

The Drinking Water Providers Partnership Restoring Municipal Watersheds in the PNW

Southeast Alaska Watershed Restoration Workshop
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James Capurso, PhD
Pacific Northwest Regional Fisheries Biologist
USDA Forest Service



Content

- Partnership Origin
- Drinking water providers partnership: what is it and how did it form?
- Accomplishments and lessons learned
- Looking to the future



COMMON GROUND

Background

- USDA Forest Service and Geos Institute are cooperators in Carpe Diem West.
- Carpe Diem West is a nonprofit organization of diverse Western water leaders developing innovative and sustainable responses to the Western U.S. water crisis.



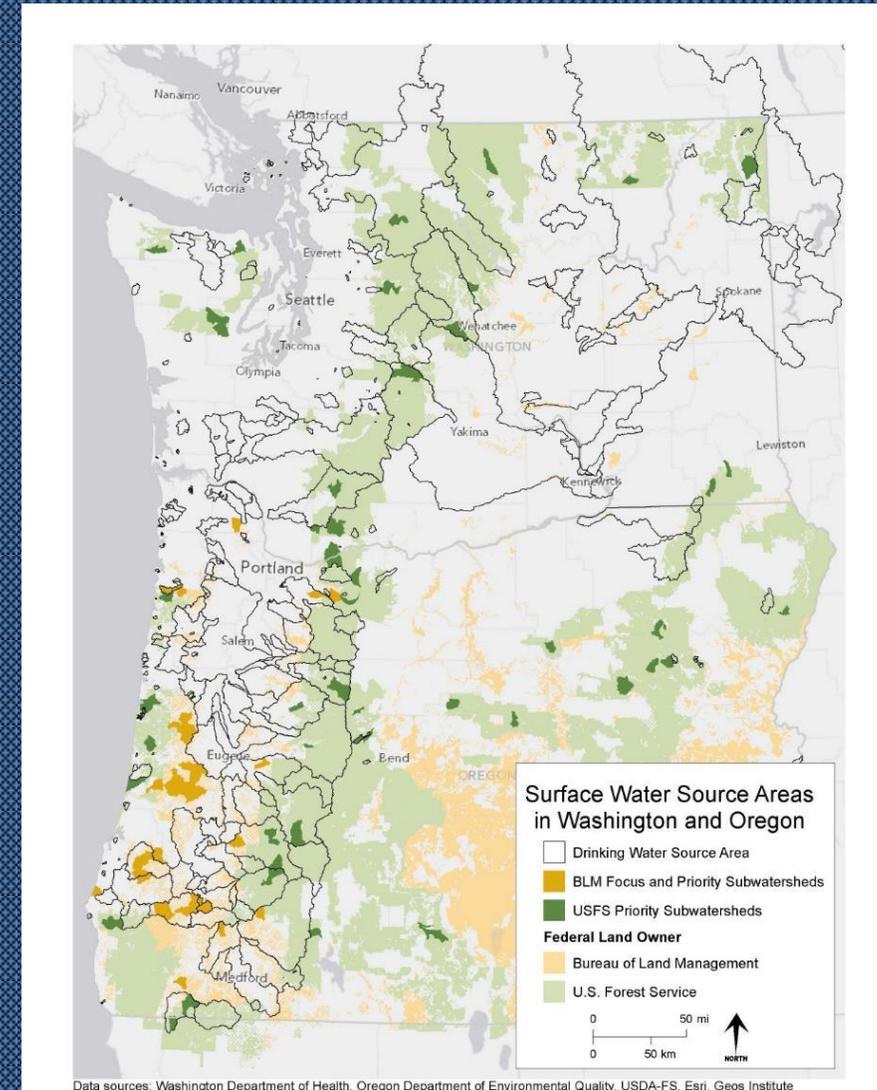
Shared Understanding: Reliance Upon Forested Surface Waters

- 2/3 of U.S. freshwater comes from forested watersheds (American Forests 2016).
- 50% of water used in the Western U.S. originates from National Forests (USDA 2016).



Shared Understanding: Reliance Upon Forested Surface Waters

- 68% of U.S. community water system users rely on surface water (EPA 2008)
- 65% of Oregonians (ODEQ 2016) and 40% of Washingtonians (DOE 2016) rely primarily upon surface water for their drinking water sources.



Shared Understanding: Source Water Protection Pays

- For every 10% increase in forest cover, there's a 20% decrease in water treatment costs (AWWA 2004)
- For every \$1 spent on source water protection, there's a \$27 savings on water treatment costs (Winecki 2012)



Shared Understanding: Challenge to Protect Municipal Watersheds

- The Safe Drinking Water Act does not provide regulatory authority for communities to protect their drinking water
- Very few towns own their source watershed
- Only larger towns and cities have capacity to protect or restore source watersheds



Shared Understanding: Challenge to Protect Municipal Watersheds





PARTNERSHIP ORIGIN

Partnership Origin

- Geos Institute proposed a partnership with the Forest Service to restore municipal watersheds.
- Identify, implement, and monitor watershed restoration within municipal watersheds, benefiting watershed/fisheries resources while protecting and restoring water quality and quantity.



