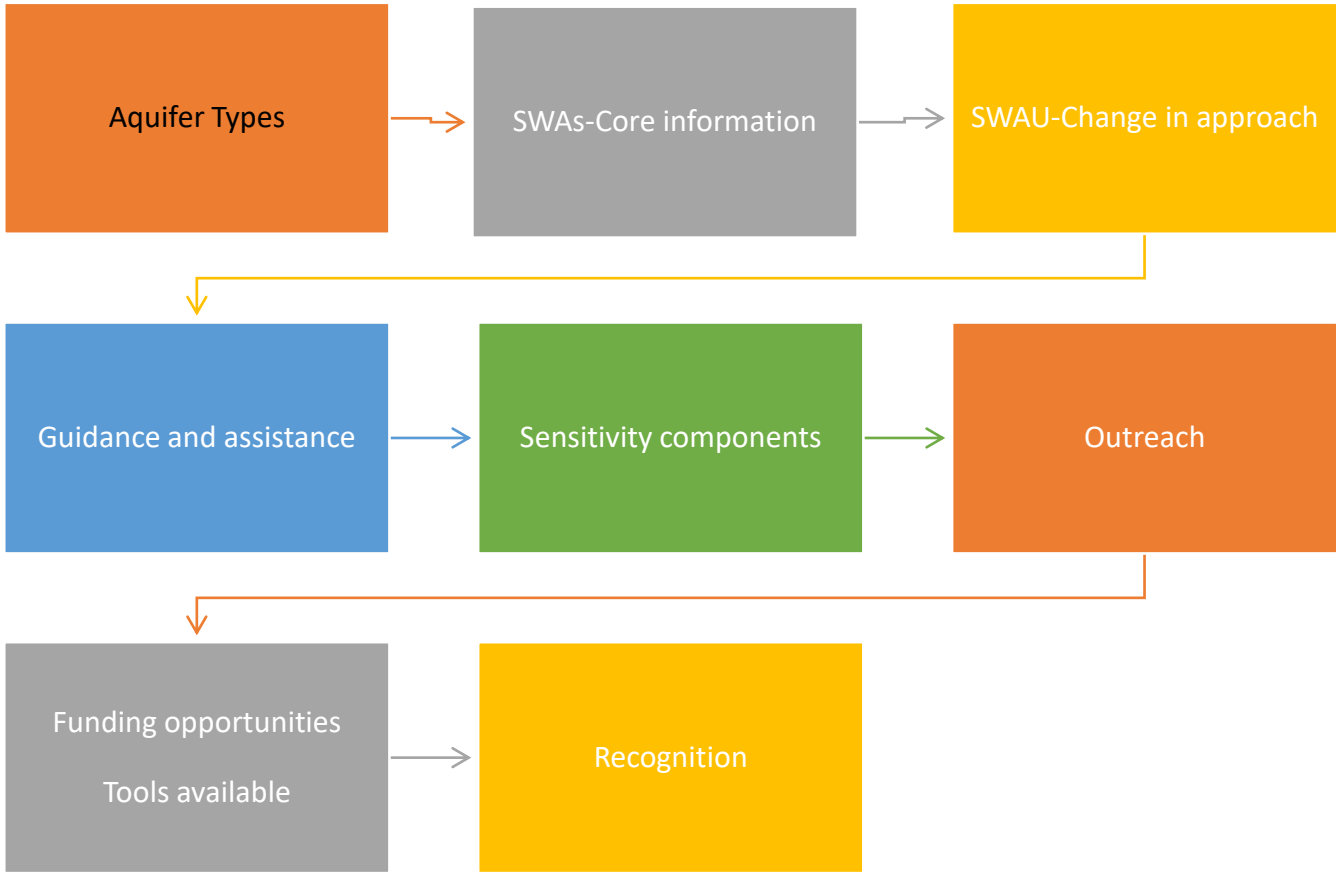
10-10-2024

Source Water Protection In Oregon

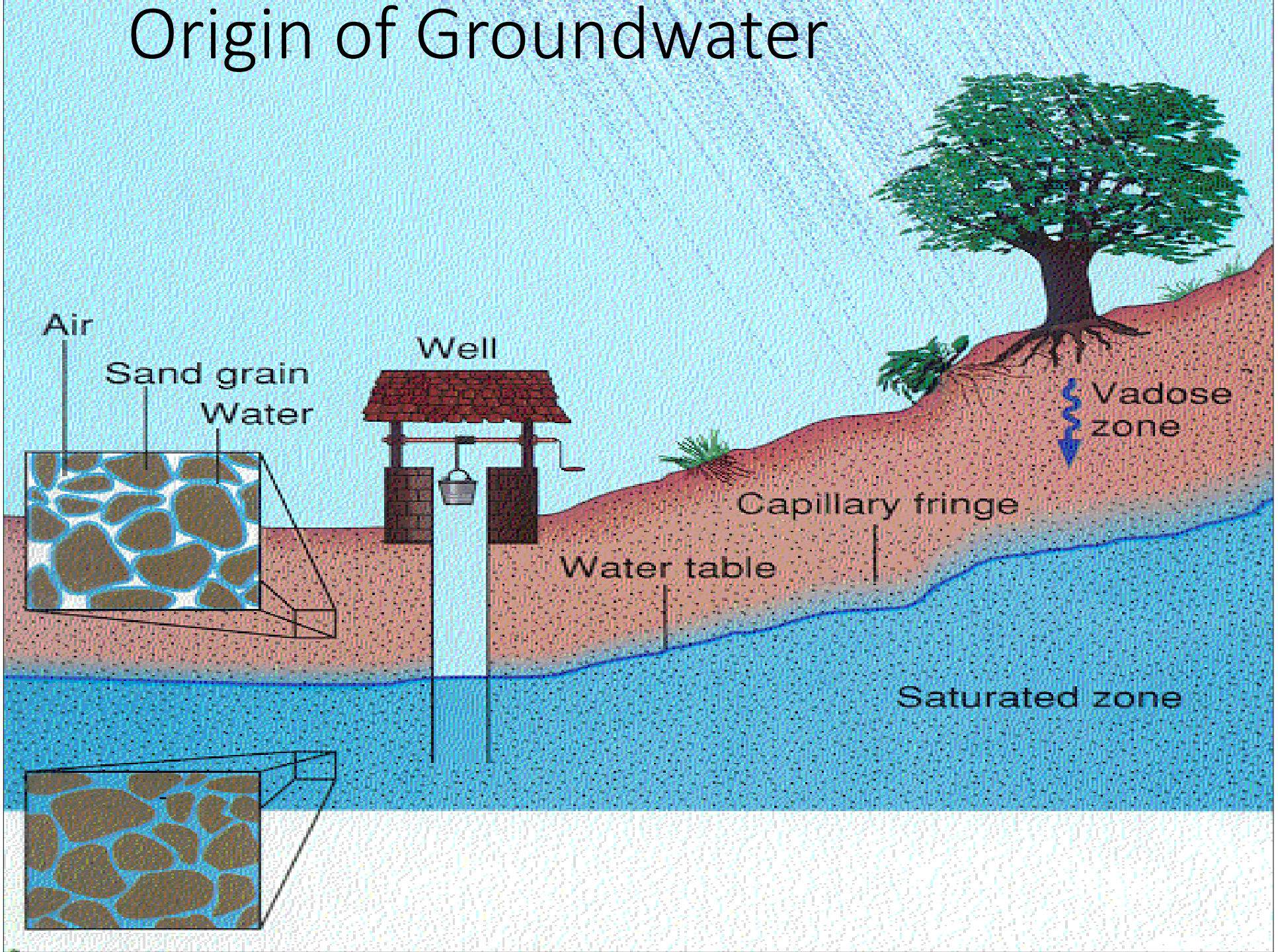
Fall Training 2024

Shawn Stevenson R.G.

