

Drinking Water Information for the Hood River  
Agricultural Water Quality Management Area

Oregon Department of Environmental Quality, Drinking Water Protection Program

10/30/2020

- 26 Public drinking water systems in the Hood Agricultural Water Quality Management Area utilize surface water and groundwater sources to serve approximately 39,132 persons regularly.
- Recent alerts for fecal coliform bacteria are not common. Two public water systems have had recent alerts for *E. coli*: The City of Hood River and OPRD Viento State Park. OPRD Viento State Park has had a recent *E. coli* Maximum Contaminant Level (MCL) violation.
- The Odell public water system has had recent alerts for elevated nitrate concentrations and no recent violations.
- Three of the 16 private well tests for which there are data in the area had elevated nitrate concentrations. None of these wells had nitrate concentrations over the MCL.

24 public water systems obtain domestic drinking water from primarily groundwater sources and two systems use primarily surface water in the Hood River Agricultural Water Quality Management Area. Drinking water is an important beneficial use under the federal 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 maximum contaminant limits (MCLs).

Agricultural land uses (predominately orchards) are present near many of the public water system wells and springs in the management area. The agricultural lands are concentrated in the northern and eastern part of the area; much of the remainder is federal land.

There are seven Community public water systems in the area using groundwater and one using surface water to serve approximately 34,171 people on a regular basis, in addition to visitors at recreation sites. There are three Non-transient, Non-community workplace or school public water systems using groundwater and one using surface water, serving 1,473 persons regularly. The remaining 16 public water systems are Transient Non-community systems using groundwater and surface water to serve an estimated population of 3,148.

See Table 1 below for a list of public water systems, their classifications, sources and activity status, and populations served.

### *Bacteria*

Two public water systems in the management area have had recent alerts for detections of bacteria, the City of Hood River and OPRD Viento State Park. These public water systems with *E. coli* alerts or violations or numerous total coliform violations are marked in **bold** text in Table 1. One public water systems has had recent MCL violations for *E. coli*: OPRD Viento State Park.

### *Nitrates*

Nitrate contamination is often related to animal and cropland agriculture. The soils through most of the management area have very high nitrate leaching potential, according to the Natural Resources Conservation Service.

Oregon Health Authority rated some of the public water system wells in the management area for contaminant susceptibility for land use impacts to drinking water sources based on Source Water Assessments, aquifer characteristics, and well locations and construction. The management area has a mix of low, moderate, and high susceptibility wells. The nitrate and other contamination issues described above and the ready movement of nitrogen into aquifers in the area verify this susceptibility. Measures to reduce leachable nitrate in soils would reduce risk to groundwater sources of drinking water.

Nitrate alerts (generated when nitrate exceeds 5 mg/L) were recently recorded at Odell Water Company. There were no recent violations for nitrate MCL (generated when nitrate exceeds 10 mg/L) recorded in the area.

DEQ only addresses drinking water issues identified for PUBLIC water systems. A query of Oregon Water Resources' water rights database for private domestic points of diversion (using a threshold of 0.005 cfs for domestic surface water rights that are household use only, not irrigation) identified 40 private domestic water rights in the area. There are also private groundwater wells for domestic use. The Domestic Well Testing Act database (real estate transaction testing data) for 1989-2018 indicates that out 16 wells included in the database for the area, two wells had nitrate concentrations over 3 mg/L and one well had nitrate concentrations above 5 mg/L.

Many of the wells are in high and medium leaching potential soils. Nitrate from fertilizers and septic systems can readily penetrate to aquifers used for drinking water when leaching potential is high or very high, and bacteria removal through soil filtration can be less effective in sandy soils.

Drinking Water Protection staff are happy to provide additional details, maps, and recommendations upon request.

