

# Progress Report on Local Stream Restoration

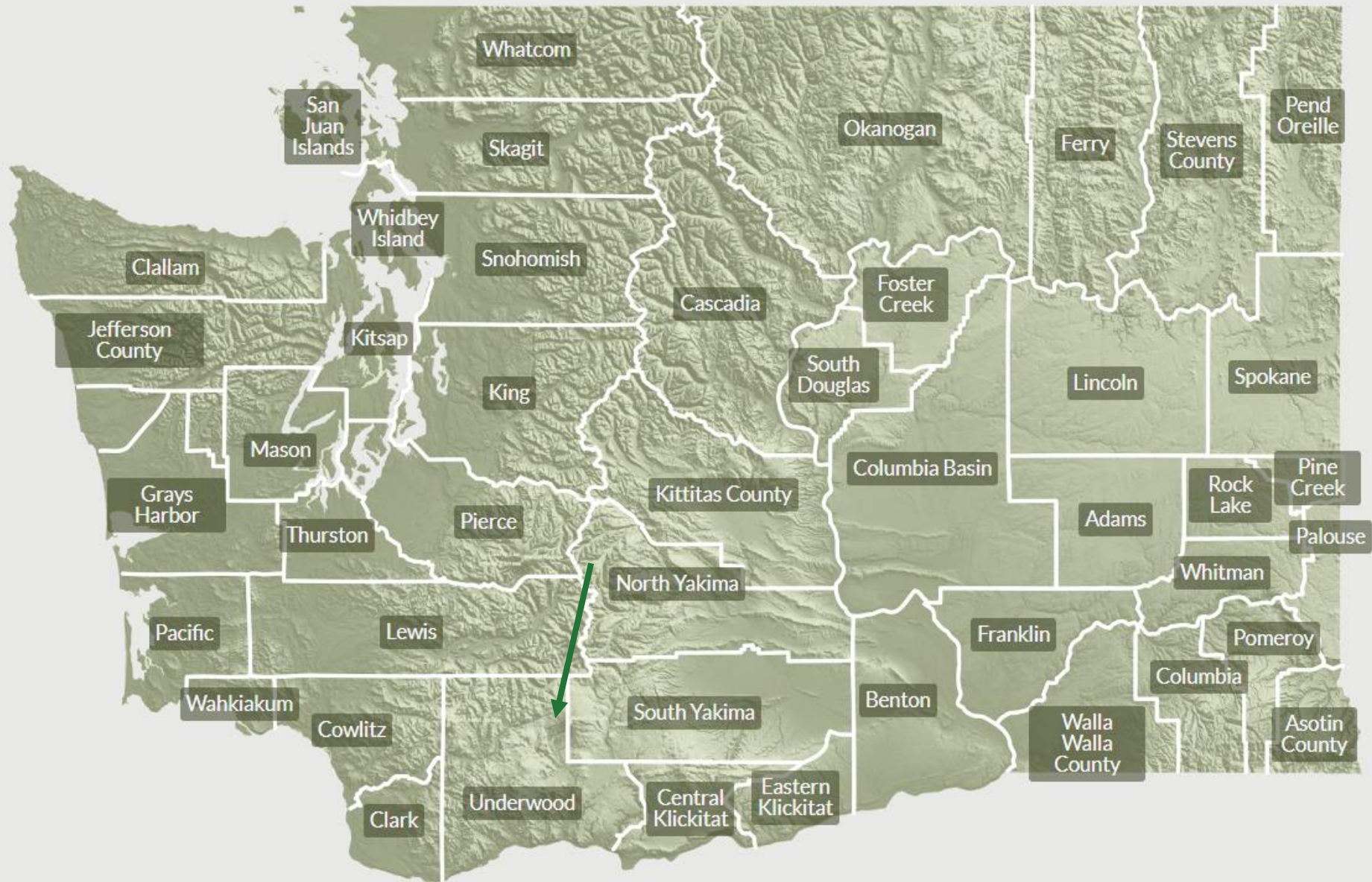


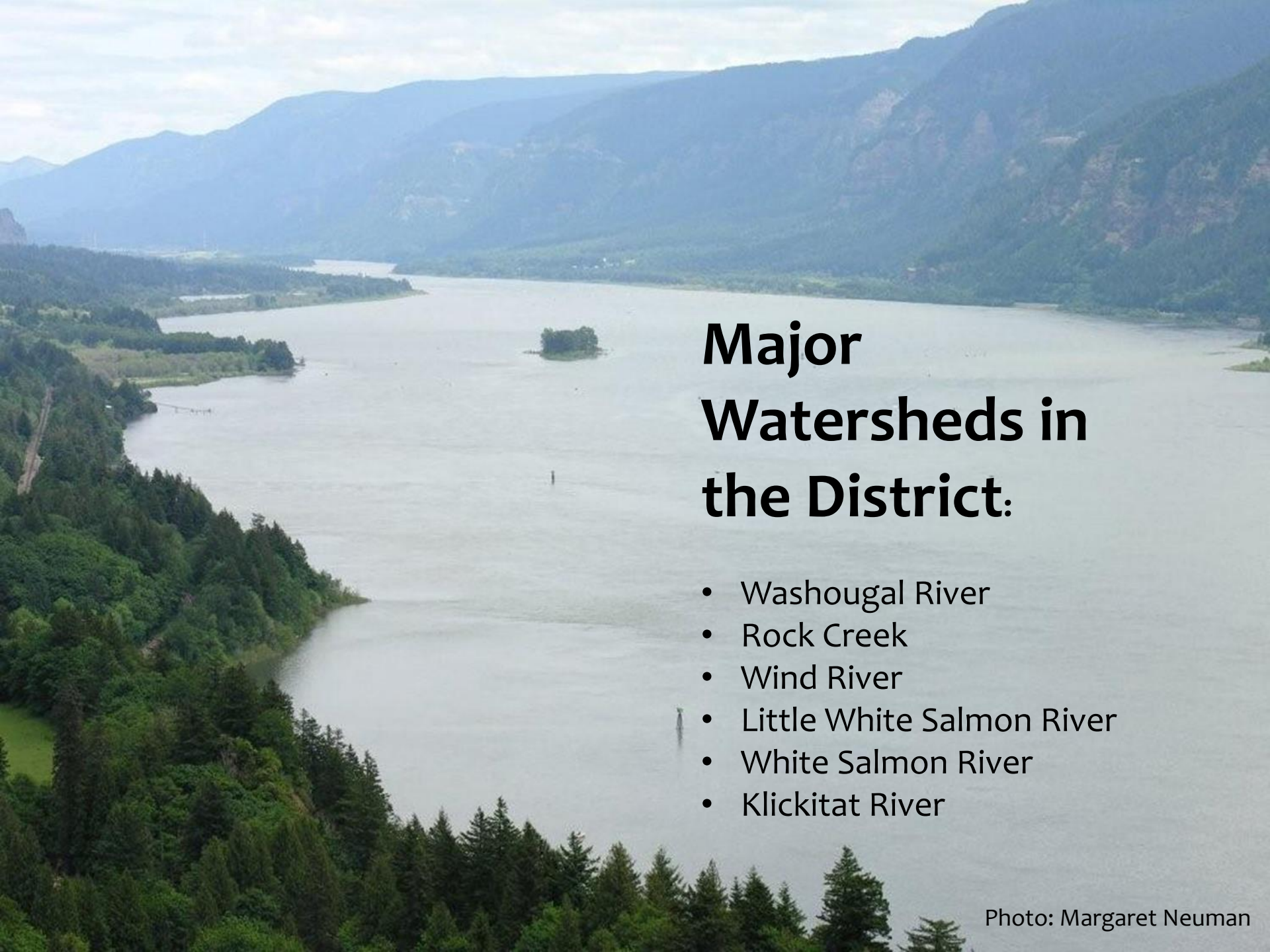
Tova Tillinghast, District Director  
Underwood Conservation District  
[tova@ucdwa.org](mailto:tova@ucdwa.org)

# What is UCD?

- ☆ Underwood Conservation District (UCD) covers all of Skamania County and the western portion of Klickitat County.
- ☆ Designed to be a local source of conservation assistance to landowners and farmers in order to protect and enhance natural resources.
- ☆ Non-regulatory, locally-guided government agency.
- ☆ 9 staff members: district director, financial manager, specialists in wildfire resilience, land management, habitat, farms and livestock, water quality, forestry, weeds and native plants.
- ☆ *Our Mission: to engage landowners and land users throughout Skamania and west Klickitat Counties in the voluntary conservation, enhancement, stewardship, and sustainable use of natural resources.*

# The only Conservation District statewide to cross the Cascade divide!



A wide, calm river flows through a valley, surrounded by lush green forests and rolling hills. In the distance, blue-toned mountains rise against a cloudy sky. The river's surface is dotted with small boats and a small island in the center. The overall scene is serene and natural.

# Major Watersheds in the District:

- Washougal River
- Rock Creek
- Wind River
- Little White Salmon River
- White Salmon River
- Klickitat River

Photo: Margaret Neuman

# District Programs



- \* Wildfire Resilience and Forest Health
- \* Agriculture and Working Lands Best Management
- \* Farm Tool Library
- \* Yard by Yard urban and residential conservation





# YARD by YARD

## CERTIFIED



a backyard habitat program from  
Underwood Conservation District  
[www.ucdwa.org/yard-by-yard](http://www.ucdwa.org/yard-by-yard)

Find the checklist online  
to get started!