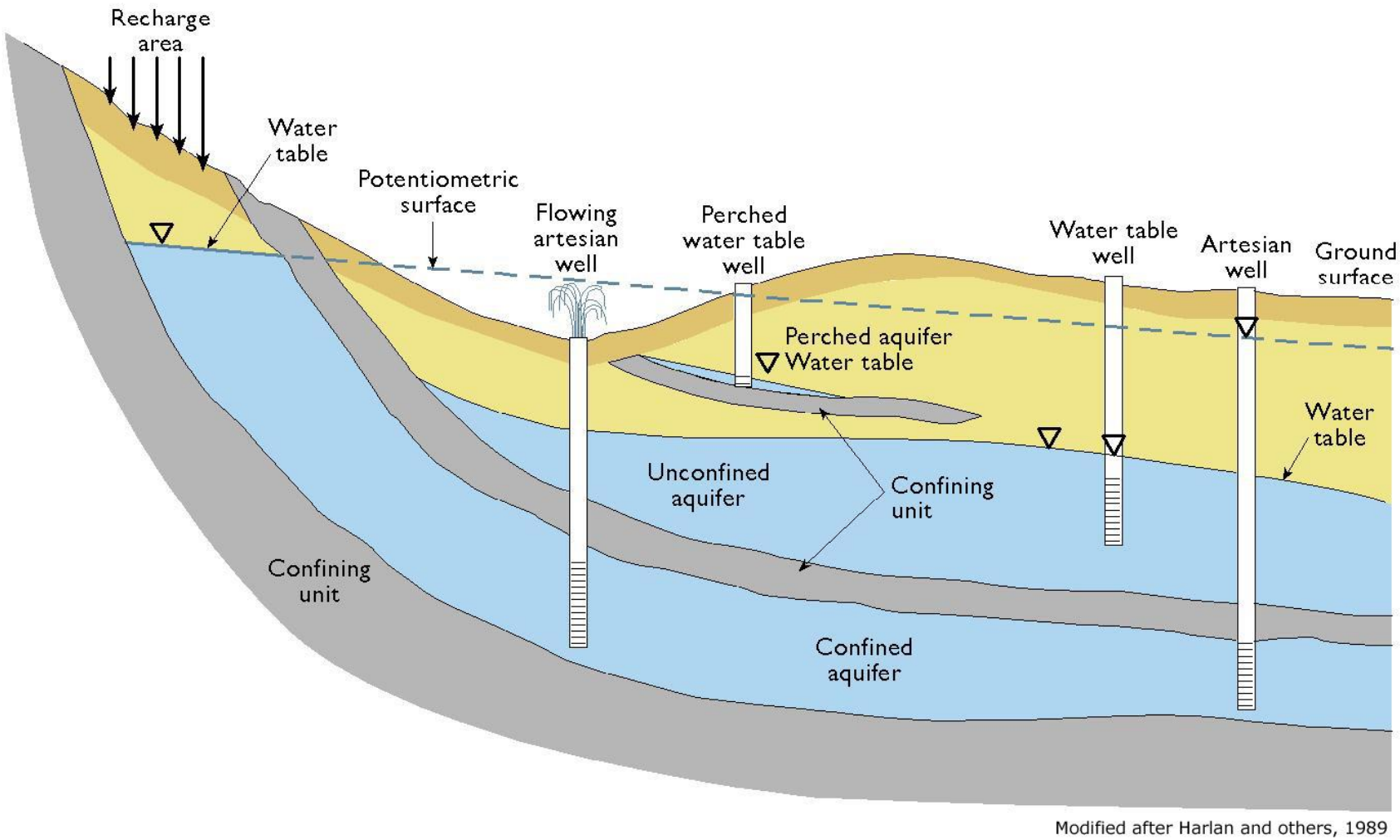
Summary of topics



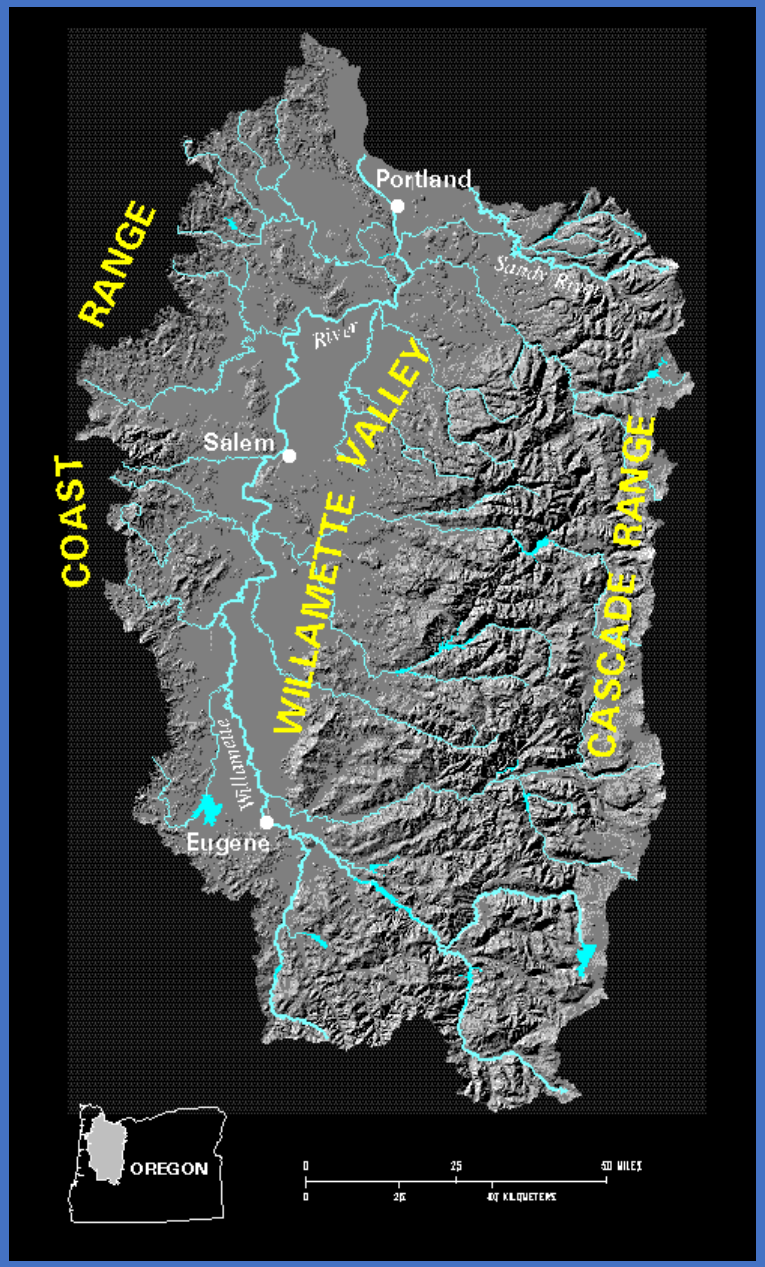
Origin of Groundwater



Aquifer Types



Prevalent Oregon Aquifers



- **Willamette Lowland basin-fill aquifer**

- Description. **Alluvial aquifers** are generally composed of clay, silt, sand, gravel or similar unconsolidated material deposited by running water.