**Table 1. Public Water Systems served by Surface Water in the Hood River Basin**

Note: Table 1 does not include public water systems which purchase drinking water from these water systems but does include the population served by wholesale customers in the Total Population. Systems in bold have had recent *E. coli* alerts/violations. **Bold text indicates PWSs w/ recent *E. coli* alerts or violations.**

PWS ID	PWS Name	Drinking Water Source	System Type	Population
<b>Surface Water Systems</b>				
00869	City of The Dalles	1 active SW well (Mill Creek), 3 seasonal GW wells	C	12,494
92627	USFS Lost Lake Campground	1 SW well (Lost Lake)	NC	231
<b>Groundwater Systems</b>				
00172	City of Cascade Locks	2 GW wells	C	1,310
00586	Odell Water Company	1 GW well, 1 inactive emergency well	C	373
00387	Ice Fountain Water District	1 GW well, 1 inactive spring, SWP for emergencies	C	5,532
<b>00385</b>	<b>City of Hood River</b>	<b>3 GW wells</b>	<b>C</b>	<b>7,995</b>
00612	Parkdale Water Company Inc	1 GW well, 1 inactive GW well, GWP for emergencies	C	867
00386	Crystal Springs Water District	1 GW well	C	5,600
01180	COE Bonneville Dam	2 GW wells, 1 inactive GW well for emergencies	NTNC	109
