

Updated Source Water Assessment

City of Sandy

PWS #4100789

June 2019

Prepared for:

City of Sandy



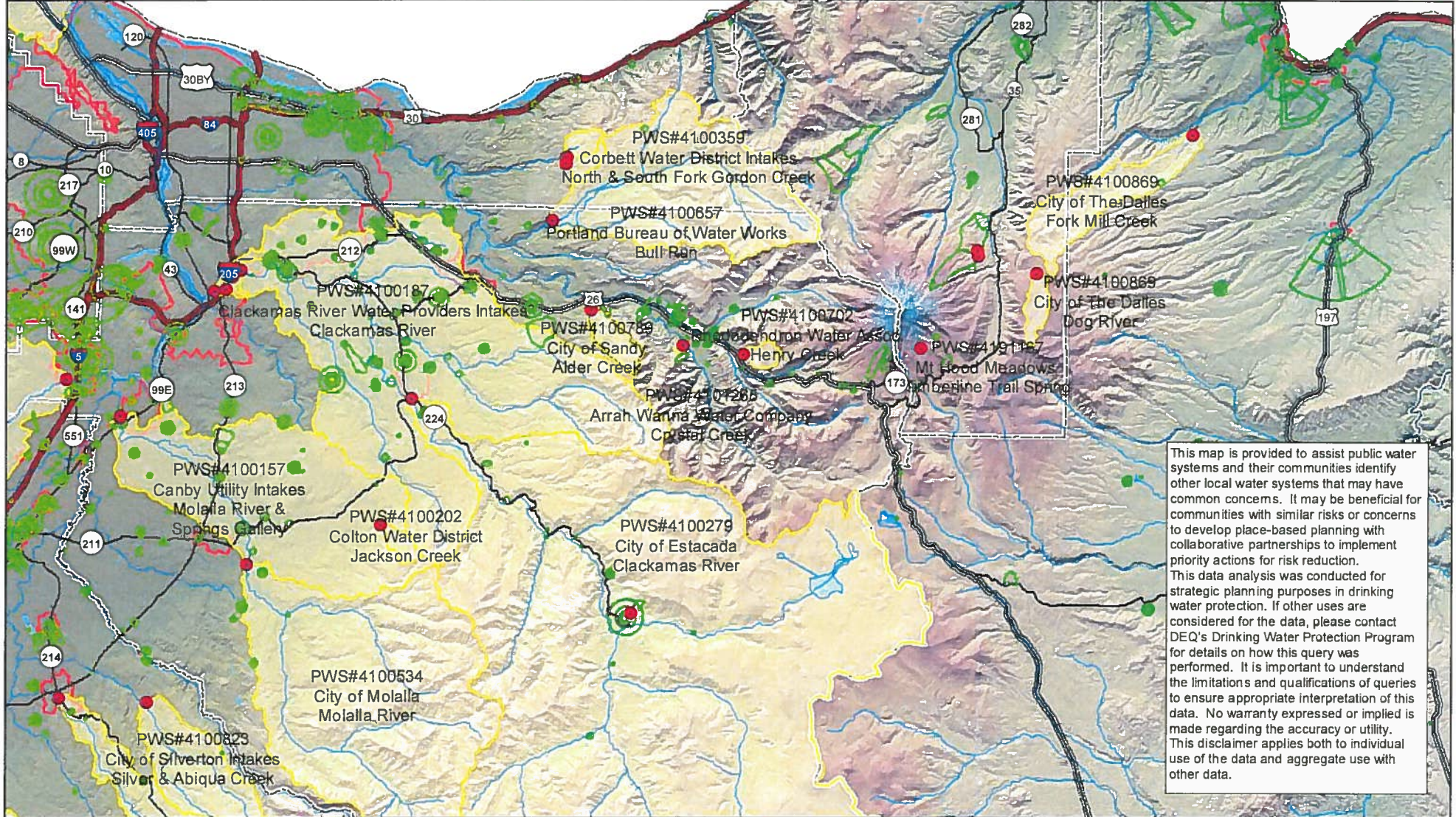
Prepared by:



DEQ

State of Oregon
Department of
Environmental
Quality

**Figure 1. City of Sandy (PWS 4100789)
Drinking Water Source Area
and Adjacent Source Areas, Public Water Systems (PWSs)**