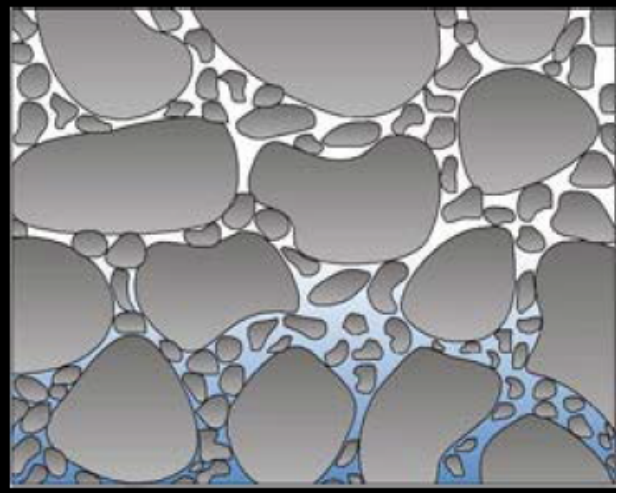
Sensitive Aquifer Types

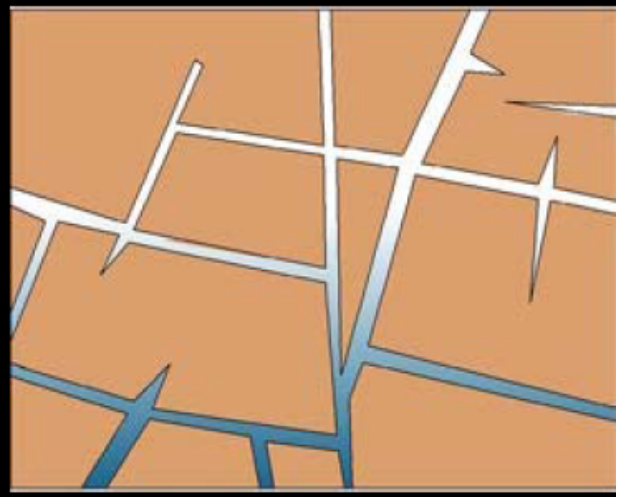
- An alluvial aquifer stores and transports water through sediment pores

- A *fractured rock aquifer has limited storage capability and transports water along planar breaks.

*aka bedrock, crystalline rock, hard rock, basement.

(Alluvial Aquifer)



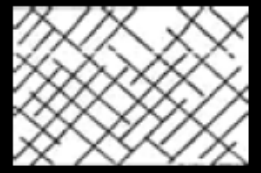


(Water Bearing Fractured Rock)