05213	Mt. Shadows Utilities Company	1 GW well, 2 inactive GW wells for emergencies	NC	50
06176	Mt. Hood Bed and Breakfast	1 GW well	NC	45
90628	BLM Wildwood Rec Site	1 GW well	NC	300
90796	Hood River Co – Tucker Park	INACTIVE	NC	225
<b>91029</b>	<b>OPRD Viento State Park</b>	<b>1 GW well</b>	<b>NC</b>	<b>250</b>
91030	OPRD Starvation Cr Park/Rec Area	1 GW well	NC	150
91163	Cooper Spur Mountain Resort Inn	1 GW well	NC	245
91165	Meadows Utilities LLC CSSA	1 GW well	NC	200
92632	USFS Robinhood Campground	INACTIVE	NC	30
93999	OPRD Koberg Beach Rec Area	INACTIVE	NTNC	100
94014	USFS Wyeth CG	1 GW well	NC	111
95046	Meadows Utilities LLC Nordic	1 GW well	NC	800
92634	USFS Cloud Cap/Cooper Spur	1 GW well	NC	25
91167	Meadows Utilities LLC-MHM Spring	1 GU (Timberline Trail Spring)	NTNC	1,373
92611	USFS Eagle Creek CG	1 GW well	NC	255
95504	Windance	1 GW well	NC	215
95536	Tum a Lum Lumber	1 GW well	NC	247

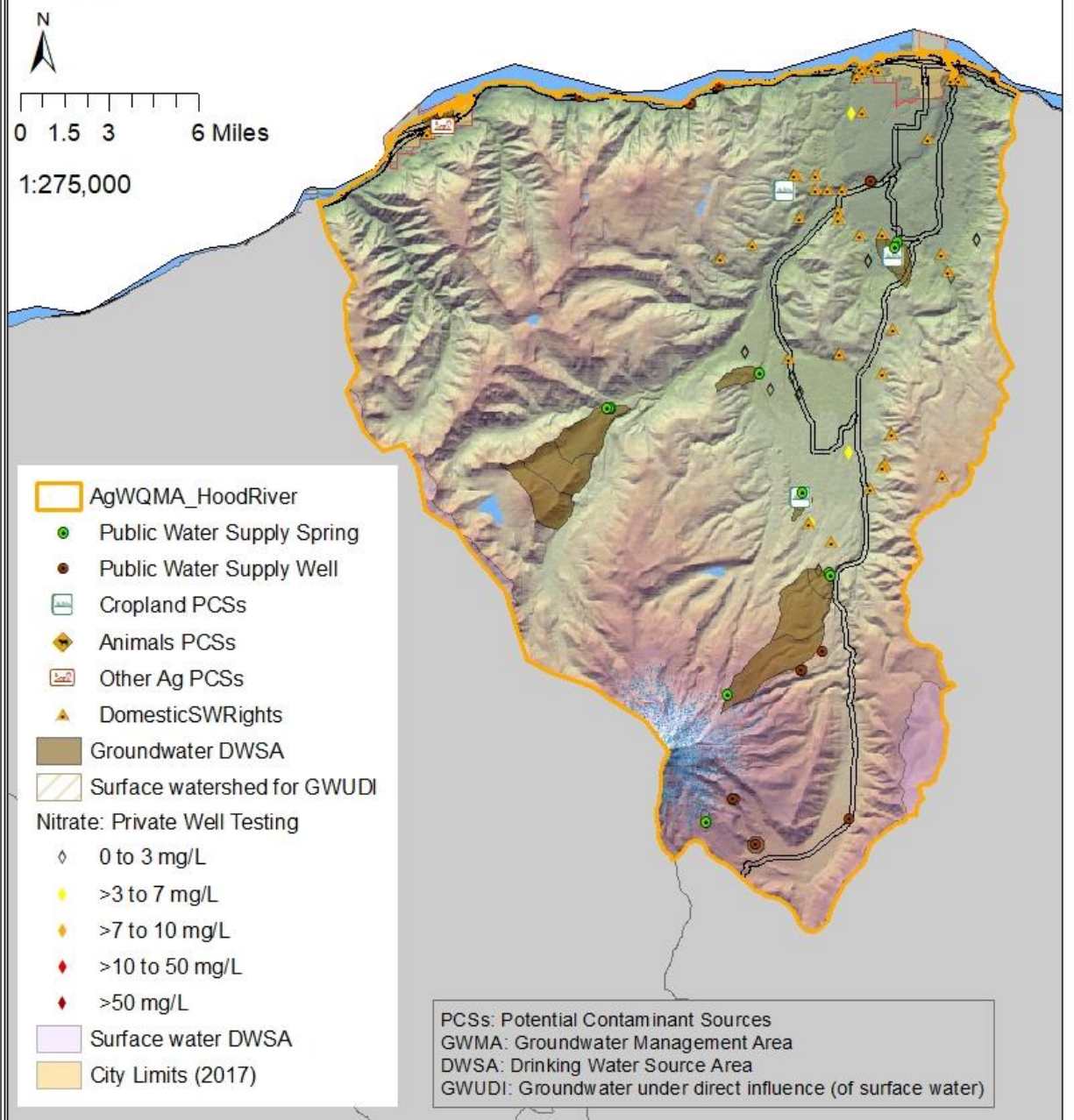
System Type: C - "Community Water System (C)" means a public water system that has 15 or more service connections used by year-round residents, or that regularly serves 25 or more year-round residents.

