



Oregon Department of Environmental Quality

Drinking Water Assessment for the North Coast Agricultural Water Quality Management Area

December 2023

Overview

- Public drinking water systems in the North Coast Agricultural Water Quality Management Area (Ag WQMA) utilize groundwater and surface water sources to serve approximately 103,043 persons regularly with another with 434,515 people served by systems outside the management area with water partially sourced from within the Ag WQMA.
- 64 public water systems had an alert within the past ten years for exceeding the Maximum Contaminant Level Goal (MCLG) for total coliform bacteria (MCLG for total coliforms is zero). None of the public water systems had MCL violations within the past five years.
- 22 public water systems had an alert within the past ten years for exceeding the MCLG for *E. coli* bacteria (MCLG for *E. coli* bacteria is zero). Five public water systems had Maximum Contaminant Level (MCL) violations within the past five years (MCL for *E. coli* bacteria is a positive result in two or more consecutive samples).
- Five public water systems had an alert within the past ten years for elevated [≥ 5 milligrams per liter (mg/L)] nitrate concentrations. None of the public water systems had Maximum Contaminant Level (MCL) exceedances for nitrate in the past five years.
- There are 686 records of private domestic well sample results submitted to Oregon Health Authority's (OHA's) Real Estate Transaction program in the area. Of these, 43 measured nitrate concentrations above 3 mg/L.
- Contaminants in water supplies potentially related to agriculture occur near human populations, agricultural land uses, and aquifers susceptible to contaminant infiltration.
- Department of Environmental Quality (DEQ) recommends Oregon Department of Agriculture (ODA) work with the appropriate Soil and Water Conservation Districts (SWCDs) to implement best management practices (BMPs) in and around private domestic and public drinking water wells to reduce high nitrate levels. BMPs to reduce nitrate levels are beneficial in helping communities reduce long term costs associated with treatment, operations, maintenance, and sustainability.
- DEQ recommends public water systems utilize [Source Water Protection Practices](#) to prevent potential contamination and increase resiliency.
- Resources for addressing risks to drinking water supplies can be found in either the [Groundwater Resource Guide](#) or [Surface Water Resource Guide](#).

Water Use

There are 150 public water systems which obtain drinking water from a combination of surface and groundwater sources in the North Coast Agricultural Water Quality Management Area (Ag WQMA). Drinking

Translation or other formats

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

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

water is an important beneficial use under the federal Clean Water Act (CWA). When CWA 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** demonstrates the drinking water source areas of the public water systems within the North Coast Ag WQMA. 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.

There are 73 Community public water systems in the North Coast Ag WQMA using groundwater and/or surface water wells to serve approximately 93,238 people on a regular basis, in addition to visitors at recreation sites. There are 15 Non-Transient, Non-Community workplace or school public water systems using groundwater, serving 3,150 persons regularly. The remaining 49 public water systems are Transient Non-Community systems and Non-Public, state-regulated systems with an estimated service population of 5,066. See **Table 1** below for a list of public water systems, their classifications, primary source and activity status, and populations served.

Agricultural land uses (e.g. berries, orchard fruits, grass seed, wheat, field vegetables and fruits, pumpkins, Christmas trees, fresh flowers and herbs) are present near many of the public water system wells and springs in the North Coast Ag WQMA. Other land use and ownership within the North Coast Ag WQMA includes private industrial forests, private rural lands, private urban lands, agriculture, Bureau of Land Management, United States Forest Service, and Oregon Department of Forestry (**Figure 3**).

Bacteria

Total coliform bacteria alerts for public water systems are generated by the Oregon Health Authority (OHA) when their presence is detected in sample results. 64 public water systems had an alert within the past ten years for exceeding the Maximum Contaminant Level Goal (MCLG) for total coliform bacteria (MCLG for total coliforms is zero). None of the public water systems received violations for exceeding the Maximum Contaminant Level (MCL) 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 their routine samples taken each month. Additionally, a public water system will receive an MCL violation for total coliform bacteria if they fail to resample following a routine positive sample.