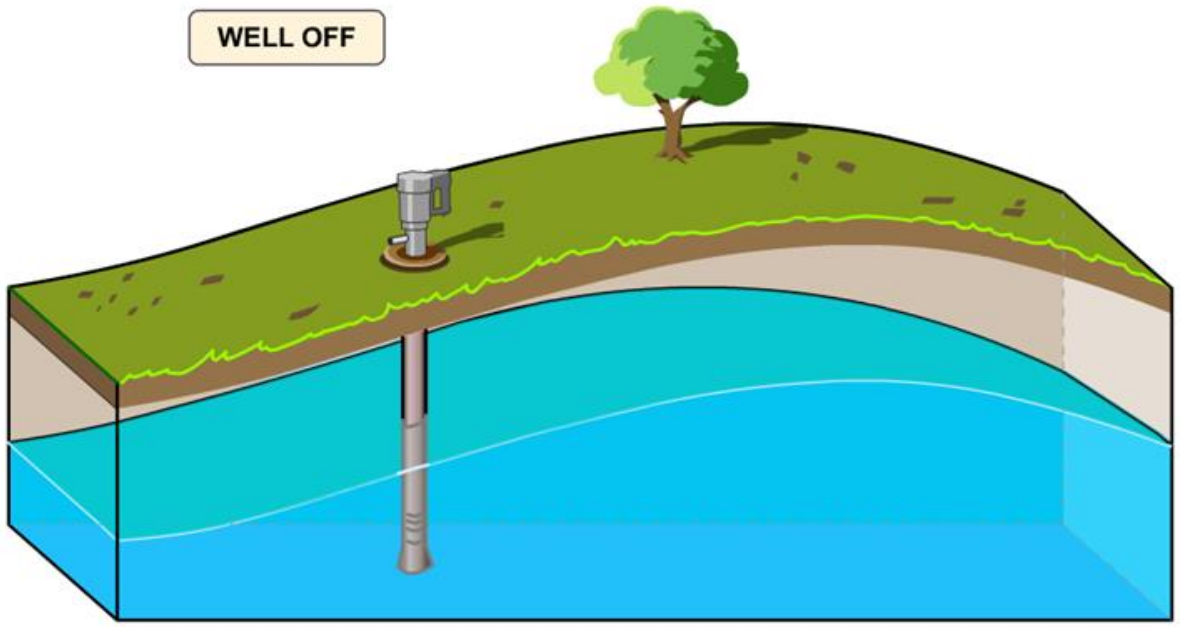
Fractured Rock Aquifers

Storage & Permeability Depends on Secondary Porosity

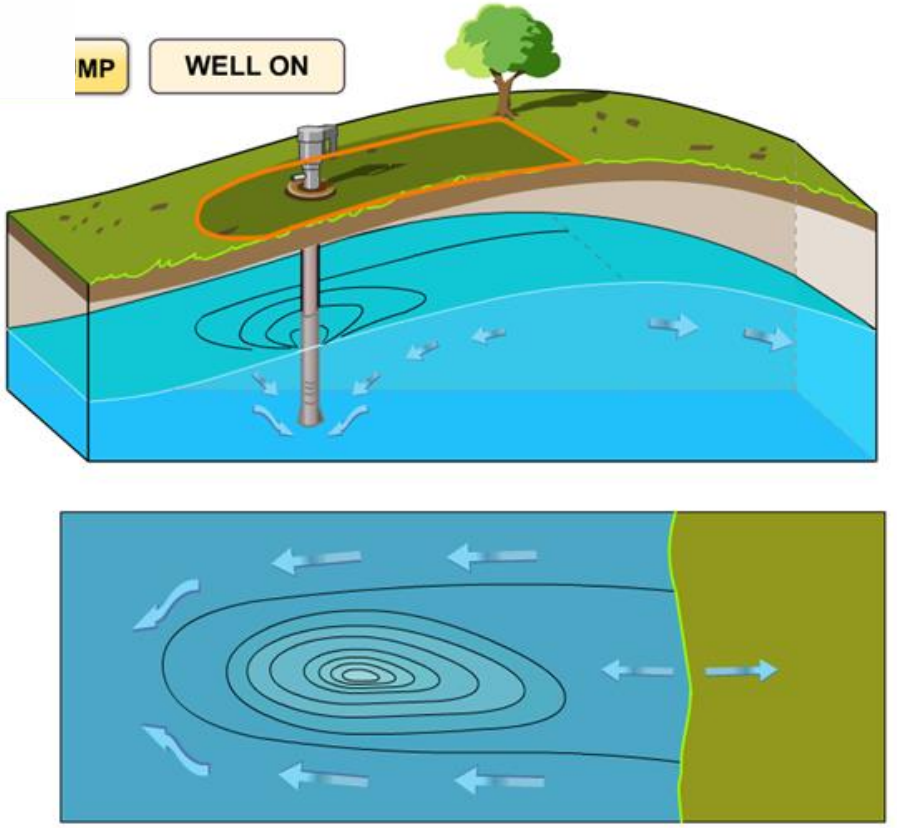
Fracture Characteristics

Unfavorable		Favorable
	-Size and Depth -	
	- Spacing -	
	- Interconnection -	

Creation of a Simple Capture Zone

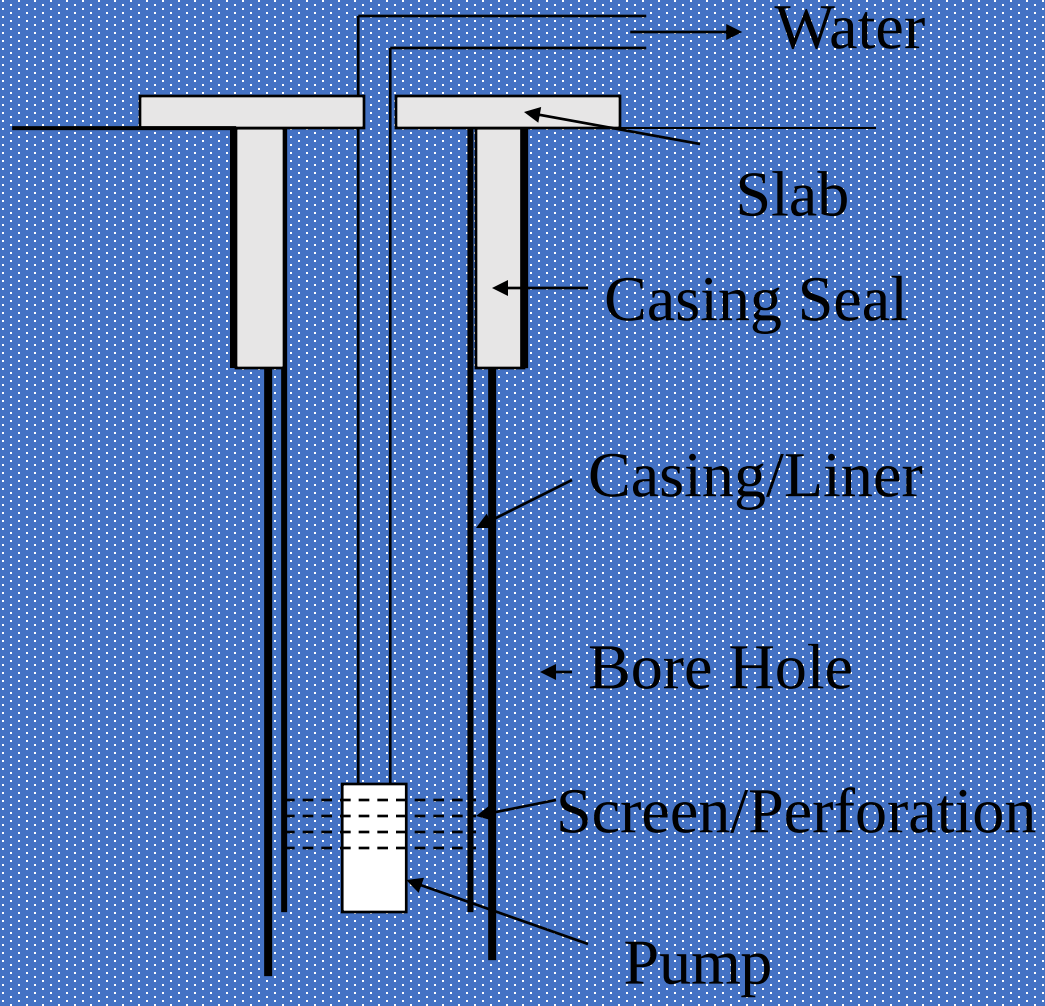


Simple Capture Zone Cont.



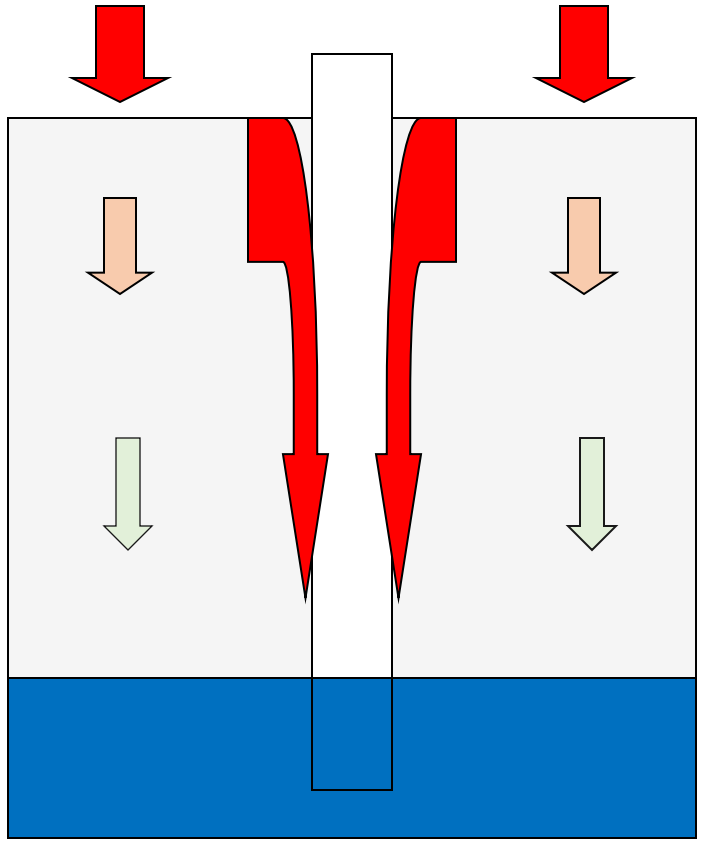
Well Construction

- **Bore Hole**
- **Casing: holds hole open**
- **Casing Seal: Protects against inflow of shallow water**
- **Concrete Slab: protects against inflow of surface water**
- **Screens/Perforations: allow access of water**



Well Construction Concerns

- Soil and unsaturated zone above the aquifer supplies some level of protection against contaminants from the surface.
- Well bore short circuits that barrier and provides a direct conduit to the aquifer



Is this wellhead sealed correctly?

What are Issues with this Well?

Applying the Source Water Assessment Sensitivity Data

- *Well construction data*
- *Aquifer characteristics*
- *GW-Delineations*
- *The two-year time of travel zone*

Sensitivity Info GW/GWUDI Link

SRC-AA: WELL #1 — GW, Active, Permanent ---- Operating Period: Jan 1 - Dec 31
Disinfection: RESID. MAINT. HYPOCHLORINATION

Sensitivity Analysis Data

Aquifer sensitivity:	High	Surface water within 500 feet:	No
Construction adequate?:	No - Seal Missing or Unknown	Surface water type:	Unknown
E. coli sources within 2-year time-of-travel:	Yes	Data last updated:	06/04/2015

Monthly Assessment Monitoring Data

Monthly Assessment Monitoring Required? Completed

Monthly Schedule (Closed): 1 sample(s) per month to be taken beginning 08/01/2015 - 07/31/2016

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	*Total*
# Samples	1	1	1	1	1	1	1	1	1	1	1	1	*12*
TC+	0	0	0	0	0	0	0	0	0	0	0	0	*0*
E. coli+	0	0	0	0	0	0	0	0	0	0	0	0	*0*

Outcome/Determination: **Low Risk**

No historic GWUDI data were found.

Back to top

SRC-AB: WELL #2 — GW, Active, Permanent ---- Operating Period: Jan 1 - Dec 31
Disinfection: RESID. MAINT. HYPOCHLORINATION

Sensitivity Analysis Data

Aquifer sensitivity:	High	Surface water within 500 feet:	No
Construction adequate?:	Yes	Surface water type:	Unknown
E. coli sources within 2-year time-of-travel:	Yes	Data last updated:	06/04/2015

Monthly Assessment Monitoring Data

Monthly Assessment Monitoring Required? Completed

Monthly Schedule (Closed): 1 sample(s) per month to be taken beginning 08/01/2015 - 07/31/2016

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	*Total*
# Samples	1	1	1	1	1	1	1	1	1	1	1	1	*12*
TC+	0	0	0	0	0	0	0	0	0	0	0	0	*0*
E. coli+	0	0	0	0	0	0	0	0	0	0	0	0	*0*

Outcome/Determination: **Low Risk**

No historic GWUDI data were found.

- Sensitivity info:
- aquifer characteristics
- well construction

SOURCE WATER ASSESSMENT REPORT

Amigo Villa Water Service, Inc.
Albany, Oregon
PWS# 4100013

March, 2002

Prepared

by

Oregon Department of Human Services
Health Services
Drinking Water Program

and

Oregon Department of Environmental Quality
Water Quality Division
Drinking Water Protection Program