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 - "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.



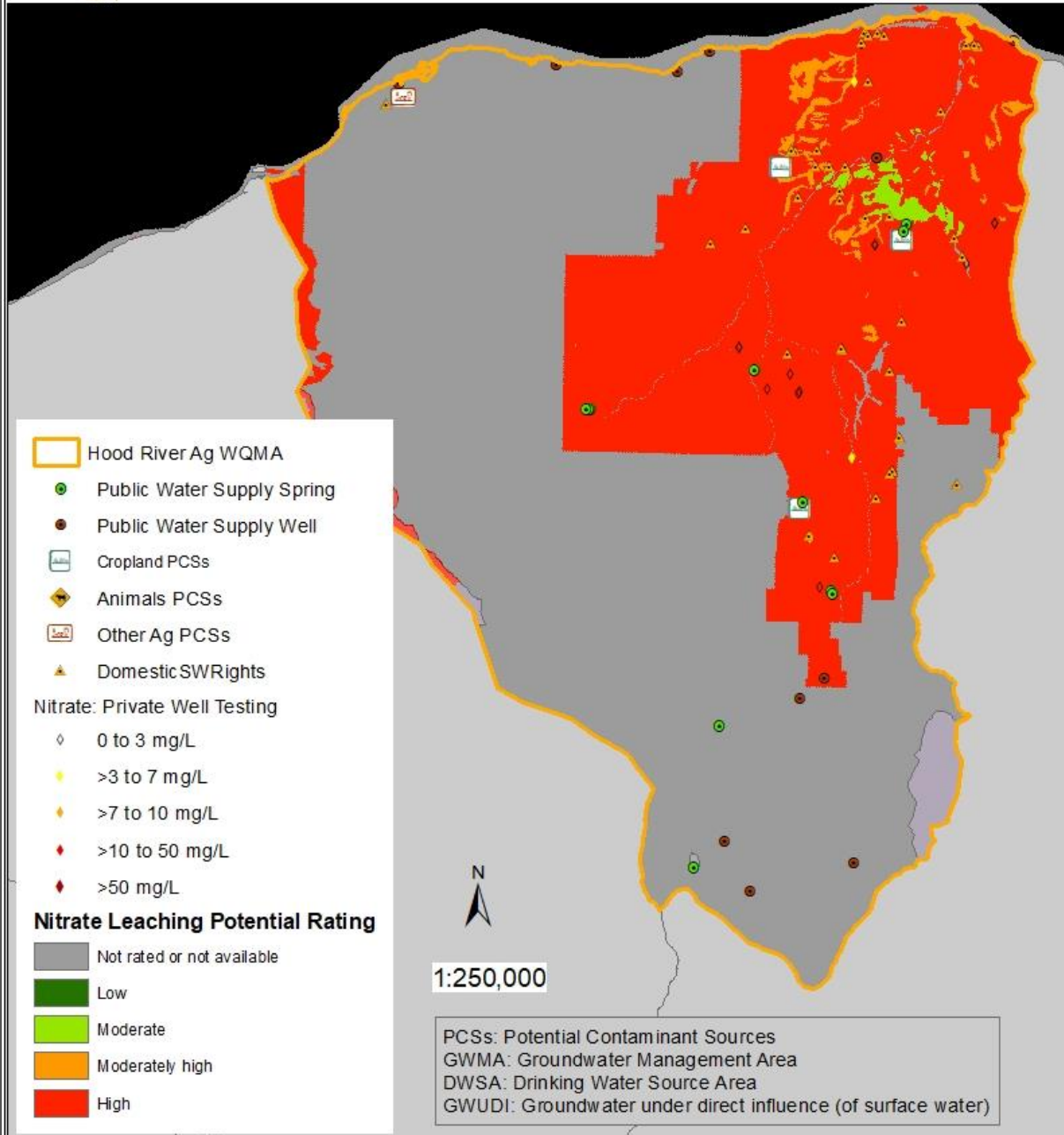
# Drinking Water Source Areas for Public Water Systems in Hood River Agricultural Water Quality Management Area