E. coli bacteria alerts for public water systems are generated by the OHA when their presence is detected in sample results. Within the North Coast Ag WQMA, 22 public water systems had an alert for detections of *E. coli* bacteria in the past ten years. Five public water systems had violations with OHA for *E. coli* bacteria in the past five years: Evergreen Acres Water Service, Fairview Water District, Falcon Cove Beach Water District, Midland Water Association, and ODF Keening Creek CG (**Figure 1, Table 1**). 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 occur near areas designated for land use as agriculture, private rural and urban land, private industrial forests, United States Forest Service and Oregon Department of Forestry. 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 OHA when nitrate sample results for public water systems exceed 5 mg/L. Within the North Coast Ag WQMA, five public water systems had an alert for elevated nitrate results in the past ten years: Bailey Nursery, Columbia Acres Water Association, Deer Island Village Mobile Home Park, Dyno Nobel, Inc., and Shell Star Mart (**Table 1, Figure 1**). None of the public water

systems had MCL violations for nitrate in the past ten years (the MCL for nitrate is 10 mg/L). These contaminants are often related to animal and cropland agriculture. The locations of nitrate contamination of private domestic wells and public drinking water sources are near agricultural land use, mostly in the northeastern portion of the area (**Figure 3**).

In addition, there are numerous private groundwater wells for domestic use within the North Coast Ag WQMA. The Domestic Well Testing Act database includes submitted records of real estate transaction testing data from 1989 to 2018. There are 686 records of private domestic well samples within the North Coast Ag WQMA. Of these 686 records, 24 results are ≥ 5 mg/L, 13 results are > 7 mg/L, and 6 are ≥ 10 mg/L out of 686 total results included in the database (**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.

Of the soils assessed in the North Coast Ag WQMA, most have high nitrate leaching potential, according to the Natural Resources Conservation Service's (NRCS) National Cooperative Soil Survey (**Figure 2**). 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. Additionally, bacteria removal through soil filtration can be less effective in sandy soils. Measures to reduce leachable nitrate in soils would 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 Oregon Water Resources Department's (OWRD'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 that are household use only, not irrigation) identified 355 private domestic surface water rights in the North Coast Ag WQMA (see **Figure 1**).

Other Contaminants

Other contaminants found related to agriculture include a Diquat alert reported at the Columbia Pacific Bio-Refinery, an 1,2,4-Trichlorobenzene alert reported at Oceanside Water District, an Endothall alert reported at the City of Rainier and a monochlorobenzene alert reported at Rainier Service District #13. Other contaminants found that are likely not related to agricultural activities include arsenic, copper, tetrachloroethylene, toluene, sodium, xylenes, ethylbenzene, p-dichlorobenzene, lead, total haloacetic acids (HAA5) and total trihalomethanes (TTHM). McNulty Water Association and Reeder Beach Resort each have one MCL violation for arsenic in the last five years. Nestucca Valley Elementary School and Pacific City Joint Water each have one MCL violation for HAA5 in the last five years. Nestucca Valley Elementary School has two and Sunset Lake RV Park has three MCL violations for TTHM in the last five years. 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 North Coast 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	Drinking Water Primary Source	System Type	Population	MCLG/MCL Exceedance
Groundwater Systems					
4191612	26 MARKET	Groundwater	Non-Community	50	
4194572	ALICES COUNTRY HOUSE	Groundwater	Non-Community	30	
4193694	ALSTON CORNERS-ASSEMBLY OF GOD	Groundwater	Non-Community	100	
4195361	ALSTON COUNTRY STORE	Groundwater	Non-Community	90	
4195481	BAILEY NURSERY REEDER RD MAIN	Groundwater	Non-Transient Non-Community	54	Nitrate
4190921	BAY AIRE MOBILE HOME PARK	Groundwater	Community	82	
4100079	BAY CITY WATER SYSTEM	Groundwater	Community	1400	
4193792	BLUE HOUSE CAFÉ Inactive System	Groundwater	Non-Community	30	
4194481	CAMP 18	Groundwater	Non-Community	69	
4192088	CAMP COOPER BSA	Groundwater	Non-Community	25	
4192087	CAMP MERIWETHER BSA	Groundwater	Non-Community	120	
4195443	CAMP RILEA	Groundwater	Non-Transient Non-Community	136	
4190923	CAMPER COVE Inactive System	Groundwater	Non-Community	25	
4100164	CANNON BEACH, CITY OF	Groundwater	Community	1710	
4100044	CANNON VIEW PARK INC	Groundwater	Non-Community	75	
4101043	CEDAR TREE MOBILE HOME PARK	Groundwater	Community	50	
4100886	CLOVERDALE WATER DISTRICT	Groundwater	Community	310	
4101148	COLUMBIA ACRES WATER ASSOC	Groundwater	Community	110	Nitrate
4100203	COLUMBIA CITY MUN WATERWORKS	Groundwater	Community	1995	
4190764	COLUMBIA CO PKS-BIG EDDY	Groundwater	Non-Community	125	
4190768	COLUMBIA CO PKS-CAMP WILKERSON	Groundwater	Non-Community	200	E. coli
4190770	COLUMBIA CO PKS-HUDSON/PARCHER	Groundwater	Non-Community	200	
4190187	COLUMBIA CO PKS-SCAPPOOSE RV Inactive System	Groundwater	Non-Community	25	
4106118	COLUMBIA HILLS HOA	Groundwater	Community	72	