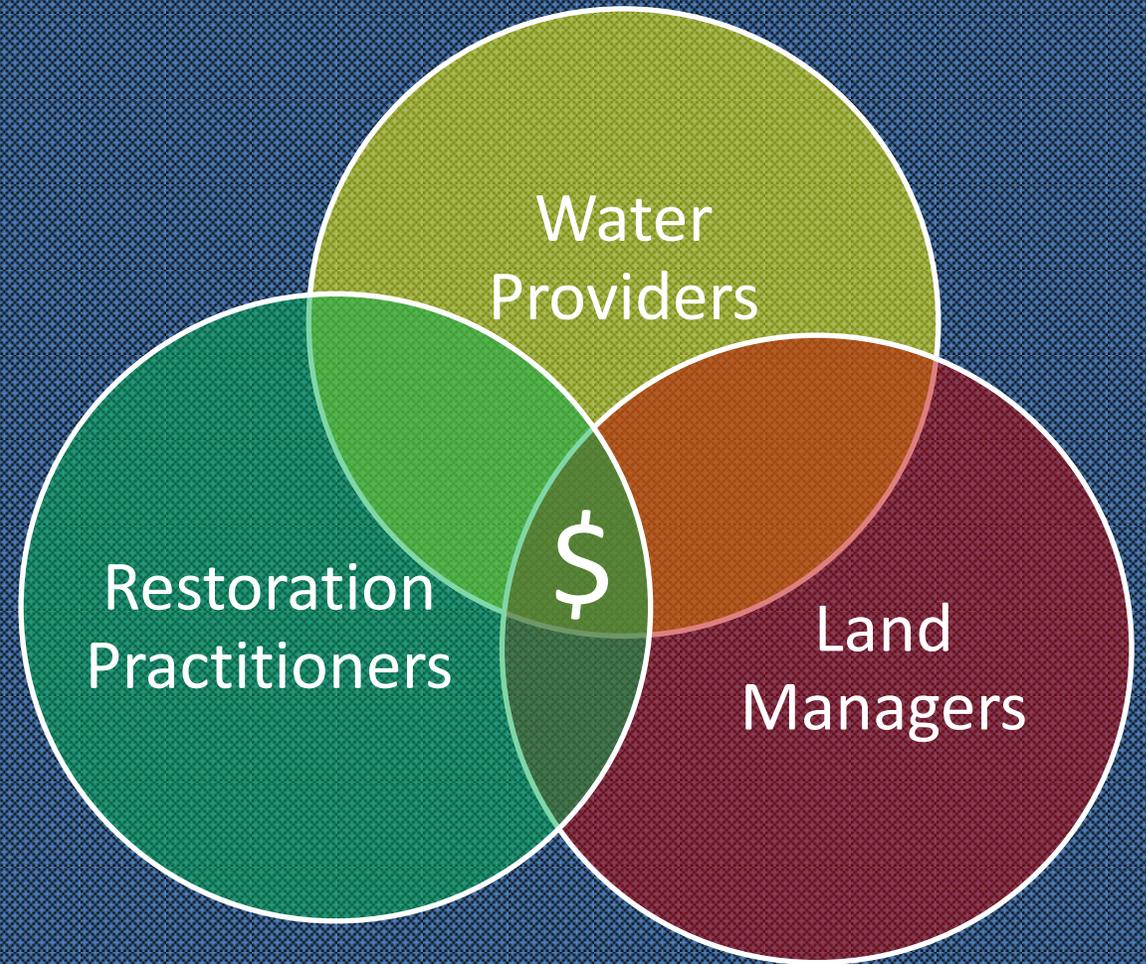
Partnership Origin

- **The Forest Service and GEOS recognized working with water providers in municipal watersheds would result in:**
 - Improved water quality and security
 - Lower treatment costs
 - Improved aquatic/riparian habitat and watershed health



Partnership Origin

- The Forest Service and GEOS decided to establish a partnership bringing together:
 - **Water providers** wanting to improve their source watersheds (but lacking resources or capacity)
 - **Restoration Practitioners** having the expertise and capacity to restore watersheds
 - **Land managers** managing land within surface water watersheds
 - **Funding sources** interested in restoring drinking water source watersheds.