The Drinking Water Source Area (DWSA) delineations define areas that supply the drinking water system. For groundwater this is defined as the area on the surface that overlies that portion of the aquifer that supplies water to a well or spring. DWSAs for wells typically show the 1-, 2-, 5-, and 10- or 15-yr time of travel zones that indicate the amount of time it takes groundwater to move to the wellhead. DWSAs for springs typically show area of short-, intermediate-, and long-term groundwater flow to the spring. DWSAs for surface water represents the watershed that supplies the waterbody where the intake is located.



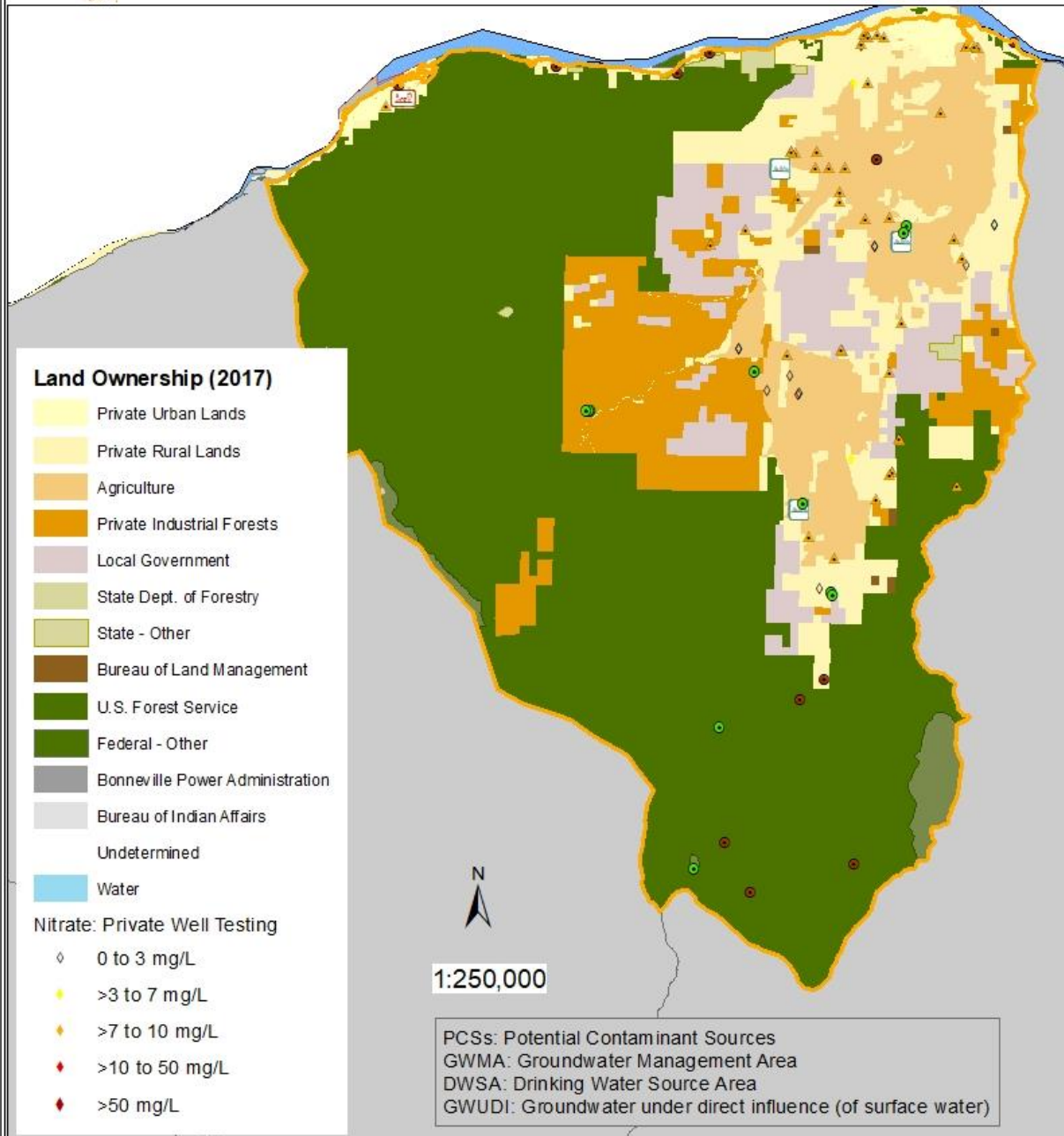
# Drinking Water Source Areas for Public Water Systems in Hood River Agricultural WQMA: Nitrate Leaching Potential



The Drinking Water Source Area (DWSA) delineations define areas that supply the drinking water system. For groundwater this is defined as the area on the surface that overlies that portion of the aquifer that supplies water to a well or spring. DWSAs for wells typically show the 1-, 2-, 5-, and 10- or 15-yr time of travel zones that indicate the amount of time it takes groundwater to move to the wellhead. DWSAs for springs typically show area of short-, intermediate-, and long-term groundwater flow to the spring. DWSAs for surface water represents the watershed that supplies the waterbody where the intake is located.