4195468	COLUMBIA PACIFIC BIO-REFINERY	Groundwater	Oregon Very Small	10	
4194717	COLUMBIA RIVER PUD	Groundwater	Non-Transient Non-Community	45	
4194990	CONNIES KITCHEN Inactive System	Groundwater	Non-Community	50	
4100793	COUNTRY VILLA MOBILE ESTATES	Groundwater	Community	90	
4105114	DEER ISLAND HEIGHTS WS	Groundwater	Community	60	
4100982	DEER ISLAND VILLAGE MHP	Groundwater	Community	100	E. coli, Nitrate
4101233	DEER ISLAND WATERWORKS	Groundwater	Community	90	E. coli
4101046	DEER VIEW COOPERATIVE	Groundwater	Community	90	E. coli
4101411	DIKESIDE MOORAGE	Groundwater	Community	45	
4190407	DISSTOP INN Inactive System	Groundwater	Non-Community	30	
4190933	DRY DOCK AT 101 CAMP Inactive System	Groundwater	Non-Community	30	
4193427	DYNO NOBEL INC	Groundwater	Non-Transient Non-Community	65	E. coli, Nitrate
4100804	ELDERBERRY NEHALEM WS	Groundwater	Community	160	
4100805	EVERGREEN ACRES WATER SERVICE	Groundwater	Community	100	E. coli
4194563	EYVETTES BROOKSIDE CAFE/STORE Inactive System	Groundwater	Non-Community	100	
4100887	FAIRVIEW WATER DISTRICT	Groundwater	Community	1920	E. coli
4100045	FALCON COVE BEACH WD	Groundwater	Community	200	E. coli
4194046	FIREHOUSE CABARET	Groundwater	Non-Community	75	E. coli
4100311	GARIBALDI WATER SYSTEM	Groundwater	Community	802	
4100690	GOBLE WATER ASSOCIATION	Groundwater	Community	85	E. coli
4101042	GREEN MEADOWS MHP 1	Groundwater	Oregon Very Small	24	
4100367	HEBO JOINT WATER & SANITARY AUTH	Groundwater	Community	250	
4101482	HILAND WC - BARGER	Groundwater	Oregon Very Small	20	
4101041	HOGG HEAVEN MHP	Groundwater	Community	40	
4194110	HORIZON VIEW HILLS WS	Groundwater	Non-Community	17	
4105639	ISLAND COMMUNITY LLC	Groundwater	Non-Community	41	
4100688	J & M MOBILE HOME PARK	Groundwater	Community	45	
4190531	JEWELL SCHOOL DISTRICT #8	Groundwater under direct influence of surface water	Non-Transient Non-Community	200	
4195338	KANDIS KOFFEE SOUTH	Groundwater	Non-Community	100	
4100080	KILCHIS WATER DISTRICT	Groundwater	Community	500	E. coli
4100061	KNAPPA WATER ASSOCIATION	Groundwater	Community	1800	
4101311	LAUREL RIDGE MHP	Groundwater	Community	70	
4101304	LOST CREEK HEIGHTS WTR ASSOC	Groundwater	Community	100	

