOT - Oregon Department of Transportation
OEM - Oregon Emergency Management Division
OHA - Oregon Health Authority
ORS - Oregon Revised Statutes
OSU - Oregon State University
POTW - Publicly Owned Treatment Works
PPB - Parts per Billion (=micrograms per liter [ug/L])
PPM - Parts per Million (=milligrams per liter [mg/L])
PWS - Public Water Supply
RCRA - Resource Conservation and Recovery Act
SDWA - Safe Drinking Water Act
SDWIS - Safe Drinking Water Information System
SFM - State Fire Marshal
SOC - Synthetic organic compound
SOC - Synthetic Organic Contaminant
SQG - Small Quantity Generator
SWA - Source Water Assessment
SWCD - Soil and Water Conservation District
TNC - Transient Noncommunity Water System
TOT - Time of Travel
TSCA - Toxic Substances Control Act
USDA - US Department of Agriculture
USFS - US Forest service
USGS - United States Geological Survey
UST - Underground Storage Tank
USWA - Updated Source Water Assessment
VOC - Volatile Organic Compound
VOC - Volatile Organic Contaminant
WHP - Wellhead Protection
WHPA - Wellhead Protection Area
WQL - Water Quality Limited
WRD - Water Resources Department

State of Oregon
Department of
Environmental
Quality

Appendix #3

Technical Information and Factsheets for Water Quality

PLEASE NOTE: The Internet URL Addresses listed in this document were included as a convenience for the users of this document. All URL Addresses were functional at the time this publication was last updated (February 2023). For active links, this list is located at http://www.oregon.gov/deq/wq/programs/Pages/DWP-Pubs.aspx see "A Summary of Technical Assistance Resources"

General Water Quality Information	
Handbook for Developing Watershed Plans to Restore and Protect Our Waters (EPA)	https://www.epa.gov/polluted-runoff-nonpoint-source-pollution/handbook-developing-watershed-plans-restore-and-protect
Water Quality Model Code and Guidebook (DLCD)	https://www.oregon.gov/deq/FilterDocs/WQModCodeGuide.pdf
DEQ Toxics Reduction Strategy	http://www.oregon.gov/deq/Hazards-and-Cleanup/ToxicReduction/Pages/Reducing-Toxics.aspx
Oregon's Groundwater Protection Program – who does what? (DEQ)	https://www.oregon.gov/deq/wq/programs/Pages/GWP.aspx
Groundwater Basics for Drinking Water Protection (DEQ)	http://www.oregon.gov/deq/FilterDocs/dwpGwBasics.pdf
Protecting Oregon's Groundwater from Contamination (OSU)	http://groundwater.orst.edu/groundwater/
Oregon Climate Change Research Institute	http://occri.net/
Climate Impacts in the Northwest (EPA)	https://19january2017snapshot.epa.gov/climate-impacts/climate-impacts-northwest_.html
Climate science, data, tools, and information (NOAA)	https://www.noaa.gov/climate
Harmful Algae Blooms (OHA) - Cyanotoxin Resources for Drinking Water	https://www.oregon.gov/oha/PH/HealthyEnvironments/DrinkingWater/Operations/Treatment/Pages/algae.aspx
Harmful Algae Blooms (OHA) FAQs, guidelines for lake managers and outreach materials	https://public.health.oregon.gov/HealthyEnvironments/Recreation/HarmfulAlgaeBlooms/Pages/index.aspx
Harmful Algal Blooms (DEQ) - agency strategy, actions to control/eliminate & prevention	http://www.oregon.gov/DEQ/wq/Pages/Harmful-Algal-Blooms.aspx
Residential Areas, Parks and Golf Courses	
Domestic Well Safety Program (OHA) Resources/ contacts for domestic/private wells	http://public.health.oregon.gov/HealthyEnvironments/DrinkingWater/SourceWater/DomesticWellSafety/Pages/index.aspx
Well Water Program (OSU)- tech. assistance for domestic/private wells & septic systems	http://wellwater.oregonstate.edu/
Oregon's Domestic Well Testing Program for Real Estate Transactions	http://public.health.oregon.gov/HealthyEnvironments/DrinkingWater/SourceWater/DomesticWellSafety/Pages/Testing-Regulations.aspx
Household Hazardous Waste Program website (DEQ)	http://www.oregon.gov/DEQ/Hazards-and-Cleanup/hw/Pages/hhw.aspx
Household Hazardous Waste - locally-sponsored and county collection programs	https://www.oregon.gov/deq/Hazards-and-Cleanup/hw/Pages/HHW-Events.aspx and http://www.oregon.gov/DEQ/Hazards-and-Cleanup/hw/Pages/HHW-by-County.aspx

Residential Areas, Parks and Golf Courses (cont.)	
Household Pharmaceutical Waste Disposal (OHA)	https://public.health.oregon.gov/HealthyEnvironments/DrinkingWater/SourceWater/Pages/takeback.aspx
Household Hazardous Wastes (EPA)	https://www.epa.gov/hw/household-hazardous-waste-hhw
Recycle Used Motor Oil Resources (EPA)	https://www.epa.gov/recycle/managing-reusing-and-recycling-used-oil
Frequently Asked Questions About Heating Oil Tanks (DEQ)	http://www.oregon.gov/DEQ/tanks/Pages/hot.aspx
Proper Care/Maintenance of Heating Oil and Other Unregulated Tank Systems	http://www.oregon.gov/deq/FilterDocs/ProperCareMaintenance.pdf
Oregon resources for on-site septic systems (DEQ)	http://www.oregon.gov/deq/Residential/Pages/Septic-Smart.aspx
Oregon's Onsite Wastewater Management Program (Septic Systems) (DEQ)	http://www.oregon.gov/DEQ/Residential/Pages/Onsite.aspx
Local Outreach Toolkit for Septic Systems (EPA)	https://www.epa.gov/septic/septic-systems-outreach-toolkit
A Homeowners Guide to Septic Systems (EPA)	https://www3.epa.gov/npdes/pubs/homeowner_guide_long.pdf
Septic Tank Maintenance (DEQ)	http://www.oregon.gov/deq/FilterDocs/septictankmaintFS.pdf
Septic Systems OSU Extension website (OSU)	http://wellwater.oregonstate.edu/septic-systems-0
Combating Illegal Dumping (DEQ)	http://www.oregon.gov/DEQ/mm/Pages/Illegal-Dumping.aspx and http://www.oregon.gov/DEQ/mm/Pages/Illegal-Dumping-Clean-Up.aspx
Water Well Owner's Handbook & other related guidance documents (WRD)	https://www.oregon.gov/OWRD/WRDPublications1/Well_Water_Handbook.pdf
Oregon Water Resources Department	http://egov.oregon.gov/OWRD/
Disposal of Chlorinated Water from Swimming Pools and Hot Tubs (DEQ)	http://www.oregon.gov/deq/FilterDocs/bmpchlorwaterdisp.pdf
Source Water Protection Publications (EPA) for managing various including: Septic Systems Turfgrass and Garden Fertilizer Application Small-Scale Application of Pesticides Small Quantity Chemical Use Pet and Wildlife Waste Storm Water Runoff	http://www.oregon.gov/DEQ/wq/programs/Pages/DWP-Pubs.aspx (see EPA Source Water Protection Practices Bulletins)
Integrated Plant Protection Center (OSU)	https://agsci.oregonstate.edu/oipmc
National Pesticide Information Center	http://npic.orst.edu/
Integrated Pest Management and Pesticide Safety for Schools (OSU)	http://blogs.oregonstate.edu/schoolipm/sample-page/
Golf Course Integrated Pest Management (IPM) tool and BMP Generator	https://www.gcsaa.org/docs/default-source/Environment/bmp-planning-guide-print.pdf?sfvrsn=24cee83e_0
EcoBiz Certified Landscapers and Auto Repair Shops	http://ecobiz.org/find-an-ecobiz/

