State of Oregon
DEQ Department of Environmental Quality

Drinking Water Assessment for the Middle Willamette Water Quality Management Area

August 2026

Overview

- There are 83 public drinking water systems in the Middle Willamette Agricultural Water Quality Management Area which use groundwater and surface water sources to serve approximately 185,055 people regularly.
- 12 public water systems have received one or more alerts within the past ten years for exceeding the Maximum Contaminant Level Goal for *E. coli* bacteria. Two public water systems had a Maximum Contaminant Level violation within the past five years.
- 15 public water systems received an alert within the past ten years or a violation within the past five years for nitrate levels that exceed 5 milligrams per liter, or mg/L.
- There are 667 records of private domestic well sample results submitted to Oregon Health Authority's Domestic Well Safety Program. Of these, 58 measured nitrate concentrations greater than three mg/L.
- Contaminants related to agriculture have been detected in drinking water samples from public water systems.
- DEQ recommends public water systems use Source Water Protection Practices to prevent potential contamination and increase resiliency.
- Resources for addressing risks to drinking water supplies can be found in the Groundwater Resource Guide or Surface Water Resource Guide.

Water Use

There are 83 public water systems within the Middle Willamette Agricultural Water Quality Management Area that obtain drinking water from a combination of surface and groundwater sources. Drinking water is an important beneficial use under the Clean Water Act. When Clean Water Act standards are met in source waters, a drinking water treatment plant using standard technology can generate water meeting the Safe Drinking Water Act standards. **Figure 1** shows the drinking water source areas of the public water systems within the Middle Willamette Agricultural Water Quality Management Area. A drinking water source area is the land area that contributes water to a drinking water system. For surface water sources, it is the portion of a watershed that drains to the system's intake. For groundwater sources, it is the land surface overlying the part of the aquifer that supplies the system's wells and springs.

Of the 83 public water systems in the Middle Willamette Agricultural Water Quality Management Area:

- 24 are active community public water systems that use either groundwater, surface water, or a combination of the two sources to serve approximately 179,568 people on a regular basis, in addition to visitors at recreation sites.
- 16 are active non-transient, non-community workplace or school public water system that uses groundwater and surface water to serve 2,407 people regularly.
- 23 public water systems are transient non-community systems that are state-regulated and serve an estimated population of 1,850.

- 18 public water systems are currently inactive.

See **Table 1** for a list of the public water systems, their classifications, primary source and activity status, and populations served.

Human activities and natural conditions within a drinking water source area can affect the quality and quantity of water available to the drinking water system. Land use often shapes the type and level of human activity in a source area, as well as natural risks such as wildfire or naturally occurring contaminants. Some land uses can be potential sources of contamination. Agriculture, forestry, urban development, and other land uses can all introduce contaminants to drinking water. Knowing how land is used helps public water systems and communities identify and reduce these risks.

In the Middle Willamette Agricultural Water Quality Management Area, the western portion consists of private industrial forests and public lands managed by the Bureau of Land Management, the U.S. Forest Service, and the Oregon Department of Forestry. The eastern portion is mostly rural land (**Figure 2**).

Bacteria

Total coliform bacteria alerts and E. coli bacteria alerts for public water systems are generated by Oregon Health Authority when their presence is detected in sample results. Water systems sample for total coliform bacteria and confirmed detections trigger additional sampling for other pathogens (E. coli). Within the Middle Willamette Agricultural Water Quality Management Area, 12 public water systems had alerts for detections of *E. coli* bacteria in the past ten years (**Figure 1, Table 1**). Two public water systems had a violation with the Oregon Health Authority for *E. coli* bacteria in the past five years: Western Christian School and Ridgewood Dist Improv Co.

A public water system will receive a Maximum Contaminant Level violation for *E. coli* bacteria if they collect a sample indicating total coliforms are present and a resample is also positive for either fecal coliform or *E. coli* bacteria. When E. coli is detected, additional site-specific review is typically needed to evaluate the source of E. coli.