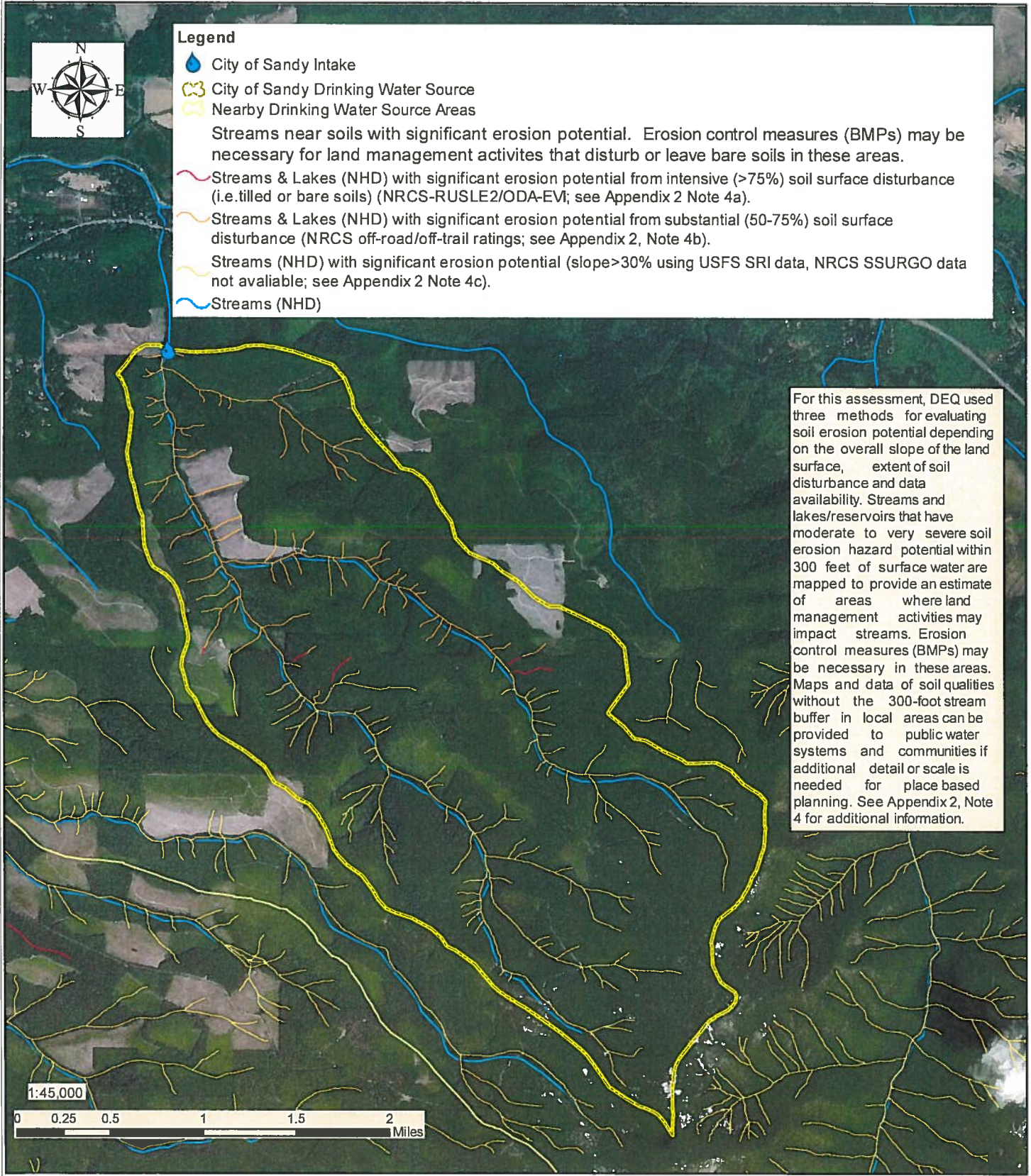


This map is provided to assist public water systems and their communities identify other local water systems that may have common concerns. It may be beneficial for communities with similar risks or concerns to develop place-based planning with collaborative partnerships to implement priority actions for risk reduction. 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.








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/Water Quality Division/Drinking Water Protection Program/GIS. Projection: Oregon Lambert (Lambert Conformal Conic) GCS_North_American_1983, Datum: D_North_American_1983 File: /deq/hq1/dwp/SWA Reports & Plan/Update SWA SW 2016/PWSReports/GIS/SW/lametteBas in USWA_Fig1_PWSVcity_Sandy.mxd Prepared by: bbs 20MAY2019

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 in the "orshade.sid" dataset displayed here. The data set is provided for use by the Oregon Geospatial Data Center.

Figure 2. City of Sandy (PWS 4100789) Drinking Water Source Areas with Erosion Potential for Management Activities with Soil Surface Disturbance
(See Appendix 2 for Key to map details and metadata)



Legend

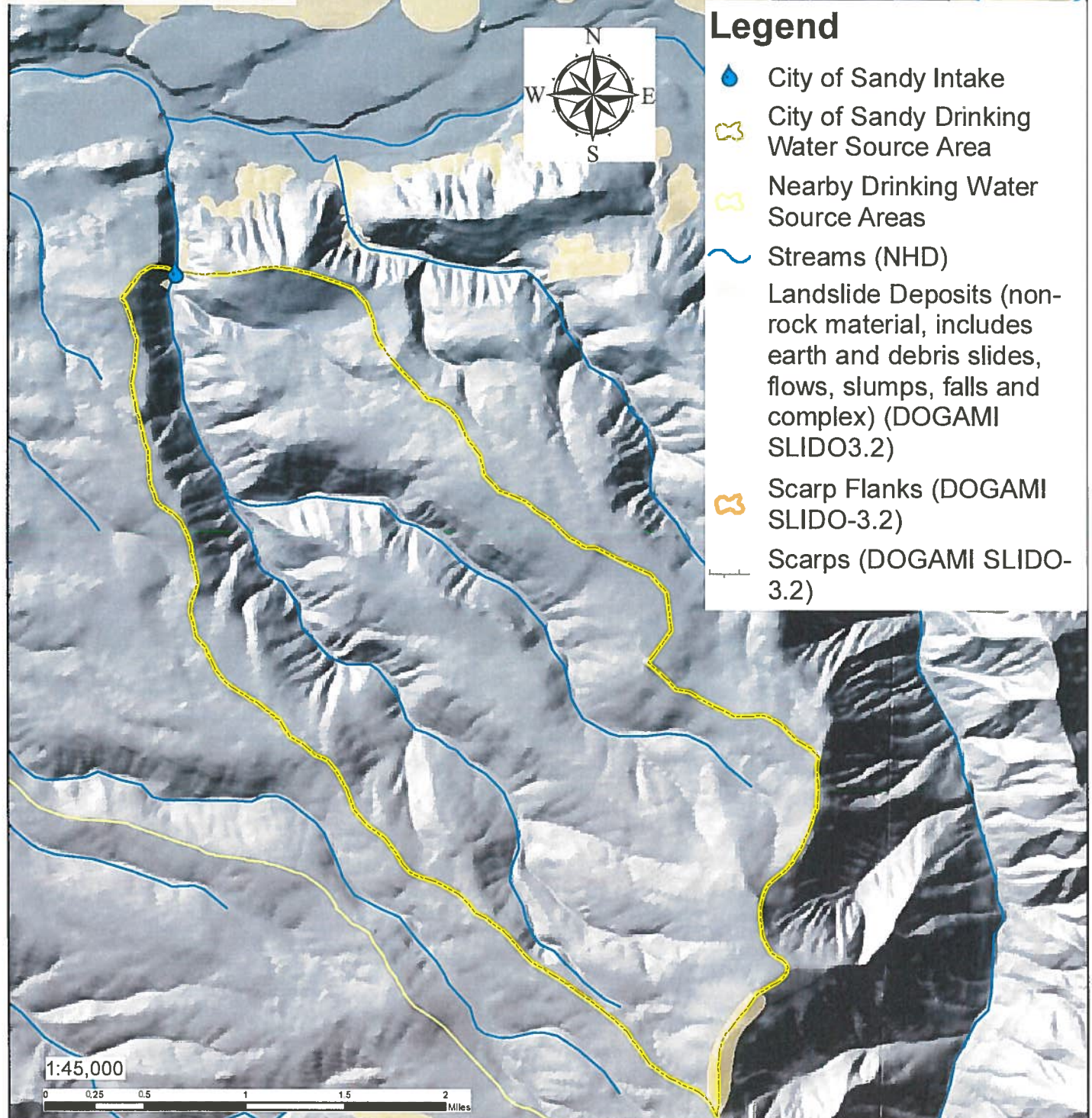
-  City of Sandy Intake
-  City of Sandy Drinking Water Source
-  Nearby Drinking Water Source Areas
-  Streams & Lakes (NHD) with significant erosion potential from intensive (>75%) soil surface disturbance (i.e. tilled or bare soils) (NRCS-RUSLE2/ODA-EVI; see Appendix 2 Note 4a).
-  Streams & Lakes (NHD) with significant erosion potential from substantial (50-75%) soil surface disturbance (NRCS off-road/off-trail ratings; see Appendix 2, Note 4b).
-  Streams (NHD) with significant erosion potential (slope>30% using USFS SRI data, NRCS SSURGO data not available; see Appendix 2 Note 4c).
-  Streams (NHD)

For this assessment, DEQ used three methods for evaluating soil erosion potential depending on the overall slope of the land surface, extent of soil disturbance and data availability. Streams and lakes/reservoirs that have moderate to very severe soil erosion hazard potential within 300 feet of surface water are mapped to provide an estimate of areas where land management activities may impact streams. Erosion control measures (BMPs) may be necessary 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 Appendix 2, Note 4 for additional information.