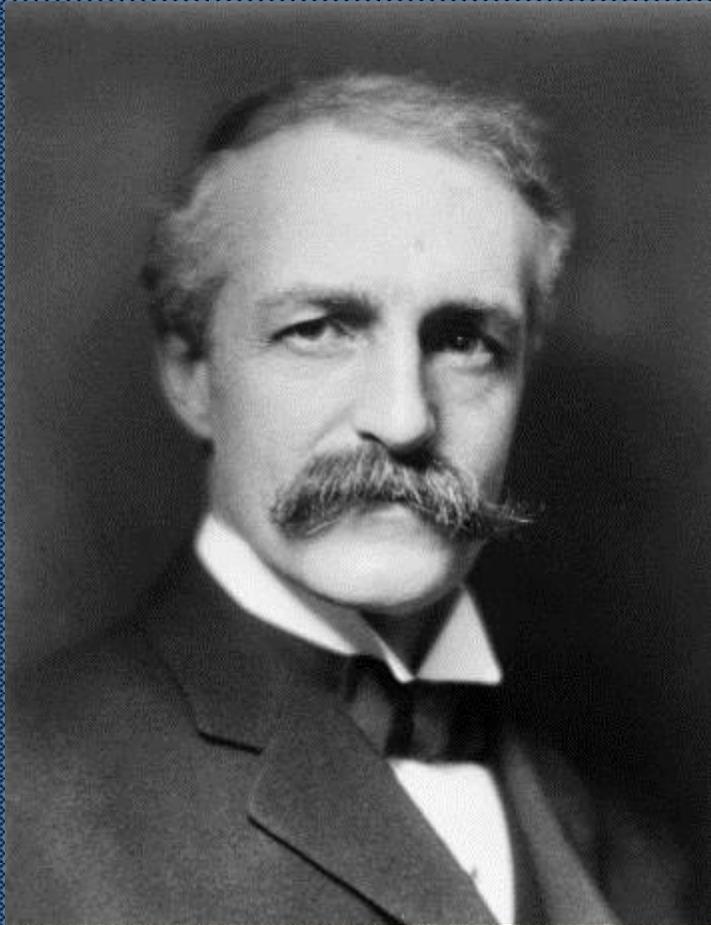


USDA Forest Service Opportunities

- Opportunity to protect and restore drinking water and aquatic systems for communities dependent upon healthy USFS watersheds.
- Opportunity to cooperate with an organization that had traditionally been a litigant.
- Opportunity to broaden the base of support for watershed restoration in the PNW.
- Opportunity to further align with agency direction.



1897 USFS Organic Administration Act



- Purpose of National Forests are to “*secure favorable conditions of water flows and to furnish a continuous supply of timber for the use and necessities of citizens of the United States.*”



USDA Strategic Goals

- 2018-22 Department Strategic goals include:
 - Foster the productive and sustainable use of our National Forest System lands
- *USDA Secretary Sonny Purdue's actions are influenced by his father's words:*
 - *"If you take care of the land, the land will take care of you."*
 - *"We're all stewards of the land and our responsibility is to leave it better than it was."*



USDA Forest Service Strategic Goals

2015-2020 USDA Forest Service Strategic Goals Include:

- Sustain our Nation's Forests and grasslands.
- Deliver benefits to the public

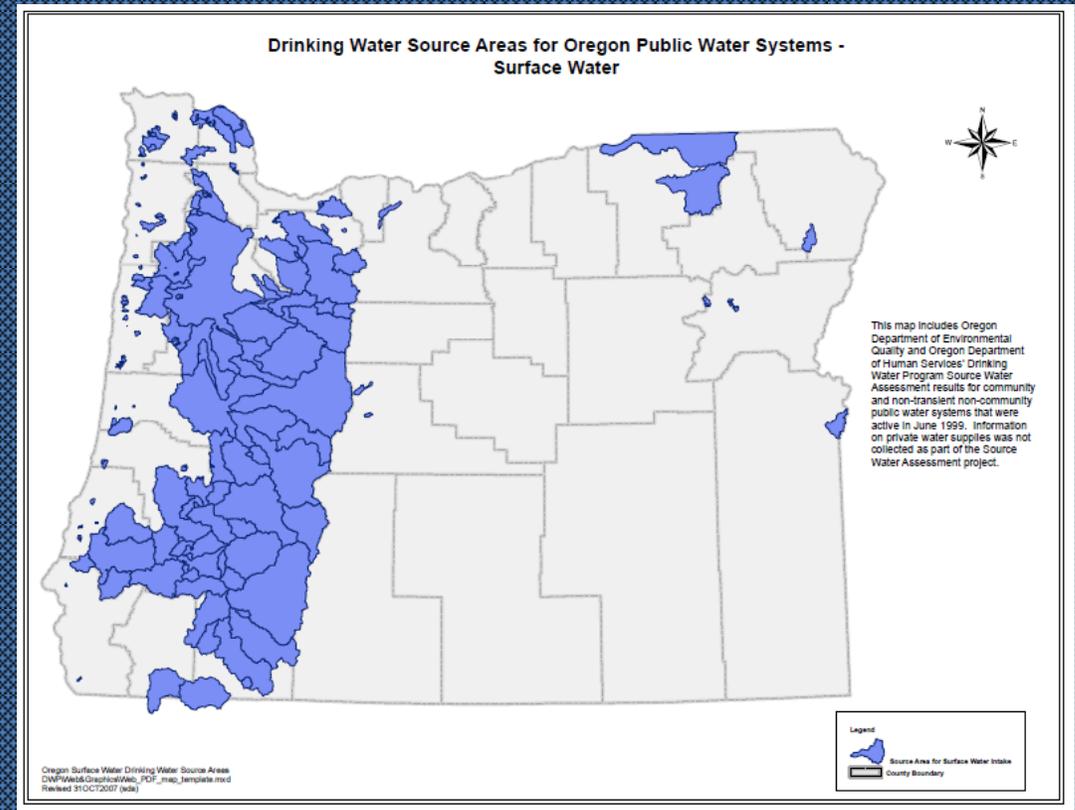
“Healthy streams, lakes, and rivers benefit Americans in a myriad of ways, from clean drinking water to diverse recreational opportunities. One in five Americans relies on water that comes from National Forest System lands.”