Agriculture / Forestry Land Uses	
Tips on Land and Water Management for Small Acreages in Oregon	https://conservationdistrict.org/wpfb-file/tips-brochure-for-oregon-pdf
Source Water Protection Pubs (EPA) for managing various activities including: Agricultural Fertilizer Application Large-Scale and Small-Scale Application of Pesticides Livestock, Poultry and Horse Waste Above Ground and Underground Storage Tanks Small Quantity Chemical Use Turfgrass and Garden Fertilizer Application	http://www.oregon.gov/DEQ/wq/programs/Pages/DWP-Pubs.aspx (see EPA Source Water Protection Practices Bulletins)
Oregon Small Farms (OSU Extension) Information on Crops, Grains, Livestock, Pastures, and Soils (see tabs at top of page for multiple resources)	http://smallfarms.oregonstate.edu/
Oregon Pesticide Stewardship Partnerships and Waste Pesticide Collection Events	http://www.oregon.gov/oda/programs/pesticides/water/pages/pesticidestewardship.aspx
Managing Waste Pesticide (DEQ)	https://www.oregon.gov/deq/Filtered%20Library/hazwasteimd.pdf
Oregon Department of Agriculture (ODA) – resources for reducing impacts	http://www.oregon.gov/oda/Pages/default.aspx
Soil and Water Conservation Districts (OACD) – technical assistance for rural landowners, family forests and growers	https://www.oacd.org/regions-and-directory-of-districts
Natural Resources Conservation Service, Oregon (NRCS)	http://www.or.nrcs.usda.gov/
NRCS Financial Assistance Programs	https://www.nrcs.usda.gov/wps/portal/nrcs/main/or/programs/financial/
Oregon Department of Fish and Wildlife Hatchery Information (ODFW)	https://www.dfw.state.or.us/fish/hatchery/
Animal Care and Handling Facilities (from California stormwater program)	https://www.casqa.org/sites/default/files/BMPHandbooks/BMP_IndComm_Appendix_D.pdf
Managing Small-acreage Horse Farms (OSU)	https://catalog.extension.oregonstate.edu/ec1558/viewfile
Irrigation well use and maintenance	See resources for domestic wells under Information for Residential Areas
Oregon State University Forestry & Natural Resources Extension Program	http://extensionweb.forestry.oregonstate.edu/
Oregon Department of Forestry Stewardship Foresters	http://www.oregon.gov/ODF/Working/Pages/FindAForester.aspx
Oregon Department of Forestry Grants and Incentives	http://www.oregon.gov/ODF/AboutODF/Pages/GrantsIncentives.aspx
US Department of Agriculture Forest Incentive Programs Available in Oregon	http://www.srs.fs.usda.gov/econ/data/forestincentives/or.htm

Agriculture / Forestry Land Uses	
US Department of Agriculture Pacific Northwest Research Station	https://www.fs.usda.gov/pnw/
US Forest Service State & Private Forestry– Cooperative Forestry, Forest Health Protection, Sustainable Development & Urban/ Community Forestry	https://www.fs.usda.gov/about-agency/state-private-forestry/coop-forestry
Water quality impacts information from US Forest Service - Part III: Chapter 10: Forest Management; Chapter 13: Pesticides and Part IV: Chapter 14-16 Animals	https://www.srs.fs.usda.gov/pubs/gtr/gtr_srs039/gtr_srs039-part_3.pdf
National Management Measures to Control Nonpoint Source Pollution from Forestry (EPA)	https://www.epa.gov/nps/national-management-measures-control-nonpoint-source-pollution-forestry
Managing Nonpoint Source Pollution from Forestry (EPA)	https://www.epa.gov/polluted-runoff-nonpoint-source-pollution/forestry-additional-resources
Oregon Forest Practices Act	https://www.oregon.gov/ODF/Working/Pages/FPA.aspx
Forest Practices Board Manual (Washington Dept. of Natural Resources)	http://www.dnr.wa.gov/about/boards-and-councils/forest-practices-board/rules-and-guidelines/forest-practices-board-manual
Sustainable Forest Management Programs/Certifications: American Tree Farm Systems (ATFS) Forest Stewardship Council (FSC) Sustainable Forestry Initiative (SFI) Dovetail Partners, Inc.	https://www.oregon.gov/ODF/Documents/AboutODF/ForestCertificationFactsheet.pdf https://www.treefarmsystem.org/ https://us.fsc.org/en-us/certification http://www.oregonsfi.org/ http://www.dovetailinc.org/
Commercial / Industrial / Municipal Land Uses	
Drinking Water Protection Strategies for Commercial & Industrial Land Uses (DEQ)	http://www.oregon.gov/deq/FilterDocs/DWPStrategiesComInd.pdf
Source Water Protection Publications (EPA) for managing various including: Above Ground and Underground Storage Tanks Aircraft and Airfield Deicing Operations Highway Deicing Operations Vehicle Washing Pet and Wildlife Waste Small Quantity Chemical Use Storm Water Runoff	http://www.oregon.gov/DEQ/wq/programs/Pages/DWP-Pubs.aspx (see EPA Source Water Protection Practices Bulletins)
Free Assistance from DEQ's Toxics Use and Waste Reduction Assistance	http://www.oregon.gov/deq/FilterDocs/TABrochure.pdf
Managing Used Computers and Other Electronic Equipment (DEQ)	http://www.oregon.gov/DEQ/ecycles/Pages/default.aspx
Computer and Electronic Equipment Recyclers (DEQ)	http://www.deq.state.or.us/ecsearch/Default.aspx
Underground Injection Control (UIC) Program (DEQ)	http://www.oregon.gov/deq/wq/wqpermits/Pages/UIC.aspx

Commercial / Industrial / Municipal Land Uses (cont.)	
Industrial Stormwater Best Management Practices Manual (DEQ)	https://www.oregon.gov/deq/FilterDocs/IndBMP021413.pdf
Illicit Discharge and Source Tracing Guidance Manual (Washington Stormwater Center)	https://www.wastormwatercenter.org/permit-assistance/municipal/permit-assistance-2/ic-id/
Construction Stormwater Best Management Practices Manual (DEQ)	https://www.oregon.gov/deq/wq/Documents/wqpBMPManual.pdf
Low Impact Development O&M guidance (Washington Stormwater Center)	https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Stormwater-permittee-guidance-resources/Low-Impact-Development-guidance
Water quality impacts information from USFS - Part V: Chapter 18-20 Mining and Oil/Gas	https://www.srs.fs.usda.gov/pubs/gtr/gtr_srs039/gtr_srs039-part_5.pdf
Dam Safety Publications and Resources FEMA website	https://www.fema.gov/emergency-managers/risk-management/dam-safety/publications
Healthcare: Pollution Prevention & Best Management Practices (EPA)	https://archive.epa.gov/region1/healthcare/web/html/bmp.html
Boating / Marinas / Recreation Areas	
Oregon Clean Boater Program (OSMB)	https://www.oregon.gov/osmb/boater-info/Pages/Environmental-Programs.aspx
Clean Boater Guide (OSMB)	https://www.oregon.gov/osmb/forms-library/Documents/Environmental/2015_osmb_clean_boater_guide_forweb.pdf
Best Management Practices for Oregon's Marinas (DEQ)	http://www.oregon.gov/deq/FilterDocs/marinas.pdf
Clean Marina Program (OSMB)	http://www.oregon.gov/OSMB/boater-info/Pages/Clean-Marinas.aspx
Clean Marina Guidebook (OSMB)	http://www.oregon.gov/OSMB/forms-library/Documents/Environmental/entire_clean_marina_guidebook.pdf
Marine Sewage and Wastewater Disposal (DEQ)	https://www.oregon.gov/osmb/forms-library/Documents/Environmental/MarineSanitationFactSheet.pdf
Water quality impacts information from US Forest Service - Part II: Chapters 7-8: Recreation; Chapter 5: Dams and Chapter 9: Roads	https://www.srs.fs.usda.gov/pubs/gtr/gtr_srs039/gtr_srs039-part_2.pdf

Appendix #4

Funds and Resources for Drinking Water Source Protection

This document provides brief descriptions and contact information for resources available to public water systems, including grants and loans to fund drinking water infrastructure and source protection projects. DEQ's list of "Technical Information and Factsheets for Water Quality Protection" provides other websites and resources available to public water systems and community members seeking to work on watershed protection.

Note: The Internet links listed in this document were included as a convenience for the users of this document. All URL Addresses were functional at the time this publication was last updated (February 2023).

Oregon Health Authority (OHA)

Drinking Water Services
Phone: 971-673-0405
Website: www.healthoregon.org/dwp

The Oregon Health Authority (OHA) is the primacy agency for the implementation of the federal Safe Drinking Water Act (SWDA) in Oregon. ORS 338.277 authorizes the OHA to administer the federal Safe Drinking Water Act in Oregon as the Primacy Agency in agreement with the federal government. ORS 448.131 further authorizes the adoption of standards necessary to protect public health through insuring safe drinking water within a water system. Standards in OAR 333-061 outlines requirements for systems to meet MCLs, submit to periodic inspections, and meet enforcement requirements as administered by OHA. As the primacy agency, OHA also approves drinking water treatment plans and sets construction standards, operator certification standards, and enforces rules to ensure safe drinking water. The OHA website has extensive information on drinking water treatment requirements: http://healthoregon.org/dwp

In order to assist systems in complying with standards, OHA also provides technical assistance and oversight of grants and loans from the Safe Drinking Water Act for public water system operation and improvements. *For those Safe Drinking Water Act loans and grant funds, the* ***Oregon Health Authority partners with Oregon Infrastructure Finance Authority to provide the financial services*** *(see below).*

Business Oregon - Infrastructure Finance Authority (IFA)

Infrastructure Finance Authority (IFA)
Municipal Infrastructure Funding
Phone: (503) 986-0123
Website:
https://www.oregon.gov/biz/programs/homeareas/infrastructure/Pages/default.aspx

IFA is a division of Business Oregon that provides funding for municipally owned infrastructure projects. IFA manages federal infrastructure funds for agencies such as Oregon Health Authority and Housing and Urban Development. IFA is not a regulatory agency but collaborates and supports our state and federal partners with financing programs and technical assistance.

