

# CUSTER SOIL AND WATER CONSERVATION DISTRICT

## **Locally Elected Board of Supervisors**

Wayne Baker, Chairman

Julia Moss, Vice Chairman

Jimmie L. Dowton, Treasurer

Dale Olson, Secretary

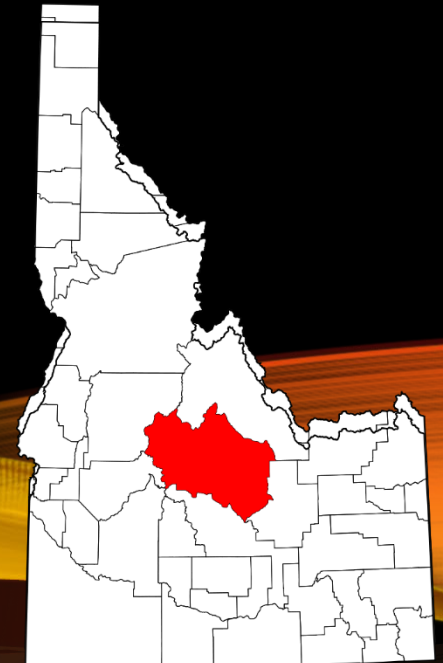
Tori O'Neal, Member

Karma Bragg, Project Manager

Idaho Watershed Habitat  
Restoration 2007-268-00

\*\*\*\*\*

Pahsimeroi Restoration via OSC  
2008-603-00



# THE GOAL

Historically, spawning and rearing habitat has been supported within the basin for federally-listed anadromous fish species: Spring and summer Snake River Chinook salmon, and Summer Snake River Steelhead.

## Limiting Factors:

- Inadequate fish habitat and habitat complexity
- Limited flows/dewatering
- Passage barriers and entrainment

We strive to address these limiting factors while at the same time maintaining the delicate balance between fish recovery and agricultural production.



# INTER-RELATED PROJECTS



Riparian Fence in Stanley

- Idaho Department of Fish and Game- 1994-015-00 Screening Improvement & 2007-399-00 Upper Salmon Screen Tributary Passage
- Idaho Department of Water Resources 2008-608-00 Idaho MOA/Fish Accord Water Transactions
- Idaho Governors Office of Species Conservation USBWP-2007-394-00



# CRITICAL PARTNERS



Stark Easement Property

- Private Landowners
- Custer County Commissioners
- Idaho Department of Fish and Game
- U. S. Bureau of Reclamation
- Natural Resources Conservation Service
- USFS- Sawtooth National Recreation Area
- Idaho Governors Office of Species Conservation
- Bureau of Land Management
- Bonneville Power Administration
- U. S. Fish and Wildlife Service
- NOAA Fisheries.

# PROJECT IMPLEMENTATION 2013-2021

## Upper Salmon-15 Projects

- In-stream water savings of approximately 26 cfs.
- Addressing 12 passage barriers by closing or modifying irrigation diversions or removing culverts

## Pahsimeroi - 25 Projects

- In stream water savings of approximately 68.5 cfs
- Addressing 23 passage barriers by closing or modifying irrigation diversions or removing culverts

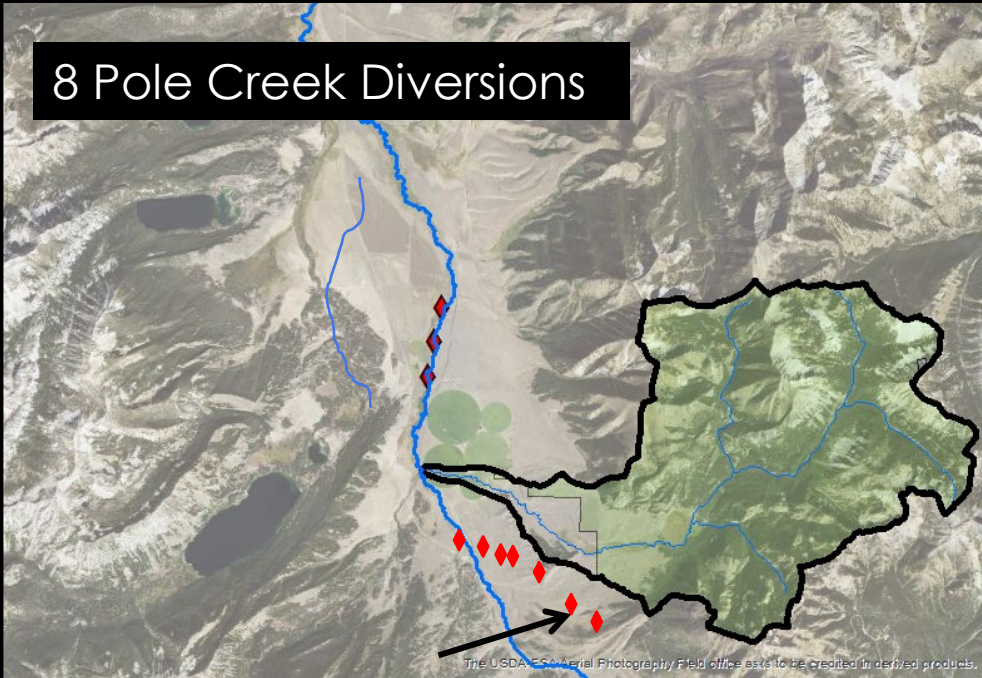
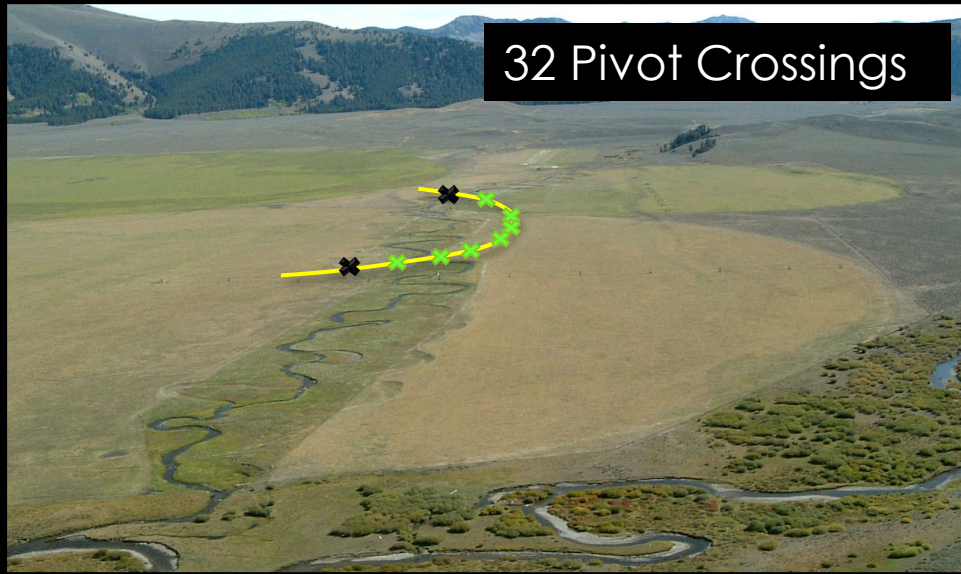
Through these contracts the Custer SWCD has completed stream restoration projects throughout the basin to improve approximately 105 miles of stream.