Visit [www.ucdwa.org](http://www.ucdwa.org) to:

- \* View or listen to past recorded workshops:
  - \* Wildfire Resilience
  - \* Stream Restoration
  - \* Water Rights, Irrigation Efficiency and Conservation
  - \* Backyard Biochar
  - \* Carbon Markets for Forest Landowners
  - \* Succession Planning
  - \* Tree of Heaven and other Noxious Weeds
  - \* Farm Tool Library
  - \* Benefits of Beaver
  
- \* Sign up for our e-newsletter and stay up on current UCD events
  
- \* Learn about our programs and services
  
- \* Purchase native plants, January-February

Underwood Conservation District's  
2023-2024

# WINTER WORKSHOP SERIES

**Wednesday, December 6**  
*Fire and Flora: Wildfire Resilience  
in the Central Columbia Gorge*

**Thursday, January 11**  
*Water Rights 101 and Conservation Opportunities*

**Thursday, February 8**  
*The Why, What and How of Native Plant Landscaping*

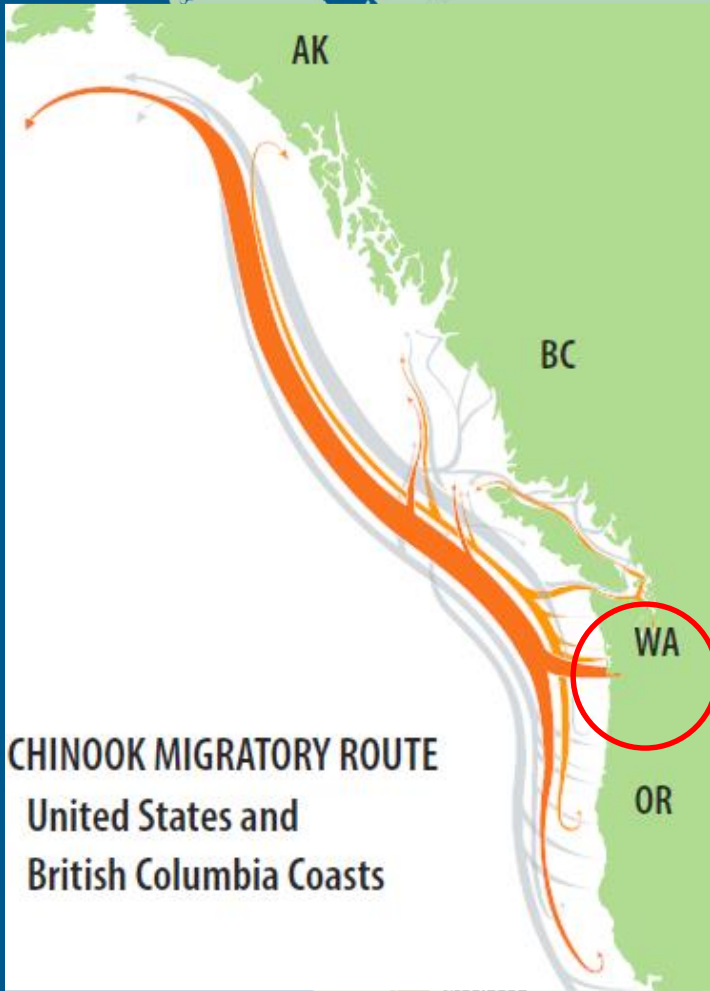
Find more information and register at [www.ucdwa.org](http://www.ucdwa.org)

Workshops take place 6:00-8:00 pm  
with options to attend in-person  
or on-line (recorded for later viewing)

In-person location:  
170 NW Washington Street  
School Board Meeting Room  
Park Center Building  
White Salmon, Washington



**UNDERWOOD  
CONSERVATION  
DISTRICT**



# Our watersheds in context

- Federal Dams
- Nonfederal Dams
- Canadian Dams

50 mi  
100 km

- Steinead Lower Columbia River (threatened)
- Snake River (threatened)
- Middle Columbia River (threatened)
- Upper Columbia River (threatened)
- Lower Columbia River (threatened)
- Upper Willamette River (threatened)
- 🐟 **Sockeye Salmon**  
Snake River (endangered)
- 🐟 **Chum Salmon**  
Columbia River (threatened)
- 🐟 **Coho Salmon**  
Lower Columbia River (threatened)

NEVADA

UTAH



# White Salmon Subbasin Post-Dam Removal

- Steelhead (redd surveys shown to right)
- Spring Chinook
- Fall Chinook
- Tule and Upriver Bright
- Coho