The public water systems with E. coli alerts are concentrated in the eastern portion of the management area, which is designated as private, rural land. To learn how to prevent bacterial contamination of surface water from different land uses, see section 2.4.2, “Bacteria Data and Surface Water Susceptibility,” in DEQ’s Surface Water Resource Guide.

Nitrates

An alert for elevated nitrate concentration is generated by the Oregon Health Authority when nitrate sample results for public water systems exceed 5 mg/L. Within the Middle Willamette Agricultural Water Quality Management Area, 15 public water systems had an alert for elevated nitrate results in the past ten years. Two public water systems had an MCL violation in the past five years. The MCL for nitrate is 10 mg/L.

There are many private groundwater wells for domestic use within the Middle Willamette Agricultural Water Quality Management Area. Oregon’s Domestic Well Safety Program has been collecting water sample results through the Domestic Well Testing Act since 1989. There are 667 records of private domestic well samples within the Management Area. Of these 667 records, 613 measured nitrate concentrations of 0 to 3 mg/L, 27 measured nitrate concentrations 3.01 to 5 mg/L, 16 measured nitrate concentrations 5.01 to 7mg/L, eight measured nitrate concentrations 7.01 to 10mg/L and three of the records measured nitrate concentrations

greater than 10mg/L (**Figure 1**). For wells testing at elevated concentrations, attention to well depth, well construction, nitrate leaching potential of local soils, and proximity to nutrient sources such as septic systems, fertilizer use areas, and high concentrations of livestock should be considered when investigating the cause of nitrate contamination.

According to the Natural Resources Conservation Service's National Cooperative Soil Survey, most of the soils assessed in the Middle Willamette Agricultural Water Quality Management Area have a moderately high or high potential for nitrate leaching (**Figure 3**). Nitrate leaching potential is based on the area's slope, precipitation, and land use. Nitrate from fertilizers and septic systems can readily penetrate aquifers used for drinking water when leaching potential is high. Practices that reduce leachable nitrate in soils help protect groundwater used for drinking water. Refer to the Pollutant Reduction Tools section in DEQ's Groundwater Resource Guide to learn more about nitrate leachability and potential reduction strategies.

DEQ specifically addresses drinking water issues identified for public water systems. A query of the Oregon Water Resources Department's Water Rights Information System identified 100 private domestic surface water rights in the Middle Willamette Agricultural Water Quality Management Area. (A threshold of 0.005 cubic feet per second was used for domestic surface water rights that are household use only, not irrigation.) **Figure 1** shows the points of diversion for the domestic surface water rights.

Other contaminants

Water quality samples from public water systems within the Middle Willamette Agricultural Water Quality Management Area also detected additional contaminants, including pentachlorophenol, atrazine, hexachlorobenzene, and arsenic that may be related to agricultural activities. Copper, TTHM, total haloacetic acids (HAA5), chloroform, lead, sodium, manganese, tetrachloroethylene, trichloroethylene, total xylenes, CIS-1,2-dichloroethylene, di(2-ethylhexyl), phthalate, and toluene were also identified in drinking water tests. These are unlikely to be related to agricultural activities.

Contact

For more information, please contact the Drinking Water Protection Program or send an email to drinkingwater.protection@deq.oregon.gov.

Table 1. Public Water Systems in the Middle Willamette Agricultural Water Quality Management Area

Note: **Table 1** does not include public water systems that purchase drinking water from these water systems.

System Type:

- "Community Water System - C”: a public water system that has 15 or more service connections used by year-round residents, or that regularly serves 25 or more year-round residents.
- "Non-Transient Non-Community Water System - NTNC": a public water system that is not a Community Water System and that regularly serves at least 25 of the same people over 6 months per year.
- "Transient Non-Community Water System - NC": a public water system that serves a transient population of 25 or more people.
- “Oregon Very Small - Non-Public”: a public water system that serves 4 to 14 service connections or serves 10 to 24 people a day for at least 60 days a year. Monitoring requirements for these systems are the same as those for Transient Non-Community water systems. This designation was recently changed to OVS for Oregon Very Small systems. Both designations are still used.

