



Oregon Department of Environmental Quality

Drinking Water Assessment for the Yamhill Water Quality Management Area

October 2024

Overview

- There are 59 public drinking water systems in the Yamhill Agricultural Water Quality Management Area, which utilize groundwater and surface water sources to serve approximately 115,585 persons regularly.
- A total of 34 public water systems within the past ten years received one or more alerts for exceeding the maximum contaminant level goal for total coliform bacteria.
- A total of 10 public water systems within the past ten years received one or more alerts 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.
- One public water system received an alert within the past ten years for nitrate levels that exceed 5 milligrams per liter.
- There are 347 records of private domestic well sample results submitted to Oregon Health Authority's Real Estate Transaction program in the area. Of these, 15 measured nitrate concentrations of ≥ 5 mg/L, and three measured concentrations of ≥ 10 mg/L.
- Contaminants in water supplies potentially related to agriculture cooccur with human populations, agricultural land uses, and aquifers susceptible to contaminant infiltration.
- Department of Environmental Quality recommends public water systems utilize [Source Water Protection Practices](#) to prevent contamination and increase resiliency.
- DEQ acknowledges that small water systems may have limited capacity and resources to address contamination issues. The [Drinking Water Protection program](#) is available for technical assistance and is developing outreach materials to coordinate with public water systems in disadvantaged communities.

Water Use

There are 59 public water systems within the Yamhill Agricultural Water Quality Management Area which 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 Yamhill Agricultural Water Quality Management Area. A drinking water source area is defined as the area of land which contributes water to the drinking water supply and where potential contamination from human activities or natural sources may pose a threat to the water quality.

Of the 59 public water systems in the Yamhill Agricultural Water Quality Management Area, 24 are active community public water systems which use either groundwater, surface water, or a combination of the two

Translation or other formats

[Español](#) | [한국어](#) | [繁體中文](#) | [Русский](#) | [Tiếng Việt](#) | [العربية](#)

800-452-4011 | TTY: 711 | deqinfo@deq.oregon.gov

sources to serve approximately 112,281 people on a regular basis, in addition to visitors at recreation sites. There are eight active non-transient, non-community workplace or school public water systems which use groundwater to serve 830 persons regularly. The remaining 16 active public water systems are transient non-community systems and state-regulated systems with an estimated service population of 1,588. There are an additional 11 public water systems in the Yamhill Agricultural Water Quality Management Area that are currently inactive. See **Table 1** for a list of the public water systems, their classifications, primary source and activity status, and populations served.

The land uses within the Yamhill Agricultural Water Quality Management Area are primarily private industrial forests, private rural lands, private urban lands, Bureau of Land Management, Oregon Department of Forestry, United States Forest Service, federal lands, Bonneville Power Administration, and Bureau of Indian Affairs (**Figure 3**).

Bacteria

Total coliform bacteria alerts for public water systems are generated by Oregon Health Authority when their presence is detected in sample results. There are 34 public water systems that received one or more alerts for exceeding the maximum contaminant level goal for total coliform bacteria in the past ten years. The MCLG for total coliforms is zero. Of these public water systems, three had more than 20 alerts in the last ten years; Grand Ronde Community Water Association had 58 alerts, Hiland WC – Wilderness had 44 alerts, and the Trappist Abbey had 29 alerts. None of the public water systems received violations for exceeding the maximum contaminant level for total coliform bacteria within the past five years. A public water system will receive an MCL violation if total coliform is present in more than 5% of its routine samples taken each month. Additionally, a public water system will receive an MCL violation for total coliform bacteria if it fails to resample following a routine positive sample.

E. coli bacteria alerts for public water systems are generated by the Oregon Health Authority when their presence is detected in sample results. Within the Yamhill Agricultural Water Quality Management Area, 10 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 violations with the Oregon Health Authority for *E. coli* bacteria in the past five years: Ewing Young Elementary SD 29J, and Hiland WC – Wilderness. A public water system will receive an MCL violation for *E. coli* bacteria if they collect a sample indicating total coliforms are present and the resample is also positive for either fecal coliform or *E. coli* bacteria.