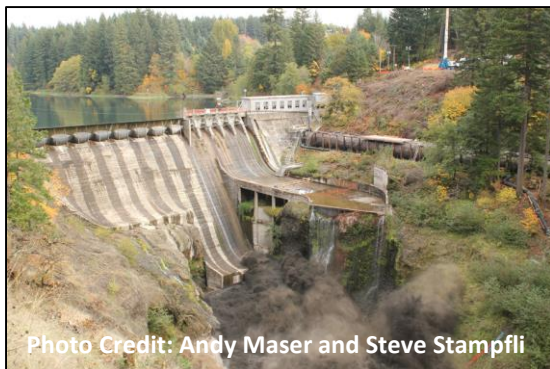
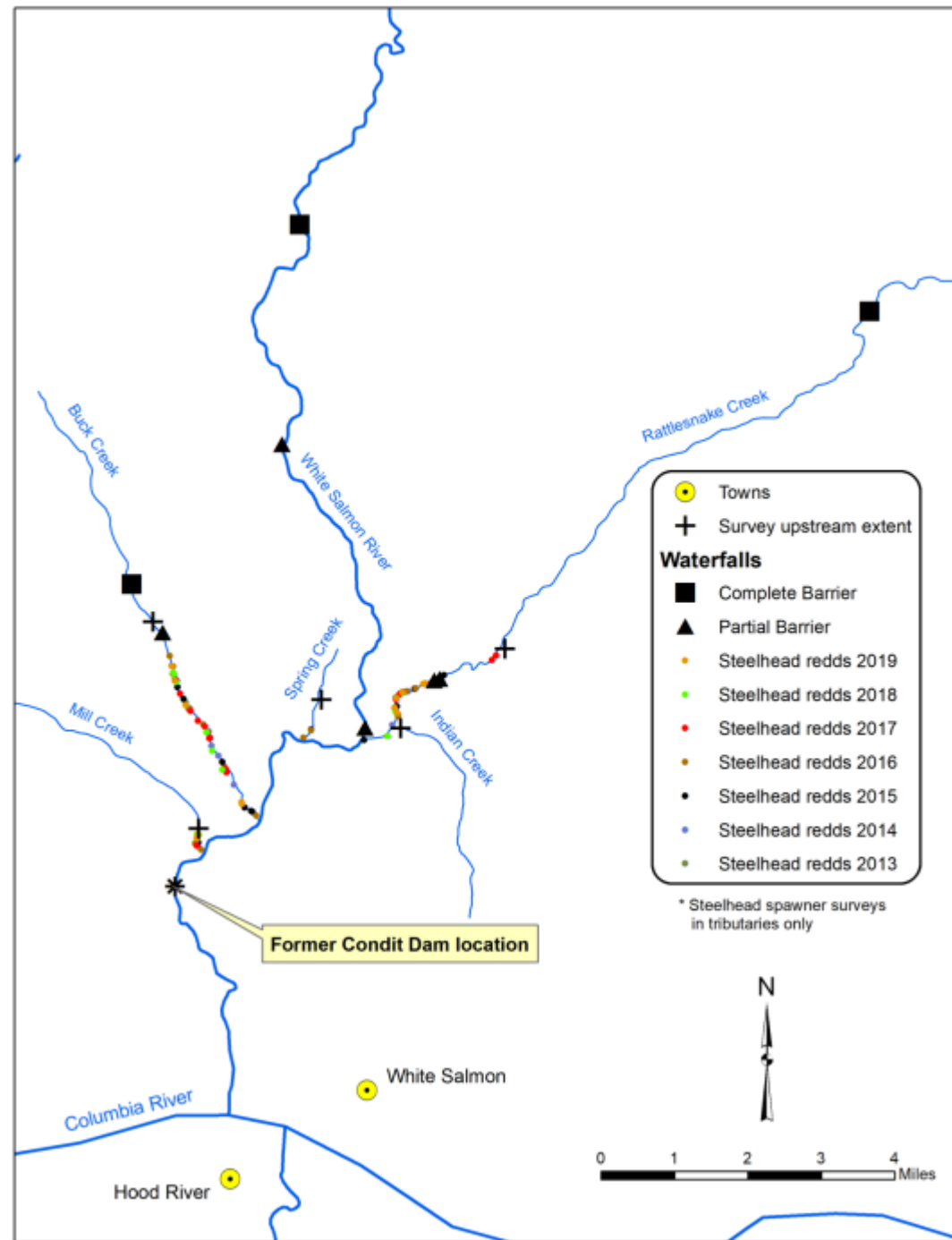


Photo Credit: Andy Maser and Steve Stampfli



# Fish Passage First



Fish Passage Opened! On the White Salmon River, in Mill Creek, Buck Creek, Rattlesnake Creek and Indian Creek