1:45,000
0 0.25 0.5 1 1.5 2 Miles

**Figure 3. Sandy (PWS 4100789)
Drinking Water Source Area Landslide Hazards Map
(See Appendix 2 for Key to map details and metadata)**

DOGAMI Landslide Information



Legend

-  City of Sandy Intake
-  City of Sandy Drinking Water Source Area
-  Nearby Drinking Water Source Areas
-  Streams (NHD)
-  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)











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 from LIDAR data is available. USGS 1:25000 DEM data was converted to hillshade by OR Dept. of Forestry (2008-12-29). The LIDAR dataset is available at the website note in the Key to Figures & Tables.
Oregon Department 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: Yoloq14061SWA Reports & Plans/Update SWA SH2016/PWS Reports/4100789_Sandy/USWA_Fig3_LandslideSusceptibility_Sandy.mxd
Prepared by: bts 20MA/2019

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**Figure 4. City of Sandy (PWS 4100789)
Drinking Water Source Area with Transportation Corridors,
Potential Anthropogenic Sources and Land Ownership/Use
(See Appendix 2 for Key to map details and metadata)**

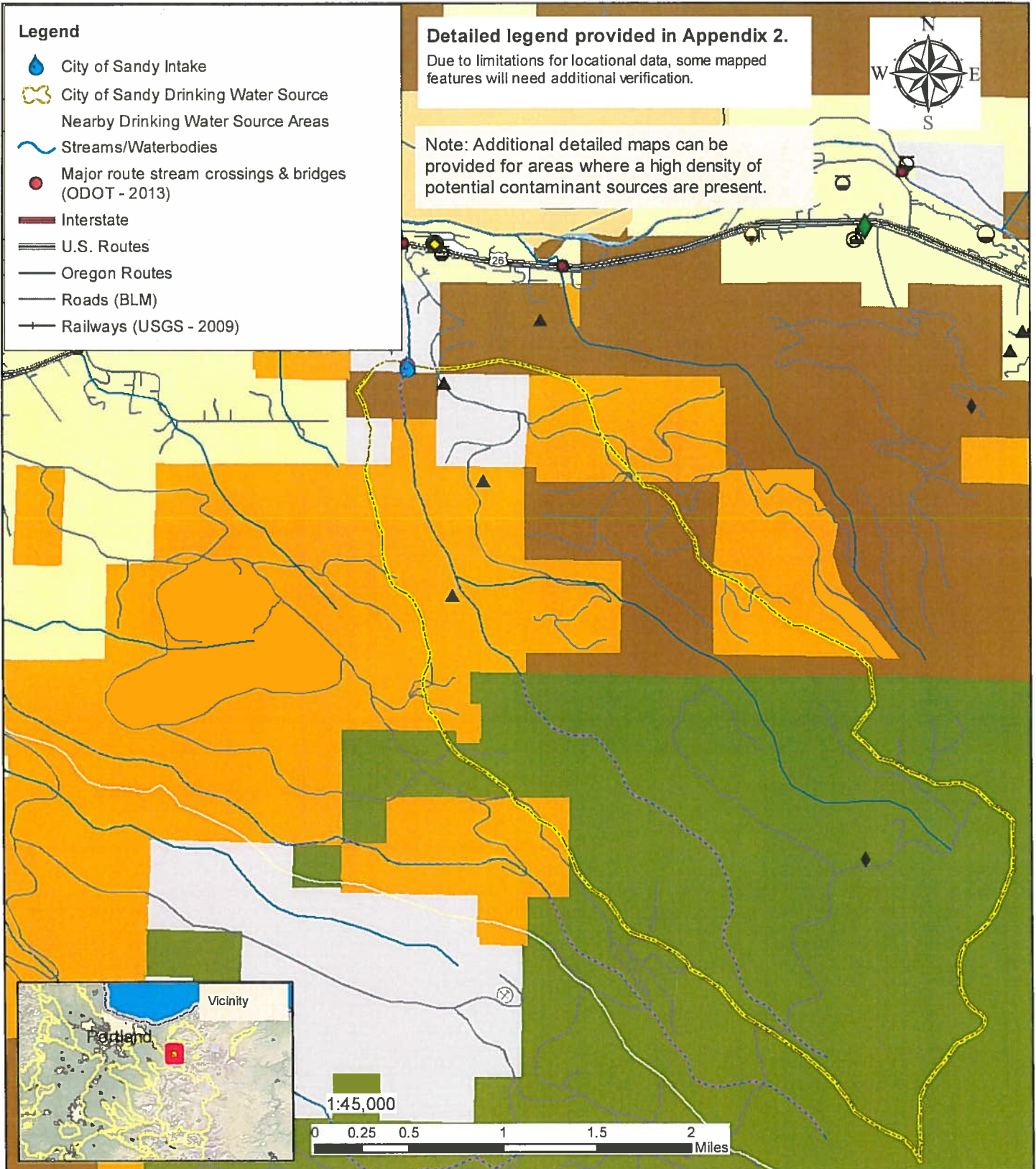
Legend

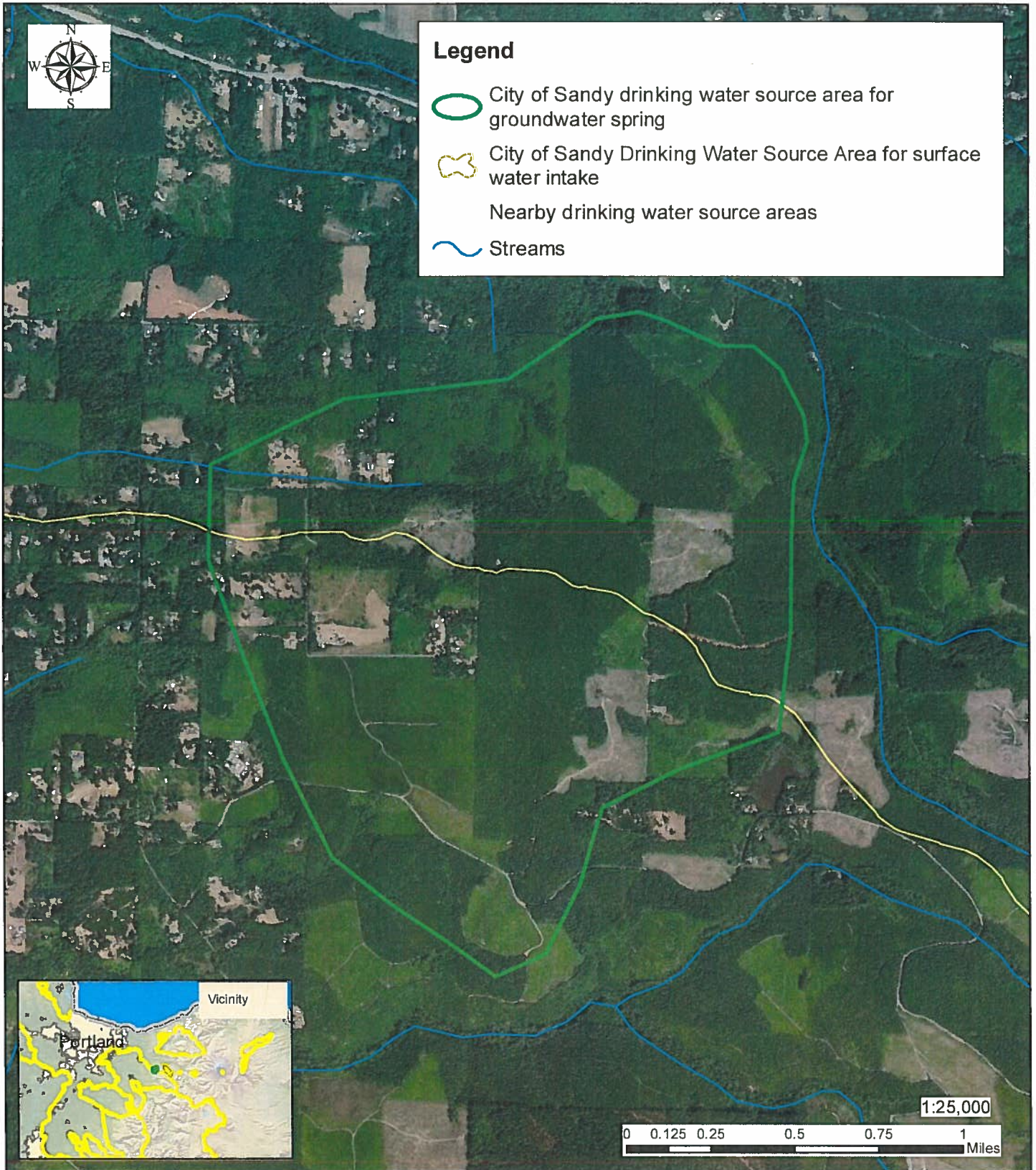
-  City of Sandy Intake
-  City of Sandy Drinking Water Source
-  Nearby Drinking Water Source Areas
-  Streams/Waterbodies
-  Major route stream crossings & bridges (ODOT - 2013)
-  Interstate
-  U.S. Routes
-  Oregon Routes
-  Roads (BLM)
-  Railways (USGS - 2009)

Detailed legend provided in Appendix 2.