Available in Alternate Formats by contacting the DHS DWP at (541) 726-2587

The original Source water Assessments produced from ~1999 produced-2005

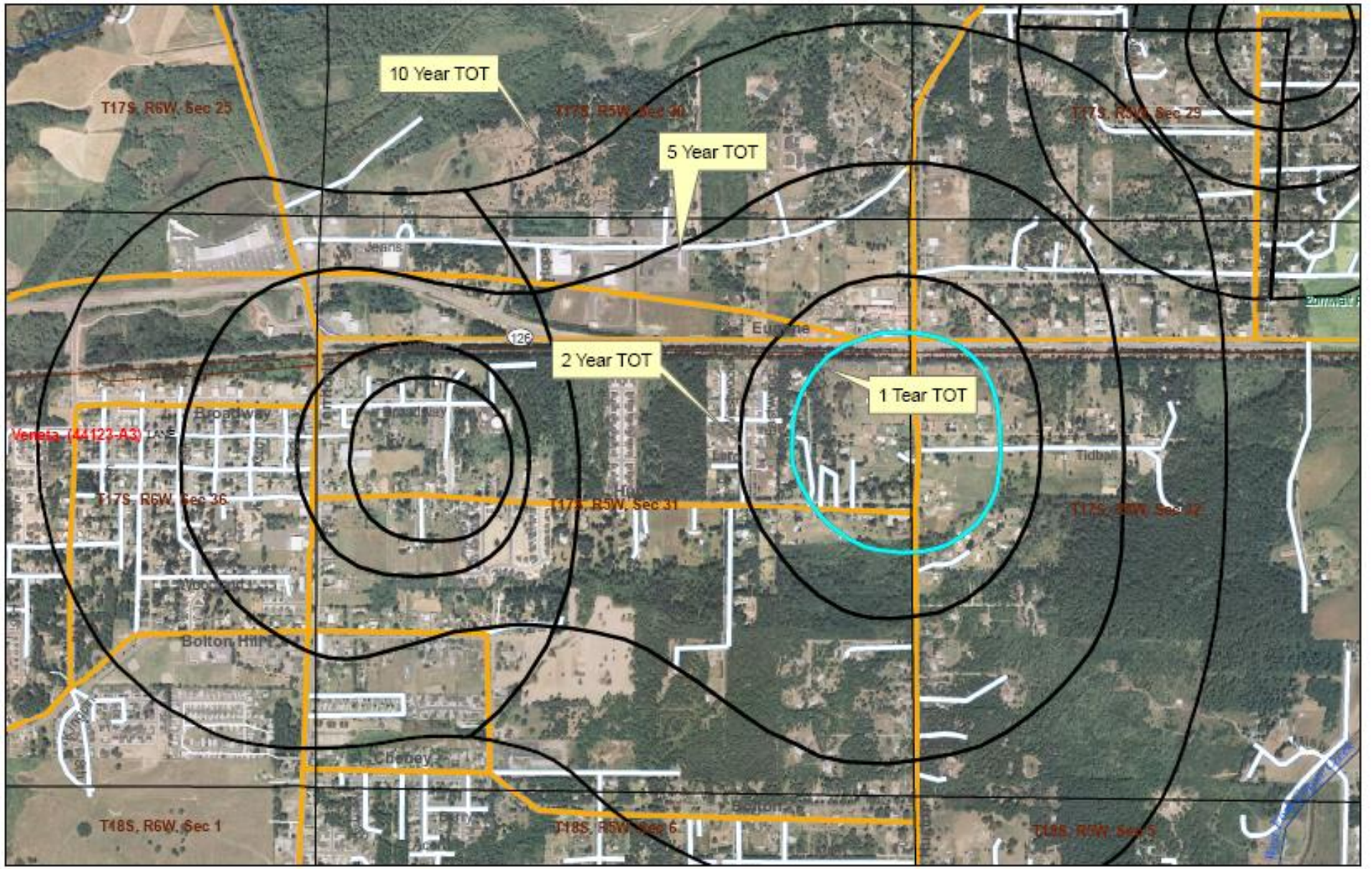
Initial delineations

Sensitivity

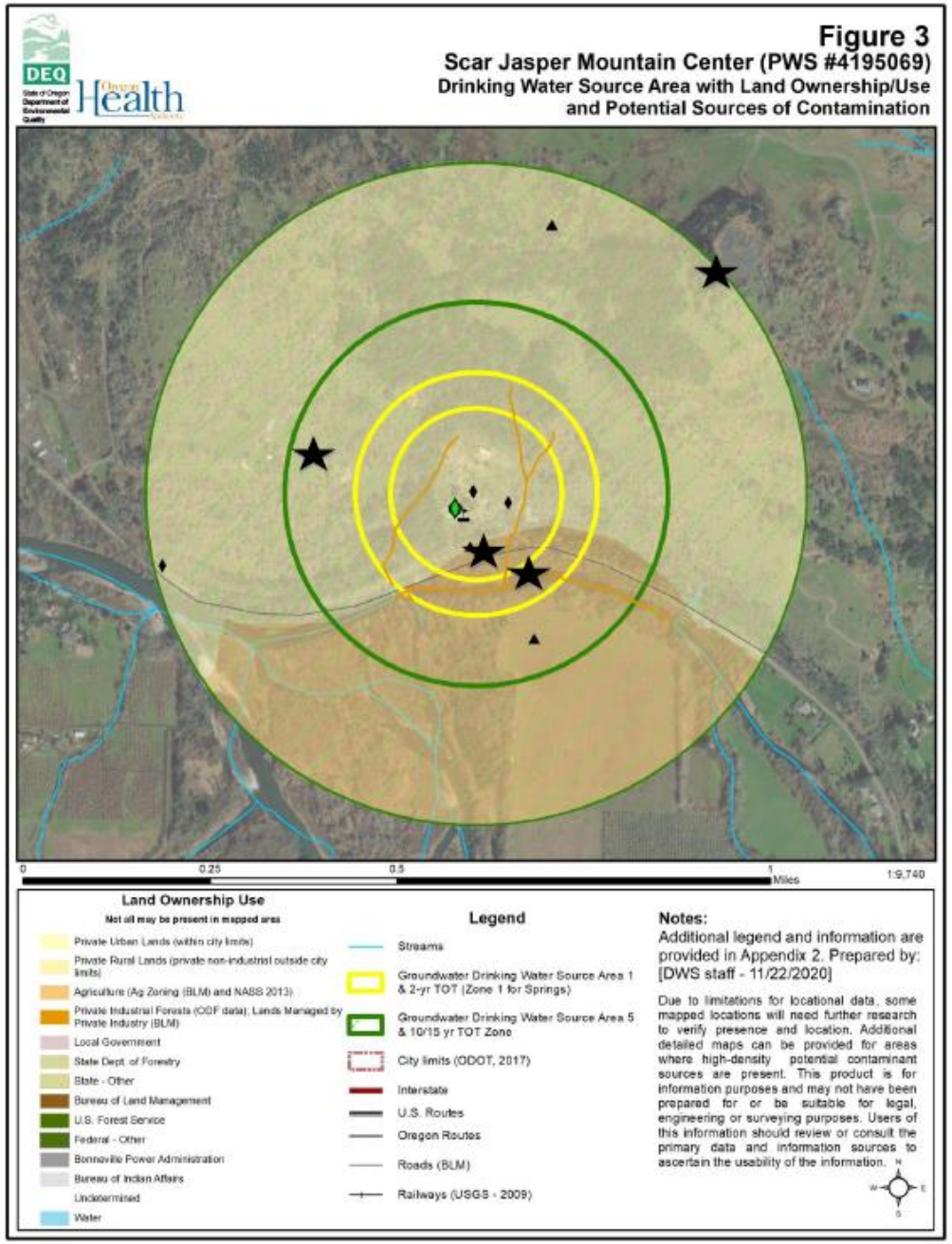
- well construction
- Aquifer characteristics
- PCS

➢ Susceptibility

Drinking Water Source Area:



TOT= Time of Travel Zone



SWA Updates Focused on:

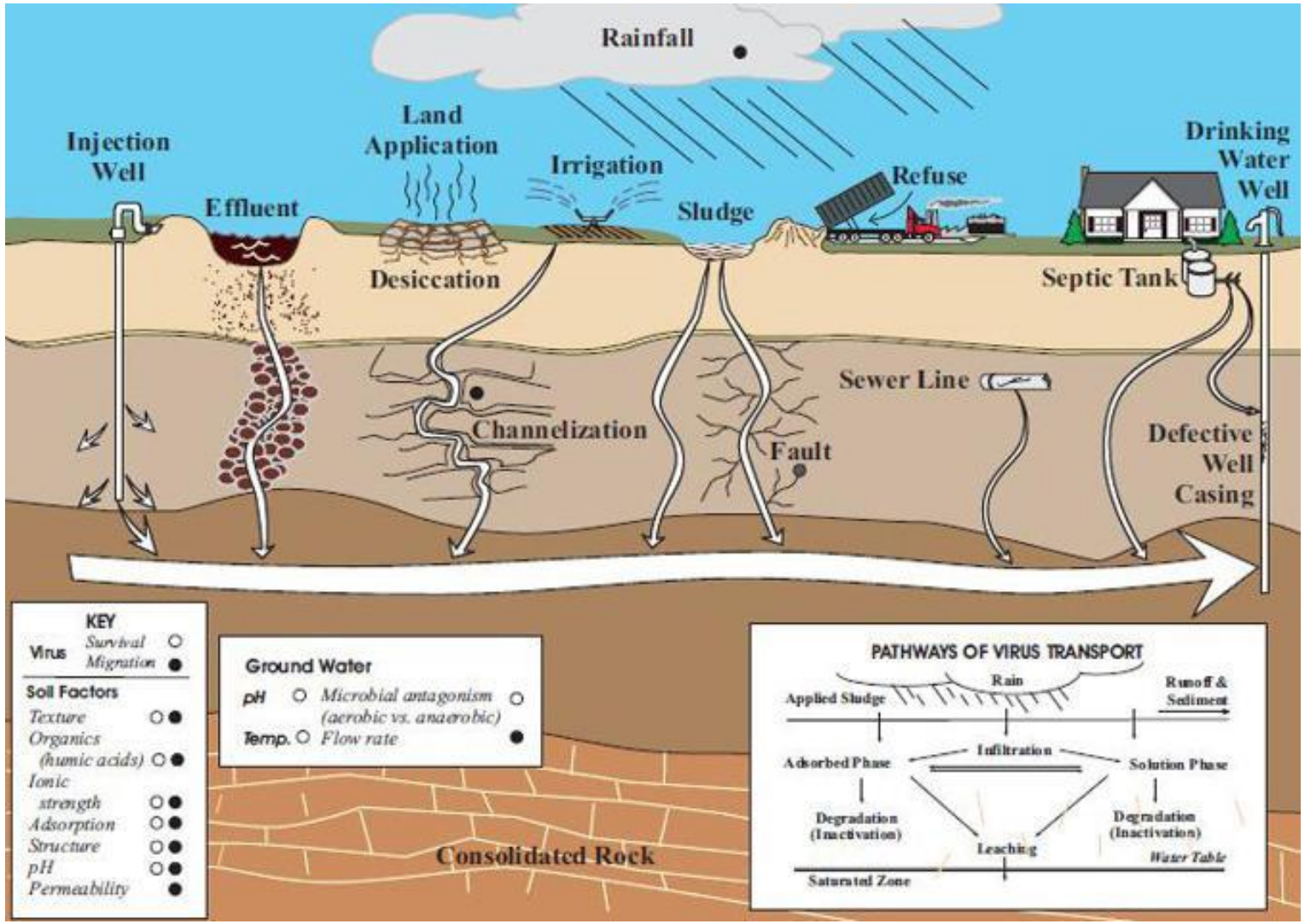
- Figures and maps
- Database queries
- More user functionality

Regulatory Database Results- State and Federal

Site ID (1)	Status	Common Name	Location	Data Source	PCS Type (2)	GW Risk (3)
Class: All Regulatory Database Results						
DHS/OHA-OFRA-Schools- -1	Schools - potential chemical use and vehicle maintenance	Jasper Mountain School	37875 Jasper-Lowell Rd, Jasper, Lane	OGDC (DHS/OHA-2015)	R15 : Schools	L
UIC- 13852	OnSite system / Registered w/permit	SCAR/Jasper Mountain Center	37875 Jasper Lowell Road, Jasper, Lane	DEQ/UIC 10/31/2018	M31 : Large Capacity Septic Systems -Class V UIC (serves >20)	H
WQ- SIS-108872	WPCFOS-BiiiRGF> - DOMESTIC	SCAR/JASPER MOUNTAIN	37875 JASPER-LOWELL ROAD, Lane	DEQ/WQ-SIS 10/31/2018	M31 : Large Capacity Septic Systems -Class V UIC (serves >20)	H
Class: Previously identified in 2000-2005 Source Water Assessment (PWS should verify presence, potential risk and location)						

Potential Contaminant Sources (PCS)

- Newly inventoried in SWAU
- Projected in Map View
- Classification
  - High
  - Moderate
  - Low



DEQ
State of Oregon Department of Environmental Quality

Appendix #3

Technical Information and Factsheets for Water Quality

PLEASE NOTE: This document provides Internet URL Addresses as a convenience for users. All URL Addresses were functional at the time of the last update (July 2020). The list with active links is located at http://www.oregon.gov/deq/wq/programs/Pages/DWP-Pubs.aspx. See "A Summary of Technical Assistance Resources"

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	https://www.oregon.gov/deq/Hazards-and-Cleanup/ToxicReduction/Pages/Reducing-Toxics.aspx
Oregon's Groundwater Protection Program – who does what? (DEQ)	https://www.oregon.gov/DEQ/wq/programs/Pages/GWP-about.aspx
Groundwater Basics for Drinking Water Protection (DEQ)	https://www.oregon.gov/deq/FilterDocs/dwpGwBasics.pdf
Protecting Oregon's Groundwater from Contamination (OSU)	https://wellwater.oregonstate.edu/protecting-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	https://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)	https://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 https://www.oregon.gov/DEQ/Hazards-and-Cleanup/hw/Pages/HHW-by-County.aspx

PWS/User Tools :

- Potential impacts
- Best management practices-BMPs
- Technical information and fact sheets

Oregon's Drinking Water Source Protection Approach

- DEQ/OHA roles
- Voluntary for Public Water Systems
  - Vs. Other States
- PWS Incentives
  - ➢Waivers
  - ➢Grants
  - ➢Awards

Implementation of Protection Activities

Initial

- Updated PCS inventory
- Participation in protection related workshop
- Etc…

Vs.

Substantial To be recognized by the state, these protection strategies must address the risks within the drinking water source area identified in the water system's Source Water Assessment report or potential hazards that have developed since the report was completed.

Substantial Implementation Cont;

- To be recognized by the state, these protection strategies must address the High or Moderate risks within the drinking water source area identified in the water system's Source Water Assessment report or potential hazards that have developed since the report was completed.

Drinking Water Protection Grant

- Source Protection Planning Projects designed to identify appropriate protection measures, including development of a comprehensive Drinking Water Source Protection (DWSP) plan, **educational projects, projects to identify and ensure implementation of Best Management Practices (BMPs)**, development of local DWSP ordinances, development of restoration or conservation plans for the source area for future easement or land acquisition.

Types of projects that can be evaluated for funding include:

- Implementing household hazardous waste collection events
- Implementing drug-take-back projects in source areas
- Well abandonment
  - Permanent abandonment and decommissioning of high-risk abandoned or unused (private or irrigation) wells near public water supply wells or within the source area.
- Installation of signs at boundaries of zones or protection areas
- Projects to decommission onsite septic systems and connect homes to existing sewer lines
- Secondary containment for high-risk above ground storage tanks outside the 100 foot setback (note this excludes fuel tanks for water system emergency water sources)
- Structures to divert contaminated stormwater runoff affecting the source area
- Implementation of best management practice projects
- Implementation of a drinking water source protection ordinance
- Development of educational flyers/brochures for purposes of public education

Letter of Interest-LOI

Consult with the Regional OHA Geologist

State circuit rider assistance

LETTER OF INTEREST

DRINKING WATER SOURCE PROTECTION FUND – FUNDING 2024 (SWP-24-_____)

- Please submit 1 copy of the *Letter of Interest*. This may be in an electronic or hardcopy format.
- You may attach additional sheets to your *Letter of Interest* to describe your project in response to Section 2.
- Information on how to complete the LOI is available via the General Information Guide to 2024 Drinking Water Source Protection Loans and Grants document.
- Information on funded project requirements including Business Oregon contact information is available in Appendix C of the Safe Drinking Water Handbook.