# Potential habitat improvements

## In-stream habitat complexity & healthy streamside vegetation

*Finding for appropriate places to...*

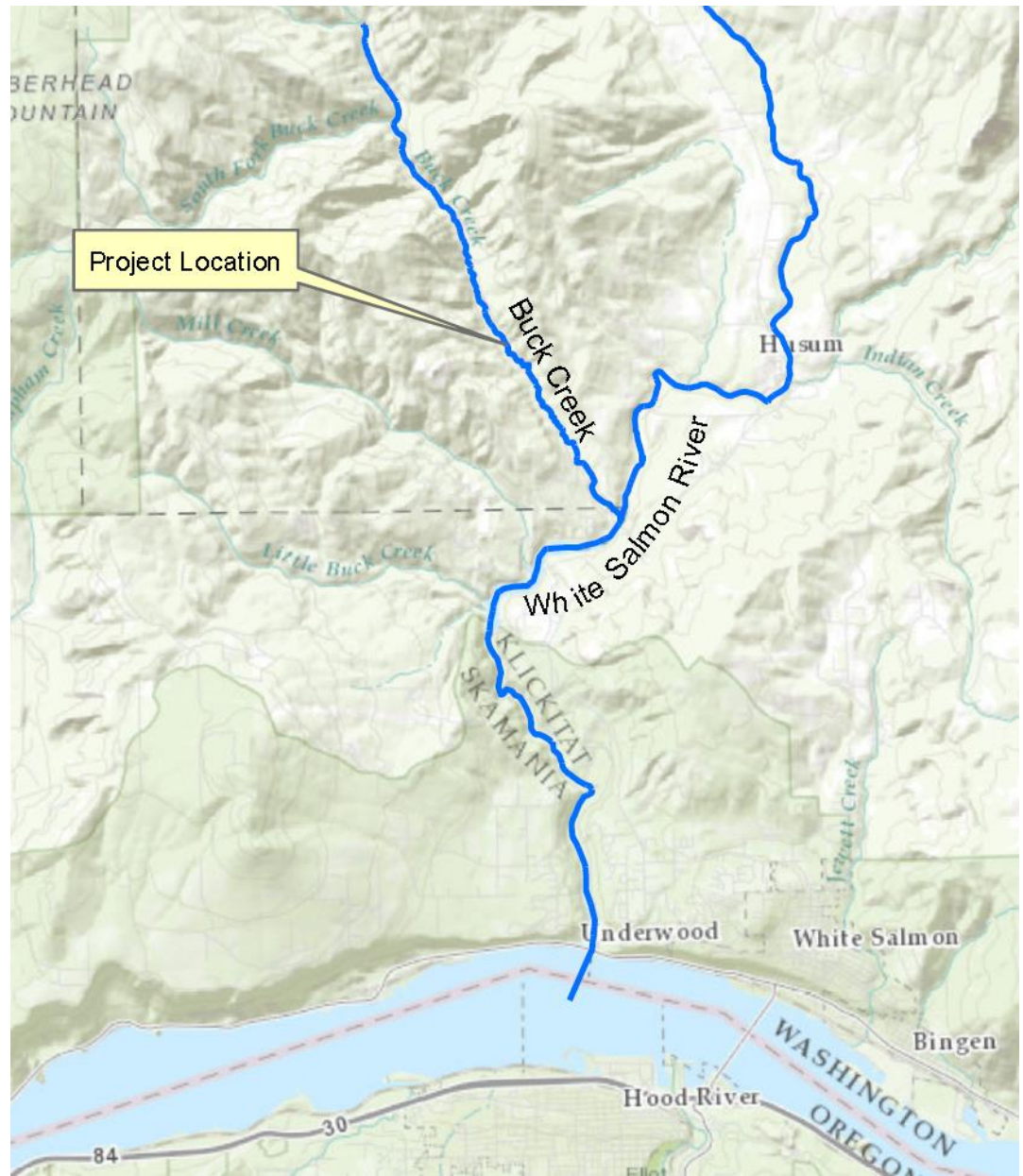
- ☆ Re-build habitat: pools, riffles & glides
- ☆ Add engineered log-jams
  - To capture spawning gravel, create pools, provide cover
- ☆ Reconnect side channels and floodplain areas
  - Flood relief, refuge, complexity, fish rearing habitat
- ☆ Plant streamside native trees & removal of weedy, invasive species
  - Future large wood recruitment, shading, cooler stream temperature
- ☆ Restore headwaters through channel stabilization and beaver mimicry
  - To improve hydrology, water storage and downstream water quality and flow