State of Oregon Department of Environmental Quality

Water Quality Drinking Water Protection
700 NE Multnomah St.
Suite 600
Portland, OR 97232
Phone: 503-229-5664
800-452-4011
Fax: 503-229-6037
Contact: Julie Harvey
http://www.oregon.gov/deq/wq/programs/Pages/dwp.aspx

Oregon Health Authority

Center for Health Protection Drinking Water Services
444 "A" Street
Springfield, OR 97477
Phone: 541-726-2587
Fax: 541-726-2596
Contact: Tom Pattee
http://www.healthoregon.org/dwp

Last Updated 10/2016
By: Sheree Stewart
Internet URLs functional as of 8/29/2018. Document is also available at:
http://www.oregon.gov/deq/wq/programs/Pages/DWP-Funding.aspx

The list of available funding programs for drinking water infrastructure and source protection is:

- Safe Drinking Water Revolving Loan Fund (SDWRLF)
- Drinking Water Source Protection Fund (DWSP)
- Water/Wastewater Financing Program (WWFP)
- Special Public Works Fund (SPWF)
- Community Development Block Grant Program (CDBG)
- Port Revolving Loan Fund (PRLF)

Safe Drinking Water Revolving Loan Fund (SDWRLF)

This loan program funds drinking water system improvements needed to maintain compliance with the Federal Safe Drinking Water Act. The Safe Drinking Water Fund is funded by annual grants from the U.S. Environmental Protection Agency (EPA) and matched with funds from the state Water/Wastewater Financing Program. The program is managed by the Oregon Health Authority (OHA), Drinking Water Services. The loans are managed by the Oregon Infrastructure Finance Authority (IFA).

The Safe Drinking Water Revolving Loan Fund (SDWRLF) is designed for water source, treatment, distribution, storage and related infrastructure projects. Funding is available for all sizes of water systems, although 15 percent of the funds are reserved for systems serving a population of fewer than 10,000. Eligible applicants can be owners of water systems that provide service to at least 25 year-round residents or systems that have 15 or more connections (or a nonprofit with 25 or more regular users). Owners can be a nonprofit, private party or municipality, but systems cannot be federally owned or operated.

To be eligible for funding, a project must solve an existing or potential health hazard or noncompliance issue under federal/state water quality standards. The following are the main types of eligible activities:

- Engineering, design, upgrade, construction or installation of system improvements and equipment for water intake, filtration, treatment, storage, transmission
- Acquisitions of property or easements
- Planning, surveys, legal/technical support and environmental review
- Investments to enhance the physical security of drinking water systems, as well as water sources

SDWRLF loan amount: The program provides up to $6 million per project (more with additional approval) with the possibility of subsidized interest rate and principal forgiveness for a Disadvantaged Community. The standard loan term is 20 years or the useful life of project assets, whichever is less, and may be extended up to 30 years under SDWRLF for a Disadvantaged Community. Interest rates are 80 percent of state/local bond index rate.

To apply, the municipality should first submit a Letter of Interest to Oregon Health Authority where it will be rated and ranked. Call Oregon OHA Drinking Water Services at 971-673-0422 or go to the OHA website: www.healthoregon.org/srf

Projects placed on the Project Priority List will be invited to apply through IFA for funding. Contact your IFA Regional Coordinator for assistance and more information. Call IFA at 503-986-0123 or https://www.oregon.gov/biz/aboutus/regions/Pages/default.aspx

Drinking Water Source Protection Fund (DWSP)

From the Safe Drinking Water Act, loans and grants are also available for drinking water protection projects: low interest *loans up to a maximum of $100,000 per project*, and *grant funds up to $50,000 per water system*. Eligible systems include any public and privately-owned Community and Nonprofit Non-Community water systems with a completed Source Water Assessment are able to demonstrate a direct link between the proposed project and maintaining or improving drinking water quality. Eligible activities include those that lead to risk reduction within the delineated source water area or would contribute to a reduction in contaminant concentration within the drinking water source. Projects can take either a local or regional approach. Local projects are defined as activities that concentrate on a public water system's source area(s). Regional projects are defined as activities that involve multiple communities and/or water systems attempting to address a common source water issue or group of issues.

The categories for eligible projects for DW Source Protection funding include the following:

Refined Delineation OHA and DEQ have completed delineations for most drinking water source areas (DWSA) for the community and non-community public water systems. DWSAs include aquifer recharge areas for groundwater sources and watershed areas for surface sources. DW Source Protection funding can be used to complete, update, or refine DWSA delineations using new or additional site-specific information as part of a more comprehensive protection strategy.

Updated Assessment

Inventory – Projects that improve upon existing potential contaminant source inventories available from the DEQ database, Geographic Information System, and Assessment Reports prepared by OHA/DEQ. A project could involve expanding or updating the inventory of land uses or existing and potential point and non-point contaminant sources.

Evaluation – Projects establishing a water quality monitoring project to evaluate existing and potential threats to water quality. This could include evaluating and prioritizing potential threats (or protection activities) based upon new or more detailed information.

Source Protection Planning

Projects designed to identify appropriate protection measures, including development of a comprehensive DW Source Protection plan, educational projects, projects to identify and ensure implementation of Best Management Practices (BMPs), development of local DW Source Protection ordinances, development of restoration or conservation plans for the source area for future easement or land acquisition.

Implementation

Funds can be used to implement many types of protection strategies in drinking water source areas. This can include implementation of any *eligible activities that will reduce risks within the source water area or would contribute to a reduction of contaminant concentration within the drinking water source(s).* Examples of the types of projects that can be funded include:

- Implementing drug-take-back projects in source areas
- Projects for reducing pesticide application rates and loadings in source area
- Implementing pesticide and household hazardous waste collection events
- Closure of high-risk abandoned or unused (private or irrigation) wells close to supply well
- Projects for reforestation or replanting in sensitive or riparian areas
- Installation of fencing to protect sensitive riparian source areas
- Installation of signs at boundaries of zones or protection areas
- Projects for assessing risks from onsite systems near supply wells, inspections, pump-outs, or decommissioning onsite systems.
- Secondary containment for high-risk ABOVE ground tanks
- Focused workshop events for household/business instruction for changing to alternative nonhazardous product usage ("green chemical" products)
- Seismic spill prevention or inspection project in proximate areas for high-risk sources
- Permanent abandonment (i.e. filling) of inadequately constructed private wells within the source area
- Installation of fencing around the immediate intake or well area to provide protection
- Structures to divert contaminated stormwater runoff affecting the source area
- Set up ecosystem services (or similar) project in watershed to fund preservation areas
- Implementation of pollution prevention or waste reduction projects
- Restoration and/or conservation projects within the drinking water source area
- Implementation of water reuse and other conservation measures related to source protection
- Implementation of best management practice projects
- Implementation of conservation easements to protect sensitive source areas
- Implementation of a drinking water source protection ordinance
- Establishing management plans for easements or lands purchased within source areas

- Development of educational flyers/brochures for purposes of public education
- Purchase of lands within the drinking water source area (funded only via low interest loans)

Any *Public and Privately-owned Community and Nonprofit Non-Community water systems* with a completed *Source Water Assessment* are eligible for funds. A "community water system" is defined as a public water system that has 15 or more service connections used by year-round residents, or which regularly serves 25 or more year-round residents. This includes water systems that are owned privately, by non-profit or public entities such as a city, district, or port. A "nonprofit non-community water system" is a public water system that is not a community water system and that regularly serves at least 25 people (more than 6 months per year) and is legally recognized under Oregon law as a nonprofit entity.

For the source water protection funds, contact OHA regarding the letter of interest submittal schedule. Call Oregon OHA Drinking Water Services at 971-673-0422 or go to the OHA website: www.healthoregon.org/srf or contact IFA at 503-986-0123; https://www.oregon.gov/biz/aboutus/regions/Pages/default.aspx

Water/Wastewater Funding Program (WWFP)

This loan program funds the design and construction of public infrastructure needed to ensure compliance with the Safe Drinking Water Act or the Clean Water Act. The public entities that are eligible to apply for the program are cities, counties, county service districts, tribal councils, ports, and special districts as defined in ORS 198.010. Municipalities must either have a documented compliance issue or the potential of a compliance issue in the near future.

Allowable funded project activities may include:

- Construction costs, including Right of Way and Easements, for improvement or expansion of drinking water, wastewater or stormwater systems
- Design and construction engineering
- Planning/technical assistance for small communities

WWFP Loans

The maximum loan term is 25 years or the useful life of the infrastructure financed, whichever is less. The maximum loan amount is $10 million per project (more with additional approval) through a combination of direct and/or bond funded loans. Loans are generally repaid with utility revenues or voter approved bond issues. A limited tax general obligation pledge also may be required. "Credit worthy" borrowers may be funded through the sale of state revenue bonds.

WWFP Grants

Grant awards up to $750,000 may be awarded based on a financial review. An applicant is not eligible for grant funds if the applicant's annual median household income is equal or greater than 100 percent of the state average median household income for the same year.

Funding for Technical Assistance

The Infrastructure Finance Authority offers technical assistance financing for municipalities with populations of less than 15,000. The funds may be used to finance preliminary planning, engineering studies and economic investigations. Technical assistance projects must be in preparation for a construction project that is eligible and meets the established criteria.

Grants up to $20,000 may be awarded per project.

Loans up to $60,000 may be awarded per project.