Forest Service Chief Tony Tooke



Partnership Origin

- FS and GEOS Summer Tour 2014
- Visited Water Providers in the FS priority watersheds of the Cascade and Coast Ranges of Oregon to introduce the municipal watershed restoration concept
- Met with great support everywhere
- In most cases, we followed up the first meeting with an introduction between water providers and local restoration practitioners
- We heard clearly from partners a source of funding was needed



Partnership Origin

- In 2015, the regional partnership formed in response to grassroots partnerships' demand for funding source
- Geos received Meyer Memorial Grant in 2015
- Oregon DEQ, Washington Department of Health, EPA BLM, and Wild Earth Guardians joined in 2015
- Recently awarded our third round of projects

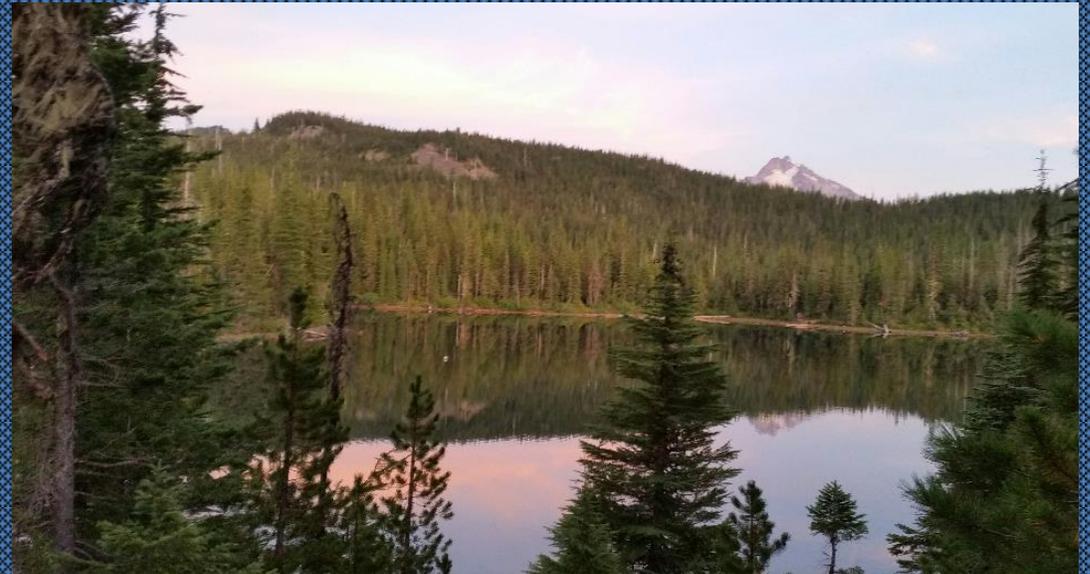




THE DRINKING WATER PROVIDERS PARTNERSHIP

Drinking Water Providers Partnership Goals

- Restore and protect the health of watersheds which communities depend upon for drinking water while also benefiting aquatic and riparian ecosystems, including the native fish that inhabit them.
- Support local partnerships between downstream drinking water providers and upstream landowners and restoration practitioners.