4100983	MAPLE TERRACE MOBILE HOME PARK	Groundwater	Community	70	
4101258	MAYFAIR MOORAGE INC	Groundwater	Community	30	
4106090	MCCUDDYS LANDING	Groundwater	Community	70	
4100725	MCNULTY WATER PUD	Groundwater	Community	2500	
4195224	MICHAEL CURRY DESIGN	Groundwater	Non-Transient Non-Community	25	
4194397	MIST GRADE ELEM SD 47J	Groundwater	Oregon Very Small	22	
4190941	MISTY RIVER RV PARK	Groundwater	Non-Community	76	
4190401	MOUNTAIN VIEW MOTEL	Groundwater	Non-Community	30	
4195184	NARROWS WATER COOPERATIVE	Groundwater	Oregon Very Small	10	
4100506	NEAHKAHNIE WATER DISTRICT	Groundwater	Community	600	E. coli
4194687	NESKOWIN VALLEY SCHOOL	Groundwater	Non-Transient Non-Community	30	
4190594	NESTUCCA HIGH SCHOOL	Groundwater	Non-Transient Non-Community	270	E. coli
4190595	NESTUCCA VALLEY ELEMENTARY SCHOOL	Groundwater	Non-Transient Non-Community	325	
4191088	ODF BROWNS CAMP FOREST PARK	Groundwater	Non-Community	41	
4191090	ODF ELK CREEK CG	Groundwater	Non-Community	41	
4194939	ODF JONES CREEK CG HP #2	Groundwater	Non-Community	50	
4191093	ODF KEENIG CREEK CG	Groundwater	Non-Community	25	E. coli
4195010	ODF NEHALEM FALLS CG	Groundwater	Non-Community	100	
4195297	ODF NORTHRUP CREEK HORSE CAMP HP	Groundwater	Non-Community	55	
4195321	ODF REEHERS CAMPGROUND	Groundwater	Non-Community	75	
4190762	ODF SPRUCE RUN PARK HP	Groundwater	Non-Community	40	
4191097	ODOT HD SUNSET SPRINGS RA	Groundwater	Non-Community	500	
4194882	OLYMPIC FOREST PRODUCTS	Groundwater	Non-Transient Non-Community	80	
4190413	ONEYS RESTAURANT/LOUNGE	Groundwater	Non-Community	60	E. coli
4191007	OPRD BRADLEY STATE WAYSIDE	Groundwater	Non-Community	383	

4191069	OPRD CAPE MEARES STATE PARK Inactive System	Groundwater	Non-Community	700	
4195341	OPRD LL STUB STEWART ST PK	Groundwater	Non-Community	1206	
4191010	OPRD SADDLE MOUNTAIN SP Inactive System	Groundwater	Non-Community	150	
4101423	PARADISE MOORAGE	Groundwater	Community	90	
4190511	PGE TROJAN NUCLEAR PLANT	Groundwater	Oregon Very Small	18	
4195508	PGE TROJAN PARK	Groundwater	Non-Community	25	
4100692	PRESCOTT, CITY OF	Groundwater	Community	70	
4100196	QUINCY WATER ASSOCIATION	Groundwater	Community	300	
4195417	RAINIER CONGREGATION OF JW	Groundwater	Non-Community	90	
4195520	RAINIER OR LDS CHURCH	Groundwater	Non-Community	150	
4193722	RAINIER SD #13	Groundwater	Non-Transient Non-Community	950	
4191951	REEDER BEACH RESORT	Groundwater	Non-Community	50	
4194945	RIVERS EDGE GRILL, THE Inactive System	Groundwater	Non-Community	30	
4101047	RIVERS EDGE MHP LLC	Groundwater	Oregon Very Small	23	
4101251	ROCKY POINTE MARINA	Groundwater	Community	125	
4190409	ROSEBUD CAFE	Groundwater	Non-Community	50	
4101209	SAUVIE ISLAND MOORAGE	Groundwater	Community	96	
4190590	SAUVIE ISLAND SCHOOL	Groundwater	Non-Transient Non-Community	175	
4195488	SCAPPOOSE ADVENTIST SCHOOL	Groundwater	Non-Transient Non-Community	65	E. coli
4195107	SHELL STAR MART	Groundwater	Non-Community	100	Nitrate
4101054	SOUTH FORK FOREST CAMP	Groundwater	Community	200	
4100724	ST HELENS, CITY OF	Groundwater under direct influence of surface water	Community	13410	
4194590	SUNNYSIDE CAFE & DELI Inactive System	Groundwater	Non-Community	43	
4100933	SUNSET LAKE RV PARK	Groundwater	Community	170	
4101310	TAMARACK MOBILE HOME PARK	Groundwater	Community	80	
4191087	TILLAMOOK CO PKS TRASK	Groundwater	Non-Community	25	
4195348	TILLAMOOK FOREST CENTER	Groundwater	Non-Community	164	
4190939	TWIN ROCKS FRIENDS CAMP	Groundwater	Non-Community	115	