Due to limitations for locational data, some mapped features will need additional verification.

Note: Additional detailed maps can be provided for areas where a high density of potential contaminant sources are present.





**Figure 5b. City of Sandy (PWS 4100789)
Groundwater Source Area - Potential Anthropogenic Sources,
Transportation Corridors and Land Ownership/Use
(See Appendix 2 for Key to map details and metadata)**

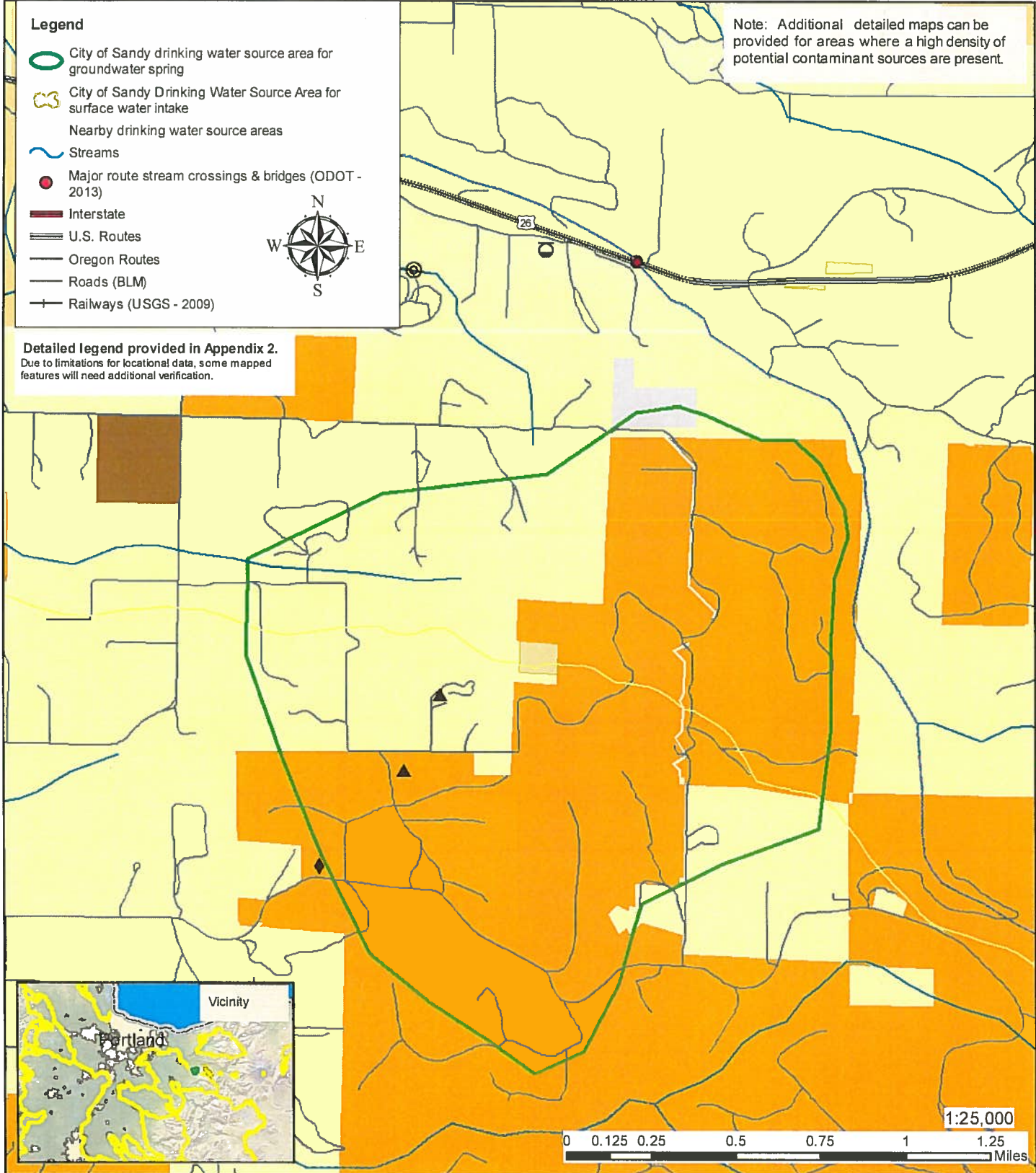




Table 1. Public Drinking Water System Land Use and Susceptibility Analysis Summary (See Appendix 2 for Key to Tables and Notes)

Public Water System Name **City of Sandy**
 PWS ID **4100789**
 Drinking Water Source Name **Alder Creek and Brownell Springs**
 County Served **Clackamas**
 Subbasin **Lower Columbia- Sandy**
 Population (includes wholesale buyers)⁽²⁾ **10,655**
 Number of Public Water Systems Served⁽²⁾ **2**

Drinking Water Source Area (DWSA) Size(1)	Alder Creek SW Source Area (sq. mi.)	Brownell Springs GW Source Area (sq. mi.)	Notes
		6.88	
Stream Miles (NHD) in DWSA	35	NA	

Land Use / Ownership ⁽³⁾	Owner Type	Area (sq. mi.)	% of DWSA	Area (sq. mi.)	% of DWSA	Notes
		Agricultural				
	Private Industrial Forest	1.59	23.1%	1.51	65.0%	
	Private (Urban)					
	Private (Rural)			0.79	34.1%	
	Local Govt	0.28	4.1%	0.01	0.5%	
	State Forest					
	Other State Lands			0.01	0.4%	
	BLM	0.92	13.4%			
	USFS	4.08	59.4%			
	Other Federal Lands					
	Tribal					
	Other					

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.