Public Water System Identification Number	Public Water System Name	Primary Source	System Type	Population	MCL Alerts
4100003	Adair Village Water System	Surface Water	Community	875	None
4100023	Fir View Water Company	Groundwater	Community	150	None
4100174	Knoll Terrace Park	Groundwater	Community	452	None
4100225	Corvallis, City of	Surface Water	Community	61468	None
4100226	Childrens Farm Home Campus	Groundwater	Non-Transient Non-Community	200	E. coli, Nitrate
4100229	Ridgewood Dist Improv Co	Groundwater	Community	90	E. coli
4100231	Vineyard Mountain Water	Groundwater	Community	325	E. coli
4100248	Dallas, City of	Surface Water	Community	17911	None
4100251	Hopewell Water Company	Groundwater	Community	100	E. coli
4100297	Falls City, City of	Surface Water	Community	1051	None
4100399	Independence Water System	Groundwater	Community	10300	E. coli, Nitrate
4100537	Monmouth, City of	Groundwater Under Direct Influence of Surface Water	Community	11651	E. coli, Nitrate
4100540	Monroe, City of	Surface Water	Community	723	None
4100624	Philomath Public Works	Surface Water	Community	4670	None
4100704	Rickreall Water Association	Groundwater	Community	1650	Nitrate
4100744	Keizer, City of	Groundwater	Community	38585	Nitrate
4100755	Hiland WC - Illahe Golf Club Estates	Groundwater	Community	561	None
4100784	Pioneer Park Co-op Inc	Groundwater	Community	54	E. coli
4100954	Wilsonville, City of	Surface Water	Community	25915	E. coli

4100977	Jackson Creek Water Association	Groundwater	Community	39	None
4101149	Perrydale Domestic Wtr Assn	Groundwater	Community	2655	None
4101158	North Corvallis MHP-Well #1	Groundwater	Community	100	None
4101296	Pioneer Village Water Company	Groundwater	Community	80	None
4101456	Cascade View Estates	Groundwater	Community	113	None
4105548	Raintree Estates	Groundwater	Community	50	E. coli
4105812	Beelarts Preschool (Inactive)	Groundwater	Oregon Very Small	17	None
4190282	Camp Kilowan	Groundwater	Transient Non-Community	180	None
4190495	Oregon Outdoor Education Center	Groundwater	Transient Non-Community	284	None
4190526	Bellfountain Community Church	Groundwater	Transient Non-Community	32	E. coli
4190582	Western Christian School	Groundwater	Non-Transient Non-Community	540	E. coli
4190754	Benton Co PKs Bellfountain PK	Groundwater	Transient Non-Community	26	None
4190755	Blodgett Country Store	Groundwater	Transient Non-Community	210	None
4190834	Linn Co PKs-Peoria Park (Inactive)	Groundwater	Transient Non-Community	25	Nitrate
4190863	Marysville Golf Course (Inactive)	Groundwater	Transient Non-Community	50	None
4190864	Pub, The	Groundwater	Transient Non-Community	100	Nitrate
4190865	Camp Whispering Winds-Ash Grove (Inactive)	Groundwater	Transient Non-Community	100	None
4190883	Fir Grove Elementary (Inactive)	Groundwater	Non-Transient Non-Community	140	None
4191053	OPRD Ellmaker State Park	Groundwater	Transient Non-Community	249	None