# POLE CREEK – A SUCCESS STORY

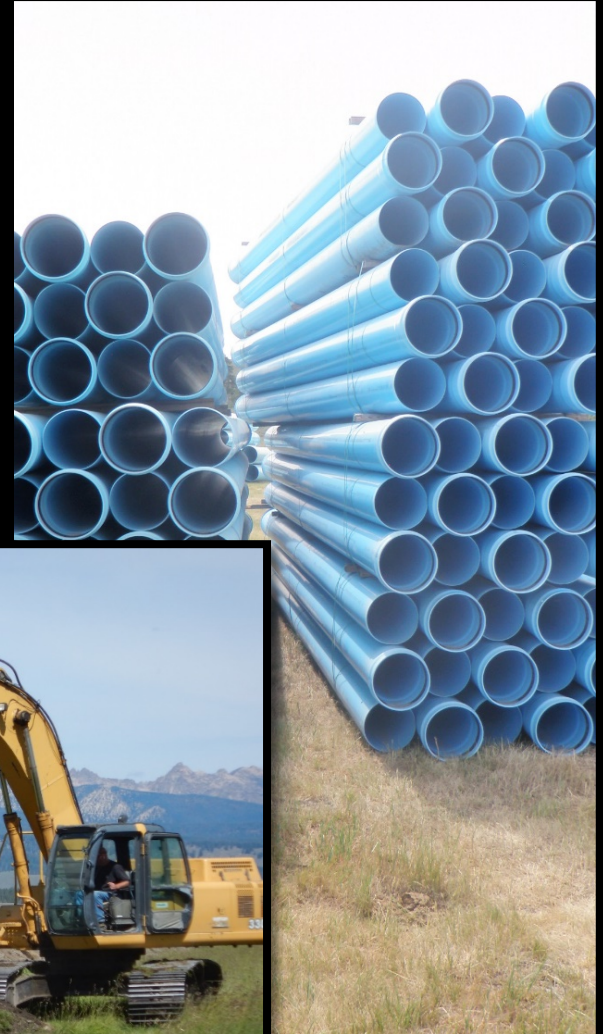








# MILES OF IMPLEMENTATION



- Reconstruct/relocate POD
- Reconfigure pivots
- Replace culverts
- Replace fences
- Develop off-site livestock water



# IMPROVED IRRIGATION



- Improve Irrigation Efficiencies
- Drill wells
- Develop system to accommodate source switch to address flows.



- Reconstruct/relocate POD
- Reconfigure pivots
- Replace culverts
- Replace fences
- Develop off-site livestock water