Potential Pollutants (see Table 2 for potential pollutants based on regulatory database search and Figures for approximate locations)	Stream Miles in Erodible Soils ⁽⁴⁾	35	NA	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)	100.00%	NA	
	Shallow Landslide Potential	see note	NA	
	Landslide Deposits ⁽⁵⁾ (DOGAMI - SLIDO 3.2)	limited area near intake- see note	NA	

More details on shallow landslide susceptibility may be available. Contact DEQ Drinking Water Protection for additional information.

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	Filtration and coagulation	Complete treatment train: SW- Rapid Sand filtration, coagulation, rapid mix, pre pH adjustment, post hypochlorination and sedimentation GW- Resid. Maint. Gas chlorination
	Safe Drinking Water Information System Results ⁽⁶⁾		MCL Violations and Significant Detections (2008-2018)(6)
	Regulated volatile organic chemicals, synthetic organic chemicals and inorganic compounds		Not detected
	Disinfection byproducts (Total Trihalomethanes (TTHM), Haloacetic acids (five) (HAA5), bromate, and chlorite)	HAA5 (2014-2018)	The distribution system had 26 alerts for (HAA5) between 12/16/2014 and 2/6/2018. The detections exceed the MCL but under BCA. The detects area from disinfection byproducts, quarterly sampling to continue and there is a public notice distributed every quarter.
	Bacteria (E.coli and TCR=Total Coliform Rule)	TCR (2010, 2011 and 2018)	The source tested positive for total coliform (TCR) on 10/19/2010, 12/13/2011 and 7/7/2018. Each detect triggered 3 repeat samples in which there was no further TCR presence.
	DEQ/OHA Source Water Monitoring project test data ⁽⁷⁾	Source water not analyzed	
	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: Summary of Potential Sources of Pollution identified in the source area for the City of Sandy as identified in readily accessible state and federal databases and GIS layers Updated Source Water Assessment

see Appendix 2 for Key to Tables for Notes and Descriptions of Acronyms

See Appendix 5 for detailed list of potential sources including potential sources identified in the area delineated area for the water sources.



PWS NAME: City of Sandy
PWS Number: 4100789

- This information supplements the Original Source Water Assessment Inventory dated between 2000 and 2005 and should be used in conjunction with the original inventory to provide a more detailed analysis of potential sources of pollution.
- Note that due to state database limitations, some sites will require further research to verify presence and location.

Alder Creek Surface Water Source Area				
Summary of Regulatory Database Results - State and Federal - see Appendix 5 for detailed list				
DEQ PCS Code	Potential Contaminant Source (PCS) Type	Relative Surface Water Risk	Count	
Agricultural\Forest				2
A11	Managed Forest Lands - Clear-cut Harvested - < 35 yrs.	H	1	
A13	Managed Forest Lands - Road Density - > 2 mi/sq. mi	H	1	
Miscellaneous				4
M13	Random Dumpsites	H	1	
M51	Landslide Area	H	1	
M54	Surface Water on 303d list	H	2	

Brownell Springs Groundwater Source Area				
Summary of Regulatory Database Results - State and Federal - see Appendix 5 for detailed list				
DEQ PCS Code	Potential Contaminant Source (PCS) Type	Relative Surface Water Risk	Count	
Agricultural\Forest				1
A11	Managed Forest Lands - Clear-cut Harvested - < 35 yrs.	M	1	
Miscellaneous				2
M09	Homesteads - Rural - Septic Systems < 1/Acre	L	1	
M54	Surface Water on 303d list	L	1	

Appendix #1

Developing Strategies For Drinking Water Protection

Many¹ 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,

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
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Quality

Water Quality - Drinking Water Protection

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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>

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

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.




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 activities 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 available; 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) (Location 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 verification.)
-  Water Quality domestic wastewater treatment sites (DEQ - SIS as of 1/25/2016)
-  Water Quality permits (DEQ - SIS as of 1/25/2016)
-  Major route stream crossings and bridges (ODOT - 2013)
-  Water Quality effluent outfalls (DEQ -WQ as of 2009)
-  Water Quality Concern; lakes - Cat3 (DEQ - 2012)
-  Major route stream crossings & bridges (ODOT - 2013)
-  Water quality limited stream/lake, DEQ 303(d) list Cat 4A or 5, TMDL approved or needed (DEQ - 2012)
-  Water Quality Concern stream/lake, DEQ 303(d) Cat.3, Insufficient Data (DEQ - 2012)
-  Harmful Algal Bloom (HAB) Advisory from Oregon Health Authority (OHA)
-  Maximum extent of historic fire perimeters (2008 - 2018)



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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.



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

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 $\leq 30\%$, 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 ($\leq 30\%$), 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



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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



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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/DWPAAssessments.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.



















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<p>DC</p> <ul style="list-style-type: none"> Active Dry Store Closed Inactive Solvent Supplier 	<p>DEQ Dry Cleaners list Status indicates Facility type and information on historic and current solvent use. Facility Type:</p> <p><i>Dry Cleaner</i> - currently active <i>Dry Store</i>: 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. <i>Closed site</i>: 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 <i>Listed Inactive</i>: 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. <i>Solvent Supplier</i>: This may be a chemical supply businesses or individual dry cleaner that imports their own solvent from out-of-state</p> <p>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.</p>
<p>DWP-PCSS</p> <ul style="list-style-type: none"> area wide point source 	<p>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.</p>
<p>DWP-PCS (update)</p> <ul style="list-style-type: none"> 	<p>Potential sources of contamination (PCS) identified by the OHA or DEQ in the Source Water Assessment updates completed in 2016 - 2019. 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.</p>
<p>ECSI</p> <ul style="list-style-type: none"> 	<p>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</p>
<p>ECSI-NFA</p> <ul style="list-style-type: none"> 	<p>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.</p>
<p>HW</p> <ul style="list-style-type: none"> LQG SQG or CEG TSD 	<p>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</p>

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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.
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, incineration, 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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WQL Streams/ Lakes TMDL approved or needed — Insufficient 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 2012 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
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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 (November 2018). 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