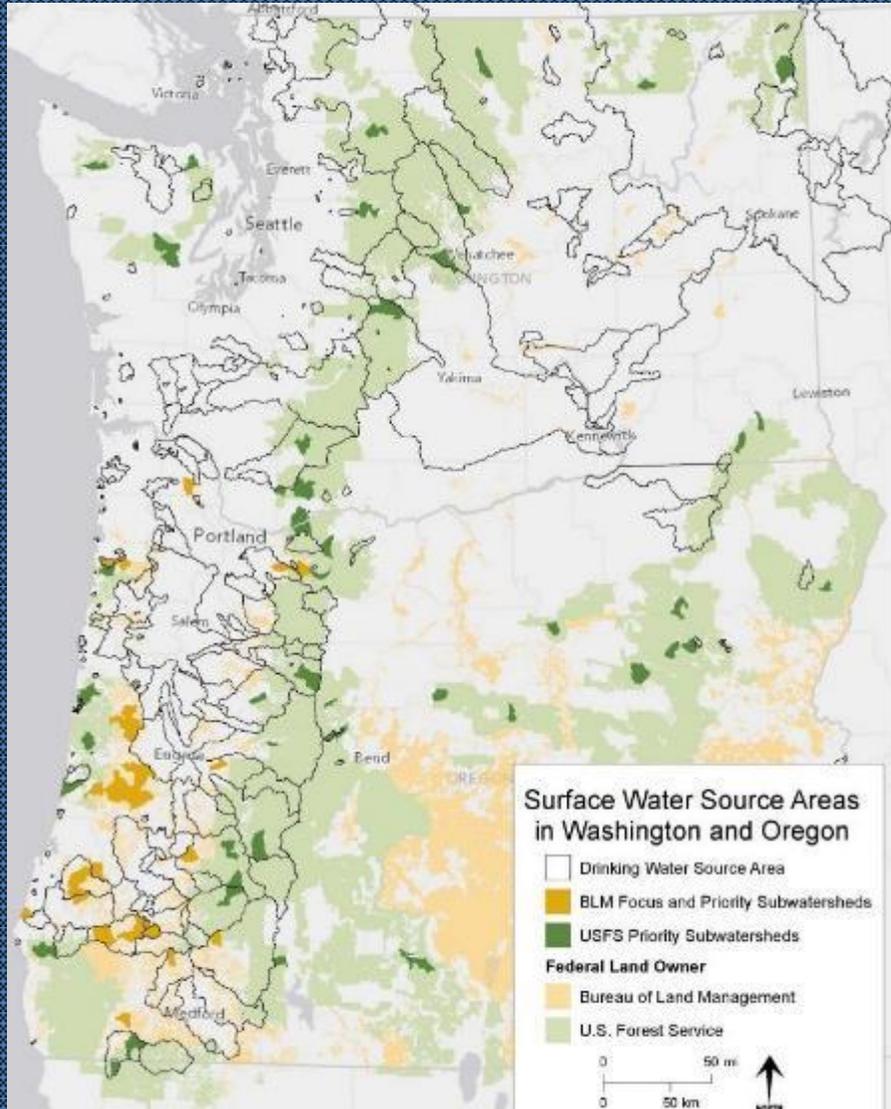


Eligible Applicants

- Tribal, local, state, or federal governments, educational institutions, non-profit organizations, watershed councils, landowners, soil and water conservation districts, and others.
- The only applicants eligible to receive the state funding are public water systems, but these \$'s can go towards many activities.

Geographic Eligibility

- Projects located in a public drinking (surface) water watershed in Oregon or Washington.
- For most consideration, projects should:
 - Be in or near a USFS priority watershed.
 - Be in or near a BLM priority watershed.
 - In Oregon, be in a sensitive area identified in an updated source water assessment delineation.



DWPP Project Types

- Activities may include feasibility analyses, planning, design, outreach, education, and monitoring.
- Work should address water quality or quantity issues within a public drinking water system and should benefit native fish and their habitat.
- Proposed work should be identified in a recognized source water protection plan, restoration action plan, rare species recovery plan, or other publicly vetted prioritization document.



Increasing Investments Mean More Restoration

- Steady increase of investments
 - 11 projects in 2016
 - 12 projects in 2017
 - 13 projects in 2018
- These projects will benefit:
 - Salmon, steelhead, lamprey, bull trout, cutthroat trout, and other aquatic species and their habitat
 - Water recreation
 - The 877,000 people relying on these waters for their drinking water and other uses.



2016 DWPP Funded Projects

- DWPP partners developed a regional funding pool of \$660,000 for its first year.
- We received 20 project funding applications.
- We were able to fund 11 of them in 11 different municipal watersheds in Oregon.



Little Butte Creek



Milk Creek

2016 Funded Project Types

- Fencing to exclude livestock
- Planting native vegetation and controlling weeds in riparian areas
- Placing large wood in streams and floodplains
- Replacing inadequate culverts and bridges
- Inventorying/reconstructing roads
- Decommissioning roads
- Removing levees and restoring channel meander
- Reducing road sedimentation with drainage improvements.



