



# Beyond Condit: Fish Habitat Restoration in the White Salmon River Watershed

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**April 14, 2015**

**Underwood Conservation District**

**[www.ucdwa.org](http://www.ucdwa.org)**

# Who is UCD?

- ★ Underwood Conservation District
- ★ Established on July 1, 1940 by orchardists and farmers from the Underwood area concerned with irrigation needs, decline of forest productivity, soil erosion and water quality.
- ★ Designed to be a community-based source of assistance to landowners and resource users in the conservation, enhancement and sustainable use of natural resources through voluntary stewardship.
- ★ Non-regulatory, locally-guided, special purpose district.
- ★ 6 staff members: district manager, financial manager, 3 watershed resource technicians and a part-time forester.

A 1941 Mt. Adams Sun article quoted Harry Card, then chairman of UCD, as follows:

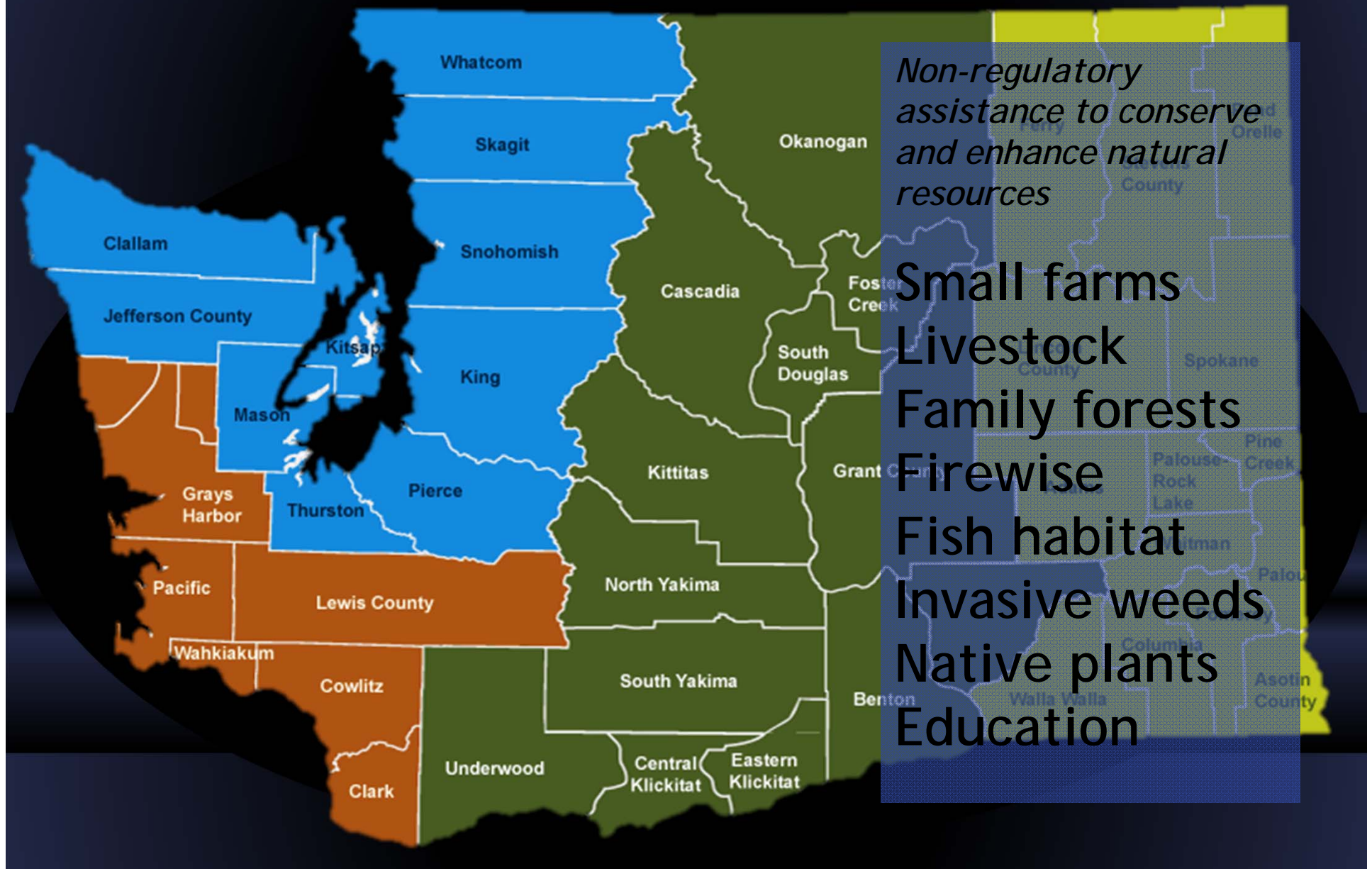
“Many of the problems [brought to UCD], such as improvement of irrigation systems, drainage, storage or need for additional irrigation water, flood control, stream bank erosion, weed and rodent control, development of water holes on range land, and the improvement of range and woodland management practices, are **community problems** and can most efficiently be solved through coordinating community plans and action.”