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)	http://www.oregon.gov/DEQ/wq/programs/Pages/GWP-about.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)	http://www.noaa.gov/climate.html
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)	http://www.nesc.wvu.edu/pdf/ww/septic/epa_septic_guide.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
Groundwater protection and your septic system (National Small Flows Clearinghouse)	http://www.nesc.wvu.edu/pdf/ww/septic/septic_tank3.pdf
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)	http://ipmnet.org/
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	http://www.greengolfusa.com/tiki-index.php
EcoBiz Certified Landscapers and Auto Repair Shops	http://ecobiz.org/find-an-ecobiz/

Agriculture / Forestry Land Uses	
Tips for Small Acreages in Oregon (NRCS) - Fact Sheets on wells, septic systems, animals, crops, weeds, streamside erosion protection. Includes specific factsheets for Eastern and Western Oregon.	https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/people/?cid=stelprdb1167242
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)	http://www.oregon.gov/DEQ/Hazards-and-Cleanup/hw/Pages/Miscellaneous-Industries.aspx
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	http://oacd.org/conservation-districts/directory
Natural Resources Conservation Service, Oregon (NRCS)	http://www.or.nrcs.usda.gov/
NRCS Financial Assistance Programs	http://www.nrcs.usda.gov/wps/portal/nrcs/main/or/programs/financial/
Oregon Department of Fish and Wildlife Hatchery Information (ODFW)	http://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	http://www.fs.fed.us/pnw/
US Forest Service State & Private Forestry—Cooperative Forestry, Forest Health Protection, Sustainable Development & Urban/ Community Forestry	http://www.fs.fed.us/spf/
Water quality impacts information from US Forest Service - Part III: Chapter 10: Forest Management; Chapter 13: Pesticides and Part IV: Chapter 14-16 Animals	http://www.srs.fs.fed.us/pubs/gtr/gtr_srs039/
National Management Measures to Control Nonpoint Source Pollution from Forestry (EPA)	http://water.epa.gov/polwaste/nps/forestry/forestrymgmt_index.cfm
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:	https://www.oregon.gov/ODF/Documents/AboutODF/ForestCertificationFactsheet.pdf
American Tree Farm Systems (ATFS)	https://www.treefarmssystem.org/
Forest Stewardship Council (FSC)	https://us.fsc.org/en-us/certification
Sustainable Forestry Initiative (SFI)	http://www.oregonsfi.org/
Dovetail Partners, Inc.	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
Business and Industry tips for reducing water quality impacts (DEQ)	http://www.oregon.gov/deq/FilterDocs/dwpbusindtips.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)	http://www.oregon.gov/deq/FilterDocs/wq/wqpermit/docs/IndBMP021413.pdf
Illicit Discharge and Source Tracing Guidance Manual (Washington Stormwater Center)	http://www.wastormwatercenter.org/illicit-connection-illicit-discharge
Construction Stormwater Best Management Practices Manual (DEQ)	https://www.oregon.gov/deq/FilterPermitsDocs/BMPManual.pdf
Low Impact Development O&M guidance (Washington Stormwater Center)	http://www.wastormwatercenter.org/lid-mando/
Water quality impacts information from USFS - Part V: Chapter 18-20 Mining and Oil/Gas	http://www.srs.fs.fed.us/pubs/gtr/gtr_srs039/
Dam Safety Publications and Resources FEMA website	https://www.fema.gov/dam-safety-publications-resources
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	http://www.srs.fs.fed.us/pubs/gtr/gtr_srs039/

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 (January 2018).

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: www.orinfrastructure.org

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>



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 <http://www.orinfrastructure.org/>

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 \$30,000 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; www.orinfrastructure.org

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. <http://www.orinfrastructure.org/>

Special Public Works Fund (SPWF)

The Special Public Works Fund (SPWF) provides funds for publically owned facilities that support economic and community development in Oregon. Funds are available to public entities for planning, design, purchasing, improving and constructing publically owned facilities, replacing publically 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. <http://www.orinfrastructure.org/>

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. <http://www.orinfrastructure.org/>

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.

For more information, contact Harmony Burrigat at 503-986-0913.

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.

For more information, contact Becky Williams at 503-986-0869.

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.

For more information, contact Becky Williams at 503-986-0869.

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 (list as of 6/16).

WRD Watermasters

District 1

Nikki Hendricks
c/o Port of Tillamook Bay
4000 Blimp Blvd Ste 400
Tillamook, Oregon 97141
Ph: 503-815-1967

District 2

Lanaya Blakely
125 East 8th Avenue
Eugene, OR 97401-2926
Ph: 541-682-3620

District 3

Robert Wood
2705 E 2nd St
The Dalles, Oregon 97058
Ph: 541-506-2652

District 4

Eric Julsrud
201 S Humbolt, Suite 180
Grant County Courthouse
Canyon City, Oregon 97820
Ph: 541-575-0119

District 5

Greg Silbernagel
116 SE Dorion Ave
Pendleton, OR 97801
Ph: 541-278-5456

District 6

Shad Hattan,
10507 N McAlister Rd #6
La Grande, Oregon 97850
Ph: 541-963-1031

District 7

David Bates
401 NE First St., Suite 11
Enterprise, Oregon 97828
Ph: 541-426-4464

District 8

Rick Lusk
Baker County Courthouse
1995 3rd Street, Suite 180
Baker City, Oregon 97814
Ph: 541-523-8224 ext 231

District 9

Ron Jacobs
Malheur County Courthouse #4
251 B St W
Vale, Oregon 97918
Ph: 541-473-5130

District 10

JR Johnson
Harney County Courthouse
450 N Buena Vista #3
Burns, OR 97720
Ph: 541-573-2591

District 11

Jeremy Giffin
231 SW Scalehouse Loop,
Ste 103
Bend, Oregon 97702
Ph: 541-306-6885

District 12

Brian Mayer
513 Center St
Lakeview, Oregon 97630
Ph: 541-947-6038

District 13

Shavon Haynes
10 S Oakdale, Rm 309A
Medford, Oregon 97501
Ph: 541-774-6880

District 14

Jake Johnstone
700 NW Dimmick St.
Grants Pass, Oregon 97526
Ph: 541-479-2401

District 15

Susan Douthit
Douglas County Courthouse, Rm
306
Roseburg, Oregon 97470
Ph: 541-440-4255

District 16

Joel Plahn
725 Summer St NE, Ste A
Salem, Oregon 97301
Ph: 503-986-0889

District 17

Danette Watson
305 Main Street
Klamath Falls, Oregon 97601
Ph: 541-883-4182

District 18

Jake Constans
1400 SW Walnut St, Suite 240
Hillsboro, Oregon 97123
Ph: 503-846-7780

District 19

Greg Wacker
Physical Address:
225 N Adams
Coquille, Oregon 97423
Ph: 541-396-1905

District 20

Amy Kim
10722 SE Highway 212
Clackamas, Oregon 97015
Ph: 503-722-1410

District 21

Ken Thiemann
221 S Oregon St.
P.O. Box 427
Condon, OR 97823
Ph: 541-384-4207

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

<http://www.oregon.gov/ODA/SWCD/>

SWCD Program and Water Quality Program Manager: John Byers, 503-986-4718

The Soil and Water Conservation District (SWCD) Program provides services to the 45 Soil and Water Conservation Districts throughout Oregon (list current as of 6/16). SWCDs are local government entities that have authorities to address soil, erosion, and water quality issues.