To apply, call IFA at 503-986-0123, then contact your IFA Regional Coordinator for assistance and more information. https://www.oregon.gov/biz/aboutus/regions/Pages/default.aspx

Special Public Works Fund (SPWF)

The Special Public Works Fund (SPWF) provides funds for publicly owned facilities that support economic and community development in Oregon. Funds are available to public entities for planning, design, purchasing, improving and constructing publicly owned facilities, replacing publicly owned essential community facilities,

emergency projects as a result of a disaster, and for planning. Public agencies that are eligible to apply for funding are cities, counties, county service districts (ORS 451), tribal councils, ports, districts as defined in ORS 198.010, and airport districts (ORS 838).

SPWF Loans
Loans for development (construction) projects range from less than $100,000 to $10 million (more with additional approval). The Infrastructure Finance Authority offers very attractive interest rates that reflect tax-exempt market rates for highly qualified borrowers. Initial loan terms can be up to 25 years or the useful life of the project, whichever is less.

SPWF Grants
Grants are available for construction projects that create or retain traded-sector jobs. They are limited to $500,000 or 85 percent of the project cost, whichever is less, and are based on up to $5,000 per eligible job created or retained. Limited grants are available to plan industrial site development for publically owned sites and for feasibility studies.

To apply, call IFA at 503-986-0123, then contact your IFA Regional Coordinator for assistance and more information. http://www.orinfrastructure.org/

Community Development Block Grant (CDBG)

Grants and technical assistance are available to develop livable urban communities for persons of low and moderate incomes by expanding economic opportunities and providing housing and suitable living environments. Non-metropolitan cities and counties in rural Oregon can apply for and receive grants. *[Oregon tribes, urban cities (Albany, Ashland, Bend, Corvallis, Eugene, Gresham, Hillsboro, Medford, Portland, Salem and Springfield) and counties (Clackamas, Multnomah, Washington) receive funds directly from HUD.]* Funding amounts are based on the applicant's need, the availability of funds, and other restrictions defined in the program's guidelines. The maximum available grant for drinking water system projects is $3,000,000.

All projects must meet one of three national objectives:

- The proposed activities must benefit low- and moderate-income individuals.
- The activities must aid in the prevention or elimination of slums or blight.
- There must be an urgent need that poses a serious and immediate threat to the health or welfare of the community.

To apply, call IFA at 503-986-0123, then contact your IFA Regional Coordinator for assistance and more information. https://www.oregon.gov/biz/aboutus/regions/Pages/default.aspx

Port Revolving Loan Fund (PRLF)

The Port Revolving Loan Fund (PRLF) is a loan program to assist Oregon ports in the planning and construction of facilities and infrastructure. Ports must be incorporated under ORS Chapter 777 or 778. The Fund may be used for port development projects (facilities or infrastructure) or to assist port-related private business development projects. The variety of eligible projects is very broad and may include water-oriented facilities, industrial parks, airports and commercial or industrial developments. Eligible project costs can include engineering, acquisition, improvement, rehabilitation, construction, operation, and maintenance or pre-project planning. Projects must be located within port district boundaries. The maximum loan amount is $3 million at any one time. The loan term can be as long as 25 years or the useful life of the project, whichever is less. Interest rates are set by the IFA at market rates, but not less than Treasury Notes of a similar term minus one percent.

Note: Flexible manufacturing space projects will not accrue interest until the building is at least 25 percent occupied or until three years after the date of the loan contract, whichever is earlier.

To apply, call IFA at 503-986-0123, then contact your IFA Regional Coordinator for assistance and more information. https://www.oregon.gov/biz/aboutus/regions/Pages/default.aspx

Oregon Department of Environmental Quality (DEQ)

Clean Water State Revolving Fund (CWSRF)

Clean Water State Revolving Fund
503-229-6412
Website: http://www.oregon.gov/DEQ/wq/cwsrf/Pages/default.aspx

Low-cost loans for planning, design, and construction projects to attain and maintain water quality standards, and necessary to protect beneficial uses such as fish habitat, drinking water sources, irrigation, and recreation. Eligible borrowers are public entities, such as cities and counties, Indian tribal governments, sanitary districts, soil and water conservation districts, irrigation districts, various special districts and some intergovernmental entities. CWSRF offers:

- Low-cost loans and bond purchases
- Lower than market interest rates
- Fixed interest rates
- Terms up to 30 years
- Up to 100% of eligible costs covered
- No match required
- Repayment begins after project is constructed
- No pre-payment penalty
- Additional financial incentives, including principle forgiveness

Applications are accepted year round with scheduled review and ranking in the first week of January, May and September. Contact the Oregon Department of Environmental Quality (DEQ); for a list of CWSRF project officers, go to http://www.oregon.gov/deq/wq/cwsrf/Pages/CWSRF-Contacts.aspx.

Financial incentives make CWSRF loans worth exploring. Principle forgiveness is available for communities meeting affordability criteria, or for meeting green project criteria. Implement a non-planning nonpoint source project ***and*** a traditional point source wastewater treatment project through the same application to reduce your interest rate on the combined two projects to as low as 1%. This combined application is called a sponsorship option.

CWSRF Pollution Reduction Funding

The Clean Water State Revolving Fund loan program provides low-cost loans to public entities for the planning, design or construction of both point source and nonpoint source projects that *prevent or mitigate water pollution.* Wastewater facility improvements and stormwater management projects are funded with CWSRF.

CWSRF loans fund development of nonpoint source water quality improvement plans, such as an integrated water resources plan and a regional or municipality-wide stormwater management plan. Planning loans can also fund the establishment of watershed partnerships, local ordinances to implement a stormwater master/management plan, engineering and development standards for new and redevelopment, permanent riparian buffers, floodplains, wetlands and other natural features.

CWSRF offers a Local Community Loan, which allows the borrower to make loans to private entities like home owners and farmers. The Local Community Loans fund the repair and replacement of failing decentralized systems. This loan type can also fund nonpoint source agricultural best management practices such as building manure containment structures, manure digesters, and fences to protect riparian resources capture and convert methane, and purchase calibrated application equipment.

CWSRF loans fund a variety of nonpoint source watershed improvement implementation projects such as establishing or restoring permanent riparian buffers and floodplains, and daylighting streams from pipes. Loans can fund protecting and restoring streamside areas, wetlands and floodplains, and to acquire riparian land, wetlands, conservation easements, and land to protect drinking water sources.

More information on DEQ's Clean Water State Revolving Fund program can be found here: http://www.oregon.gov/DEQ/wq/cwsrf/Pages/default.aspx. For specific information on the Sponsorship Option, Planning Loans, Nonpoint Source Loans, or Local Community Loans, see

http://www.oregon.gov/DEQ/wq/cwsrf/Pages/CWSRF-Application.aspx. The application requirements for CWSRF loans may take some lead-time to develop and may require out-of-pocket expense to prepare. Prospective CWSRF applicants should discuss any questions about the required content of these items with a regional DEQ CWSRF Project Officer at the earliest opportunity (http://www.oregon.gov/DEQ/wq/cwsrf/Pages/CWSRF-Contacts.aspx).

Supplemental Environmental Projects (SEPs)

DEQ's Office of Compliance and Enforcement administer Supplemental Environmental Projects. When DEQ assesses civil penalties for environmental law violations, violators can offset up to 80% of their monetary penalty by agreeing to pay for a Supplemental Environmental Project that improves Oregon's environment. SEPs can be for pollution prevention or reduction, public health protection, environmental restoration and protection as long as it is a project that the respondent is not already required to do by law or where the project would be financially self-serving for the respondent. The work can be completed by a third-party like a local government, watershed council, non-profit or private entity. Coastal PWSs can develop a "SEP Application" with general information that OCE can distribute to respondents. Community organizations with proposed projects are also free to contact respondents on their own initiative. The enforcement case does not necessarily have to be in the same area (watershed/county, etc.) as the environmental project or even address the same media (i.e. air/water/land). Interested parties can sign up for DEQ's public notifications via email at http://www.oregon.gov/deq/Get-Involved/Pages/Public-Notices.aspx - when signing up, select types of information (select "enforcement actions") and which counties or subbasins are of interest.

Nonpoint Source Implementation 319 Grants

Nonpoint Source Grants support implementation and planning projects that address water quality problems in surface and groundwater resources resulting from nonpoint source pollution. Funds are appropriated by DEQ through the U.S. Environmental Protection Agency under Section 319 of the Clean Water Act and support a wide variety of management activities, including technical assistance, site assessment, public awareness and education, training, technology transfer, demonstration projects, and monitoring to assess the success of specific nonpoint source implementation projects. Eligible applicants include government agencies, tribal nations and nonprofit organizations. For more information including funding availability, eligible projects, and application requirements and timelines see http://www.oregon.gov/deq/wq/programs/Pages/Nonpoint-319-Grants.aspx

Oregon Water Resources Department (WRD)

Water Resources Development Program
725 Summer Street NE, Suite A
Salem, OR 97301
Phone: 503-986-0900

The Water Resources Department is the state agency charged with administration of the laws governing surface and ground water resources. The Department's core functions are to protect existing water rights, facilitate voluntary streamflow restoration, increase the understanding of the demands on the state's water resources, provide accurate and accessible water resource data, and facilitate water supply solutions. WRD is charged with carrying out the water management policies and rules set by the Water Resources Commission and with overseeing the enforcement of Oregon's water laws. By law, all surface and ground water in Oregon belongs to the public.