# Headwater hydrology



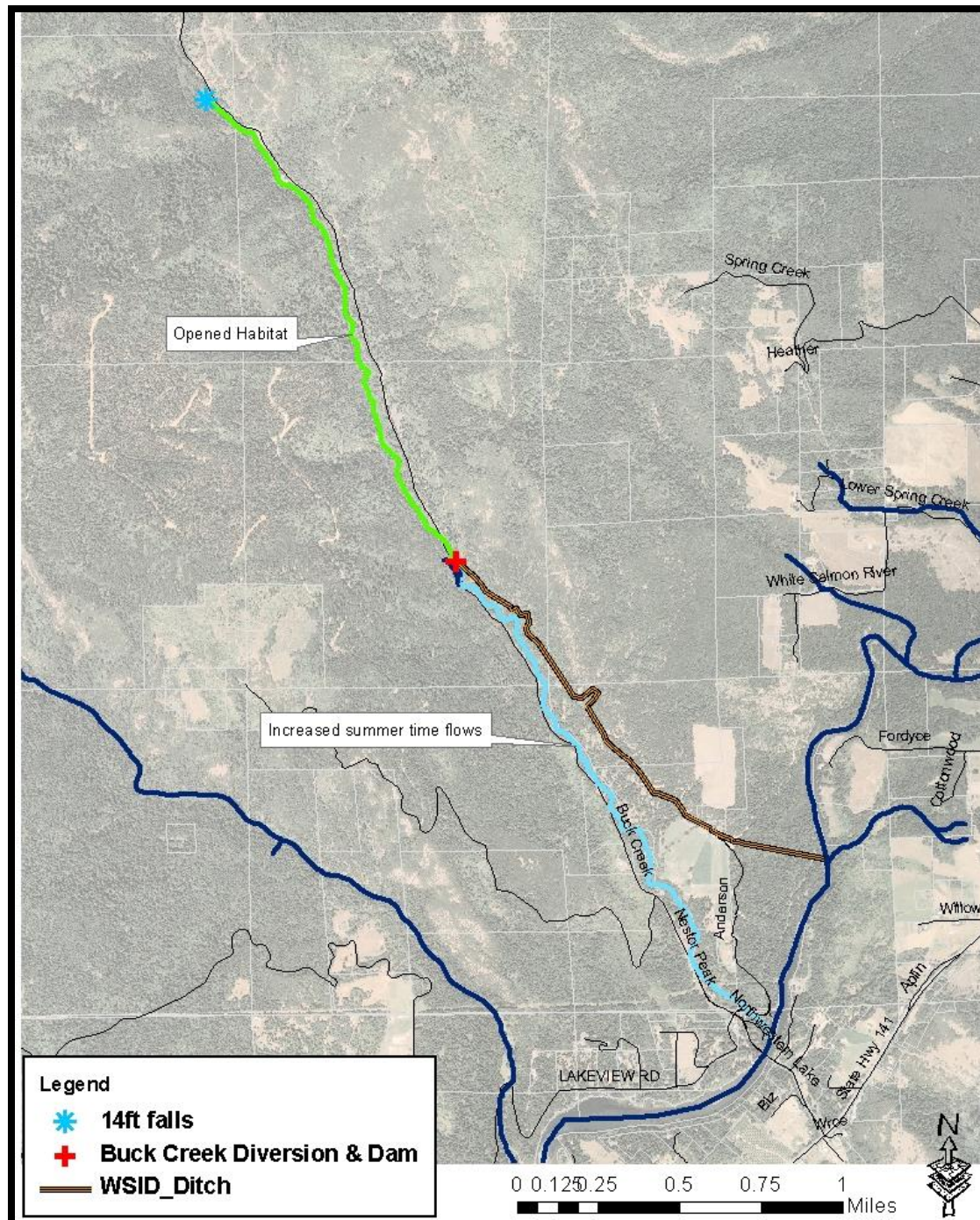
# White Salmon Irrigation District Project on Buck Creek