Benton SWCD

456 SW Monroe Ave., Suite 110
Corvallis, OR 97333
Phone: 541 753-7208
Website: www.bentonswcd.org

Burnt River SWCD

3990 Midway Drive
Baker City, OR 97814
Phone: 541 523-7121 Ext. 109
Email: whitney.collins@bakercountyswcds.com

Clackamas SWCD

221 Molalla Ave., Suite 102
Oregon City, OR 97045
Phone: 503 210-6000
Website: www.conservationdistrict.org

Clatsop SWCD

750 Commercial St., Room 207
Astoria, OR 97103
Phone: 503 325-4571
Website: www.clatsopswcd.org

Columbia SWCD

35285 Millard Road
St. Helens, OR 97051
Phone: 503 397-4555
Website: www.columbiaswcd.com

Coos SWCD

371 N Adams St.
Coquille, OR 97423
Phone: 541 396-6879
Website: www.coosswcd.org

Crook County SWCD

498 SE Lynn Blvd.
Prineville, OR 97754
Phone: 541 447-3548

Curry County SWCD

29692 Ellensburg Ave.
Gold Beach, OR 97444
Phone: 541 247-2755 Ext. 0#
Website: www.currywatersheds.org

Deschutes SWCD

625 SE Salmon Ave., Suite 7
Redmond, OR 97756
Phone: 541 923-2204
Website: www.deschuteswcd.com

Douglas SWCD

2741 West Harvard Ave.
Roseburg, OR 97471
Phone: 541 957-5061
Website: www.douglasswcd.org

Eagle Valley SWCD

3990 Midway Drive
Baker City, OR 97814
Phone: 541 523-7121 Ext. 109

East Multnomah SWCD

5211 N Williams Ave.
Portland, OR 97217
Phone: 503 222-SOIL (7645)
Website: www.emswcd.org

Fort Rock / Silver Lake SWCD

17612 Highway 395
Lakeview, OR 97630
Phone: 541 947-5855
Email: LakeviewSWCD2@hotmail.com

Gilliam County SWCD

Dunn Office Building
333 S Main St.
Condon, OR 97823
Phone: 541 384-2672
Email: gilliamswcd@gmail.com

Grant SWCD

721 S Canyon Blvd.
John Day, OR 97845
Phone: 541 575-0135 Ext. 3
Email: jkehrberg@ortelco.net

Harney SWCD

530 Highway 20 S
Hines, OR 97738
Phone: 541 573-5010
Email: marty.suter@or.nacdn.net

Hood River SWCD

3007 Experiment Station Drive
Hood River, OR 97031
Phone: 541 386-4588 / 386-6719
Website: www.hooddriverswcd.org

Illinois Valley SWCD

Josephine Co. Office Building
102 S Redwood Highway
Cave Junction, OR 97523
Phone: 541 592-3731
Email: amy@ivstreamteam.org

Jackson SWCD

89 Alder Street
Central Point, OR 97502
Phone: 541 664-1070
Website: www.jswcd.org

Jefferson County SWCD

625 SE Salmon Ave., Suite 6
Redmond, OR 97756
Phone: 541 923-4358 Ext. 101
Email: debbe.chadwick@oacd.org

Josephine SWCD

1440 Parkdale Drive
Grants Pass, OR 97527
Phone: 541 474-6840
Email: joswcd@outreachinternet.com

Keating SWCD

3990 Midway Drive
Baker City, OR 97814
Phone: 541 523-7121 Ext. 109
Email: whitney.collins@bakercountyswcds.com

Klamath SWCD

2316 S 6th St., Suite C
Klamath Falls, OR 97601
Phone: 541 883-6932 Ext. 101
Website: www.klamathswcd.org

Lakeview SWCD

17612 Highway 395
Lakeview, OR 97630
Phone: 541 947-5855
Email: lakeviewswcd2@hotmail.com

Lincoln SWCD

23 North Coast Highway
Newport, OR 97365
Phone: 541 265-2631
Website: www.lincolnsxcd.org

Linn SWCD

33935 Highway 99E, Suite C
Tangent, OR 97389
Phone: 541 926-2483
Website: www.linnswcd.oacd.org

Malheur County SWCD

2925 SW Sixth Ave., Suite 2
Ontario, OR 97914
Phone: 541 889-2588 Ext. 101
Email: LRowe@malcoswcd.org

Marion SWCD

338 Hawthorne Ave. NE
Salem, OR 97301
Phone: 503 391-9927
Website: www.marionswcd.net

Monument SWCD

Columbia Power Building
311 Wilson St.
Monument, OR 97864
Phone: 541 934-2141
Website: www.monumentswcd.org

Morrow SWCD

430 Linden Way
Heppner, OR 97836
Phone: 541 676-5452
Email: swcdmanager@centurytel.net

Polk SWCD

580 Main St., Suite A
Dallas, OR 97338
Phone: 503 623-9680
Website: www.polksxcd.org

Sherman County SWCD

302 Scott St.
Moro, OR 97039
Phone: 541 565-3216 Ext. 3
Website: www.shermancountyswcd.com

Siuslaw SWCD

1775 Laurel Place, Suite 4
Florence, OR 97439
Phone: 541 997-1272
Website: www.siuswcd.com

Tillamook SWCD

4000 Blimp Blvd., Suite 200
Tillamook, OR 97141
Phone: 503 842-2240 Ext. 110
Website: tillamookcountyswcd.org/

Tualatin SWCD

1080 SW Baseline St., Suite B-2
Hillsboro, OR 97123
Phone: 503 648-3174 Ext. 4
Website: www.swcd.net

Umatilla County SWCD

1 SW Nye Ave., Suite 130
Pendleton, OR 97801
Phone: 541 278-8049
Website: www.umatillacountyswcd.com

Umpqua SWCD

1877 Winchester Ave.
Reedsport, OR 97467
Phone: 541 662-1341
Website: www.umpquasoilandwater.com

Union SWCD

10507 N McAlister Road, Room 7
La Grande, OR 97850
Phone: 541 963-1313
Website: unionswcd.org

Upper Willamette SWCD
780 Bailey Hill Road, Suite 5
Eugene, OR 97402
Phone: 541 465-6443 Ext. 102
Website: www.uwswcd.org

Wallowa SWCD
401 NE 1st St., Suite E
Enterprise, OR 97828
Phone: 541 426-4521
Email: cynthia.a.warnock@gmail.com

Wasco County SWCD
2325 River Road, Suite 3
The Dalles, OR 97058
Phone: 541 296-6178 Ext. 3
Website: www.wascoswcd.org

West Multnomah SWCD
2701 NW Vaughn St., Suite 450
Portland, OR 97210
Phone: 503 238-4775
Website: www.wmswcd.org

Wheeler SWCD
40535 Highway 19
Fossil, OR 97830
Phone: 541 468-2990
Website: www.wheelerswcd.org

Yamhill SWCD
2200 SW Second St.
McMinnville, OR 97128
Phone: 503 472-6403
Fax: 503 472-6407
Website: www.yamhillswcd.org

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: <http://seagrant.oregonstate.edu/sgpubs>.