4191260	Eola Inn (Inactive)	Groundwater	Oregon Very Small	10	None
4192025	Bless Your Heart Baking And Cafe (Inactive)	Groundwater	Transient Non-Community	32	None
4192152	Cascade Pacific Pulp LLC	Surface Water	Non-Transient Non-Community	300	None
4193577	Tennis West Racquet Club	Groundwater	Transient Non-Community	39	None
4193581	Fort Hoskins Park	Groundwater	Transient Non-Community	25	E. coli
4193583	Camp Alpine Church of LDS	Groundwater	Transient Non-Community	28	None
4193584	Alpine Tavern	Groundwater	Transient Non-Community	30	None
4193606	Fir Ridge Campground	Groundwater	Transient Non-Community	14	None
4193702	Blodgett Elementary SD 17J	Groundwater	Non-Transient Non-Community	35	None
4193710	Alpine Elementary SD 1J (Inactive)	Groundwater	Non-Transient Non-Community	138	None
4193711	Corvallis Waldorf Association	Groundwater	Non-Transient Non-Community	180	Nitrate
4193712	Muddy Creek Charter School	Groundwater	Non-Transient Non-Community	125	None
4193713	Mt View Elementary SD 509J	Groundwater	Non-Transient Non-Community	250	None
4193714	Kings Valley Charter School	Groundwater	Non-Transient Non-Community	215	None
4193771	Luckiamute Valley Charter Schools	Groundwater	Non-Transient Non-Community	50	None
4194013	Hull-Oakes Lumber Company	Groundwater	Non-Transient Non-Community	51	None
4194078	Little Beavers Preschool #1	Groundwater	Non-Transient Non-Community	50	None
4194079	Little Beavers Preschool #2 (Inactive)		Oregon Very Small	27	None
4194090	Consumers Power Inc	Groundwater	Non-Transient Non-Community	60	None

4194119	OSU Research Forests	Groundwater	Oregon Very Small	16	None
4194141	Student Transportation of America	Groundwater	Non-Transient Non-Community	53	None
4194536	Camp Whispering Winds-Richards Lod (Inactive)	Groundwater	Transient Non-Community	85	None
4194538	Camp Whispering Winds-Maple Valley (Inactive)	Groundwater	Transient Non-Community	85	None
4194602	Hwy 20 Market (Inactive)	Groundwater	Transient Non-Community	150	None
4194662	Roll-A-Way LLC (Inactive)	Groundwater	Transient Non-Community	30	None
4194741	Suburban Christian Church	Groundwater	Non-Transient Non-Community	100	None
4194751	Holiday El Campo (Inactive)	Groundwater	Transient Non-Community	30	None
4194880	Life Community Church	Groundwater	Transient Non-Community	30	None
4194947	City Limits	Groundwater	Transient Non-Community	100	None
4195139	Monmouth Kingdom Hall	Groundwater	Transient Non-Community	57	None
4195179	Chemeketa Cellars	Groundwater	Non-Transient Non-Community	25	None
4195235	Aspinwalls Nursery and Produce	Groundwater	Transient Non-Community	100	None
4195290	Hpaulson Livestock and Feed (Inactive)	Groundwater	Oregon Very Small	1	Nitrate
4195295	Addivia Water System (Inactive)	Groundwater	Transient Non-Community	135	None
4195336	Beazell Memorial Forest	Groundwater	Transient Non-Community	54	None
4195350	Calvary Corvallis	Groundwater	Non-Transient Non-Community	173	None
4195353	Gathering Together Farms	Groundwater	Transient Non-Community	50	None
4195382	Green Villa Farms	Groundwater	Oregon Very Small	21	Nitrate

4195390	OSU Rowing Center	Groundwater	Transient Non-Community	90	Nitrate
4195429	Rogue Farms (Inactive)	Groundwater	Transient Non-Community	25	Nitrate
4195471	Camp Tapawingo Rec Lake (Inactive)	Groundwater	Transient Non-Community	150	None
4195477	G3 Sports and Fitness	Groundwater	Transient Non-Community	25	None
4195554	Garland Nursery	Groundwater	Transient Non-Community	90	Nitrate

Figure 1: Drinking Water Source Areas for Public Water Systems in the Middle Willamette Agricultural Water Quality Management Area