The locations of public water systems with *E. coli* bacteria alerts are near areas designated for land use as agricultural, private urban land, and private rural land. Refer to DEQ's [Surface Water Resource Guide](#) > Section 3.0 – Surface Water Characterization and Risks > Using Oregon Data to Identify Priorities > Bacteria Data and Susceptibility to learn more about preventing bacterial contamination in surface water bodies from various land uses.

Nitrates

An alert for elevated nitrate concentrations is generated by the Oregon Health Authority when nitrate sample results for public water systems exceed 5 mg/L. Within the Yamhill Agricultural Water Quality Management Area, one public water system had an alert for elevated nitrate results in the past ten years. None of the public water systems had MCL violations in the past five years for nitrate levels. The MCL for nitrate is 10 mg/L.

There are numerous private groundwater wells for domestic use within the Yamhill Agricultural Water Quality Management Area. The Domestic Well Testing Act database includes submitted records of real estate

transaction testing data from 1989 to 2018. There are 347 records of private domestic well samples within the Management Area. Of these 347 records, 26 measured nitrate concentrations of ≥ 3 mg/L, 15 measured nitrate concentrations ≥ 5 mg/L, five measured nitrate concentrations ≥ 7 mg/L, and three measured nitrate concentrations ≥ 10 mg/L (**Figure 1**). For wells testing at elevated concentrations, attention should be paid 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.

Of the soils assessed in the Yamhill Agricultural Water Quality Management Area, most have moderately high or high nitrate leaching potential, according to the Natural Resources Conservation Service's National Cooperative Soil Survey (**Figure 2**). Nitrate leaching potential is influenced by 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. Additionally, bacteria removal through soil filtration may be less effective in sandy soils. Measures to reduce leachable nitrate in soils reduce risk to groundwater sources of drinking water. Refer to Section 5.0 - Pollutant Reduction Tools in the [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 database for private domestic points of diversion—using a threshold of 0.005 cubic feet per second for domestic surface water rights designated for household use only, not irrigation—identified 139 private domestic surface water rights in the Yamhill Agricultural Water Quality Management Area (Figure 1).

Other Contaminants

Water quality samples from public water systems within the Yamhill Agricultural Water Quality Management Area also detected other contaminants that may be related to agricultural practices. These include di(2-ethylhexyl) phthalate, dalapon, pentachlorophenol, xylenes, and nitrite. Other contaminants detected in water quality samples from public water systems in the area include arsenic, copper, manganese, sodium, lead, cis-1,2-dichloroethylene, total haloacetic acids (also known as HAA5) and total trihalomethanes (also known as TTHM). Some of these contaminants are naturally occurring in the area. In addition, HAA5 and TTHM are disinfection byproducts that form when chlorine compounds that are used to disinfect water react with other naturally occurring chemicals in the water.

Contact

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

Non-discrimination statement

DEQ does not discriminate on the basis of race, color, national origin, disability, age or sex in administration of its programs or activities. Visit DEQ's [Civil Rights and Environmental Justice page](#).