UCD board of supervisors , the early days



# Washington Conservation districts: what, where

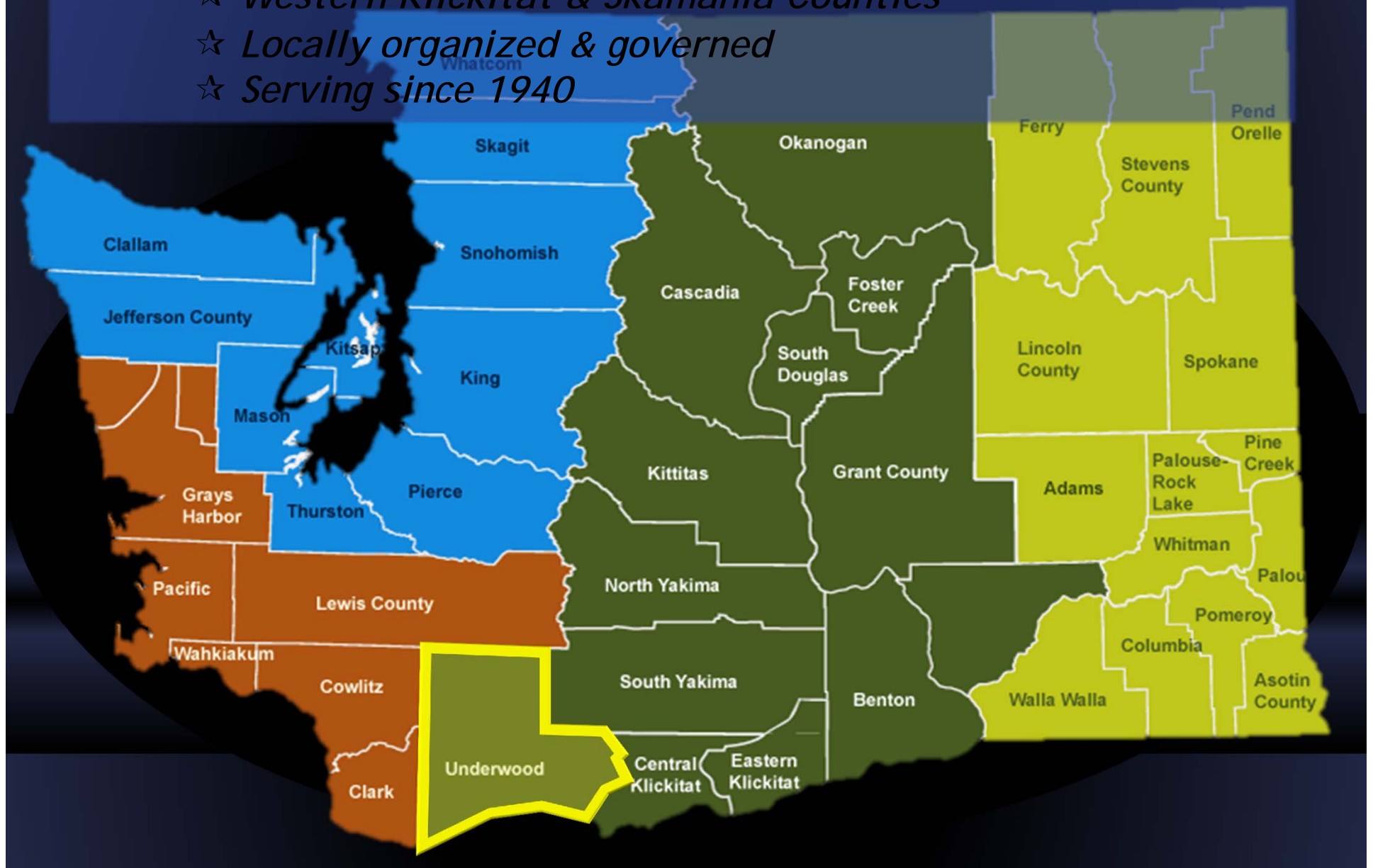


*Non-regulatory assistance to conserve and enhance natural resources*

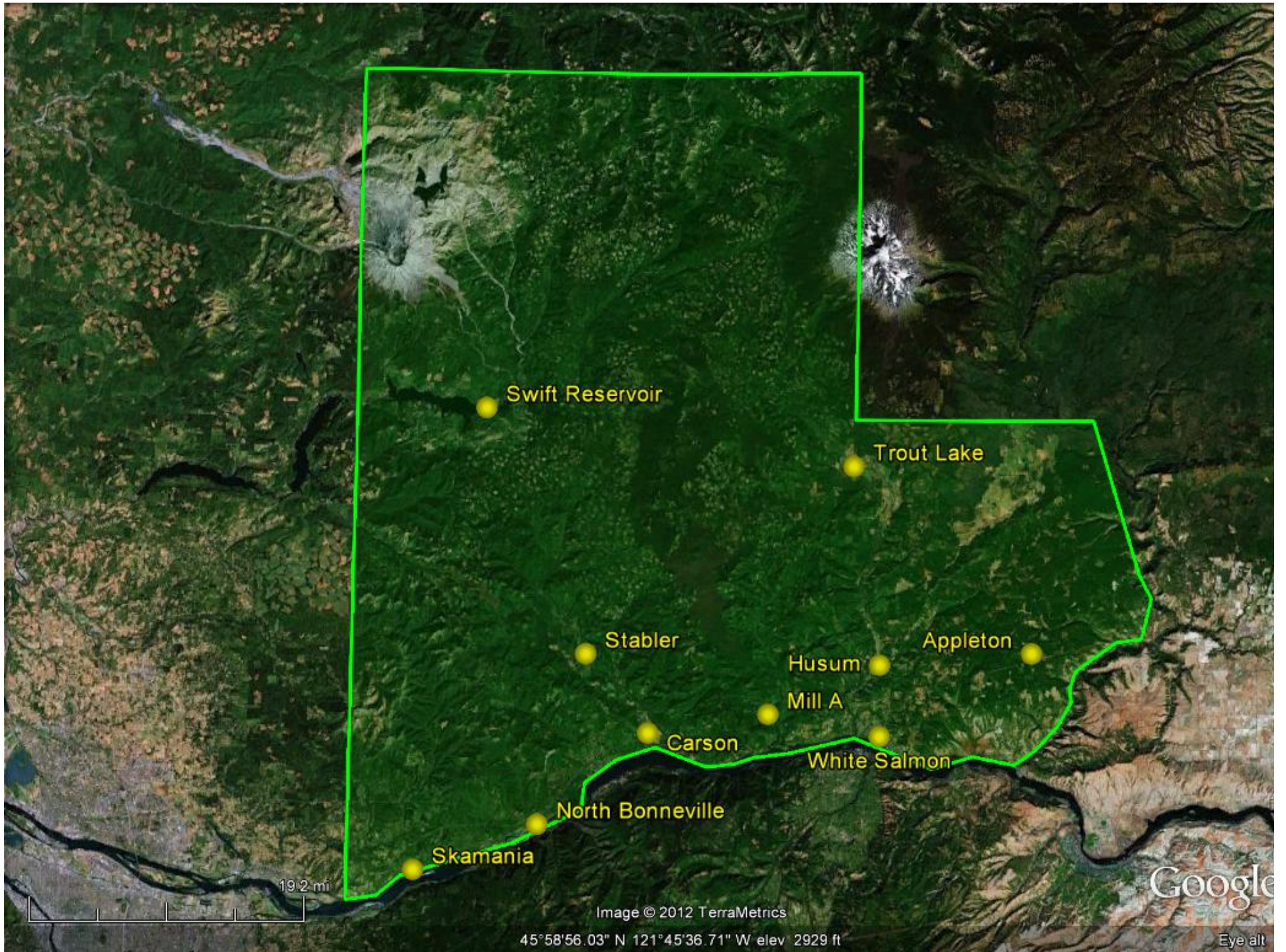
Small farms  
Livestock  
Family forests  
Firewise  
Fish habitat  
Invasive weeds  
Native plants  
Education

# Underwood Conservation District:

- ☆ *Western Klickitat & Skamania Counties*
- ☆ *Locally organized & governed*
- ☆ *Serving since 1940*







Swift Reservoir

Trout Lake

Stabler

Appleton

Husum

Mill A

Carson

White Salmon

North Bonneville

Skamania

19.2 mi

Image © 2012 TerraMetrics

45°58'56.03" N 121°45'36.71" W elev 2929 ft

Google

Eye alt



# Partners in the White Salmon River Watershed

(not exhaustive)