WRD's mission is to serve the public by practicing and promoting responsible water management through two key goals:

- to directly address Oregon's water supply needs, and
- to restore and protect streamflows and watersheds in order to ensure the long-term sustainability of Oregon's ecosystems, economy, and quality of life.

WRD developed *Oregon's 2012 Integrated Water Resources Strategy* to help individuals and communities address instream and out-of-stream needs now and into the future, including water quantity, water quality and

ecosystem needs. More information can be found at:
https://www.oregon.gov/OWRD/programs/Planning/IWRS/Pages/default.aspx

There is funding available to support planning, feasibility studies, and implementation of water projects:

Place-Based Integrated Water Resources Planning
https://www.oregon.gov/OWRD/programs/Planning/PlaceBasedPlanning/Pages/default.aspx
Place-based planning is a voluntary, locally initiated and led effort in which a balanced representation of water interests within a basin or watershed work in partnership with the state to: characterize current water resources and issues (water quantity, water quality, ecosystem health); understand current and future instream and out-of-stream water needs and demands; identify and prioritize strategic solutions to address water needs; and, develop a place-based integrated water resources plan that informs the state-wide strategy.

Recent cycle of funding included $750,000 in grants; requires 25% cost-share.

Feasibility Study Grants
https://www.oregon.gov/OWRD/programs/FundingOpportunities/FeasibilityStudyGrants/Pages/default.aspx
Once potential projects are identified, communities often find it difficult to secure funding to assess their viability. This program component addresses that need by providing grant funding to cover 50% of the cost of conducting feasibility studies for potential water conservation, storage and reuse projects. A feasibility study is an assessment of the practicality of a proposed project or plan and can be used to determine if and how a project should proceed to the implementation phase.

Recent cycle of funding included $2.8 million in grants; 50% cost share required.

Water Project Grants & Loans (formerly Water Supply Development Grants & Loans)
https://www.oregon.gov/OWRD/programs/FundingOpportunities/WaterProjectGrantAndLoans/Pages/default.aspx
This account provides grants and loans to evaluate, plan and implement instream and out-of-stream water development projects that have economic, environmental and social/cultural benefits. Eligible projects include, but are not limited to projects that: increase water use efficiency; develop new or expanded storage; allocate federally stored water; promote water reuse or conservation; and protect or restore stream flows.

Recent cycle funding included $14 million in grants or loans; 25% cost share required; applications accepted year round.

More details and updates for these grants can be found at:
https://www.oregon.gov/OWRD/programs/FundingOpportunities/Pages/default.aspx

Municipal Water Management and Conservation Planning

Municipal water management and conservation planning provides a process through which cities and other municipal water suppliers estimate long-range water supply needs and identify alternatives, including water conservation programs, to meet those needs. The Department requires many municipal water suppliers to prepare plans as conditions of their water use permits or permit extensions.

Water Rights

Oregon's water laws are based on the principle of prior appropriation. This means the first person to obtain a water right on a stream is the last to be shut off in times of low streamflows. In water-short times, the water right holder with the oldest date of priority can demand the water specified in their water right regardless of the needs of junior users. The date of application for a permit to use water usually becomes the priority date of the right. Watermasters respond to complaints from water users and determine in times of water shortage, which generally occur every year, who has the right to use water. Each summer as streamflows drop, watermasters regulate junior users to provide water to the more senior users. On many streams throughout the state, by the end of summer,

there is only enough water to supply users who established their rights in the late 1800s. All of the more recently established rights will have been regulated off by the watermaster.

There are "watermaster" offices located around the state. The watermaster office is an excellent source of local information. Watermasters can research water rights for a particular stream reach and provide supporting maps (above). During critical flow periods, watermasters regulate water usage to enable senior water right holders to satisfy their water right. The watermaster may also provide information regarding instream leases, ground water rights, cancellations, transfers of water rights, streamflow data, and water right information in general.

Oregon Department of Forestry (ODF)

Salem Headquarters
2600 State Street
Salem, Oregon 97310
http://www.oregon.gov/ODF/Pages/index.aspx

The Oregon Department of Forestry manages and regulates activities on non-federal forestland in Oregon. There are three main divisions under ODF-- Fire Protection, Private Forests, and State Forests. The Private Forests Division administers the Forest Practices Act and various forestry incentive programs and employs the use of about 50 Stewardship Foresters who work closely with landowners and operators The State Forests Division is responsible for forest management to provide economic, environmental, and social benefits to Oregonians.

Financial incentive programs are aimed at encouraging and assisting landowners in managing their resources and meeting their objectives. Typical forestry projects can be aimed at protecting the landowner's resources/investment from fire or insect and disease infestation, to increasing its monetary and environmental value in the future.

Information about all ODF and federal forestry-related grants and incentive programs can be found at:

http://www.oregon.gov/ODF/AboutODF/Pages/GrantsIncentives.aspx

Community Forest Program

The Community Forest and Open Space Conservation Program is a federal financial assistance program with grants available to local governments, Indian tribes, and qualified nonprofit organizations to establish community forests and sustainably manage them for many public benefits, including recreation, income, wildlife habitat, stewardship demonstration sites, and environmental education.

Conservation Stewardship Program

To help landowners and operators maintain existing stewardship and adopt additional conservation on privately-owned, non-industrial working forests and agricultural lands.

Forest Legacy Program

The Forest Legacy Program is a national program that addresses privately-owned forestlands that face threats of conversion to non-forest use by development pressures. The goal of the Forest Legacy Program is to promote stewardship and sustainable management of private forest lands by maintaining working forests that conserve important forest resource and conservation values. Forest Legacy provides funds for eligible private forestlands for the purchase of development rights through either conservation easement or fee-title acquisition into public ownership. All properties entered into Oregon's Forest Legacy Program – either through conservation easement, fee acquisition or donation – have their forest resources and conservation values protected and managed in accordance with a State Forester-approved Forest Stewardship Plan (see below).

Forest Stewardship Program

Oregon's Forest Management Planning System recognizes that forest management planning is a journey – Pathways to Stewardship -- involving several distinct steps. A landowner's initial interest may be related to a specific project or action that is pressing on their property – such as reducing hazardous wildfire fuels or combating an invasive weed. Landowner assistance organizations and agencies usually first cross paths through outreach efforts defined around mutual interests or resource concerns. Landowners who are just beginning the

management planning process begin a more formal journey by taking the Woodland Discovery step. Woodland Discovery consists of gathering basic property information and solidifying management goals. The remaining steps for completing your forest management plan include organizing the planning elements into specific management planning modules: soil and water, forest vegetation, fish and wildlife, access and protection, scenery and enjoyment and tax and business. Every step completed along the way results in the identification of specific actions that a landowner can take to improve conditions of the forestland or otherwise meet goals in owning forestland. Completion of a forest management plan opens up formal types of engagement such as forest certification and the enrollment of lands into specialized conservation programs that define a long-term commitment to sustainable forestry.

Healthy Forests Reserve Program (HFRP)

The goal is to restore and enhance ecosystems and habitat for threatened and endangered species while promoting sustainable timber harvests on working forest lands.

Department of Agriculture
Natural Resources Program

635 Capitol St. NE
Salem, OR 97301-2532
Phone: 503 986-4700
http://www.oregon.gov/ODA/programs/NaturalResources

The Oregon Department of Agriculture (ODA) is responsible for developing plans to prevent and control water pollution from agricultural activities and soil erosion on rural lands. ODA's Natural Resources Program aims to conserve, protect, and develop natural resources on public and private lands in order to ensure that agriculture will continue to be productive and economically viable in Oregon. Natural Resources Programs work to do the following:

- Address water quality and natural resource conservation on agricultural lands
- Protect Oregon's environment and public health by ensuring the proper and legal sale, use, and distribution of pesticide products
- Assist local soil and water conservation districts as they help landowners properly manage Oregon's natural resources

More information on the Agricultural Plan Areas and Regulations can be found at:
https://www.oregon.gov/ODA/programs/NaturalResources/AgWQ/Pages/AgWQPlans.aspx
Information on local management plans and your area's ODA Water Quality Specialist can be found at:
http://www.oregon.gov/ODA/programs/NaturalResources/AgWQ/Pages/AgWQPlans.aspx
More information on the regulation and use of pesticides can be found at:
http://www.oregon.gov/ODA/programs/Pesticides/Pages/default.aspx

Department of Agriculture
Pesticide Analytical and Response Center (PARC)

http://www.oregon.gov/ODA/programs/Pesticides/Pages/PARC.aspx

The Pesticide Analytical and Response Center (PARC) was created by executive order in 1978. The program was reauthorized under the Oregon Department of Agriculture (ODA) as ORS 634.550, in 1991.

PARC is mandated to perform the following activities with regard to pesticide-related incidents in Oregon that have suspected health or environmental effects: Collect incident information, mobilize expertise for investigations, identify trends and patterns of problems, make policy or other recommendations for action, report results of investigations, and prepare activity reports for each legislative session.