# Drinking Water Source Areas for Public Water Systems in Hood River Agricultural WQMA: Land Use/Ownership

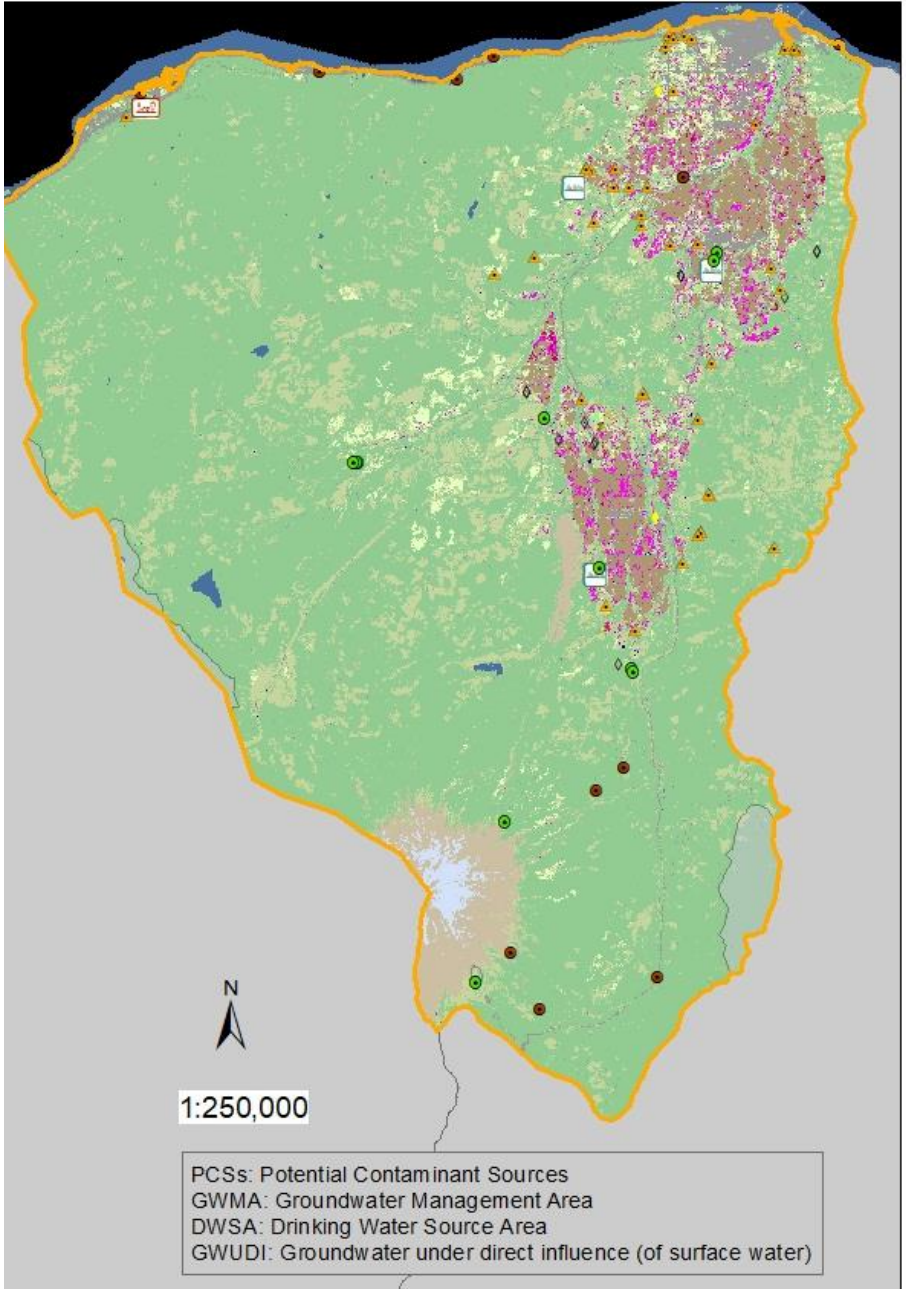


The Drinking Water Source Area (DWSA) delineations define areas that supply the drinking water system. For groundwater this is defined as the area on the surface that overlies that portion of the aquifer that supplies water to a well or spring. DWSAs for wells typically show the 1-, 2-, 5-, and 10- or 15-yr time of travel zones that indicate the amount of time it takes groundwater to move to the wellhead. DWSAs for springs typically show area of short-, intermediate-, and long-term groundwater flow to the spring. DWSAs for surface water represents the watershed that supplies the waterbody where the intake is located.



# Drinking Water Source Areas for Public Water Systems in Hood River Agricultural WQMA: Crops (2015 NASS)

- Hood River Ag WQMA
- Public Water Supply Spring
- Public Water Supply Well
- Cropland PCSs
- Animals PCSs
- Other Ag PCSs
- Domestic SW Rights
- Background
- Corn
- Sweet Corn
- Barley
- Spring Wheat
- Winter Wheat
- Oats
- Alfalfa
- Other Hay/Non Alfalfa
- Sod/Grass Seed
- Fallow/Idle Cropland
- Cherries
- Apples
- Pears
- Open Water
- Perennial Ice/Snow
- Developed/Open Space
- Developed/Low Intensity
- Developed/Med Intensity
- Developed/High Intensity
- Barren
- Deciduous Forest
- Evergreen Forest
- Mixed Forest
- Shrubland
- Grass/Pasture
- Woody Wetlands
- Herbaceous Wetlands
- Triticale
- Blueberries



1) delineations define areas that supply the drinking water system.  
 area on the surface that overlies that portion of the aquifer that supplies water to a well or spring. DWSAs for wells  
 15-yr time of travel zones that indicate the amount of time it takes groundwater to move to the wellhead. DWSAs for  
 immediate-, and long-term groundwater flow to the spring.  
 2) watershed that supplies the waterbody where the intake is located.