Table 1. Public Water Systems in the Yamhill Ag WQMA

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

PWS ID	Public Water System Name	System Type	Population	MCLG/MCL Alert
Surface Water Systems				
4100041	AMITY, CITY OF	Community	1810	
4101174	BUELL-RED PRAIRIE WD	Community	800	
4100171	CARLTON, CITY OF	Community	2270	
4100497	MCMINNVILLE WATER & LIGHT	Community	34515	E. coli
4100337	ROCK CREEK WATER DISTRICT	Community	300	
4100811	SHERIDAN, CITY OF	Community	6200	E. coli
4100953	WILLAMINA, CITY OF	Community	2284	
4100954	WILSONVILLE, CITY OF	Community	25915*	E. coli
4100968	YAMHILL, CITY OF	Community	1130	
Groundwater Systems				
4195372	5 ROCK RANCH	Non-Community	40	
4101477	ASPEN ESTATES SUBDIVISION Inactive System	Community	80	
4194885	BAILEY NURSERY II	Non-Transient Non-Community	45	
4194993	BAILEY NURSERY III	Non-Transient Non-Community	160	
4193941	BOBS GRAND ISLAND GROCERY AND DELI	Non-Community	50	
4194219	BOISE CASCADE-WILLAMINA VENEER	Non-Transient Non-Community	75	
4194559	CAFE UNCORKED Inactive System	Non-Community	365	
4194879	CHEHALEM VALLEY BAPTIST CHURCH	Non-Community	100	
4191963	CRABTREE PARK Inactive System	Non-Community	30	
4100252	DAYTON, CITY OF	Community	2535	E. coli
4100812	DELPHIAN SCHOOL	Community	350	
4195526	DOMAINE SERENE	Non-Community	124	E. coli
4100262	DUNDEE, CITY OF	Community	3356	
4191972	EWING YOUNG ELEM SD 29J	Non-Transient Non-Community	245	E. coli
4101359	FAIRVIEW WATER COMPANY	Oregon Very Small	22	
4191973	FLYING M RANCH Inactive System	Non-Community	25	
4191985	GOLDEN ENTERPRISES	Non-Community	700	
4100338	GRAND RONDE COMMUNITY WTR ASSN	Community	2500	
4194361	GRAY & COMPANY	Non-Transient Non-Community	25	
4194549	HAPPY ACRES AT THE BAYOU Inactive System	Oregon Very Small	20	
4101464	HIDDEN MEADOWS WATER ASSN INC	Community	110	
4105398	HILAND WC - FRYER HILL	Community	32	
4106213	HILAND WC - STABLES	Community	20	
4105940	HILAND WC - WILDERNESS	Community	20	E. coli
4101538	HILAND WC - WYLAND	Community	25	
4194545	HOPEWELL COMMUNITY CHURCH	Non-Community	80	
4100251	HOPEWELL WATER COMPANY	Community	100	E. coli
4106079	HYPER-DRIVE ENTERPRISES Inactive System	Non-Community	100	
4195403	KNUDSEN VINEYARDS	Non-Community	30	
4195043	LAS AGUILAS Inactive System	Non-Community	80	
4193910	LAWRENCE & LAWRENCE INC Inactive System	Non-Community	30	
4194567	MCMINNVILLE HONDA	Oregon Very Small	20	

4193614	MID VALLEY REHABILITATION WOOD PRD Inactive System	Oregon Very Small	6	
4194336	MONROVIA NORTH	Non-Transient Non-Community	175	E. coli
4193696	MULKEY RV PARK Inactive System	Non-Community	120	
4100557	NEWBERG, CITY OF	Community	25138	
4191083	OPRD MAUD WILLIAMSON STATE PK	Non-Community	55	
4105308	OXBERG WATER SYSTEM #1	Community	90	
4101149	PERRYDALE DOMESTIC WTR ASSN	Community	2655	
4191983	RIVERWOOD GOLF COURSE Inactive System	Non-Community	30	
4195247	ROBINSON NURSERY AMITY WS	Non-Transient Non-Community	70	Nitrate
4105157	ROCK OF AGES REST HOME	Community	97	
4195512	SOKOL BLOSSER VINEYARDS	Non-Community	110	
4195572	ST. COUSAIR INC.	Non-Transient Non-Community	35	
4195530	STOLLER FAMILY ESTATE	Non-Community	85	
4105317	SUNNYCREST MEADOWS WS	Community	29	
4191961	THE PRESERVE	Non-Community	100	
4101308	TRAPPIST ABBEY	Non-Community	29	E. coli
4194566	WEST CHEHALEM FRIENDS CHURCH	Oregon Very Small	13	
4191970	YAMHILL CO PKS-ED GRENFELL PK	Non-Community	30	

System Type:

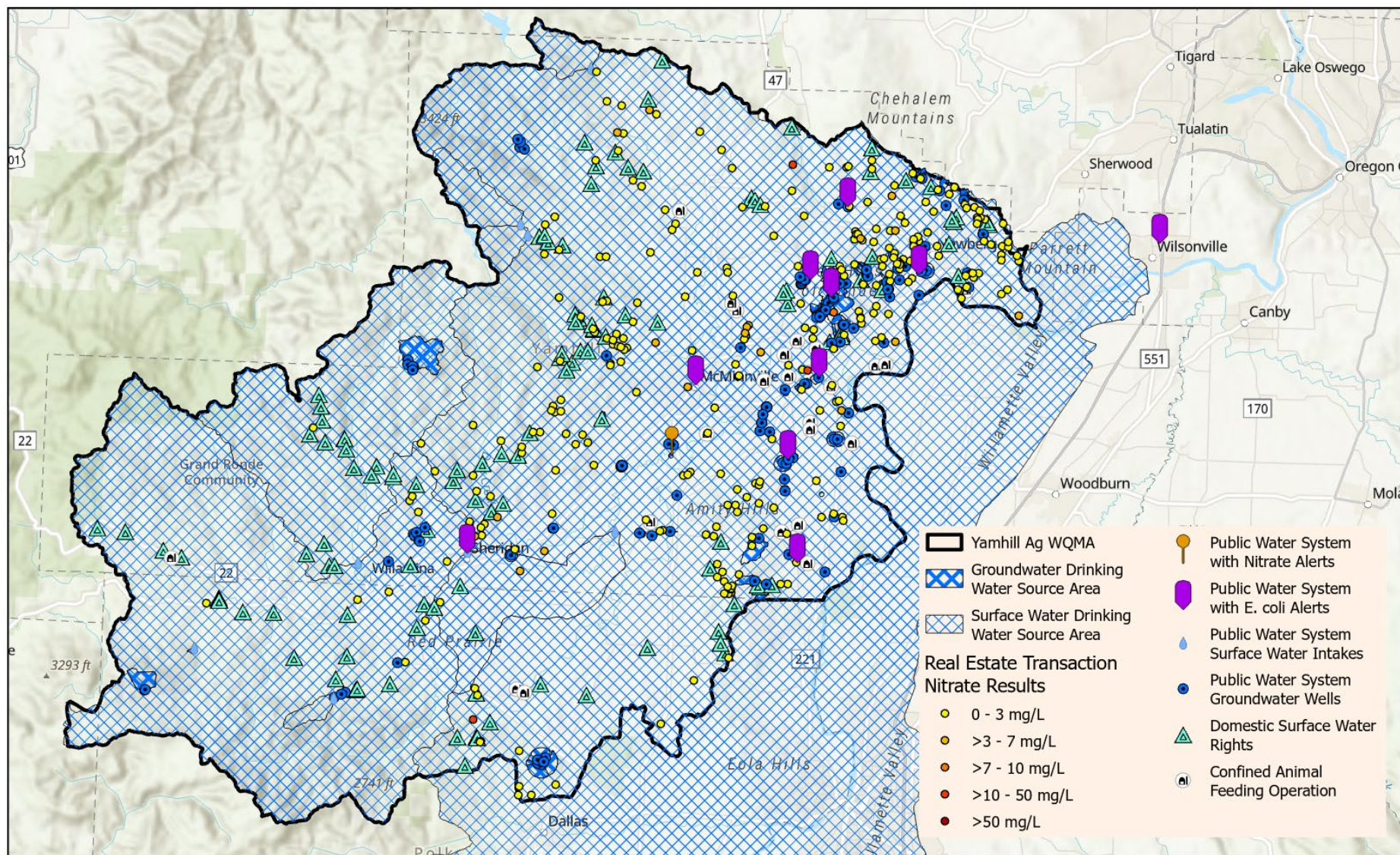
C - "Community Water System (C)" means a public water system that has 15 or more service connections used by year-round residents, or that regularly serves 25 or more year-round residents.

NTNC - "Non-Transient Non-Community Water System (NTNC)" means a public water system that is not a Community Water System and that regularly serves at least 25 of the same persons over 6 months per year.

NC - "Transient Non-Community Water System (NC)" means a public water system that serves a transient population of 25 or more persons.

NP or OVS - "State Regulated Water System (NP)" means a public water system, which serves 4 to 14 service connections or serves 10 to 24 people. 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.

** Population for these water systems located outside of Yamhill Agriculture Water Quality Management Area. Part of the source water area for these water systems extends into the Yamhill Agriculture Water Quality Management Area.*



Drinking Water Source Areas in the Yamhill Agricultural Water Quality Management Area