PARC does not have regulatory authority. Their primary function is to coordinate investigations to collect and analyze information about reported incidents. Investigation coordination includes collecting reports produced by member agencies and consultation as necessary with a toxicologist with Oregon State University. Member agencies conduct most of the investigations and take any necessary enforcement action(s). The eight member

agencies include the following: Oregon Health Authority (OHA), Oregon Department of Fish and Wildlife (ODF&W), Oregon Department of Environmental Quality (DEQ), Oregon Department of Forestry (ODF), Oregon Occupational Safety and Health Administration (OR OSHA), Office of the State Fire Marshal (SFM), Oregon Poison Center (OPC), Oregon Department of Agriculture (ODA).

To report a pesticide incident that has impacted people, animals, or the environment, contact:
Theodore Bunch Jr., PARC Coordination Team Leader at 503-986-6470 or toll-free at 844-688-7272
PARC@oda.state.or.us.

Department of Agriculture
Soil and Water Conservation Districts

https://www.oregon.gov/oda/programs/naturalresources/swcd/Pages/Default.aspx

The Soil and Water Conservation District (SWCD) Program provides services to the 45 Soil and Water Conservation Districts throughout Oregon. SWCDs are local government entities that have authorities to address soil, erosion, and water quality issues. For information about each of Oregon's SWCDs, see the SWCD Directory: https://www.oregon.gov/oda/shared/Documents/Publications/NaturalResources/SWCDDirectory.pdf

Oregon Watershed Enhancement Board (OWEB)

775 Summer St. NE Suite 360
Salem, OR 97301
Phone: (503) 986-0178
Website: www.oregon.gov/OWEB

The Oregon Watershed Enhancement Board (OWEB) is a state agency that provides grants to help Oregonians take care of local streams, rivers, wetlands and natural areas. Community members and landowners use scientific criteria to decide jointly what needs to be done to conserve and improve rivers and natural habitat in the places where they live. OWEB grants are funded from the Oregon Lottery, federal dollars, and salmon license plate revenue. The agency is led by a 17 member citizen board drawn from the public at large, tribes, and federal and state natural resource agency boards and commissions. OWEB provides grants to projects that contribute to the Oregon Plan for Salmon and Watersheds and the Oregon Conservation Strategy by protecting, restoring and improving clean water and fish and wildlife habitat. See the OWEB website for more information on grants: https://www.oregon.gov/oweb/grants/Pages/grant-programs.aspx.

Oregon Sea Grant (OSG)

Oregon State University
Corvallis, Oregon
Phone 541-737-2714
http://seagrant.oregonstate.edu/

Oregon Sea Grant serves Oregon coastal communities through integrated research, education and public engagement on ocean and coastal issues. Based at Oregon State University, OSG is part of the national network of NOAA Sea Grant College Programs, dedicated to promoting environmental stewardship, long-term economic development and responsible use of America's coastal, ocean and Great Lakes resources. OSG targets research on better defining the relationships between the many pressures that can degrade water quality: climate change, upland and coastal land use, fish and habitat restoration efforts, aquatic invasive species. OSG works with groups whose interests sometimes come in conflict - landowners, outdoor recreationists, farmers and woodland managers, local government, the general public - to seek solutions that will help sustain healthy watersheds and our precious water resources. OSG focuses on the question of resilience - the ability to plan, adapt and rebound in the face of change by supporting physical and social science research aimed at better understanding ocean and coastal processes and the socio-economic barriers to hazard and climate change preparation. Publications and resources available from OSG can be found here: https://seagrant.oregonstate.edu/publications-grid-view

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OSG and OSU Extension produce textbooks and other publications on such topics as conservation-friendly gardening, sustainable living and low-impact development. OSG also partners with the Oregon State Marine Board to develop the Clean Vessel Act (CVA) Education Initiative. Funded by the Clean Vessel Act of 1992, the goal of the CVA Education Initiative is to improve boaters' awareness, accessibility and use of sewage pump-outs, dump stations, and floating toilets. Publications and resources available from OSG about watershed health can be found here: https://seagrant.oregonstate.edu/publications-grid-view by using "watersheds and wetlands" in the "Search by Subject" field.

Every two years, OSG awards approximately $2 million in research grants addressing community preparedness for climate change, watershed health, other urgent or emerging regional needs with high relevance to coastal communities. For more information on grants, see: http://seagrant.oregonstate.edu/research

Source Water Collaborative – led by U.S. Environmental Protection Agency

Technical assistance and lists of resources and contacts are available from this national network that has worked to promote drinking water protection for several years. The Source Water Collaborative is a network of federal, state, and local organizations led by US EPA. Some of the key Source Water Collaborative members include the US EPA, US Department of Agriculture, AWWA, American Planning Association, ASDWA, ACWA, National Rural Water Association, Groundwater Protection Council, National Association of Counties, and The Trust for Public Land. Resources can be found here:

http://sourcewatercollaborative.org/

U.S. Environmental Protection Agency Catalog of Federal Funding Sources for Watershed Protection

This is an online, free searchable database of financial assistance sources (grants, loans, cost-sharing) available to fund a variety of watershed protection projects.
https://www.epa.gov/waterdata/catalog-federal-funding

U.S. Environmental Protection Agency Environmental Finance Centers

Free technical assistance is available through EPA's Environmental Finance Centers. There is currently no Environmental Finance Center for US EPA Region 10, but the resources are still available through the US EPA website. The program mission is to provide help to those facing the "how to pay" challenges of environmental protection. EFC is committed to helping the regulated community build and improve the technical, managerial, and financial capabilities needed to comply with federal and state environmental protection laws.
https://www.epa.gov/waterfinancecenter/efcn

U.S. Environmental Protection Agency Community Action for a Renewed Environment (CARE) Grants

Eligible Projects: Prevention of human exposure to harmful pollution; improve water quality. Form community-based collaborative partnerships; identifying and developing an understanding of the many local sources of risk from toxic pollutants and environmental concerns; and setting priorities for the reduction of the identified risks and concerns of the community

Eligible Applicants: Local, public non-profit institution/organizations, federally-recognized Indian tribal government, Native American organizations, private non-profit institution/organization, quasi-public nonprofit institution/organization both interstate and intrastate, local government, colleges, and universities

Funding Available: $75,000 to $100,000 with an average project funding of about $90,000

How To Apply: Currently, EPA has no plans to publish a Request for Proposal for the CARE program due to lack of congressional funding. For updates see: https://archive.epa.gov/care/web/html/

U.S. Bureau of Reclamation
Cooperative Watershed Management Program

Eligible Projects: Improve water quality; improve ecological resiliency of a river or stream; and to reduce conflicts over water at the watershed level by supporting the formation of watershed groups to develop local solutions to address water management issues

Eligible Applicants: States, Indian tribes, local and special districts (e.g., irrigation and water districts, county soil conservation districts, etc.), local governmental entities, interstate organizations, and non-profit organizations. To be eligible, applicants must also meet all of the following requirements: (1) Significantly affect or be affected by the quality or quantity of water in a watershed; (2) Be capable of promoting the sustainable use of water resources; (3) Be located in the western United States specifically: Arizona, California, Colorado, Idaho, Kansas, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington.
Funding Available: $22,000-$100,000 in the past
How To Apply: http://www.usbr.gov/WaterSMART/cwmp/index.html

U.S. Department of Agriculture
Farm Service Agency Conservation Programs

http://www.fsa.usda.gov/programs-and-services/conservation-programs/index

USDA Farm Service Agency oversees a number of voluntary conservation-related programs. These programs work to address a large number of farming and ranching related conservation issues including:

- Drinking water protection
- Reducing soil erosion
- Wildlife habitat preservation
- Preservation and restoration of forests and wetlands
- Aiding farmers whose farms are damaged by natural disasters

Source Water Protection Program (SWPP)

The SWPP is designed to protect surface and ground water used as drinking water by rural residents. Through a partnership with the National Rural Water Association, local teams are formed to develop plans to reduce pollutant impacts in rural areas.

http://www.fsa.usda.gov/programs-and-services/conservation-programs/source-water-protection/index

Conservation Reserve Program (CRP)

The CRP pays a yearly rental payment in exchange for farmers removing environmentally sensitive land from agricultural production and planting species that will improve environmental quality. In exchange for a yearly rental payment, farmers enrolled in the program agree to remove environmentally sensitive land from agricultural production and plant species that will improve environmental health and quality. Contracts for land enrolled in CRP are 10-15 years in length. The long-term goal of the program is to re-establish valuable land cover to help improve water quality, prevent soil erosion, and reduce loss of wildlife habitat.

http://www.fsa.usda.gov/programs-and-services/conservation-programs/conservation-reserve-program/index

Conservation Reserve Enhancement Program (CREP)

The CREP, an offshoot of CRP, targets high-priority conservation issues identified by local, state, or tribal governments or non-governmental organizations. In exchange for removing environmentally sensitive land from production and introducing conservation practices, farmers, ranchers, and agricultural land owners are paid an

annual rental rate. Participation is voluntary, and the contract period is typically 10–15 years, along with other federal and state incentives as applicable per each CREP agreement.
http://www.fsa.usda.gov/programs-and-services/conservation-programs/conservation-reserve-enhancement/index

Emergency Conservation Program (ECP)

The ECP provides funding and technical assistance for farmers and ranchers to restore farmland damaged by natural disasters and for emergency water conservation measures in severe droughts. The ECP also provides funding and assistance to help ranchers and farmers install water conservation measures during severe drought.

http://www.fsa.usda.gov/programs-and-services/conservation-programs/emergency-conservation/index

Emergency Forest Restoration Program (EFRP)

The EFRP, which is very similar to the ECP, provides funding to restore privately owned forests damaged by natural disasters.

http://www.fsa.usda.gov/programs-and-services/disaster-assistance-program/emergency-forest-restoration/index

Farmable Wetlands Program (FWP)

The FWP is designed to restore wetlands and wetland buffer zones that are farmed. FWP gives farmers and ranchers annual rental payments in return for restoring wetlands and establishing plant cover.

http://www.fsa.usda.gov/programs-and-services/conservation-programs/farmable-wetlands/index

U.S. Department of Agriculture
Natural Resources Conservation Service

NRCS provides farmers, ranchers and forest managers with free technical assistance, or advice, for their land. Common technical assistance includes: resource assessment, practice design and resource monitoring. The conservation planner will help you determine if financial assistance is right for you. Technical assistance is also available online through Conservation Client Gateway.

