



Conservation Management and Land Ownership in Drinking Water Source Areas

DEQ Drinking Water Protection Program

<https://www.oregon.gov/deq/wq/programs/Pages/dwp.aspx>

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Source Water Protection Basics

- OHA regulates finished drinking water
- DEQ regulates groundwater and surface water quality
- Drinking Water Protection is a joint program between the two agencies
 - Source Water Assessments, voluntary/collaborative efforts, education, planning, etc.
- Other agencies directly regulate private land management on farms (ODA), mines (DOGAMI), & forests (ODF)
- Treatment technologies have physical limits for treating raw water quality; technology varies among public water systems
- Treated water must meet Safe Drinking Water Act (SDWA) limits, regardless of source quality
- If water meets Clean Water Act standards, conventional treatment should be adequate for SDWA requirements
- Multiple Barrier Approach: the ecosystem is the first barrier, treatment is another, maintenance/testing is another. Watersheds are natural infrastructure.
- Protecting source water is cost-effective and reduces risk overall (e.g. emerging contaminants)
- Many systems are small - ~ 65% of surface water systems serve < 3,300 people and 40% serve <1,000 people. 75% have <3000 connections (connections = ratepayers)

Land Management & Drinking Water Protection

- Healthy aquatic systems provide better drinking water
- Degraded ecosystems are riskier water sources
 - Algae blooms in nutrient enriched, warmer water
 - Sediment/turbidity interfering with treatment, sheltering pathogens
 - Toxic metals and compounds—acute and chronic health implications
- Land uses that might contribute contaminants include agriculture, forest, residential/commercial, stormwater, mining, transportation, & recreation
- Forest harvest practices and intensities vary, as do the risks for drinking water sources
- High harvest intensities, roads, insufficient riparian & steep slope buffering can all increase risks to drinking water sources, for both water quality and quantity
- Climate change is already increasing winter storm intensity (more erosion & flood risk) while decreasing summer precipitation & stream flow (quantity risks)

Benefits of Land Protection Projects

- Managing watersheds with practices proven to be low-risk, and having a diverse, resilient ecosystem, benefit drinking water sources and provide stability during and after disturbances
- Prevention reduces costs of treatment (operations, maintenance, upgrades) over the long-term
- Protect public health by reducing contaminant loads; ensures long-term financial viability
- Local/conservation-based control over land that provides an essential need
- Revenue potential for PWSs/municipalities from wood products, carbon credits, recreation, etc. with local jobs protected
- Increased recreation opportunities and tourism
- Generally, what is good for salmon is good for drinking water & vice versa

Knowledge Resources:

DWP Interactive Map Viewer

<http://www.oregon.gov/deq/wq/programs/Pages/DWP-Maps.aspx>

- shows most Updated Source Water Assessment results, land use, regulatory databases (including WQ 303(d) listed streams)

Coastal Drinking Water Atlas and Interactive Web Tool

<https://ecotrust.org/drinking-water-data-for-oregon-coast-communities/>

Updated Source Water Assessments (USWA)

<http://www.oregon.gov/deq/wq/programs/Pages/DWPAssessments.aspx>

- Source water area/watershed and identification of potential risks

Resource Guides - Surface Water and Groundwater

<https://www.oregon.gov/deq/wq/programs/Pages/dwp.aspx>

- Lists of partner organizations, best management practices, links to funds and resources

Grant programs for planning and land maintenance:

Drinking Water Source Protection Fund (OHA/Business Oregon)

<https://www.oregon.gov/oha/PH/HEALTHYENVIRONMENTS/DRINKINGWATER/SRF/Pages/spf.aspx>

Drinking Water Providers Partnership (Multiple Federal and State agencies with NGO support)

<https://www.workingwatersgeos.org/drinking-water-providers-partnership>

Figure 1
Coastal Drinking Water Source Areas
Public Water Systems