# PHYSICAL BARRIER REMOVED - PASSAGE IS RESTORED

Old Diversion Before Project



Fish Passage Restored



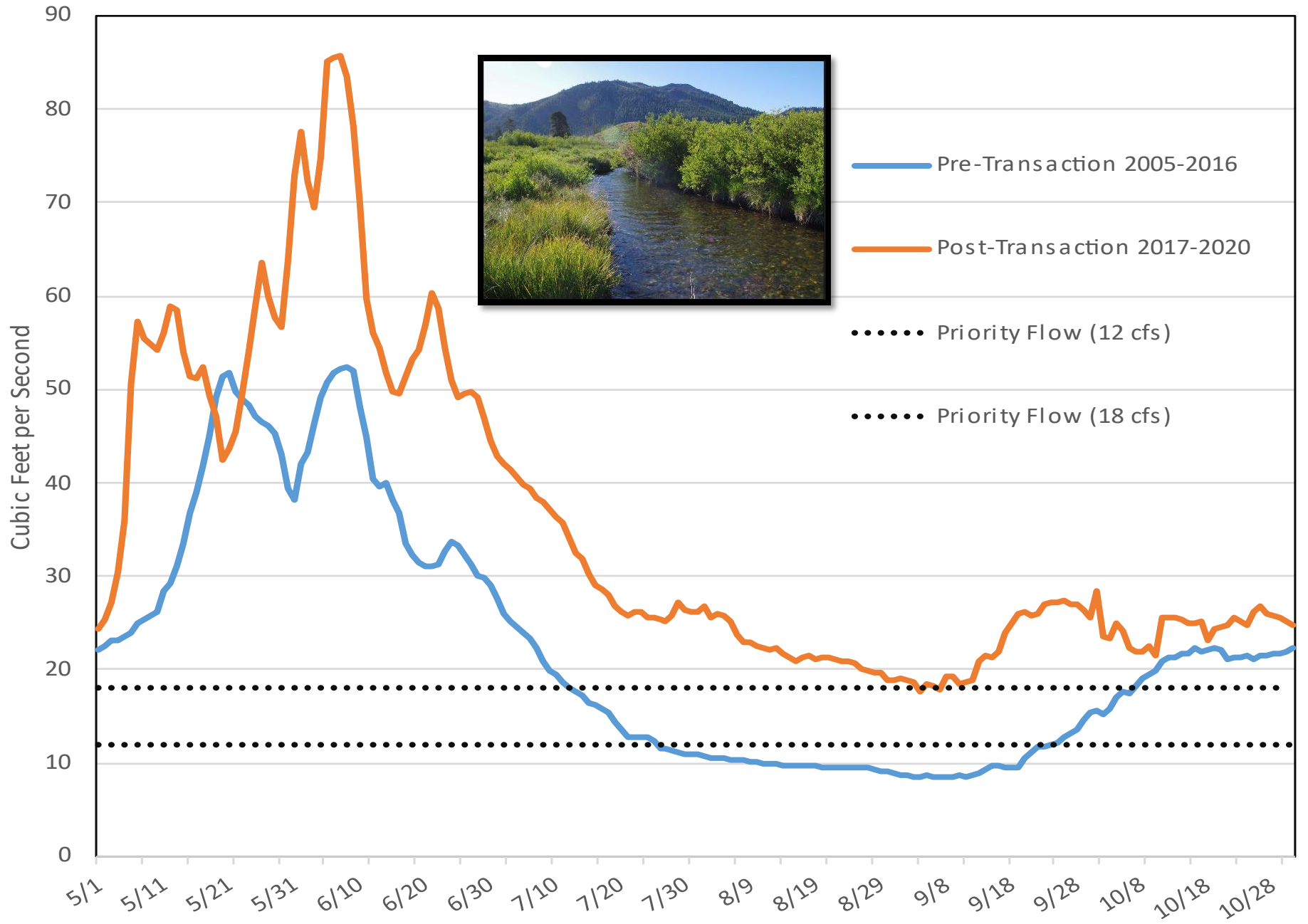
New Diversion



IDFG Criteria Fish Screen



# Pole Creek - Average Daily Flow





# Pole Meadow - Before and After



## Pole Meadow Historic Channel Before and After



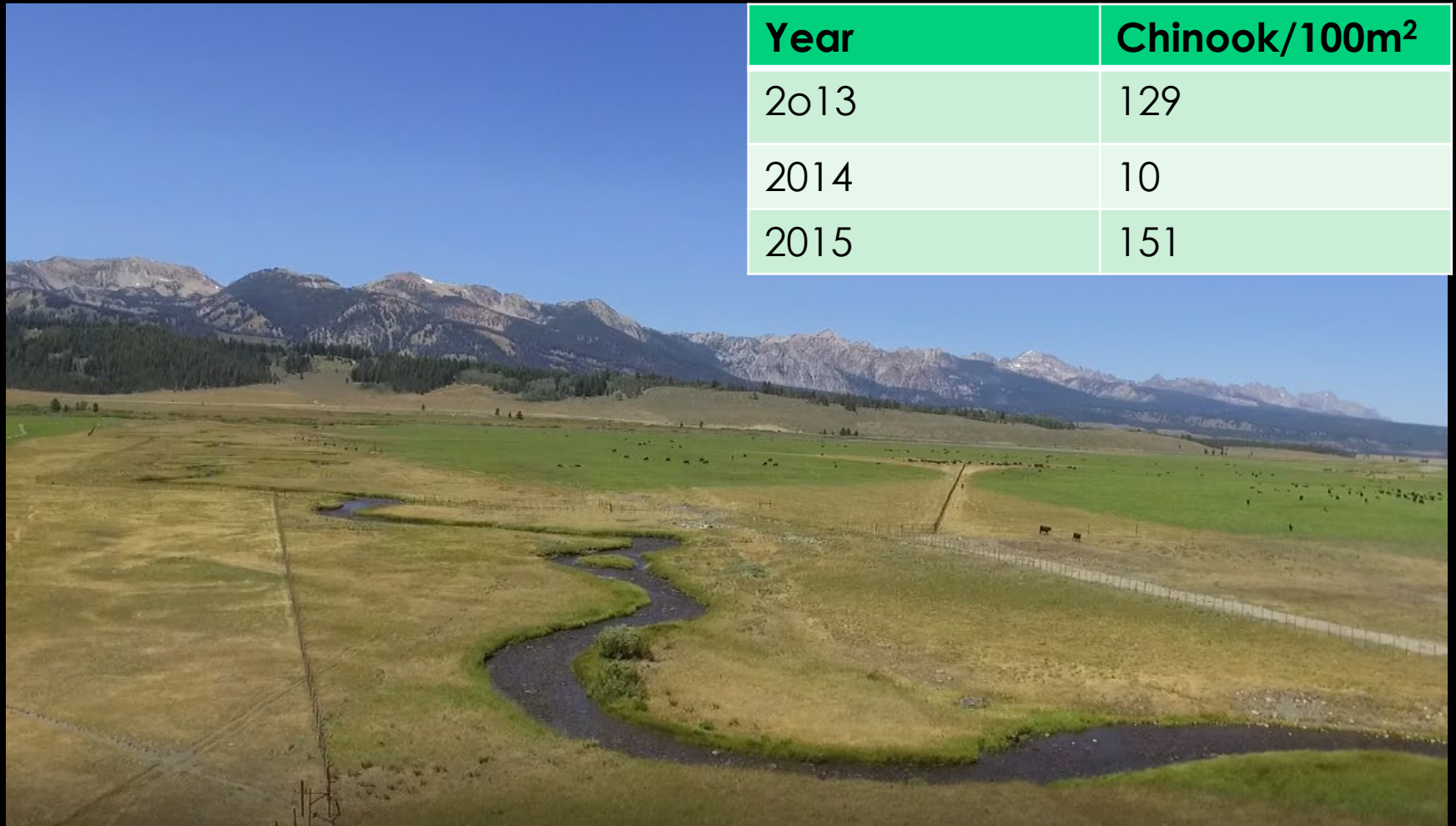
# PARTNERS

Salmon Falls Land and Livestock  
Office of Species Conservation - USBWP  
Sawtooth National Recreation Area  
Shoshone-Bannock Tribes  
U. S. Bureau of Reclamation  
Natural Resources Conservation Service  
Custer Soil and Water Conservation District  
Idaho Department of Fish and Game  
Idaho Department of Water Resources  
Idaho Transportation Department  
NOAA Fisheries  
US Fish and Wildlife Service  
Bonneville Power Administration  
Pacific Coast Salmon Recovery Funding