Planned over several years and constructed 2018-2019

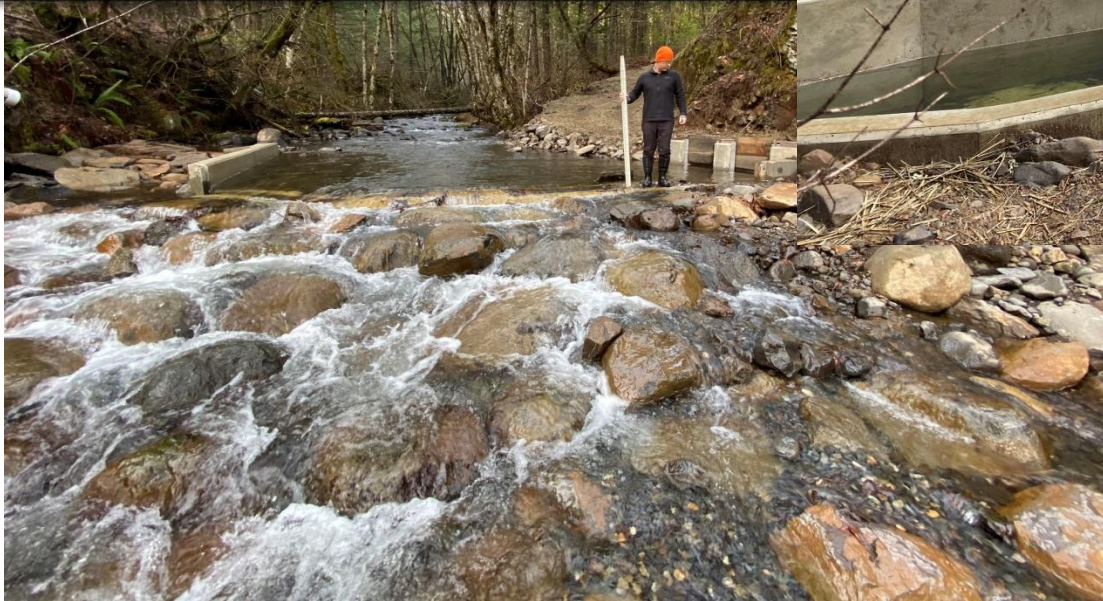


# Key Issues

- Fish Screen - Irrigation diversion was unscreened, possibly allowing fish into the system.
  - Project installed a rotating modular drum screen.
- Fish Passage - Minimum of 1.3 miles of spawning & rearing habitat was inaccessible due to a fish barrier dam in Buck Creek.
  - Project constructed a Roughened Channel for fish passage over dam.
- Water Conservation - 2.39 cfs went into state water trust with the piping of open ditch, turning it into a pressurized, on-demand system.



# White Salmon Irrigation District Diversion – Before and After



## Diverse natural resource needs and solutions in the White Salmon River basin:

- Buck Creek Fish Passage and White Salmon Irrigation District Fish Screen (2018-19) and multiple fish screens for individual irrigation pumps
- Mill Creek Fish Passage Project (2014-2016)
- Indian Creek Fish Passage Project (2012)
- Rattlesnake Creek: 21 beaver dam analogs, large woody debris placement, and planting
- Various improvements to ag. and livestock operations: manure storage upgrades, roof runoff catchment, irrigation fish screens, off-stream water troughs, livestock exclusion fencing and planting along streams.
- Firewise work: doing this with balance.
- Information & Outreach: the value of native plants and riparian vegetation, the value of instream wood, the rules and regs., the need for fish screens and fish passage, irrigation efficiency and water conservation, etc.