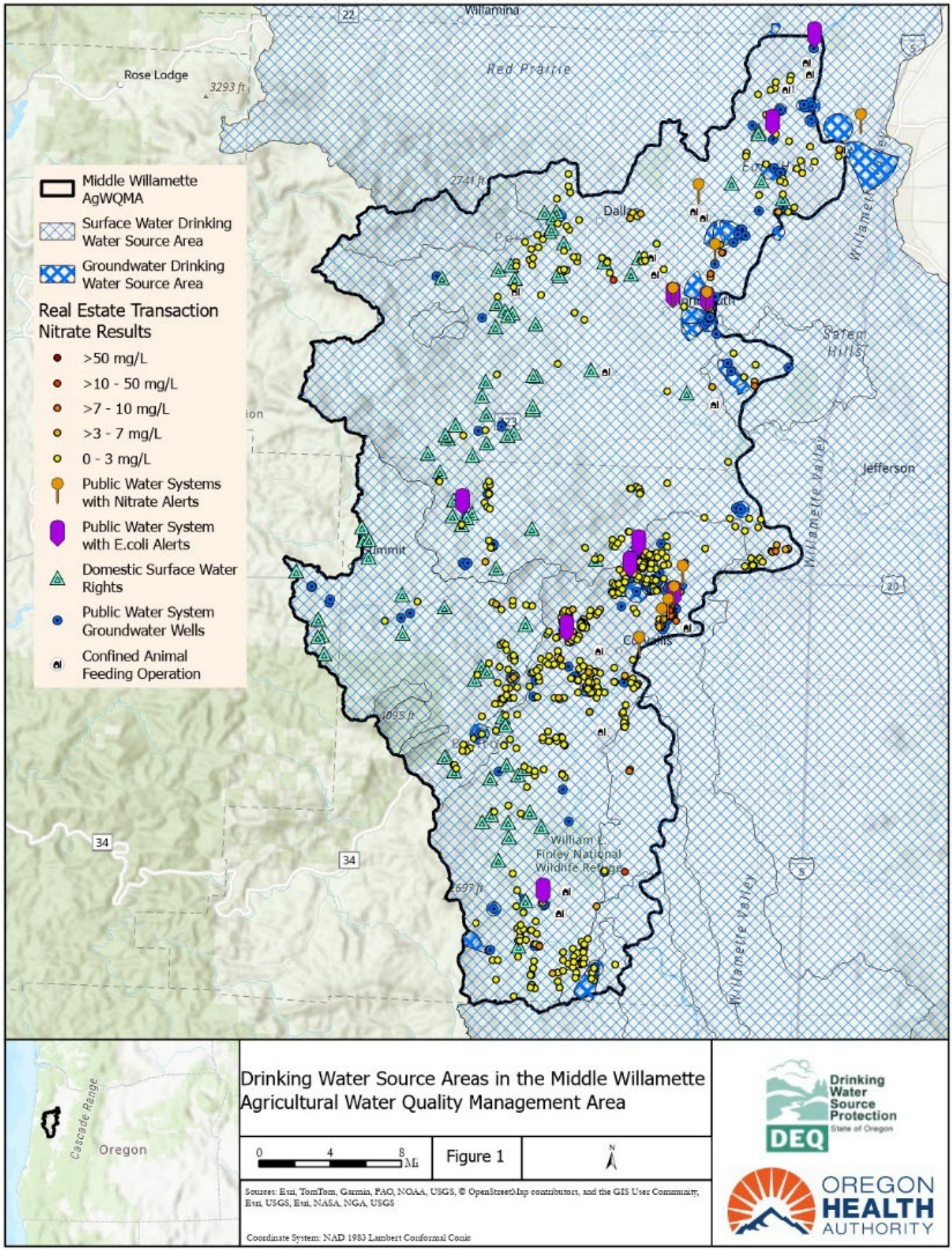


Figure 2: Drinking Water Source Areas for Public Water Systems in the Middle Willamette Agricultural Water Quality Management Area, Land Use/Land Ownership