0 5 10 Mi

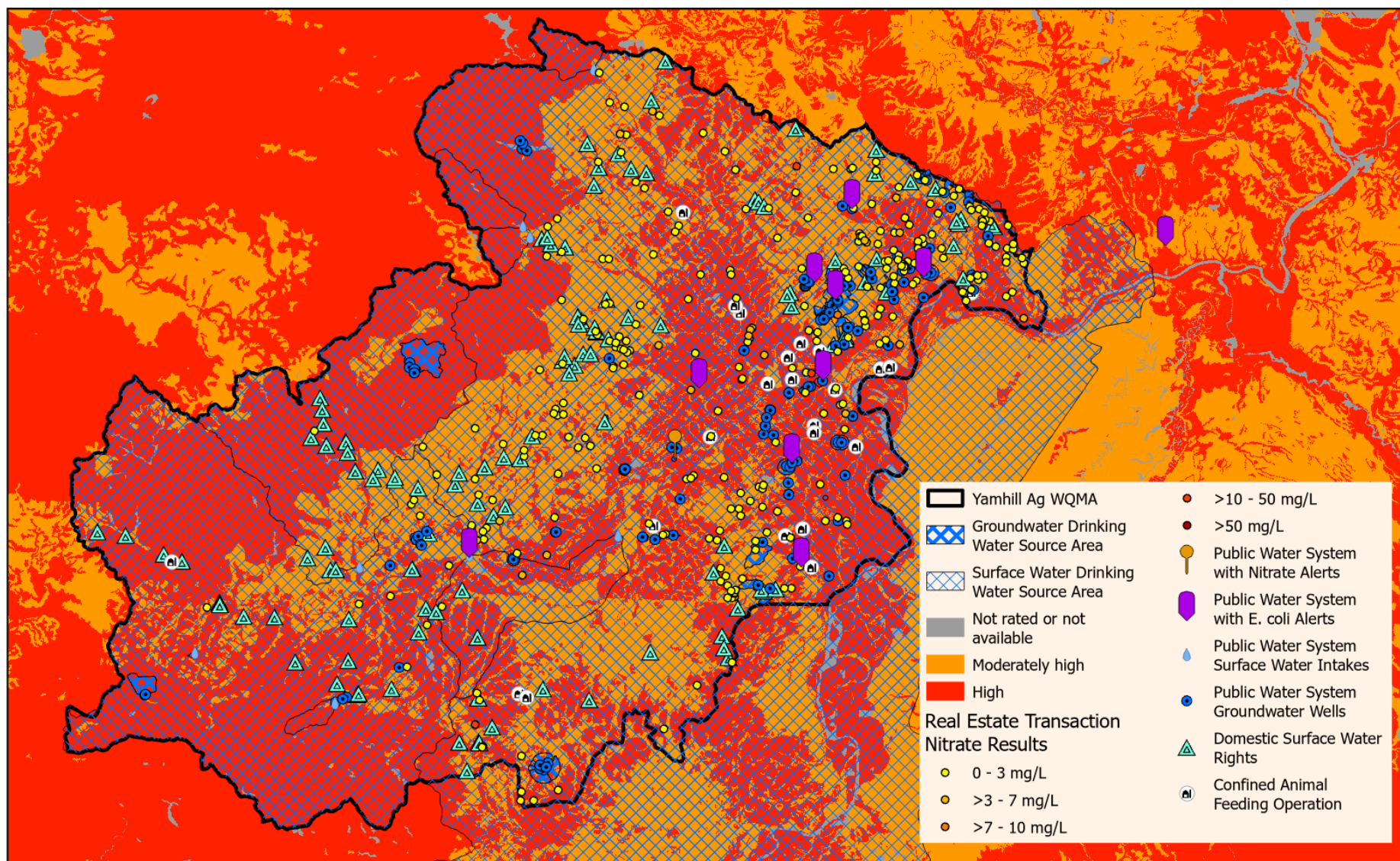
Figure 1



Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, USFWS, Esri, NASA, NGA, USGS, Oregon Metro, Oregon State Parks, State of Oregon GEO, Esri, TomTom, Garmin, SafeGraph, FAO, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USFWS, Esri, USGS

Coordinate System: NAD 1983 Lambert Conformal Conic





Drinking Water Source Areas in the Yamhill Agricultural Water Quality Management Area NRCS Nitrate Leaching Potential - Irrigated