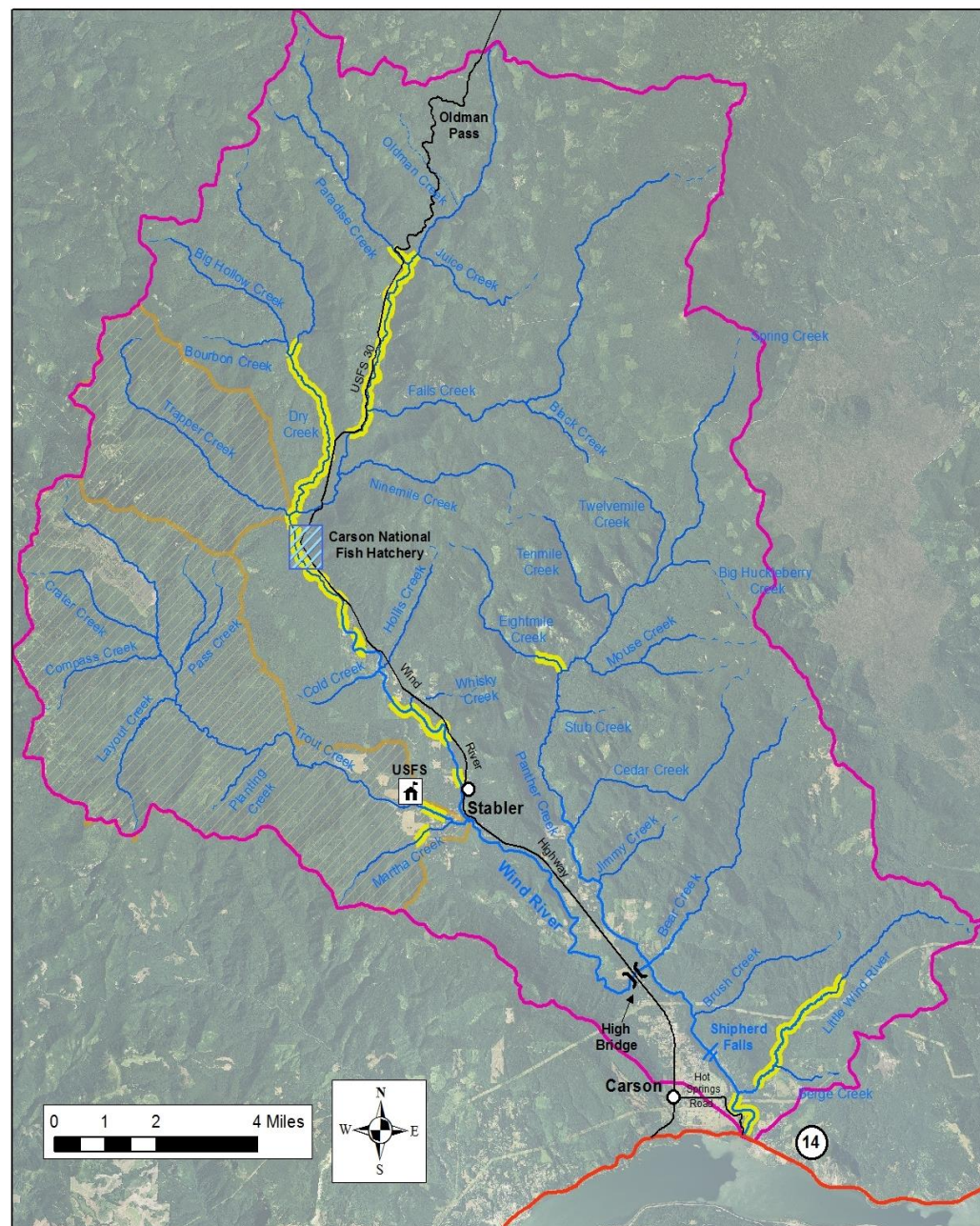
# Wind River

## Anadromous Fish Species:

- wild Steelhead
- Coho
- Chinook
- Chum
- Coastal Cutthroat Trout

## Habitat constraints:

- Habitat simplification
- Lack of large woody debris
- Floodplain disconnection, little or no off-channel habitat such as side-channels, oxbows, wetlands
- Little or no cover or pool habitat



## Geographic Scope

Reaches surveyed Apr-June 2016

- Wind River Watershed
- Geographic Scope for Survey
- Trout and Trapper Cr Basins - Part of existing USFS Restoration Plan

## Diverse natural resource needs and solutions in the Wind River basin:

- Little Wind River habitat enhancement work (four phases, 2012-2019; fifth phase planned for 2024)
- Hollis Creek Fish Passage project (planned for 2025)
- Cannavina Fish Passage project (2016)
- Martha Creek Dam removal (2012)
- Hemlock Dam removal (2009) and subsequent side-channel and floodplain restoration work
- Noxious weed control and riparian planting throughout watershed.
- Wind River Nursery establishment and potential fall native plant sale this year!
- Firewise, forest health and forest road improvements
- Information & Outreach: the value of native plants and riparian vegetation, the value of instream wood, the rules and regs., etc.



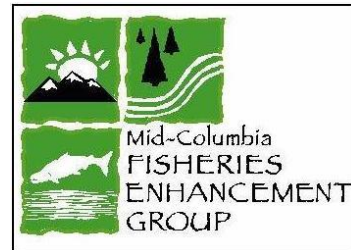
# We're not alone... Thankfully!

## Partners are doing good work too

- Dry Creek Fish Passage
- Large Woody Debris project at Beaver Campground
- Snyder Creek Habitat Restoration
- Rattlesnake Creek Habitat Enhancement
- Beaver Relocation and Reintroduction
- To name just a few....



Mt. Adams Resource Stewards



WASHINGTON STATE Recreation and Conservation Office



# Together, we're planting and building a bright future!

- FORESTLANDS
- AGRICULTURE & WORKING LANDS
- URBAN ENVIRONMENTS
- TERRESTRIAL & RIPARIAN HABITAT, WEEDS & NATIVE PLANTS
- INSTREAM HABITAT & WATER QUALITY
- COMMUNITY ENGAGEMENT
- SUSTAINABLE OPERATIONS



UNDERWOOD CONSERVATION  
DISTRICT

## LONG-RANGE PLAN

2023-2028



For more information, contact:

Tova Tillinghast, District Director  
info@ucdwa.org | 509-493-1936



# Film showing... Little Wind River, Phase 4



- [www.ucdwa.org/little-wind-river-habitat-enhancement-project](http://www.ucdwa.org/little-wind-river-habitat-enhancement-project)