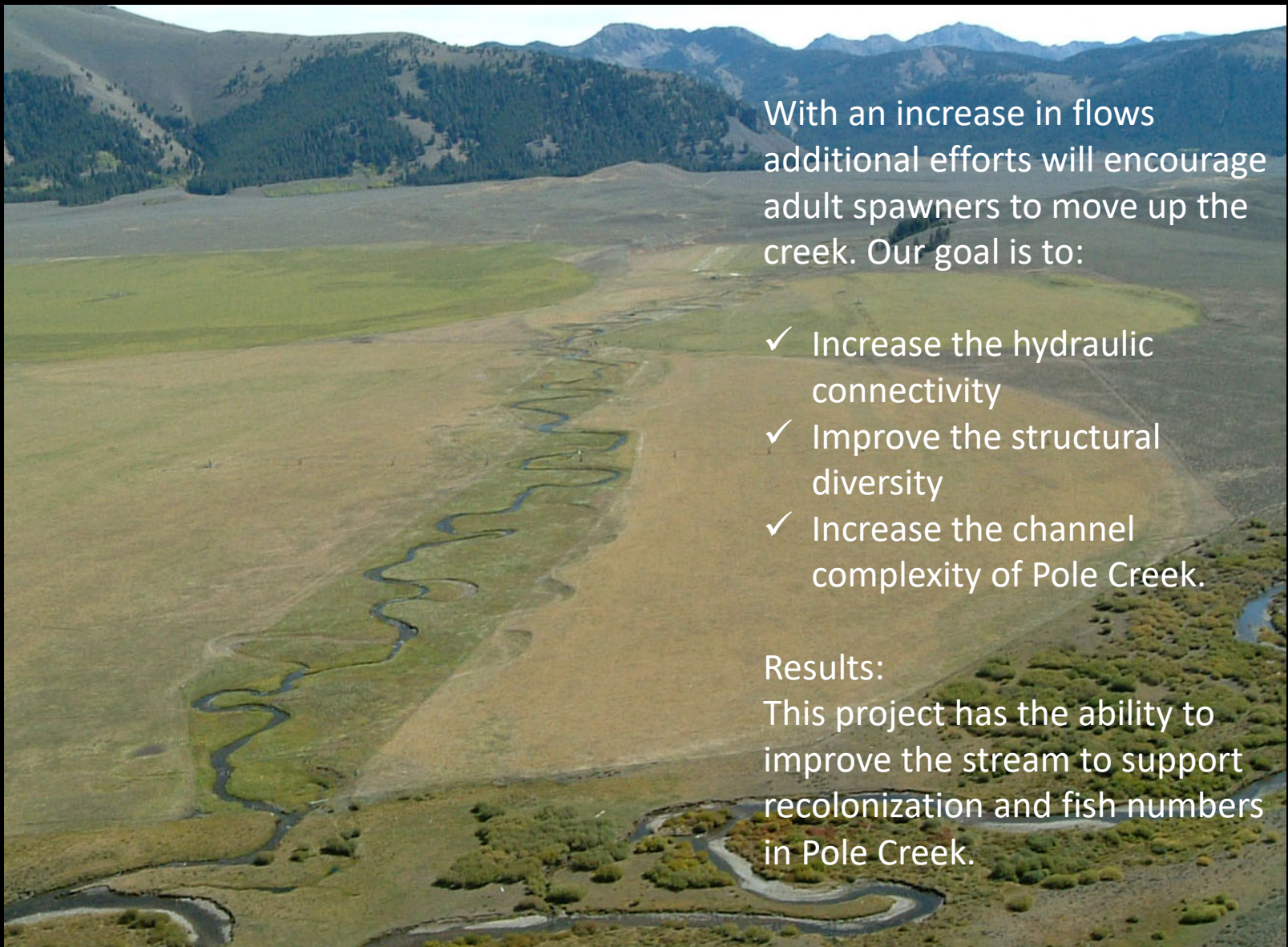
# POST PROJECT RECOVERY ON POLE CREEK



Year	Chinook/100m <sup>2</sup>
2013	129
2014	10
2015	151



# THE GOAL FOR POLE CREEK



With an increase in flows additional efforts will encourage adult spawners to move up the creek. Our goal is to:

- ✓ Increase the hydraulic connectivity
- ✓ Improve the structural diversity
- ✓ Increase the channel complexity of Pole Creek.

Results:

This project has the ability to improve the stream to support recolonization and fish numbers in Pole Creek.



# P-16/FUREY LANE DIVERSION MODIFICATION AND STREAM RECONNECT

Furey Lane - July 26, 2021



# FUREY LANE – P-16 DIVERSION

## Before at Furey/P16 Project:

- 29.52 cfs is decreed at this Point of Diversion
- P-16 was unscreened.
- Sulphur Creek Ranch - A "re-divert and was also unscreened
- Big Creek Irrigation Diversion – 23.8 cfs

## After Furey Lane/P-16:

- 1 new "fish passable" POD at Furey for 8 cfs
- Permanent Closure P15/converted to well for Sulphur Creek
- One criteria fish screen at new POD
- Permanent Closure of P-14 Dversion
- Permanent Closure of Big Creek/Hamilton Ditch Diversion



P-16 Before





P-16 Before



P-16 After





# PAHSIMEROI HABITAT COMPLEXITY





# MUDDY SPRINGS HABITAT PROJECT





# QUESTIONS?

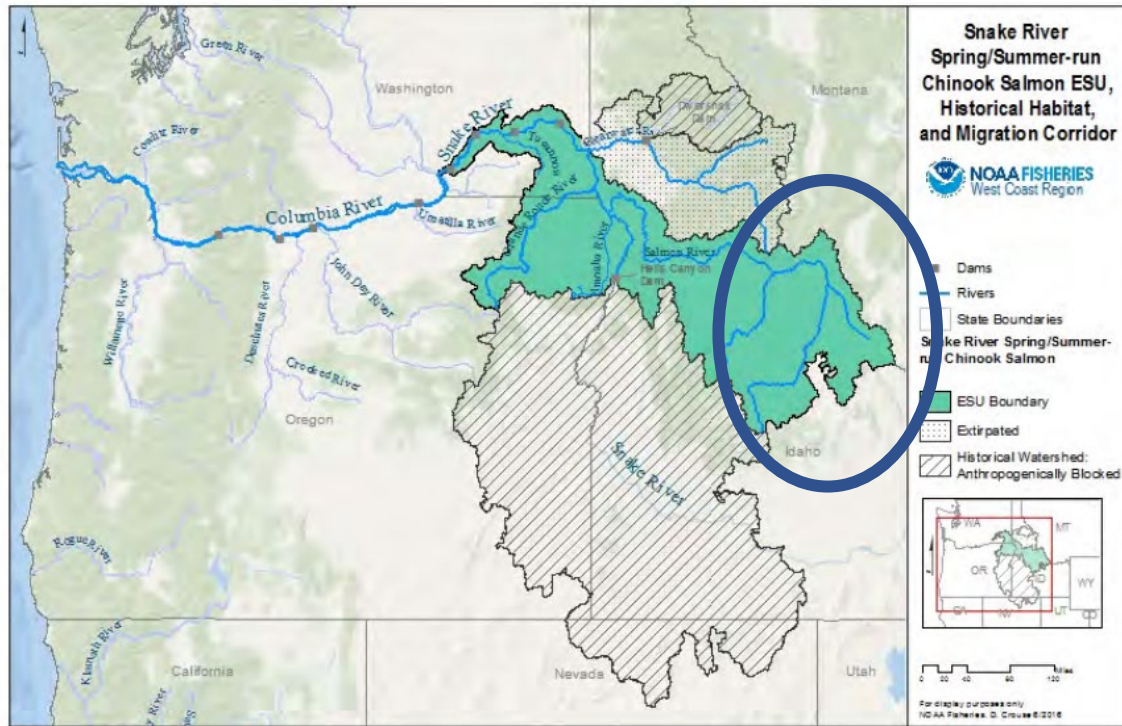


Photo Credit:  
IDFG, Screen Shop  
Brian Hamilton, USBOR  
Steve Stubner, Life on the Range  
Mark Moulton , SNRA