4195119	USFS DERRICK ROAD HOST SITE Inactive System	Groundwater	Non-Community	26	
4192708	USFS SAND BEACH CG	Groundwater	Non-Community	30	
4105904	VALLEY OF THE MOON	Groundwater	Non-Community	46	
4100726	WARREN WATER ASSOCIATION	Groundwater	Community	2050	
4100951	WAUNA WATER DISTRICT	Groundwater	Community	188	E. coli
4101172	WESTERN HILLS MH ESTATES	Groundwater	Community	375	E. coli
4101474	WESTLAND WATER ASSOCIATION	Groundwater	Community	25	
4100195	WESTPORT HEIGHTS	Groundwater	Community	90	
4100952	WHEELER WATER SYSTEM	Groundwater	Community	400	
4100896	WILSON RIVER WATER DISTRICT Inactive System	Groundwater	Community	350	
4101278	WINEMA CHRISTIAN CAMP	Groundwater	Non-Community	70	
Surface Water Systems					
4100802	ARCH CAPE WATER DISTRICT	Surface water	Community	200	
4100055	ASTORIA, CITY OF	Surface water	Community	10181	
4100199	BEAVER WATER DISTRICT	Surface water	Community	600	
4105737	BERNDT CREEK WATER CORP	Surface water	Community	45	
4100689	CITY OF RAINIER	Surface water	Community	1975	
4100194	CLATSKANIE, CITY OF	Surface water	Community	2188	
4100124	FISHHAWK LAKE RESERVE AND COMMUNITY	Surface water	Community	350	
4190416	GEORGIA-PACIFIC, WAUNA MILL	Surface water	Non-Transient Non-Community	700	
4100379	JOINT WATER COMMISSION	Surface water	Community	400000 *	
4190922	KELLYS BRIGHTON MARINA	Surface water	Non-Community	25	
4101449	MARSHLAND WATER ASSOCIATION	Surface water	Community	70	
4100497	MCMINNVILLE WATER & LIGHT	Surface water	Community	34515 *	E. coli
4101139	MIDLAND WATER ASSOCIATION	Surface water	Community	160	E. coli
4100554	NEHALEM, CITY OF	Surface water	Community	1700	
4100970	NESKOWIN REG WATER DIST	Surface water	Community	1200	
4100556	NETARTS WATER DISTRICT	Surface water	Community	1800	
4100585	OCEANSIDE WATER DISTRICT	Surface water	Community	500	
4100609	PACIFIC CITY JOINT WATER - SAN AUTH	Surface water	Community	1000	
4105246	PGE BEAVER GENERATING STATION	Surface water	Non-Transient Non-Community	30	
4100708	ROCKAWAY BEACH WTR DIST	Surface water	Community	1400	
4100792	SCAPPOOSE, CITY OF	Surface water	Community	8710	
4100799	SEASIDE WATER DEPARTMENT	Surface water	Community	7084	
4100610	TIERRA DEL MAR WATER CO	Surface water	Community	80	E. coli
4100893	TILLAMOOK WATER DEPT, CITY OF	Surface water	Community	5265	
4100898	TIMBER WATER ASSOCIATION	Surface water	Community	180	
4100922	VERNONIA, CITY OF	Surface water	Community	2100	

4100932	WARRENTON, CITY OF	Surface water	Community	9100	
4100063	WICKIUP WATER DISTRICT	Surface water	Community	1635	E. coli
4100062	YOUNGS RIVER LEWIS & CLARK WD	Surface water	Community	2500	