★ Mid-Columbia Fisheries Enhancement Group

★ Yakama Nation Fisheries

★ WA Dept. of Fish and Wildlife

★ WA Dept. of Natural Resources

★ WA Dept. of Ecology

★ US Fish and Wildlife Service

★ US Forest Service

★ Columbia Land Trust

★ USGS – Columbia River Research Lab

★ Mt. Adams Resource Stewards

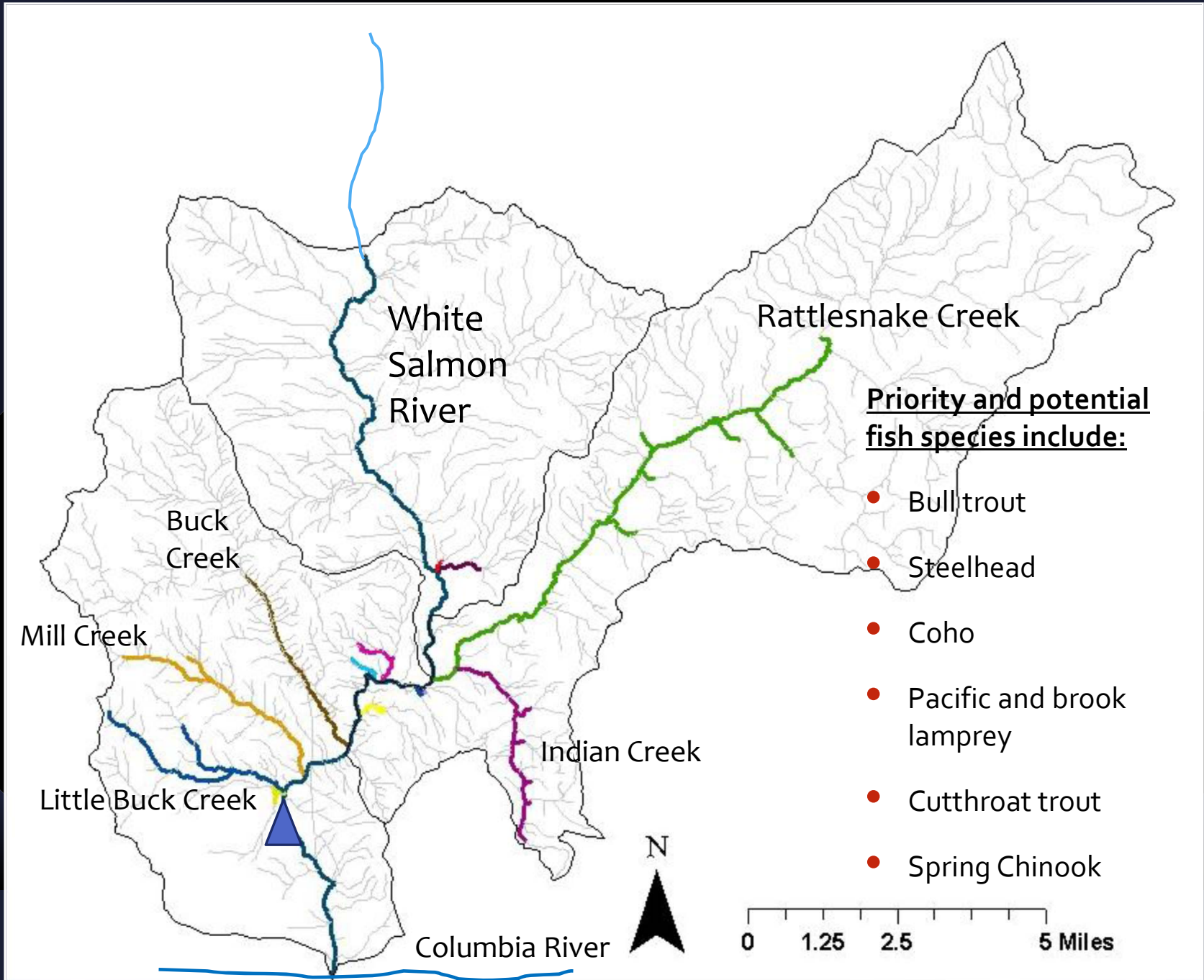
★ Skamania County

★ Klickitat County

★ White Salmon River Watershed Management Committee

★ Friends of the White Salmon River

★ Individual landowners





# Recent UCD stream projects

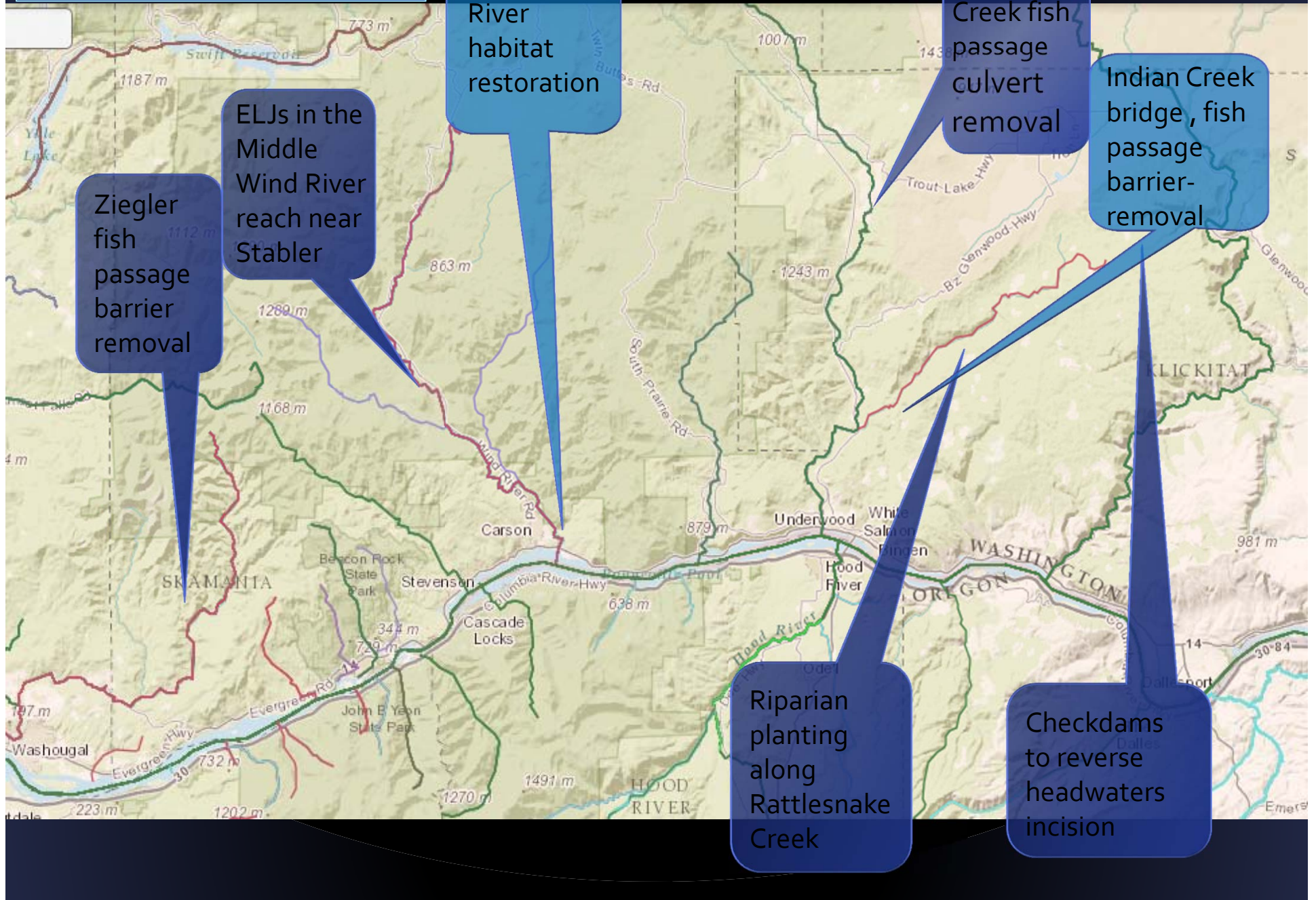
**Approach:** Inventory and prioritize fish passage barriers and habitat restoration and enhancement opportunities.