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: <http://seagrant.oregonstate.edu/sgpubs> 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. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/or/home/?cid=stelprdb1249312>

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.

<http://www.nrcs.usda.gov/wps/portal/nrcs/detail/or/home/?cid=stelprdb1249312>

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>

http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/communitydevelopment/programs

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. <http://www.waterrf.org/resources/Pages/PublicWebTools-Detail.aspx?ItemID=8>

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: <http://usendowment.org/partnerships/hwcgrantprogram.html>

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: <http://www.oregoncf.org/grants-scholarships/grants/community-grants>

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>

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 5 Table 1: Inventory of Potential Sources of Pollution for Groundwater as identified in readily accessible state and federal databases and GIS layers
Updated Source Water Assessment
see Appendix 2 for Key to Tables for Notes and Descriptions of Acronyms

PWS NAME: City of Sandy-SW
PWS NUMBER: 4100789

This information supplements the Original Source Water Assessment Inventory dated between 2000 and 2005 and should be used in conjunction with the original inventory to provide a more detailed analysis of potential sources of pollution. Note that due to state database limitations, some sites will require further research to verify presence and location.

Primary Land										Data Source	
The majority of the lands within the City of Sandy drinking water source area are managed by United States Forest Service (USFS). There is also a strong influence of Private Industrial Forest and Bureau of Land Management (BLM) lands.										Land use map - Figure 4	
Other potential sources of pollution identified based on aerial photographs, topographic maps or local knowledge.											
Name										Data Source	
Forest-cutting and yarding of trees may contribute to increased erosion resulting in turbidity in the drinking water supply. Over application or improper handling of pesticides, fertilizers or petroleum products may impact the drinking water source.										aerial photograph	
Regulatory Database Results for the source area from Surface Water Intake - 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 PCS Type	Relative Risk
Previously identified in 2000-2005 Source Water Assessment (PWS should verify presence, potential risk and location)											
DWP - PCS - Clear-cuts	10052	A11 - Managed Forest Lands - Clear-cut Harvested - < 35 yrs.	Clear-cuts	Throughout DWPA	Sandy	Clackamas	2005	OR Dept. of Environmental Quality and OR Health Authority Source Water Assessment database (DEQ/OHA SWA 2000 - 2005)	A11	Managed Forest Lands - Clear-cut Harvested - < 35 yrs.	H
DWP - PCS - Landslides	10054	M51 - Landslide Area	Landslides	Throughout DWPA	Sandy	Clackamas	2005	OR Dept. of Environmental Quality and OR Health Authority Source Water Assessment database (DEQ/OHA SWA 2000 - 2005)	M51	Landslide Area	H
DWP - PCS - Random Dumpsite	10086	M13 - Random Dumpsites	Random Dumpsite	Road 3626	Sandy	Clackamas	2005	OR Dept. of Environmental Quality and OR Health Authority Source Water Assessment database (DEQ/OHA SWA 2000 - 2005)	M13	Random Dumpsites	H
DWP - PCS - Road Density	10053	A13 - Managed Forest Lands - Road Density - > 2 mi/sq. mi	Road Density	Throughout DWPA	Sandy	Clackamas	2005	OR Dept. of Environmental Quality and OR Health Authority Source Water Assessment database (DEQ/OHA SWA 2000 - 2005)	A13	Managed Forest Lands - Road Density - > 2 mi/sq. mi	H
Water Quality Limited streams											
Water Quality Limited streams, Cat3 - Alder Creek	1199596448080	Cat 3: Insufficient data - Flow Modification	Alder Creek	Not applicable	Not applicable	Not applicable	10/31/2014	OR Dept. of Environmental Quality Water Quality Assessment (DEQ/WQ)	M54	Surface Water on 303d list	H
Water Quality Limited streams, Cat4A & Cat5, DEQ-2012 - Alder Creek	1178298436080	Cat 4A: Water quality limited, TMDL approved - Temperature	Alder Creek	Not applicable	Not applicable	Not applicable	10/31/2014	OR Dept. of Environmental Quality Water Quality Assessment (DEQ/WQ)	M54	Surface Water on 303d list	H



Appendix 5: Table 2: Inventory of Potential Sources of Pollution within the Groundwater Source Area as identified in readily accessible state and federal databases and GIS layers - Updated Source Water Assessment
 see Appendix 2 for Key to Tables for Notes and Descriptions of Acronyms

PWS NAME: City of Sandy-GW
 PWS NUMBER: 4100789

- This information supplements the Original Source Water Assessment Inventory dated between 2000 and 2005 and should be used in conjunction with the original inventory to provide a more detailed analysis of potential sources of pollution.

- 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			
Lands within the City of Sandy groundwater drinking water source area are Private Industrial Forest lands and rural residential lands.								Land use map - Figure 4			
Other potential sources of pollution identified based on aerial photographs, topographic maps or local knowledge.											
Name								Data Source			
Forest- over application or improper handling of pesticides, fertilizers or petroleum products may impact the drinking water source.								aerial photograph			
Rural Residential- improper use, storage, and disposal of household chemicals, pesticides, fertilizers may impact drinking water. Excessive irrigation may cause transport of contaminants of groundwater. If not properly sited, designed, installed and maintained, septic systems can impact drinking water. Improperly installed or maintained wells and abandoned wells may provide a direct conduit for contamination to groundwater and drinking water source.								aerial photograph			
Regulatory Database Results for 8-Hour Time of Travel zone from Surface Water Intake - 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 PCS Type	Relative Risk
Previously identified in 2000-2005 Source Water Assessment (PWS should verify presence, potential risk and location)											
DWP - PCS - Clear-cuts	14987	A11 - Managed Forest Lands - Clear-cut Harvested - < 35 yrs.	Clear-cuts	Throughout DWPA for Brownell Spring		Clackamas	2005	OR Dept. of Environmental Quality and OR Health Authority Source Water Assessment database (DEQ/OHA SWA 2000 - 2005)	A11	Managed Forest Lands - Clear-cut Harvested - < 35 yrs.	M
DWP - PCS - Rural Homes	14988	M09 - Homesteads - Rural - Septic Systems < 1/Acre	Rural Homes	Throughout DWPA		Clackamas	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
Water Quality Limited streams											
Water Quality Limited streams, Cat4A & Cat5, DEQ-2012 - Unnamed Stream	1221974453742	Cat 4A: Water quality limited, TMDL approved- E. Coli	Unnamed Stream	Not applicable	Not applicable	Not applicable	38457	OR Dept. of Environmental Quality Water Quality Assessment (DEQ/WQ)	M54	Surface Water on 303d list	L