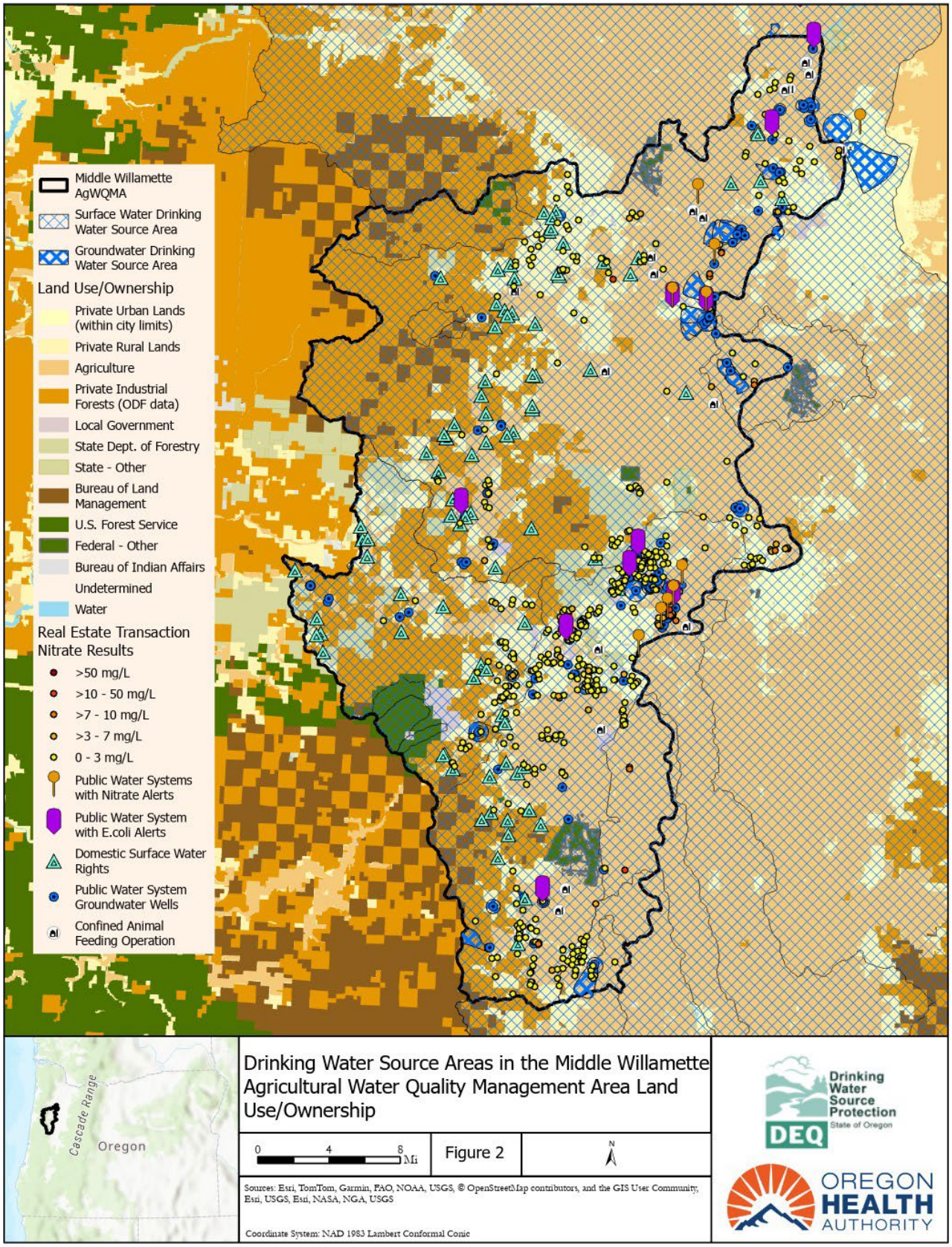
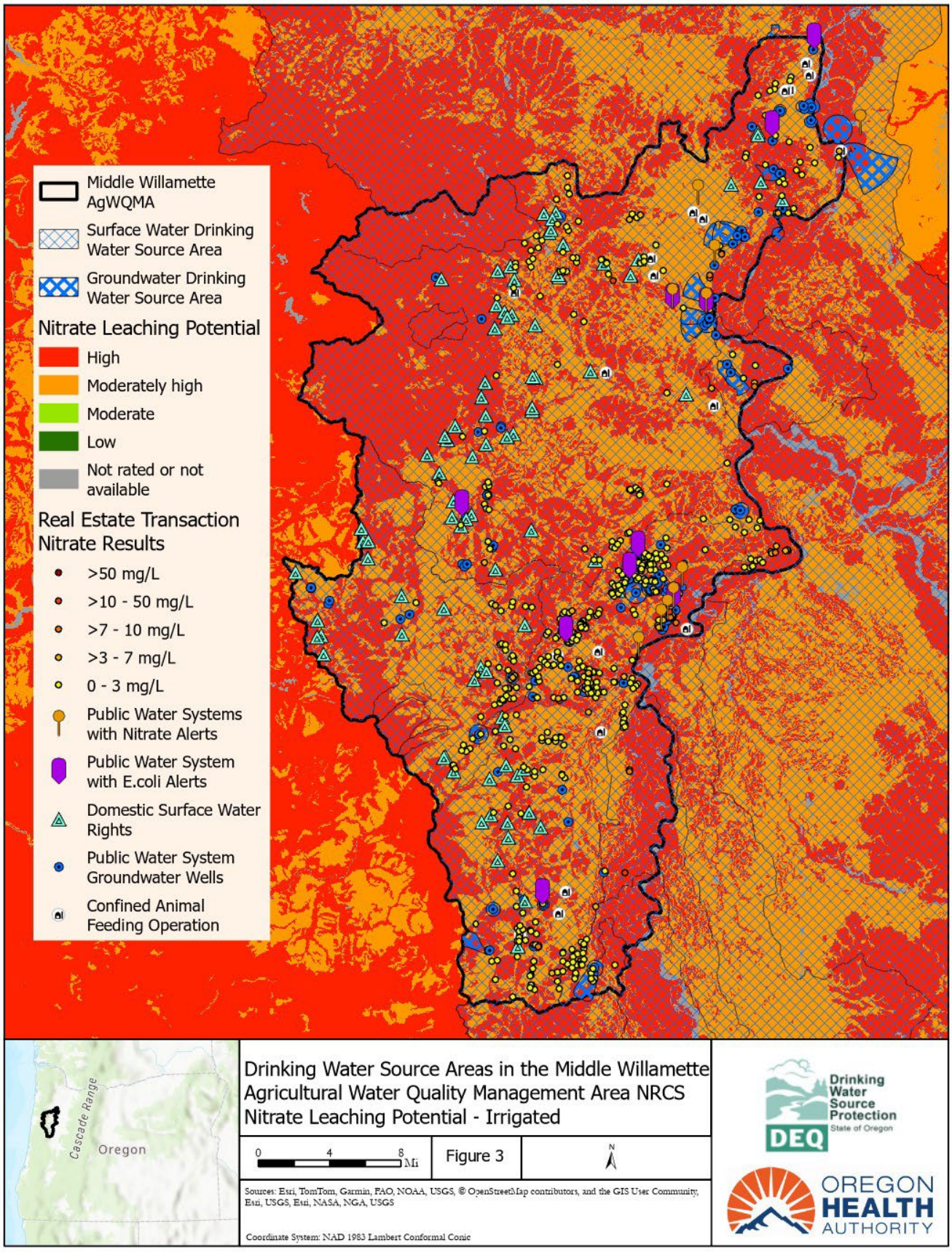


Figure 3: Drinking Water Source Areas for Public Water Systems in the Middle Willamette Agricultural Water Quality Management Area, Nitrate Leaching Potential



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