**Focus on the “bigger-bang” projects:**

☆ **Fish Passage** - *re-connecting historic habitat*

☆ **In-stream and Riparian Habitat** - *jumpstarting natural conditions and watershed processes that previously existed*

## UCD's past stream projects



Ziegler  
fish  
passage  
barrier  
removal

ELJs in the  
Middle  
Wind River  
reach near  
Stabler

Little Wind  
River  
habitat  
restoration

Stoller  
Creek fish  
passage  
culvert  
removal

Indian Creek  
bridge, fish  
passage  
barrier-  
removal

Riparian  
planting  
along  
Rattlesnake  
Creek

Checkdams  
to reverse  
headwaters  
incision





★ Check-dams throughout the upper Rattlesnake Creek watershed

★ Planting projects







## Indian Creek bridge, 2012

☆ Reconnected ~1.5 miles (potential for 4.5 miles) of high-quality habitat, now accessible to Chinook, Coho, Summer and Winter Steelhead, Pacific Lamprey, Coastal Cutthroat and Rainbow Trout.



☆ Indian Creek provides important refuge for fish from nearby Rattlesnake Creek.





*Photo courtesy of Ed Wickersham*

## Little Wind River: half a mile of habitat restoration, 2012-14









“The work has begun, but we  
have yet to determine what  
works best.”

Palmer, M.A. and J.D. Allan. 2006.  
*Restoring Rivers: The work has begun, but we have yet to determine what works best.*  
Issues in Science and Technology 22:40-48.