System Type

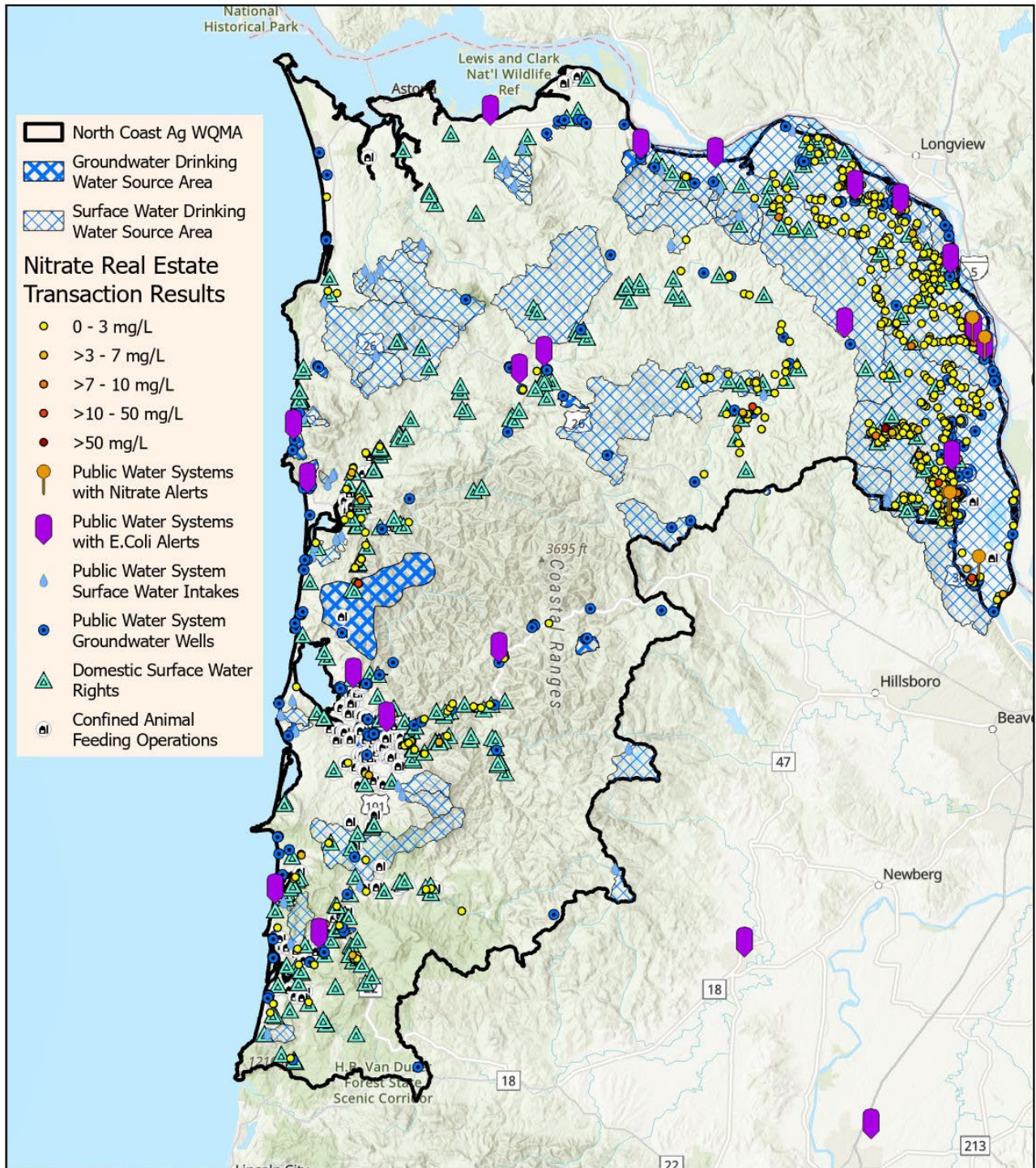
C - "Community Water System (C)" means a public water system that has 15 or more service connections used by year-round residents, or that regularly serves 25 or more year-round residents.

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.

OVS - "Oregon Very Small" 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.