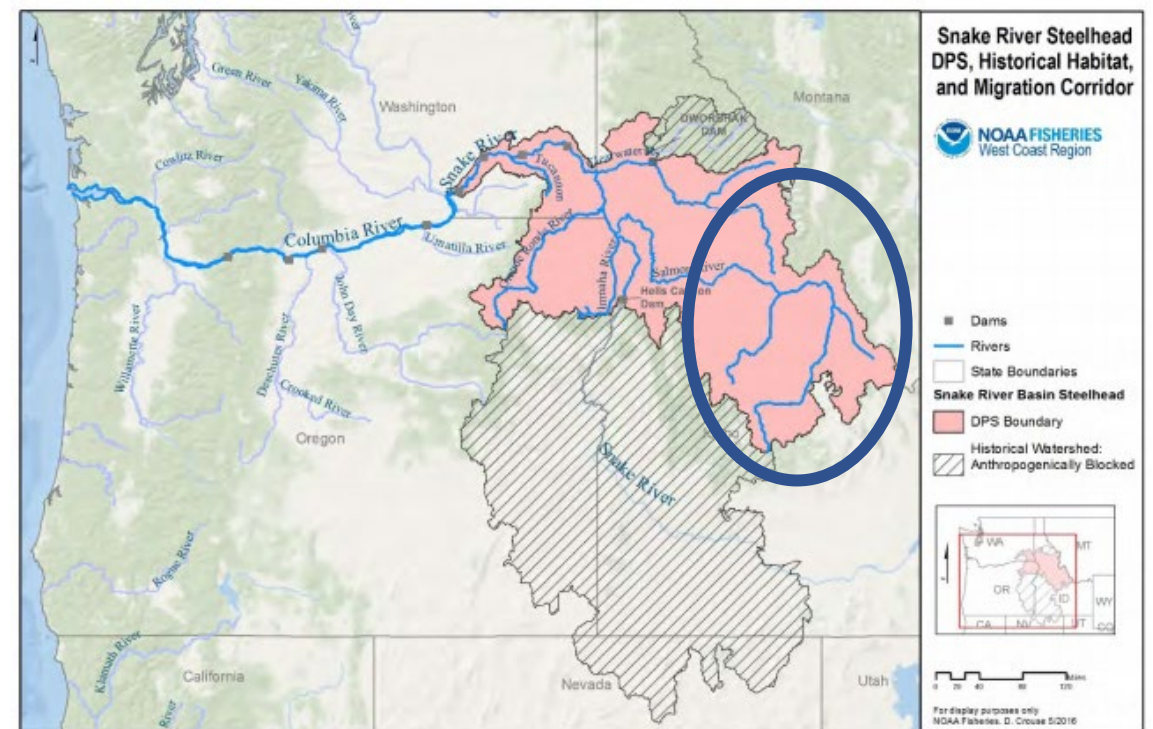
- Our role: **PLANNING, PERMITTING, COORDINATION AND IMPLEMENTATION**
- Landowner Relations - Willing landowners is KEY!
- IDFG and the Office of Species Conservation - USBWP have worked to identify priorities for each of the sub-basins we are work in. We use the established priorities to identify and develop project goals.
- We rely heavily on IDFG, IDWR and the USBWP to assist with monitoring and provide monitoring results to direct fish priorities for new projects.
- We have implemented 98% of all projects noted in our last proposal plus some additional projects

<https://idrange.org/range-stories/central-idaho/pole-creek-conservation-success-story>

# Lemhi Soil and Water Conservation District Upper Salmon Basin

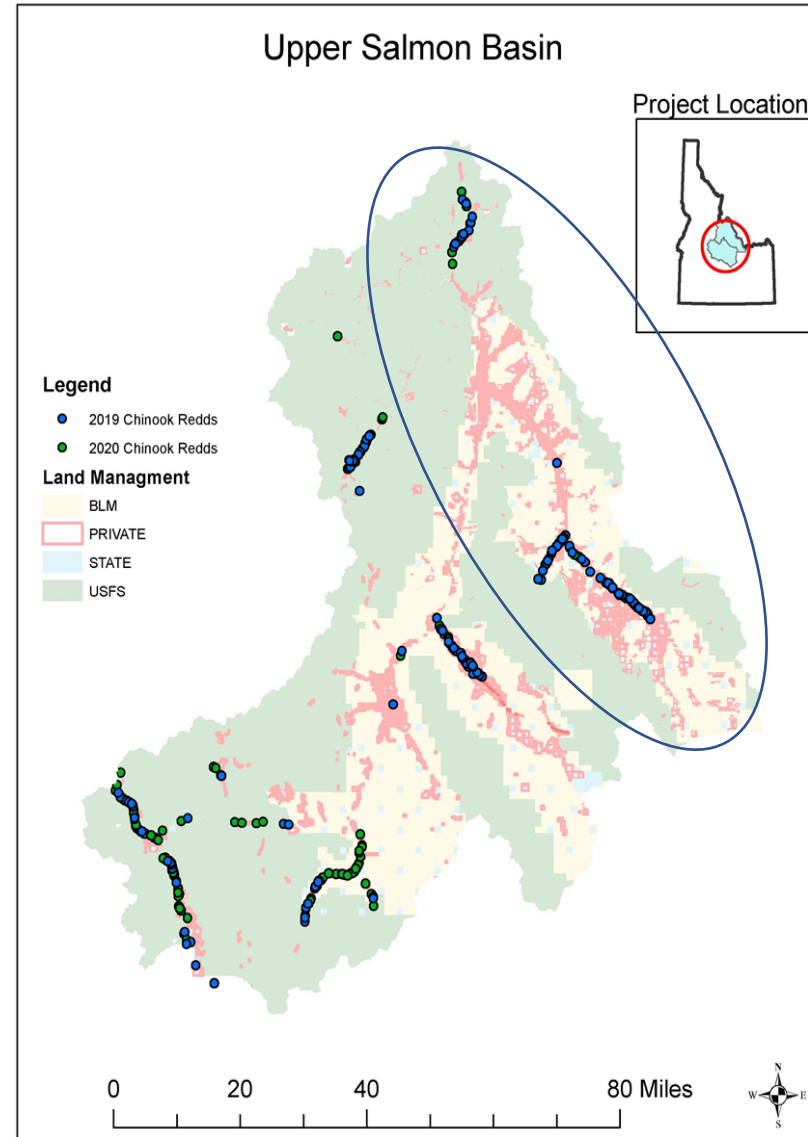


**Figure 1-1.** Snake River Spring/Summer-Run Chinook Salmon Evolutionarily Significant Unit, historical habitat, and migration corridor.