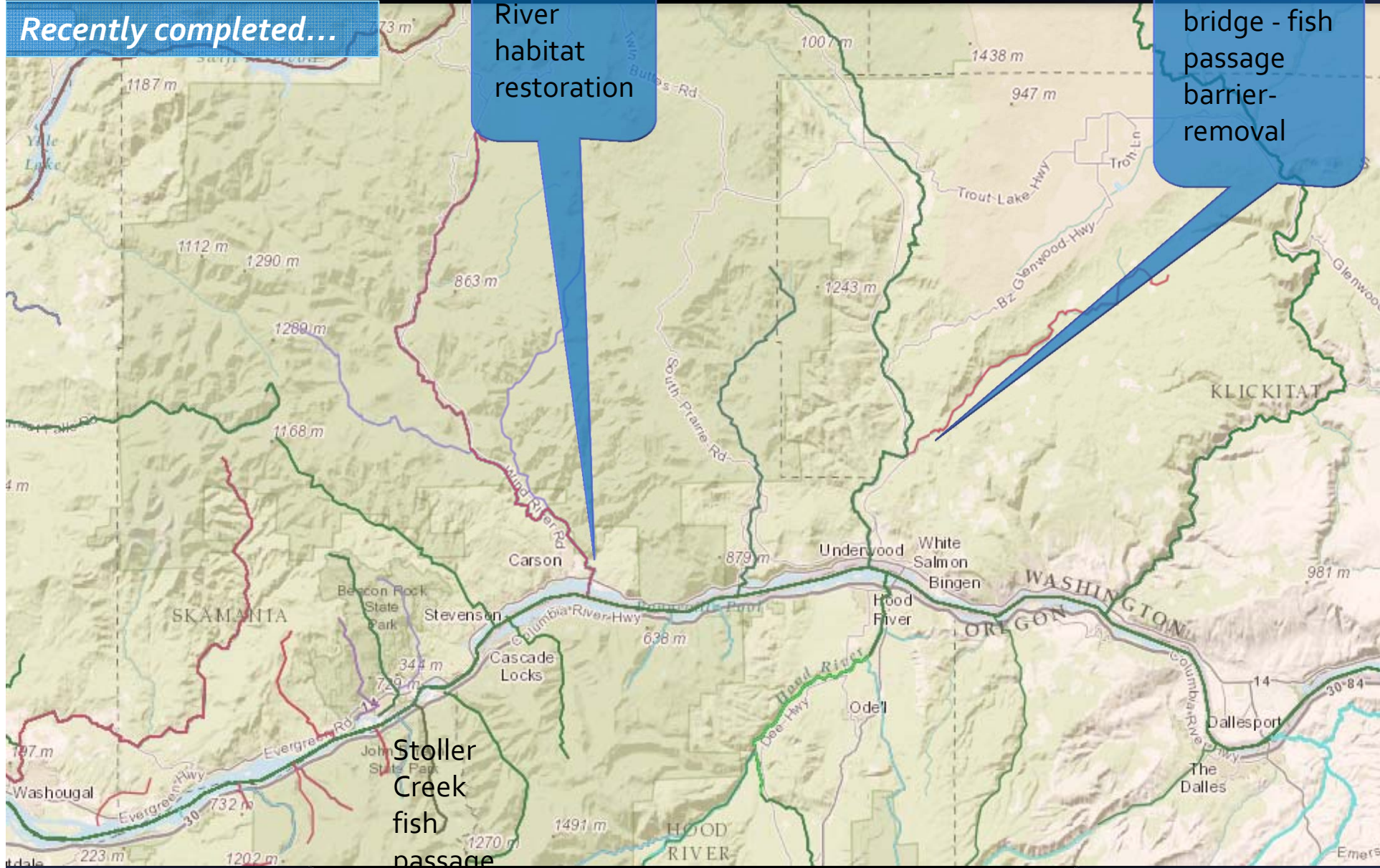


Recently completed...

Little Wind River habitat restoration

Indian Creek bridge - fish passage barrier-removal

Stoller Creek fish passage





Recently completed...

Coming up next...

Little Wind River habitat restoration

Buck Creek fish passage barrier removal and irrigation fish screen

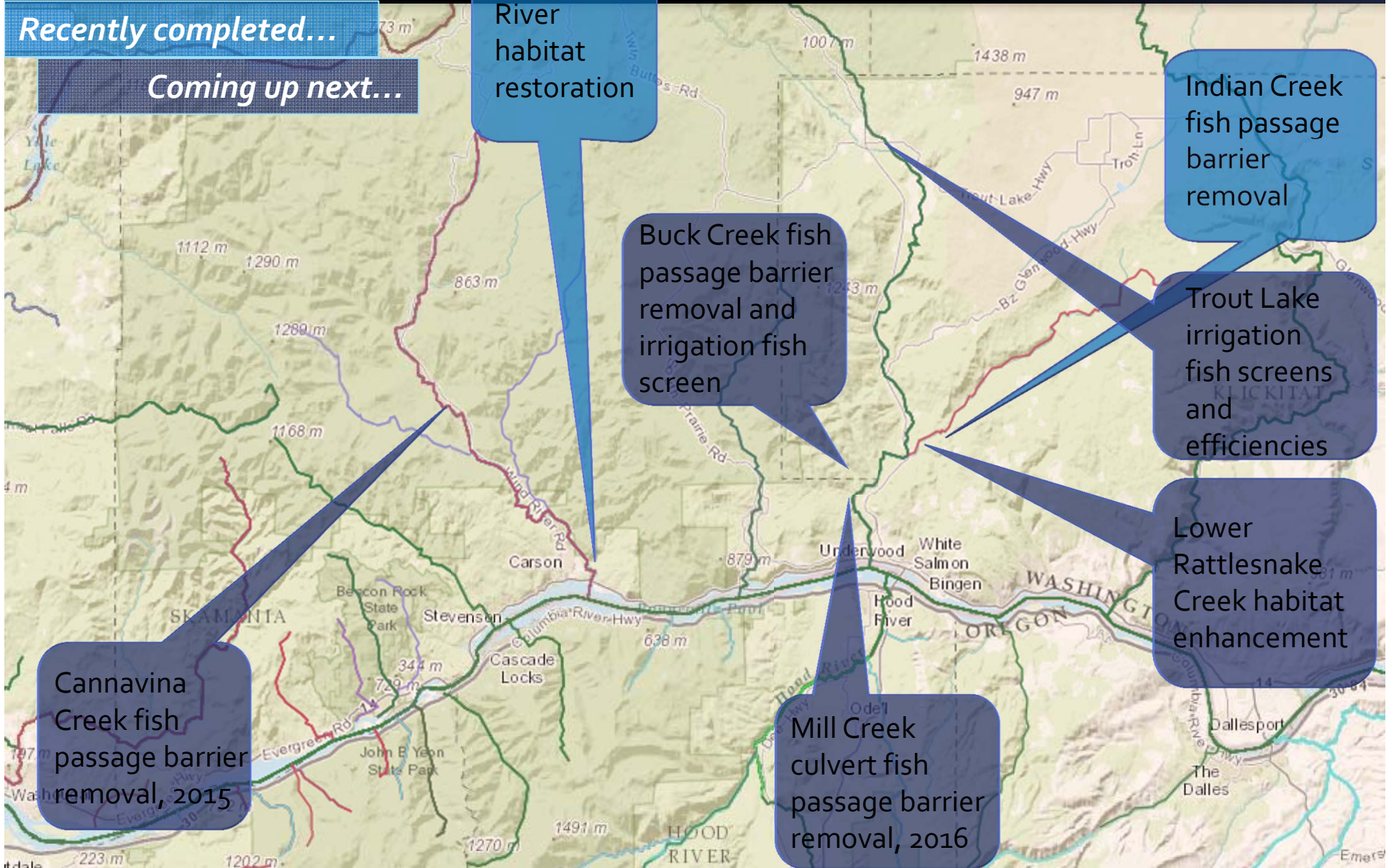
Indian Creek fish passage barrier removal