Grant Creek

2017 DWPP Funded Projects

- DWPP partners developed a regional funding pool of \$688,000 for 2017.
- We received 19 project funding applications.
- We were able to fund 12 of them in 12 different municipal watersheds in Oregon and Washington.



Poison Canyon

2017 Funded Project Types

- Fixing aquatic organism passage barriers
- Restoring aquatic and riparian habitat through placement of wood, increasing stream channel complexity and floodplain use, excluding livestock, eradicating invasive weeds, and revegetation.
- Community planning
- Public outreach



Dunn Creek

2018 DWPP Funded Projects

- DWPP partners developed a regional funding pool of \$519,000 for 2018.
- We received 14 project funding applications.
- We were able to fund 13 of them in 12 different municipal watersheds in Oregon and Washington.



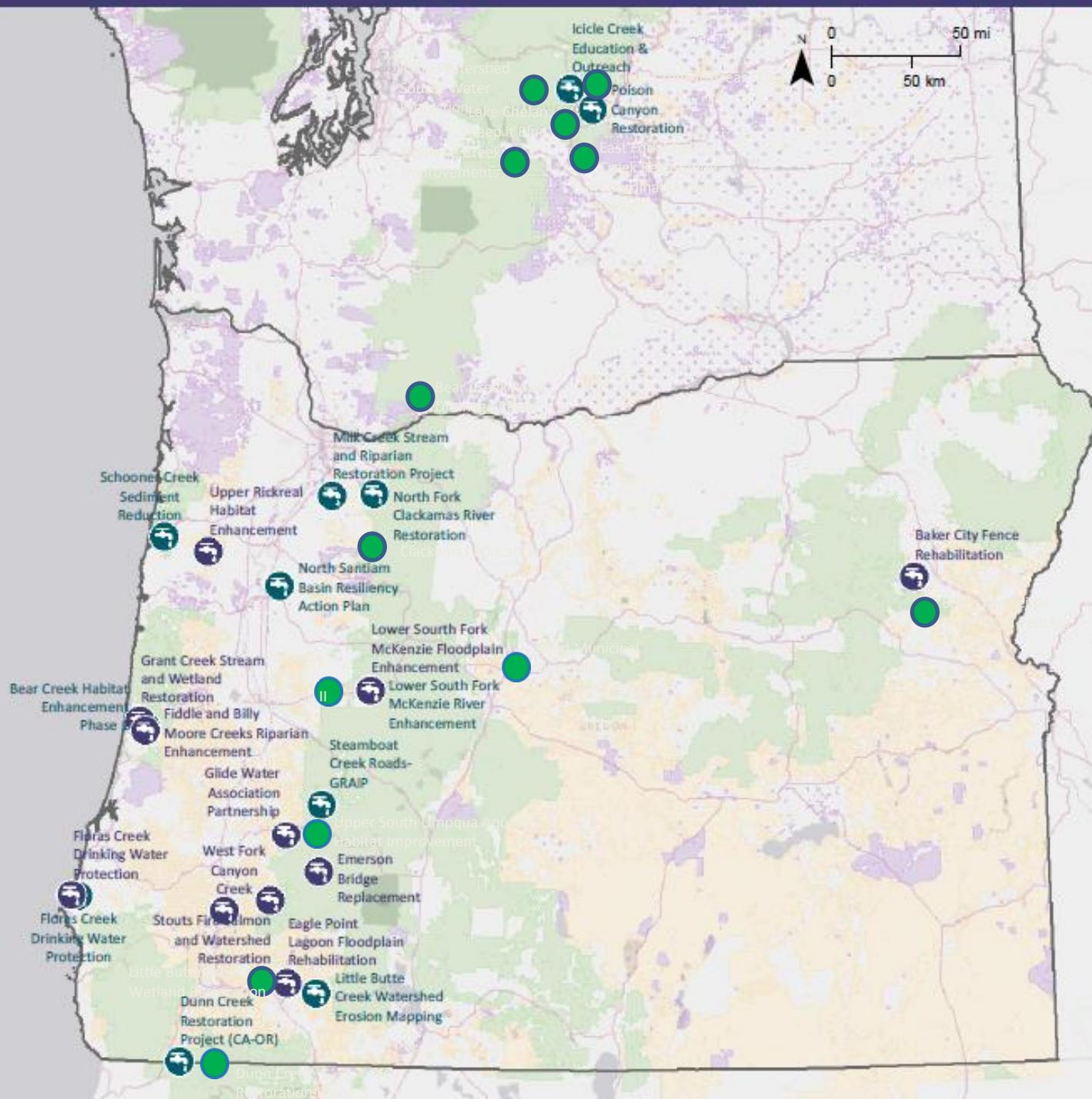
Enchantment Area in Upper Icicle Creek Basin