SECTION 1: WATER SYSTEM INFORMATION

Organization Name

PWS ID Number

Mailing Address (Street/City/State/Zip code)

Contact Name
(Person we should contact with project questions)

Title

Phone Number

Fax Number

Email Address

Federal Tax ID Number

UEI Number

Date SAM (System for Award Management) Registration Expires

* A current UEI number and a System for Award Management (SAM) Registration will be required for all accepted funding recipients as well as entities that enter into contracts with a funding recipient (i.e., contractors/consultants). For more information about UEI and SAM see section 5.6 of the Safe Drinking Water Handbook. SAM.gov is an official website of the United States government. There is no charge to register or maintain your entity registration in SAM.gov

Representation (Information may be found at https://www.oregonlegislature.gov/)

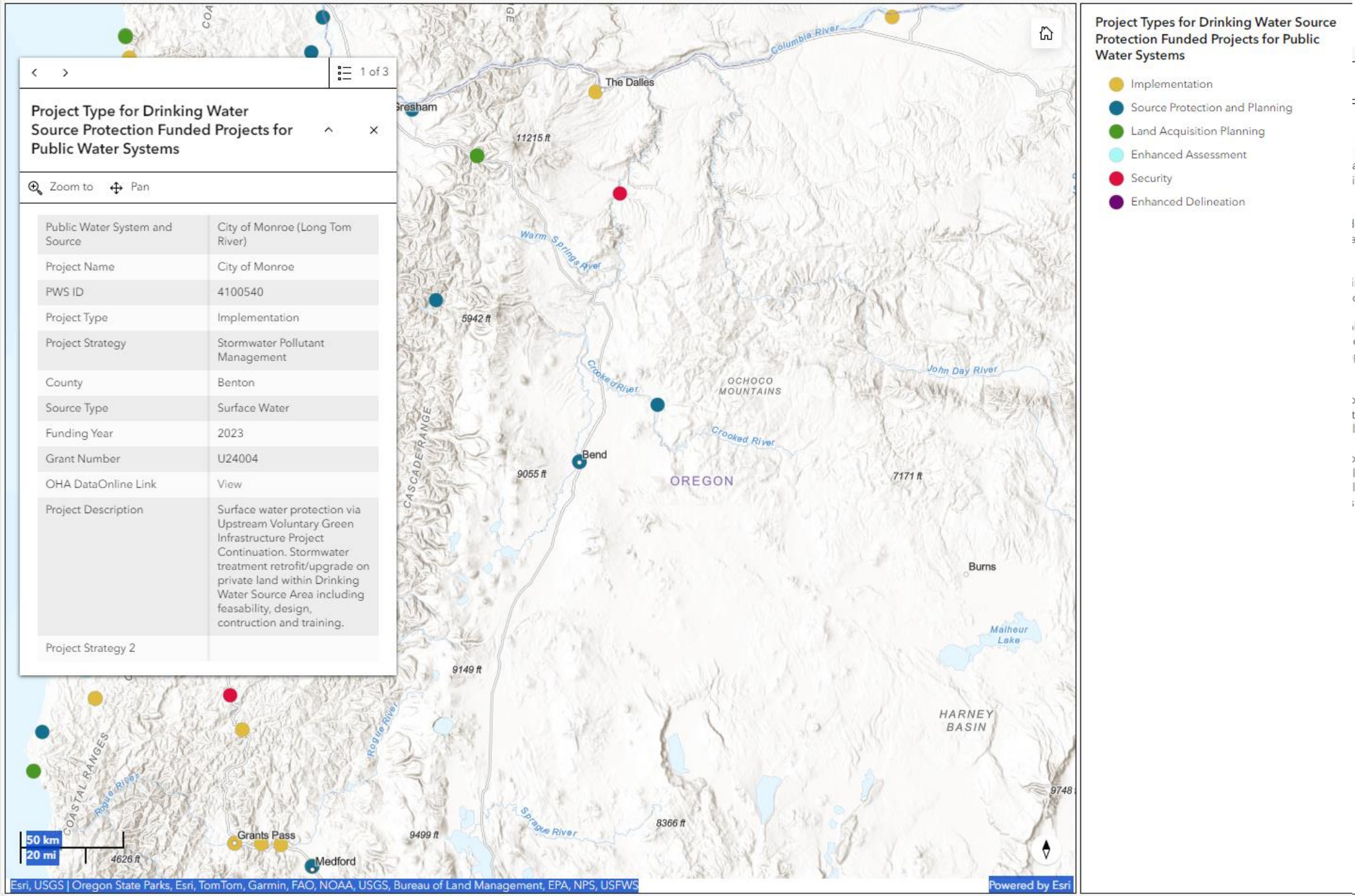
Senate District Number

Senator's Name

House District Number

Representative's Name

OHA/DEQ Drinking Water Source Protection Funded Projects 2008-2023



Drinking Water Source Protection

About Source Protection

How to Use This Data Table

Reset | Columns | Download

Showing 1 to 25 of 3,305 records

Search records

Regulating Agency	County Served	PWS ID	PWS Name	State Approved DW Source Protection Plan	Source Water Assessment	Source is Substantially Protected	DW Source Protection Award	Award D
MARION COUNTY	M	05331	1594 COTTAGES	No	No	No	No	
CLACKAMAS COUNTY	Clackamas	06280	211 FARM - WILLAMETTE NURSERIES	No	No	No	No	
WASHINGTON COUNTY	Washington	06326	216TH PLACE SHARED WELLS	No	No	No	No	
DEPT OF AGRICULTURE	Washington	91612	26 MARKET	No	Yes	No	No	
MARION COUNTY	Marion	06301	4B FARM LABOR CAMP	No	No	No	No	
YAMHILL COUNTY	Yamhill	95372	5 ROCK RANCH	No	No	No	No	
DESCHUTES COUNTY	Deschutes	05950	57TH & MAPLE WATER SYSTEM	No	No	No	No	
JACKSON COUNTY	Jackson	91555	62 BURGERS AND BREW	No	No	No	No	
MARION COUNTY	Marion	01184	62ND COURT MUTUAL WATER CO	No	Yes	No	No	
JACKSON COUNTY	Jackson	06316	777 GUEST RANCH	No	No	No	No	
DEPT OF AGRICULTURE	Josephine	95298	A 1 MARKET #5	No	No	No	No	
JACKSON COUNTY	Jackson	95342	A RIVER RUNS THROUGH	No	No	No	No	
REGION 1	Baker	94825	A-FRAME RV PARK	No	Yes	No	No	
MARION COUNTY	Marion	93768	ABIQUA SCHOOL	No	Yes	Yes	No	
JOSEPHINE COUNTY	Josephine	95709	ACE EARTHMOVING INC	No	No	No	No	
CLACKAMAS COUNTY	Clackamas	05649	ACHING ACRES MOBILE HOME PARK	No	No	No	No	
DOUGLAS COUNTY	Douglas	92091	ADA RESORT	No	Yes	No	No	
REGION 2	Benton	00003	ADAIR VILLAGE WATER SYSTEM	No	Yes	Yes	No	
REGION 1	Umatilla	00001	ADAMS WATER DEPT, CITY OF	No	Yes	Yes	No	
POLK COUNTY	Polk	95295	ADDIVIA WATER SYSTEM	No	No	No	No	
REGION 2	Lake	05723	ADEL SCHOOL-SD 21 LIBRARY	No	No	No	No	
REGION 2	Lake	93936	ADEL SCHOOL-SD 21 SCHOOLHOUSE	No	No	No	No	
DEPT OF AGRICULTURE	Yamhill	95668	ADELSHEIM VINEYARDS	No	No	No	No	
REGION 1	Malheur	00002	ADRIAN, CITY OF	No	Yes	No	No	

Water system specific SWP link

PWS ID: 05331 ---- 1594 COTTAGES OR41

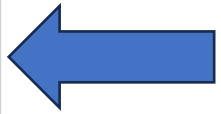
Drinking Water Source Protection

Drinking water source protection refers to actions that protect raw water sources (such as rivers, streams, lakes, reservoirs, springs, and groundwater) that provide water to public water system wells, springs, and intakes. OHA encourages water systems and their communities to implement best management practices to reduce risks of contamination to their drinking water sources. By addressing potential and current concerns at the source, water systems can reduce the risk of exposing consumers to contaminated water, as well as reduce treatment costs. Implementing source protection might also help avoid or defer the need for complex treatment in the future.