Trout Lake irrigation fish screens and efficiencies

Lower Rattlesnake Creek habitat enhancement

Cannavina Creek fish passage barrier removal, 2015

Mill Creek culvert fish passage barrier removal, 2016





## Cannavina Creek culverts, *planned: 2015*

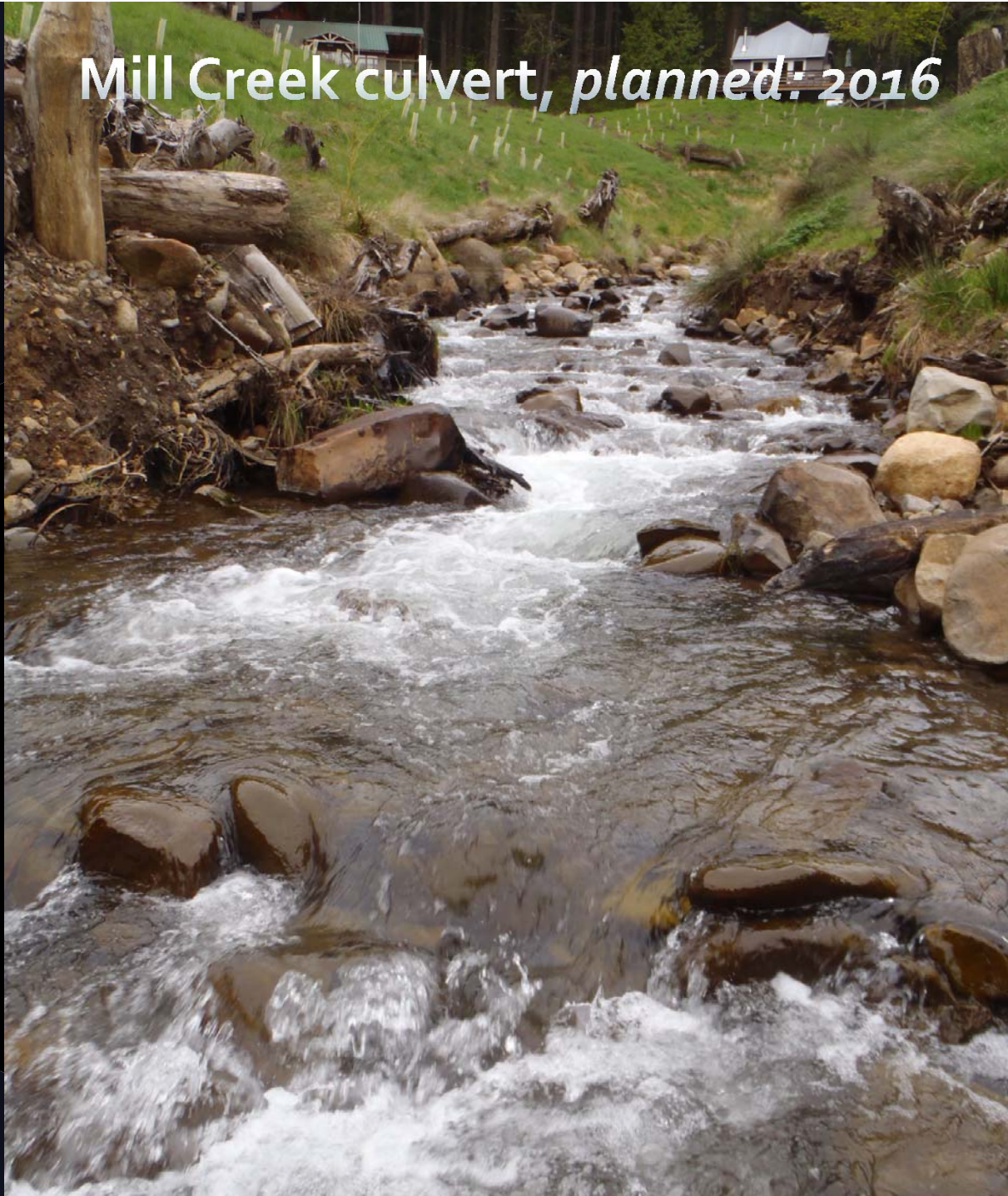


*2 Skamania County road crossings (in close proximity) will be completely passable*