2018 Funded Project Types

- Public Outreach
- Project Planning
- Wilderness Recreation Management
- Stream Channel and Riparian Restoration
- Livestock Exclosure
- Road Decommissioning
- Fixing aquatic organism passage barriers
- Fish Screening and assessing failing levee
- Eliminating a surface water diversion



East Fk Mission Creek



GLIDE, OR

- **Problem:** Sedimentation to the North Umpqua River (drinking water source for Glide) due to deteriorating culverts on Forest Service roads.
- **Solution:** Identify highest risk locations and restore roads to reduce hydrologic risk.
- DWPP funds were used to remove 8 cross-drain pipes, 4 old culverts, and 8,000 cubic yards of fill, and prevented erosion with native straw, native seed, and slash.



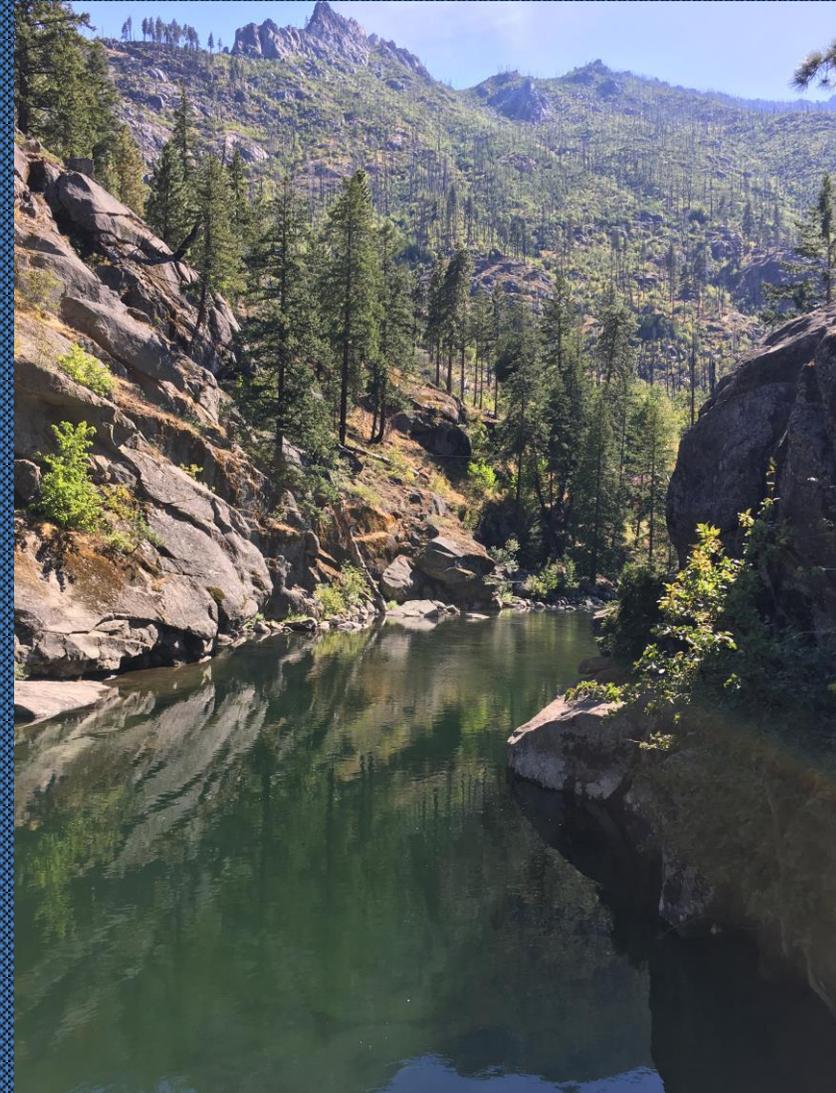
BAKER CITY, OR

- **Problem:** Baker City experienced a cryptosporidium outbreak in 2013 and identified cattle as a probable source. City is one of only 3 unfiltered sources in Oregon.
- **Solution:** Construct and repair livestock fencing in key areas.
- DWPP funds were used to build livestock enclosure fencing in the Elk Creek drainage. The wooden posts were built locally. Barbless wire was used on the lower line for wildlife.



LEAVENWORTH, WA

- **Problem:** Icicle Creek, Leavenworth's water source, is overly loved by recreationists, impacting water quality. The stream also supports ESA listed Spring Chinook, steelhead and Bull Trout.
- **Solution:** Improve outreach to ensure visitors embrace protection of Icicle Creek and address recreation impacts.
- DWPP funds were used to develop outreach materials and address erosion and pollution from recreation.