**Figure 1-2.** Snake River Basin Steelhead Distinct Population Segment, historical habitat, and migration corridor.

- 2,700 Square miles
- 92% Public Land
- 8% Private Land
- Occupied salmon habitat
  - 90% private





# The LSWCD Board of Supervisors



Rusty Hamilton, Thayne Kauer, Jane Sandstrom, Mike Kossler , Curtis Beyeler  
Secretary      Treasurer      Chair      Vice-Chair      Contract Officer



# The SHOSHONE-BANNOCK TRIBES

SALMON DISTRICT  
 ACTIVITY OFFICE DATE  
 DISTRICT OFFICE DATE



FORT HALL INDIAN RESERVATION  
 PHONE (208) 238-3700  
 (208) 785-2080  
 FAX # (208) 237-0797

FORT HALL BUSINESS COUNCIL  
 P. O. BOX 306  
 FORT HALL, IDAHO 83203

February 18, 1992

Dick Buster, Realty/Range Specialist  
 Bureau of Land Management - Salmon District  
 Highway 93, South  
 P.O. Box 430  
 Salmon, ID 83467

Dear Mr. Buster:

In response to our conversation over the telephone regarding what creeks Salmon use to spawn in the Lemhi river drainage.

I have contacted a few of our Tribal Elders, those of *who* are of Lemhi descendents, and they indicated that they remember salmon were in just about every creek within the Lemhi river drainage.

Listed below are a list of creeks they remember where the salmon were taken prior to the whiteman farming and ranching the valley and drought conditions.

- |                                |                      |
|--------------------------------|----------------------|
| 1. Eighteen Mile Creek         | 7. Patlee Creek      |
| 2. Big and Little Timber Creek | 8. Kenney Creek      |
| 3. Canyon Creek                | 9. Sandy Creek       |
| 4. Big Eight Mile Creek        | 10. Withington Creek |
| 5. Hayden Creek                | 11. Wimpey Creek     |
| 6. Agency Creek                | 12. Kirtley Creek    |

There are no photographs available of the creeks, listed above, that were taken by our members for your review.

If you need additional information, please feel free to contact me at 238-3807 or leave a message.

Sincerely,

SHOSHONE-BANNOCK TRIBES

Keith Tinno, Member  
 Fort Hall Business Council

cc: file/chrony



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, AeroGRID, IGN, and the GIS User Community





Typical culvert/partial fish barrier.

- Collaborating with partners
- Water efficiency projects
- Fish passage barrier removal
- Points of irrigation diversion consolidation and screening
- Stream rehabilitation projects



Typical bridge replacing culvert.

**Results (2013-2020):**

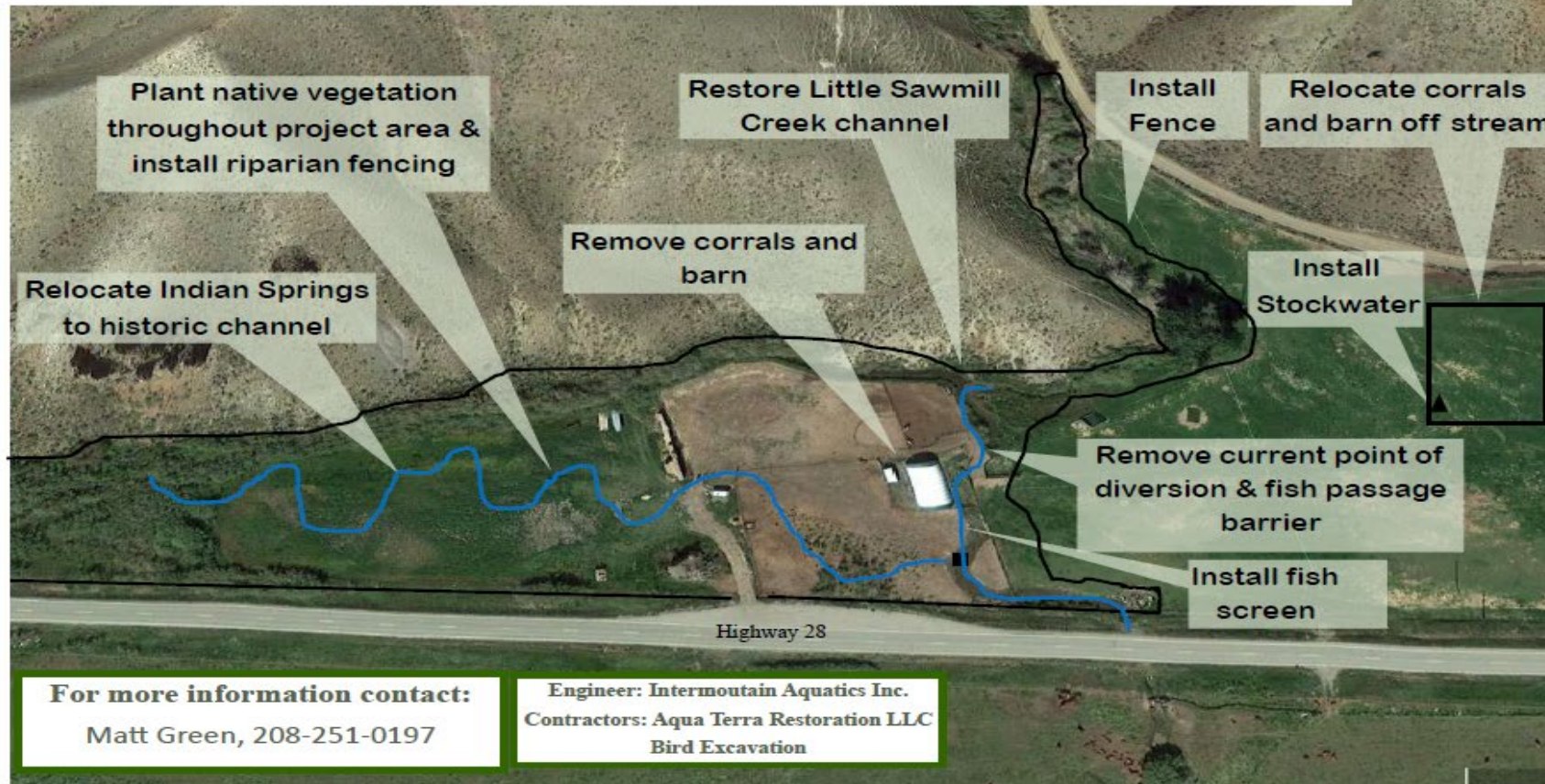
- 21 passage barriers removed
- 29 miles of protected/enhanced flow
- 42 miles of tributary habitat now accessible