*Opening: ~2 miles of potential habitat*



Mill Creek culvert, *planned*: 2016







**Mill Creek culvert, *planned: 2016***

*Location: White Salmon River watershed*

*Improvement: Replace a perched culvert  
that's a complete fish-passage barrier.*

*Opening: ~4 miles of historic habitat*



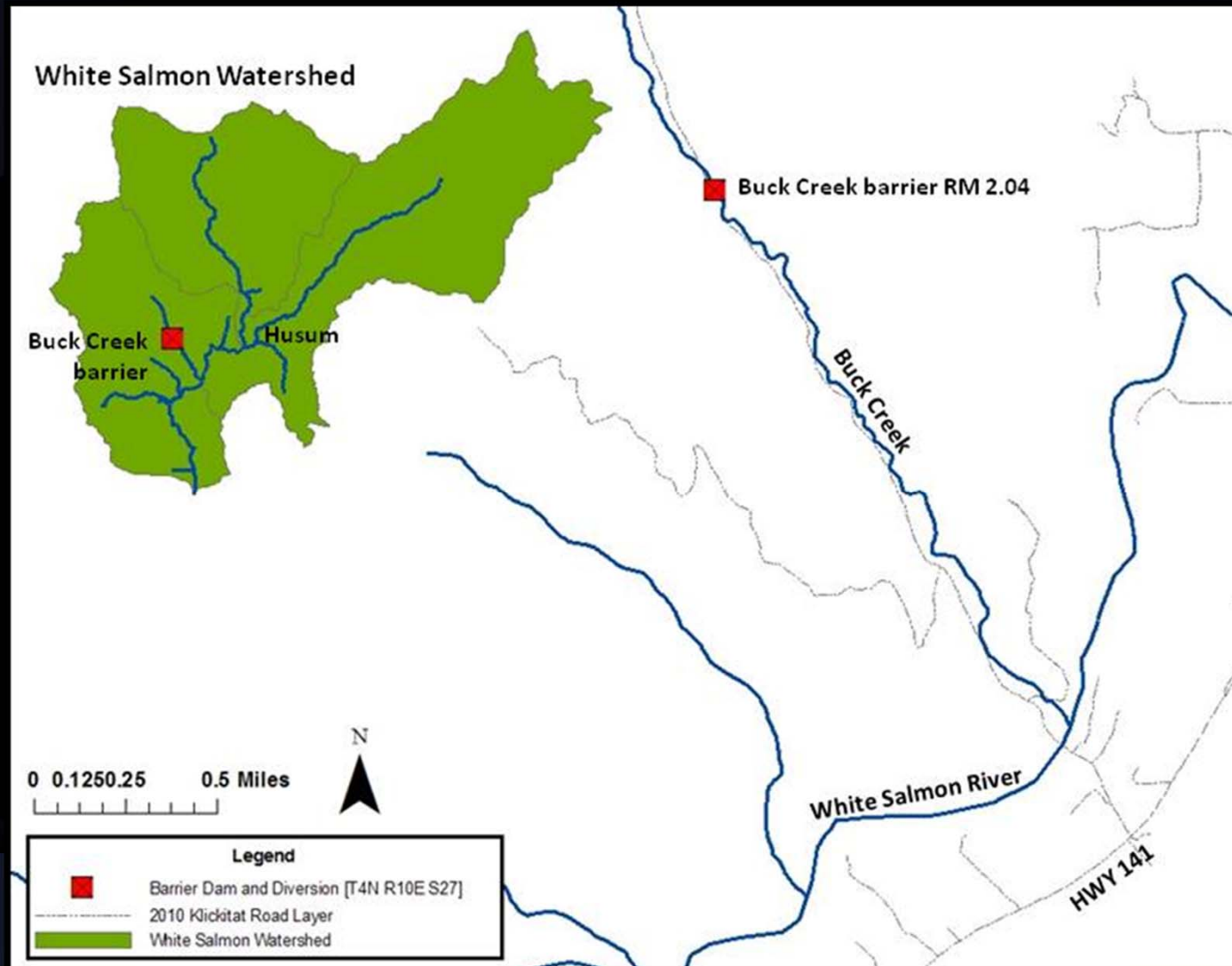








# Buck Creek Fish Passage Project and Irrigation Screening







☆ Currently in alternatives analysis and preliminary design phase

☆ A minimum of 1.3 miles of spawning and rearing habitat inaccessible due to 67-100% passage barrier at diversion dam





# The Future of Stream Restoration at UCD

**Where landowners are willing...**

**Improve instream, riparian and upland ecosystem complexity and resilience**

**Support Continuing Education *as a community*, learning to be good stewards of the water and land.**

**Aim to restore the White Salmon River watershed to a fully-accessible and functional stream system**



A photograph of a waterfall with a fish jumping out of the water. The text is overlaid on the image.

# Transform community problems into community successes

BZ Falls

White Salmon River

July 2012

< 1 year after Condit Dam removal

Photo: Jeanette Burkhardt, Yakama Nation Fisheries