Current Status for 1594 COTTAGES

- State Approved Drinking Water Source Protection Plan: **No**
- Source Water Assessment: **No**
- Source is Substantially Protected: **No**
- Drinking Water Source Protection Award: **No**

Source Protection Activities Survey



Expand the sections below to learn more about each of these items.

Drinking Water Source Protection Plans

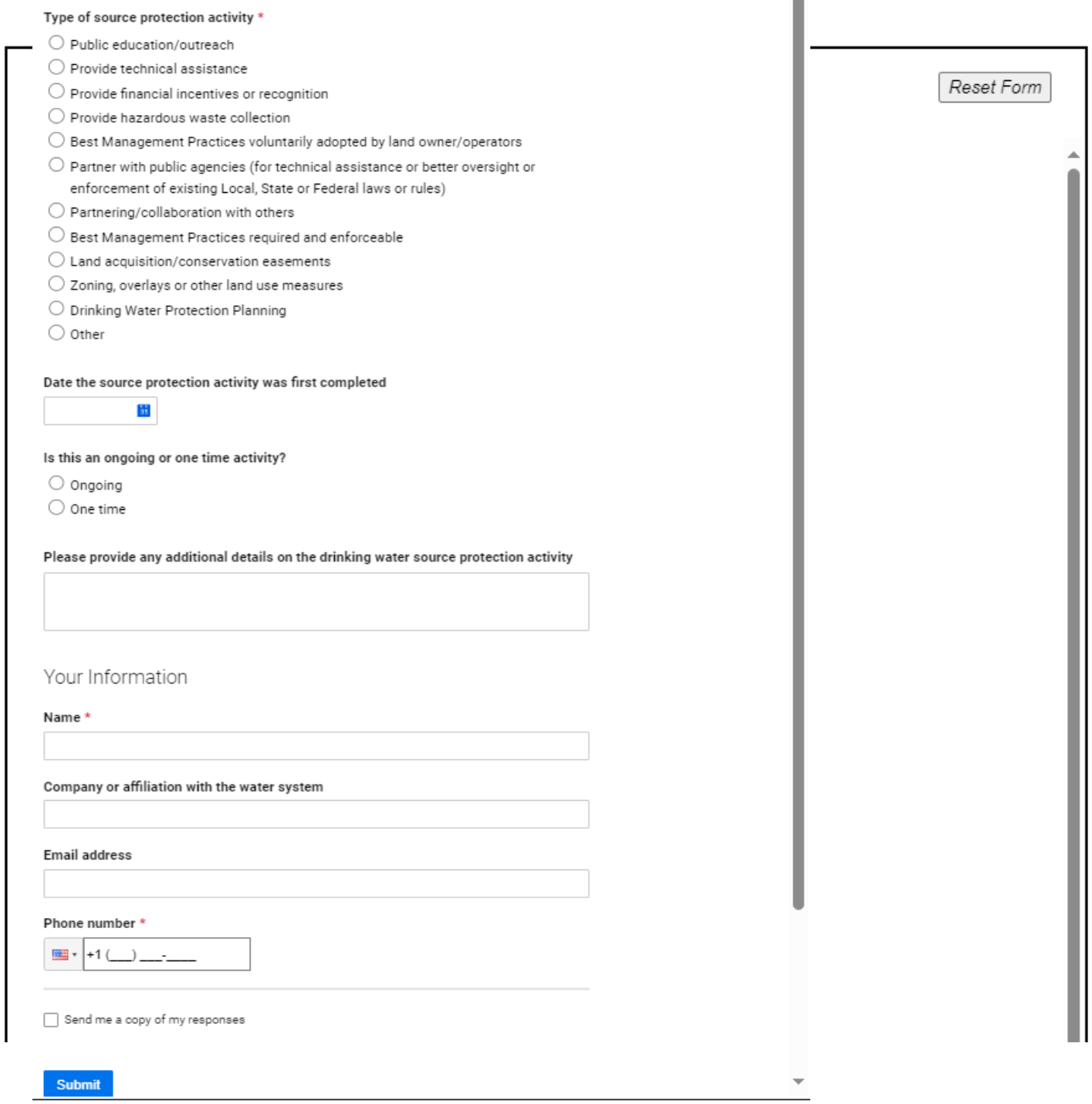
Source Water Assessments

Drinking Water Source Protection Implementation

Drinking Water Source Protection Award

Source Water Activities Survey

- Geologist Reviews Survey
  - Verify criteria



Type of source protection activity *

- Public education/outreach
- Provide technical assistance
- Provide financial incentives or recognition
- Provide hazardous waste collection
- Best Management Practices voluntarily adopted by land owner/operators
- Partner with public agencies (for technical assistance or better oversight or enforcement of existing Local, State or Federal laws or rules)
- Partnering/collaboration with others
- Best Management Practices required and enforceable
- Land acquisition/conservation easements
- Zoning, overlays or other land use measures
- Drinking Water Protection Planning
- Other

Date the source protection activity was first completed

Is this an ongoing or one time activity?

- Ongoing
- One time

Please provide any additional details on the drinking water source protection activity

Your Information

Name *

Company or affiliation with the water system

Email address

Phone number *

+1 (___) ___-____

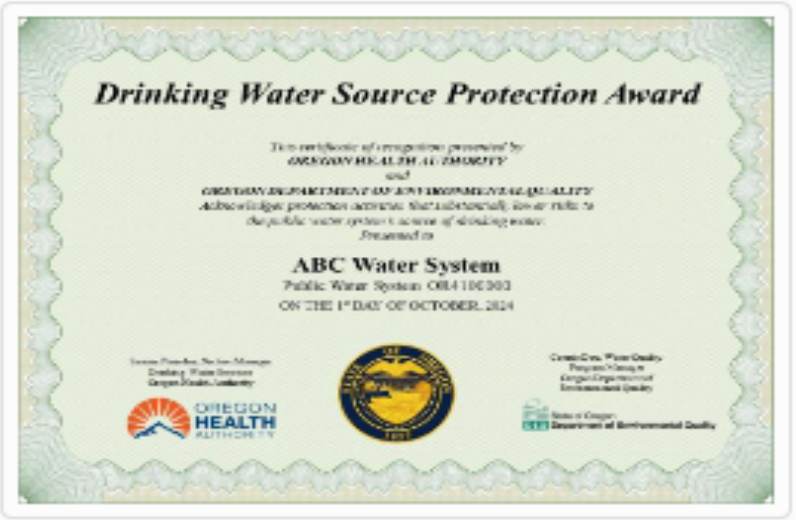
Send me a copy of my responses

Submit

Reset Form

Drinking Water Source Protection Award

To acknowledge excellence in drinking water source protection efforts, the state of Oregon awards a certificate of recognition to water systems that have made substantial progress in implementing measures to protect their drinking water sources from contamination.



Receipt of the award is displayed on the Water System Information page. The Drinking Water Source Protection Award may be used to promote consumer trust, positive customer relations, and public support in protecting drinking water sources.

To be eligible for the award, the water system must show that strategies are in place to reduce the risk of contamination from one or more high- or moderate-risk land-use activities within the drinking water source area. The strategy also must be commonly considered an effective risk-reduction measure for the drinking water supply (either groundwater or surface water). Risk-reduction strategies can be implemented through actions taken by state agencies, regional management authorities, local government, and the water system. To apply for the Drinking Water Source Protection Award, see the information below under "Drinking Water Source Protection Activities Survey."

For risk-reduction examples and ideas, see DEQ's Protecting Your Source.

Drinking Water Source Protection Activities Survey

If your water system has implemented drinking water protection measures that protect your drinking water source from

On the Horizon

GIS - functions/DWSA/Geocortex

Website Redesign

WSS updates-

- questionnaire offerings

Questions and comments

Thank you!