0 5 10 Mi

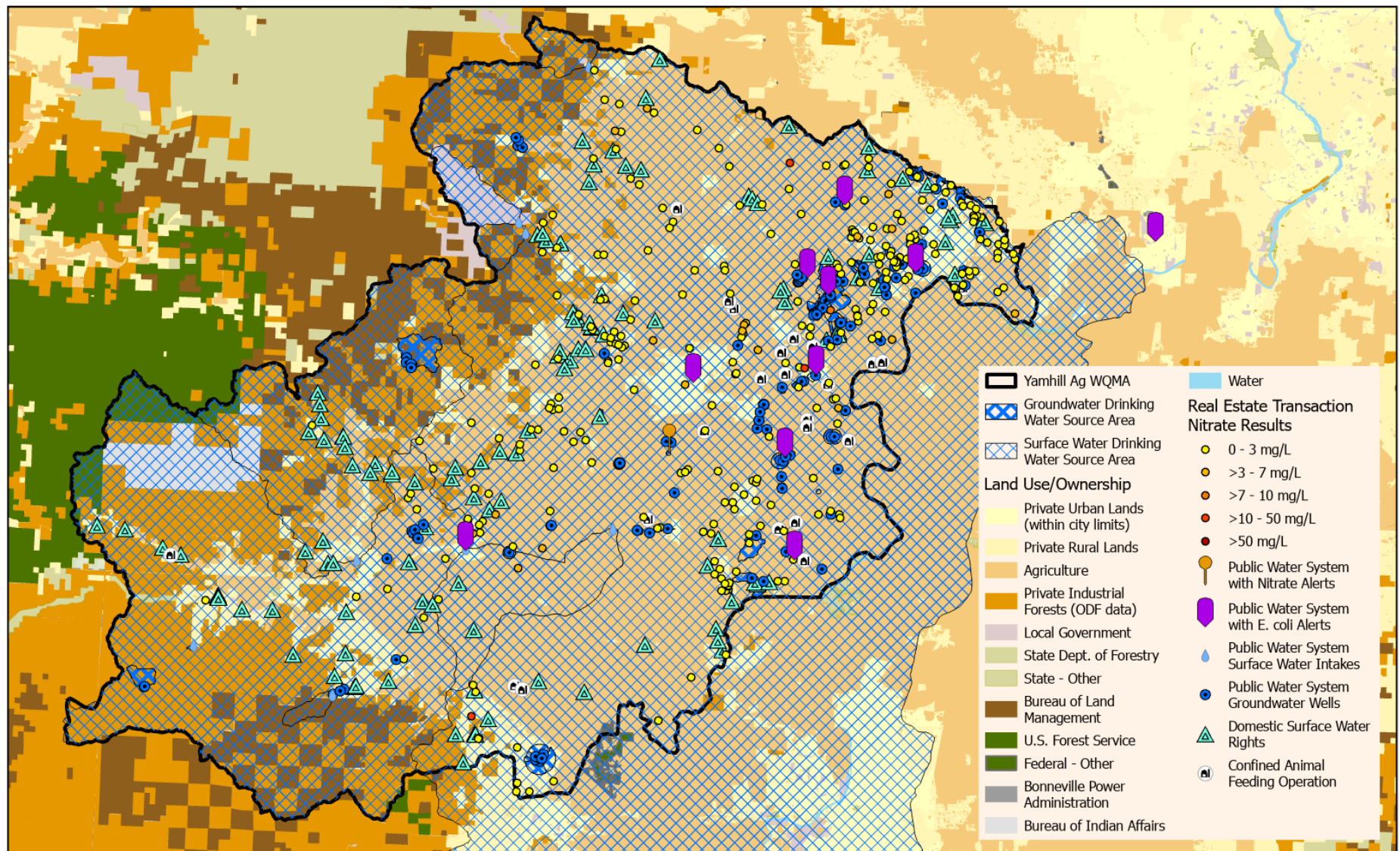
Figure 2



Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, USFWS, Esri, NASA, NGA, USGS, Oregon Metro, Oregon State Parks, State of Oregon GEO, Esri, TomTom, Garmin, SafeGraph, FAO, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USFWS, Esri, USGS

Coordinate System: NAD 1983 Lambert Conformal Conic





Drinking Water Source Areas in the
Yamhill Agricultural Water Quality Management Area
Land Use/Ownership

0 5 10 Mi

Figure 3



Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, USFWS, Esri, NASA, NGA, USGS, Oregon Metro, Oregon State Parks, State of Oregon GEO, Esri, TomTom, Garmin, SafeGraph, FAO, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USFWS, Esri, USGS

Coordinate System: NAD 1983 Lambert Conformal Conic