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



Drinking Water Source Areas in the North Coast Agricultural Water Quality Management Area

0 5 10 Mi

Figure 1

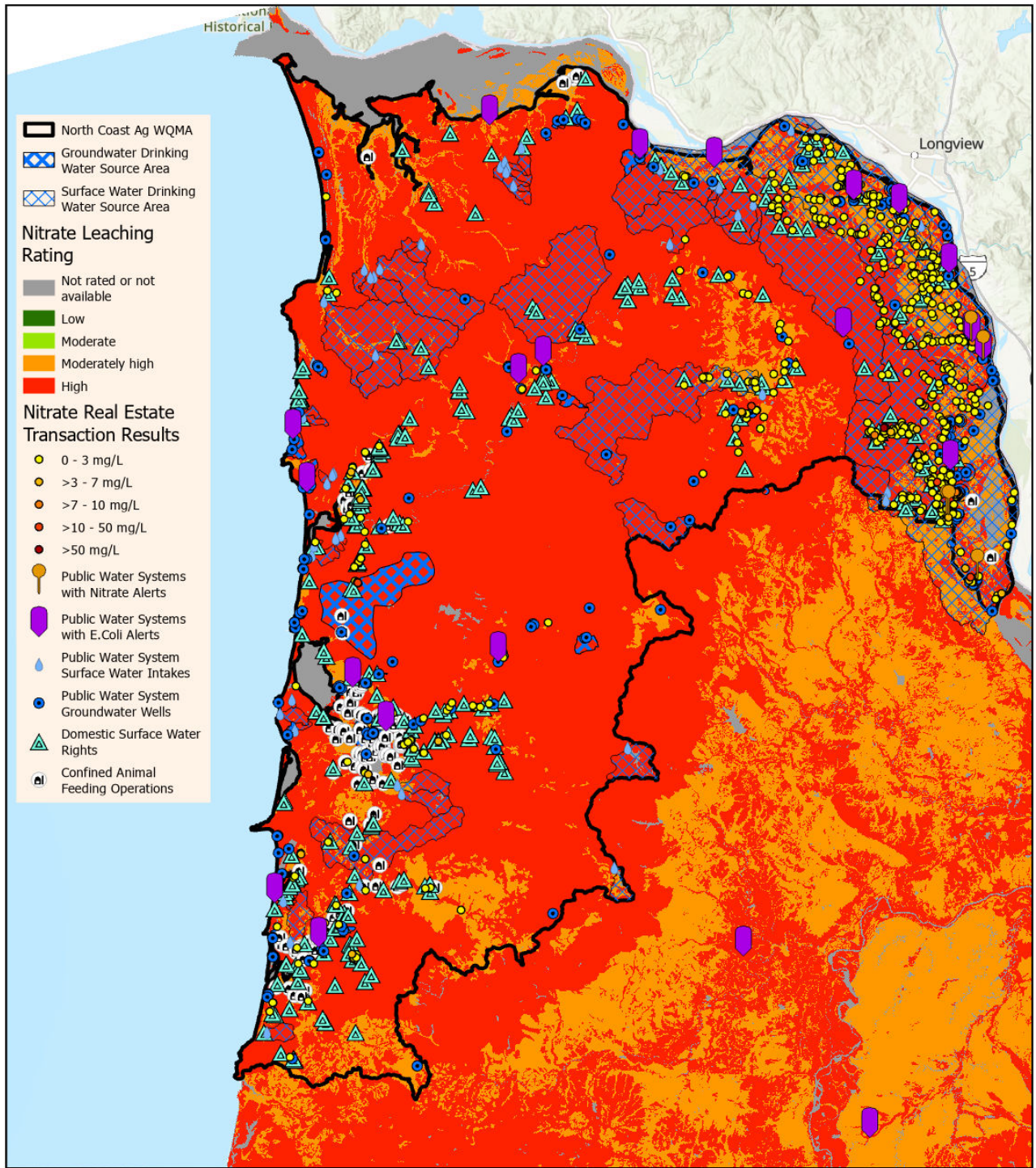
County of Crook, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA, Esri, NASA, NGA, USGS, Oregon State Parks, State of Oregon GEO, WA State Parks GIS, Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, Esri, USGS