CASHMERE, WA

- **Problem:** Mission Creek (tributary to Wenatchee River), is Cashmere's water source. Stream is incised and confined by riparian road/trail.
- **Solution:** Re-route road/trail and restore floodplain, benefitting ESA-listed steelhead and Chinook Salmon.
- DWPP funds will be used to develop alternatives for road/trail re-route, conceptual plan, baseline monitoring, and community outreach.



TILLER, OR

- **Problem:** Emerson Bridge was affecting the hydrology and water quality of the South Umpqua River.
- It's abutments were located in the river, backing up debris and flow. Creosote leached from the pressurized wood surface.
- **Solution:** The old bridge was removed and a new bridge with more environmentally friendly design and materials was built at a better location. The associated road was decommissioned, benefitting salmon, steelhead, and lamprey.



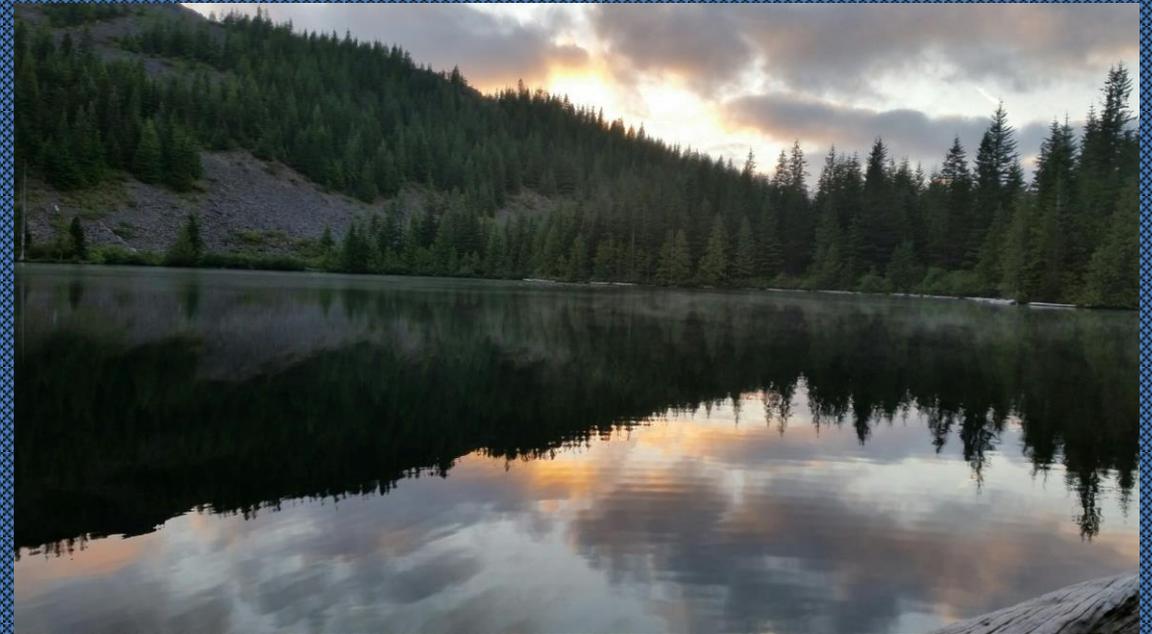
What's next?

- Develop a series of workshops in OR, WA and ID to bring land managers, surface water providers, watershed councils, restoration practitioners together (matchmaking, Identification of priority restoration projects, identify funding sources)
- Seek opportunities to increase our conservation impact by expanding the partnership (other agencies, business partners?)
- Issue 4th RFP in November



Partnership Lessons Learned

- Immediate success simply connecting water providers and restoration practitioners at grassroots level
- Need to continue to accommodate diverse funding source limitations.
- Maintain flexibility for timing of funding availability.
- Remain cognizant of agency geographic restrictions.
- Importance of Wyden Authority for BLM and USFS
- Continue to market program to increase grant applicants and funding sources.



For More Information:

James Capurso, PhD
Regional Fisheries Biologist
Pacific Northwest Region
USDA Forest Service
jcapurso@fs.fed.us



Cathy Kellon, Working Waters Director, Geos Institute, cathy@geosinstitute.org
Teresa Kubo, Environmental Review and Sediment Manager, EPA, Kubo.Teresa@epa.gov
Scott Lightcap, Oregon Fisheries Lead, BLM, slightca@blm.gov
Sheree Stewart, Drinking Water Protection Coordinator, Oregon Department of Environmental Quality, Stewart.Sheree@deq.state.or.us
Corina Hayes, Source Water Protection Manager, Washington Department of Health, Corina.Hayes@doh.wa.gov
Marlies Wierenga, PNW Conservation Manager, WildEarth Guardians, mwierenga@wildearthguardians.org



PARTNERSHIPS IN THE PNW REGION OF USFS (A PLACEHOLDER IF TIME ALLOWS)