More information about NRCS can be found on their home page:
http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/about/

Environmental Quality Incentives Program (EQIP)

Grants are available for best management practices and conservation on private, non-industrial forestland and agricultural lands. Financial assistance is available to help plan and implement conservation practices that address natural resource concerns and for opportunities to improve soil, water, plant, animal, air and related resources on agricultural land and non-industrial private forestland. In addition, EQIP can help producers meet Federal, State, Tribal and local environmental regulations.

http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/eqip/

Eligible Applicants: Owners of land in agricultural or forest production or persons who are engaged in livestock, agricultural or forest production on eligible land and that have a natural resource concern on the land

Funding Available: Financial and technical assistance to agricultural and forestland producers through contracts up to 10 years. Not to exceed $300,000 for all EQIP contracts entered into during any six-year period. If NRCS determines project has special environmental significance the payment limitation is a maximum of $450,000.

Conservation Stewardship Program (CSP)

CSP helps agricultural producers maintain and improve their existing conservation systems and adopt additional conservation activities to address priority resources concerns. Through CSP, participants take additional steps to improve resource condition including soil quality, water quality, water quantity, air quality, and habitat quality, as well as energy. Participants earn CSP payments for conservation performance - the higher the performance, the higher the payment.

http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/csp/

Wetlands Reserve Easements (WRE)

WRE provides habitat for fish and wildlife, including threatened and endangered species, improve water quality by filtering sediments and chemicals, reduce flooding, recharge groundwater, protect biological diversity and provide opportunities for educational, scientific and limited recreational activities.

NRCS also provides technical and financial assistance directly to private landowners and Indian tribes to restore, protect, and enhance wetlands through the purchase of a wetland reserve easement. https://www.nrcs.usda.gov/programs-initiatives/wre-wetland-reserve-easements

Agricultural Land Easements (ALE)

ALE is designed to protect the long-term viability of the nation's food supply by preventing conversion of productive working lands to non-agricultural uses. Land protected by agricultural land easements provides additional public benefits, including environmental quality, historic preservation, wildlife habitat and protection of open space.

https://www.nrcs.usda.gov/programs-initiatives/acep-agricultural-conservation-easement-program

Emergency Watershed Protection (EWP)

The EWP program was set up by Congress to respond to emergencies created by natural disasters. The United States Department of Agriculture's Natural Resources Conservation Service is responsible for administering the program. EWP is designed to relieve imminent hazards to life and property caused by floods, fires, windstorms, and other natural occurrences. It is not necessary for a national emergency to be declared for an area to be eligible for assistance. Activities include providing financial and technical assistance to remove debris from streams, protect destabilized streambanks, establish cover on critically eroding lands, repairing conservation practices, and the purchase of flood plain easements. The purpose of EWP is to help groups of people with a common problem. EWP is generally not an individual assistance program. All projects undertaken must be sponsored by a political subdivision of the State, such as a city, county, general improvement district or conservation district, or by a tribal government.

http://www.nrcs.usda.gov/wps/portal/nrcs/main/or/programs/financial/ewp/

Other NRCS Programs

There are other NRCS programs that are specific to Oregon geographic areas---Wildfire Rehabilitation Initiative, Organic Initiative, drought funding, and restoration funding---see the Oregon NRCS link for more information on those: http://www.nrcs.usda.gov/wps/portal/nrcs/main/or/programs/financial/eqip/

Anyone applying for EQIP or any of the other NRCS grants for the first time should schedule a meeting with NRCS to discuss their options before moving forward.

U.S. Department of Agriculture
Rural Development Water and Waste Disposal Direct Loans and Grants

Eligible Projects: Pre-construction and construction associated with building, repairing, or improving drinking water, solid waste facilities and wastewater facilities

Eligible Applicants:

- Cities or towns with fewer than 10,000 population
- Counties, special purpose districts, non-profit corporations or tribes unable to get funds from other sources at reasonable rates and terms

Funding Available: Loans (40-year term), grants in some cases, interest rates vary (currently 2.125 – 3.5%)

How To Apply: Applications accepted year-round on a fund-available basis. http://www.rd.usda.gov/programs-services/water-waste-disposal-loan-grant-program

U.S. Department of Commerce
Community Development Block Grant Planning Program

Region 10 HUD
Seattle Regional Office
Phone: (206) 220-5101
http://portal.hud.gov/hudportal/HUD?src=/states/washington/offices

https://www.hud.gov/program_offices/comm_planning/cdbg

Eligible Projects: Comprehensive plans, Infrastructure plans, Feasibility studies, Community action plans, Low-income housing assessments

Eligible Applicants: Projects must principally benefit low- to moderate-income people in non-entitlement cities and counties.

- Cities or towns with fewer than 50,000 people
- Counties with fewer than 200,000 people

Funding Available: Grants

- Up to $24,000 for a single jurisdiction
- Up to $35,000 for single jurisdiction projects that address urgent public health and safety needs
- Up to $40,000 for multiple jurisdictions/joint application

How To Apply: http://portal.hud.gov/hudportal/HUD?src=/states/washington/offices

Rural Community Assistance Corporation (RCAC)

Environmental Programs
1020 S.W. Taylor Street Suite 450
Portland, OR 97205

Local contacts:
RosAnna Noval, Rural Development Specialist 503-308-0207
Email: rnoval@rcac.org
Website: www.rcac.org

At the national level, RCAC has a variety of loans for water and/or wastewater planning, environmental work, and other work to assist in developing an application for infrastructure improvements

Eligible Applicants: Non-profit organizations, public agencies, tribes, and low-income rural communities with a 50,000 population or less, or 10,000 or less if guaranteed by USDA Rural Development financing.

Funding Available:

- Maximum $50,000 for feasibility loan
- Maximum $350,000 for pre-development loan
- 1 year term
- 5.5% interest rate

How To Apply: Applications accepted anytime. www.rcac.org

National contact: Josh Griff, 720-951-2163, jgriff@rcac.org

Water Research Foundation - Source Water Protection Cost-Benefit Tool

This is a free, online suite of tools designed to assist in evaluating the triple bottom-line costs and benefits of different source water protection options. Cost/benefit calculations help evaluate, prioritize, justify, and ultimately implement source water protection initiatives. https://www.waterrf.org/research/projects/benefit-cost-analysis-tool

Healthy Watersheds Consortium

The Healthy Watersheds Consortium Grant Program has just published a Request for Proposals (RFP) to support local projects that protect and sustain healthy watersheds (including drinking water sources). Through this program, EPA will provide approximately $3.75 million over six years to the U.S. Endowment for Forestry and Communities for projects that develop and/or support state, interstate, and tribal healthy watersheds programs and enhance collaboration among the many groups who benefit from protecting healthy watersheds such as drinking water utilities, hunters and fisherman, foresters and farmers, and more. The Endowment is also matching a portion of EPA's financial commitment to the partnership and expects to leverage additional funding from other public and private sources.

The goal of the Healthy Watersheds Consortium Grant Program is to accelerate strategic protection of healthy, freshwater ecosystems and their watersheds. This goal will be achieved by: Funding key projects identified in existing watershed protection or conservation plans; Building the sustainable organizational infrastructure, social support, and long-term funding commitments necessary to implement large-scale protection of healthy watersheds; and supporting innovative or catalytic projects that may accelerate or broadly advance the field of practice for watershed protection efforts. For more information and to view and download the RFP and other helpful documents, visit the website: https://www.usendowment.org/

For questions, please contact Peter Stangel at peter@usendowment.org.

Ecotrust

http://www.ecotrust.org/

Ecotrust works to protect and restore watersheds and the economic and public health of the communities that depend upon them. Ecotrust develops and applies strategic approaches that improve habitat for native fish and wildlife, create local jobs and recreational opportunities, increase public awareness of the value of nature's services like water, and ensure a more reliable access to clean water for all members of the Oregon communities. Ecotrust provides Ecosystem Services, GIS Analysis, Mapping, Cartography, Data and Software Development, Economic Impact Assessment, etc.