Coordinate System: NAD 1983 Lambert Conformal Conic

Drinking Water Protection Program
State of Oregon

DEQ

Oregon Health Authority



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

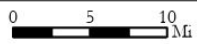


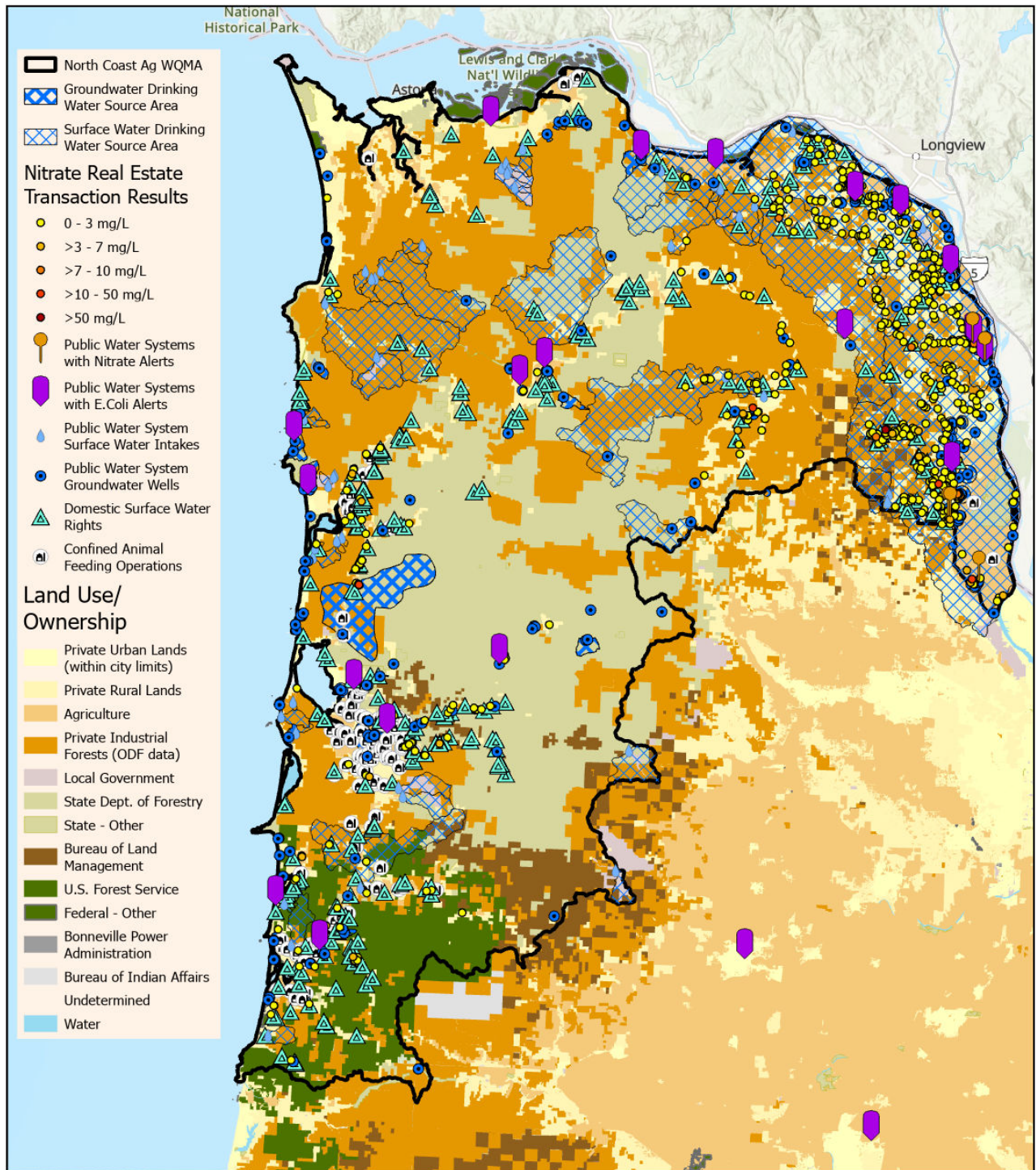
Figure 2



County of Crook, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA, Esri, NASA, NGA, USGS, Oregon State Parks, State of Oregon GEO, WA State Parks GIS, Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, Esri, USGS

Coordinate System: NAD 1983 Lambert Conformal Conic





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

0 5 10 Mi

Figure 3

Scale bar and north arrow.

County of Crook, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA, Esri, NASA, NGA, USGS, Oregon State Parks, State of Oregon GEO, WA State Parks GIS, Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, Esri, USGS

Coordinate System: NAD 1983 Lambert Conformal Conic

Drinking Water Protection Program
State of Oregon

Oregon Health Authority