Ecotrust Forest Management

http://ecotrustforests.com

Ecotrust Forest Management is a for-profit forestland investment management company that acquires and manages land on behalf of investors and forestland owners to enhance forest health and productivity, and to produce a diverse array of forest products and services including timber, biomass, carbon, and improved habitat and water quality. Where possible, our goal is to transition land to long-term, local, stewards of land like Tribes, Community Forests, Public or State Agencies etc. EFM is adept at using a wide array of financing sources— New Market Tax Credits, carbon credits, conservation easements, and restoration funding — to supplement private capital resources in the acquisition and management of forestland. Contact: info@ecotrustforests.com

LAND TRUSTS

Resources to assist in locating a land trust can be found here:
http://findalandtrust.org/states/oregon41

Coalition of Oregon Land Trusts

The Coalition of Oregon Land Trusts (COLT) is a newly formed nonprofit representing and serving Oregon's land trusts. Its mission is to serve and strengthen the land trust community in Oregon. Oregon's land trust community is working at local, regional, and statewide scales with landowners, communities, public agencies and other partners to maintain the state's natural heritage and the economies it supports. COLT will accomplish its mission by strengthening public policies and programs that are supportive of land conservation, helping to build capacity within and across land trusts, and communicating to key audiences about the role of land trusts in conserving Oregon's natural heritage and healthy human communities that depend on it. There are currently 18 land trusts that are members of COLT.

Coalition of Oregon Land Trusts
322 NW 5th, Suite 312 Portland, OR 97209
Phone: 503-719-4732 http://oregonlandtrusts.org/

Land Trust Alliance

The Land Trust Alliance is a national conservation organization that works preserve land through conservation and easements, so land and natural resources get protected. The Alliance is based in Washington, D.C., and has several regional offices.

Northwest Conservation Manager
1353 Officers Row Vancouver, WA 98661

Phone: (971) 202-1483 http://www.landtrustalliance.org/

Individual land trusts which may be of assistance include:

The Trust for Public Land

http://www.tpl.org/services/conservation-transactions

The Nature Conservancy

http://www.nature.org/

FOUNDATIONS

The Oregon Community Foundation / Community Grant Program

Eligible Projects: Community Livability, Environment & Citizen Engagement (*10 to 20 percent of grants*)

- Promote leadership development, volunteerism, immigrant integration, and civic participation
- Support stewardship and appreciation of Oregon's outdoor spaces and scenic beauty
- Address social, economic and environmental challenges or opportunities by bringing together disparate stakeholders
- Preserve places essential to communities' civic and historic identities

Eligible Applicants: nonprofits with tax-exempt status under Section 501(c)(3)

Funding Available: average grant is $20,000

Contact: https://oregoncf.org/grants-and-scholarships/grants/community-grant-program/

National Fish and Wildlife Foundation

Eligible Projects: Environmental Solutions for Communities (1:1 match required)

- Supporting sustainable agricultural practices and private lands stewardship;
- Conserving critical land and water resources and improving local water quality;
- Restoring and managing natural habitat, species and ecosystems that are important to community livelihoods;
- Facilitating investments in green infrastructure, renewable energy and energy efficiency; and
- Encouraging broad-based citizen and targeted youth participation in project implementation.

Eligible Applicants: non-profit 501(c) organizations, state government agencies, local governments, municipal governments, Indian tribes, educational institutions

Funding Available: grants range from $25,000 to $100,000

Contact: 202-595-2434 - Community-Based Conservation

Access Fund Foundation

Eligible Projects: land acquisitions; considering the management and financial resources of land ownership, the Access Fund views land acquisitions as a tool of last resort and have adopted the following guidelines for land acquisition projects. If you are requesting funds for a land acquisitions please call the Access Fund before submitting your application.

- The area must be imminently threatened with permanent closure or sale to an outside party that may consider land development opportunities or other uses threatening its climbing and/or access resources.
- The area can be acquired for a reasonable price (reasonable price being one that falls within existing market values and is not in excess of appraised value), together with a reasonable budget (including secured funding) or secured exit-strategy for management by another land trust, local climbers organization or governmental agency.
- A fully executed purchase agreement stating how the project will be funded is required before Access Fund grant funds will be allocated to any acquisition.
- A high degree of matching funds is required. The Access Fund's role in land acquisitions is as an additional, not primary, funding resource.
- Applicants whose projects require continued payments and/or financing should submit a plan describing how these payments will be met in the future. These include, but are not limited to, property tax payments, loan payments, lease and mortgage payments. This payment plan will be taken into consideration during the grant review process.

Eligible Applicants: Local climbing groups, individuals or organizations (Note: tax exempt 501(c)(3) status is not a pre-requisite); governmental agencies that wish to sponsor or organize a local project; conservation organizations and land trusts.

Funding Available: $1,000 to $4,000. (The Access Fund considers requests for over $10,000, but these projects should have national significance and utilize a high degree of matching funds.)

Contact: http://www.accessfund.org/

The Collins Foundation

Eligible Projects: land acquisitions; grants are for projects that directly benefit the residents of Oregon

Eligible Applicants: nonprofits with tax-exempt status under Section 501(c)(3) / agencies that have current registration with the offices of the Oregon State Attorney General and the Secretary of State

Funding Available: varies; grants may range from $3000 to $150,000

Contact: www.collinsfoundation.org

Giles W. and Elise G. Mead Foundation

Eligible Projects: Preserving and improving the environment; primary emphasis forestry, fisheries and the sustainable use of natural resources in western North America

Eligible Applicants: nonprofits with tax-exempt status under Section 501(c)(3) in western North America

Funding Available: past grants ranged from $15,000 to $100,000

Contact: http://www.gileswmeadfoundation.org/

Rose E. Tucker Charitable Trust

Eligible Projects: giving limited to organizations and projects in Oregon, with emphasis on the metropolitan Portland area; land acquisition is eligible

Eligible Applicants: nonprofits with tax-exempt status under Section 501(c)(3)

Funding Available: past grants ranged from $6,000 to $150,000

How to Apply: apply anytime; board meets approximately every 2 months

Contact: Tuckertrust@stoel.com

Doris Duke Charitable Foundation

Eligible Projects: The foundation's grant-making is designed to provide frameworks and concrete examples of how practitioners can protect biodiversity in light of climate change through strategic land conservation. The program's adaptation efforts focus on three critical land conservation activities undertaken by non-profit organizations and government natural resource agencies:

- Habitat conservation planning (i.e., the identification of which sites should be conserved in their natural state to benefit wildlife);
- Permanent land protection (i.e., the acquisition of conservation easements or fee title to secure high priority sites); and C) Management of lands already in protected status. The goal for each of these activities is to encourage the conservation community to augment the dominant species-based approach to wildlife conservation with a focus on maintaining ecosystem functionality as climate change takes hold.
- The program has adopted three approaches to achieve its objectives: 1) Identifying resilient landscapes; 2) Protecting resilient landscapes; and 3) Managing conserved lands.

Eligible Applicants: nonprofits with tax-exempt status under Section 501(c)(3)

Funding Available: past grants ranged in the $100K

Contact: http://www.ddcf.org/what-we-fund/environment/

Bonneville Environmental Foundation

Eligible Projects: renewable power and acquire, maintain, preserve, restore, protect, and/or sustain fish and wildlife habitat within the Pacific Northwest.

Interest area: Watershed Restoration Program---supports restoration of damaged watershed ecosystems; supports communities trying to heal their local watersheds by supporting watershed restoration projects grounded in the best available watershed science

Eligible Applicants: nonprofit organizations

Funding Available: varies

Contact: www.b-e-f.org

The Bullitt Foundation

Program priorities:

- Manage freshwater resources: control, use, distribution, conservation;
- Conserve and restore resilient watersheds, wetlands and estuaries;
- Maintain a working land base for sustainable agriculture and forestry;
- Enforce laws and policies intended to assure air and water quality;
- Create landowner incentives for maintaining and enhancing ecosystem services, including the development of market-based mechanisms.

Eligible Applicants: nonprofit organizations in Washington, Oregon, Idaho, western Montana, south-central Alaska, and British Columbia. Within that broad geographic range, work is targeted to specific sub-regions generally associated with major population centers.

Funding Available: varies---past grants ranged from $10,000 to over $600,000

Contact: http://www.bullitt.org/

Weyerhaeuser Foundation

Eligible Projects: forestry practices, manufacturing's effects on air, water and land; free trade, recycling, diversity, land conservation and environmental education; land acquisitions or conservation easement projects may fit with the Foundation's priorities and goals

Eligible Applicants: educational institutions, non-profit organizations, research institutions in Oregon and Washington

Funding Available: $1,000 - $50,000

Contact: http://www.wfamilyfoundation.org/

Laird Norton Foundation

Eligible Projects: projects contribute to a heightened awareness of the ecological, social and economic significance of water sources and watersheds. Preference will be given to projects which demonstrate innovative measures for protecting and restoring water resources and which involve local communities and/or regional institutions.

Eligible Applicants: nonprofit organizations working in Hood Canal (WA), Upper Deschutes (OR), and Rogue (OR) watersheds

Funding Available: varies; past grants ranged from $10k to $100k

Contact: http://www.lairdnorton.org