# Little Sawmill Creek Restoration Project

## Project Objectives:

- Remove a fish passage barrier
- Reconstruct Indian Springs to a natural channel
- Improve the riparian habitat
- Create a self-sustaining, stable stream channel that maximizes habitat values for Chinook and steelhead
- Remove and relocate corrals and barn off stream
- Remove cattle from stream with fence and stockwater



## Project Partners:

**Andy and Kathleen Knight**



**Upper Salmon Basin  
WATERSHED PROGRAM**



**NRCS**  
Natural Resources Conservation Service



Project funded by: Bonneville Power Administration, Pacific Coast Salmon Recovery Fund, DEQ 319 & Natural Resources Conservation Service





Aerial view of the project area as construction on new stream channel begins.





Project area after stream rehabilitation.





Beginning construction on bypass road for culvert replacement.



# Eighteenmile Creek Habitat Improvement Project

## Project Objectives:

- Remove a seasonal fish passage barrier
- Reconnect 0.34 mile of historic channel with perennial flows
- Improve the surrounding wetland and riparian habitat
- Create a self-sustaining, stable stream channel that maximizes habitat values for Chinook and steelhead
- Improve irrigation efficiency and decrease headgate maintenance



### For more information contact:

Bob Minton, 208-756-3211 ext. 105  
Adair Muth, 208-332-1559

Engineer: Intermountain Aquatics Inc.  
Contractor: Boyd Foster Backhoe Service

## Project Partners:

Beyeler Ranches, LLC



Ellsworth Angus Ranch



Leadore Land Partners Limited





A Google Earth image of the project site before project implementation.





The push up dam on the old creek alignment. This picture shows the overly slow, deep pool created. This water would get extremely warm and flow right downstream to spawning grounds.





Picture showing the creek after realignment, rehabilitation and new fencing to exclude livestock.



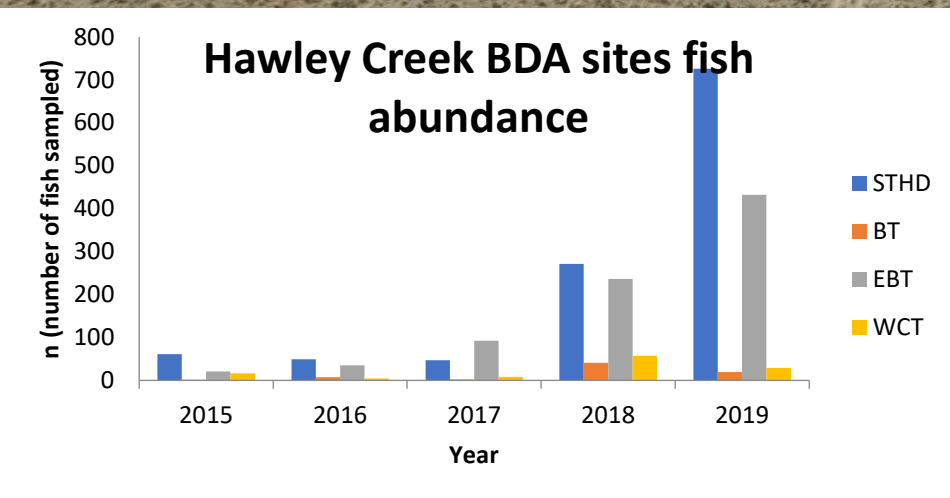
# Hawley Creek Reconnect

BDA

Historic  
irrigation ditch

Side channel  
network

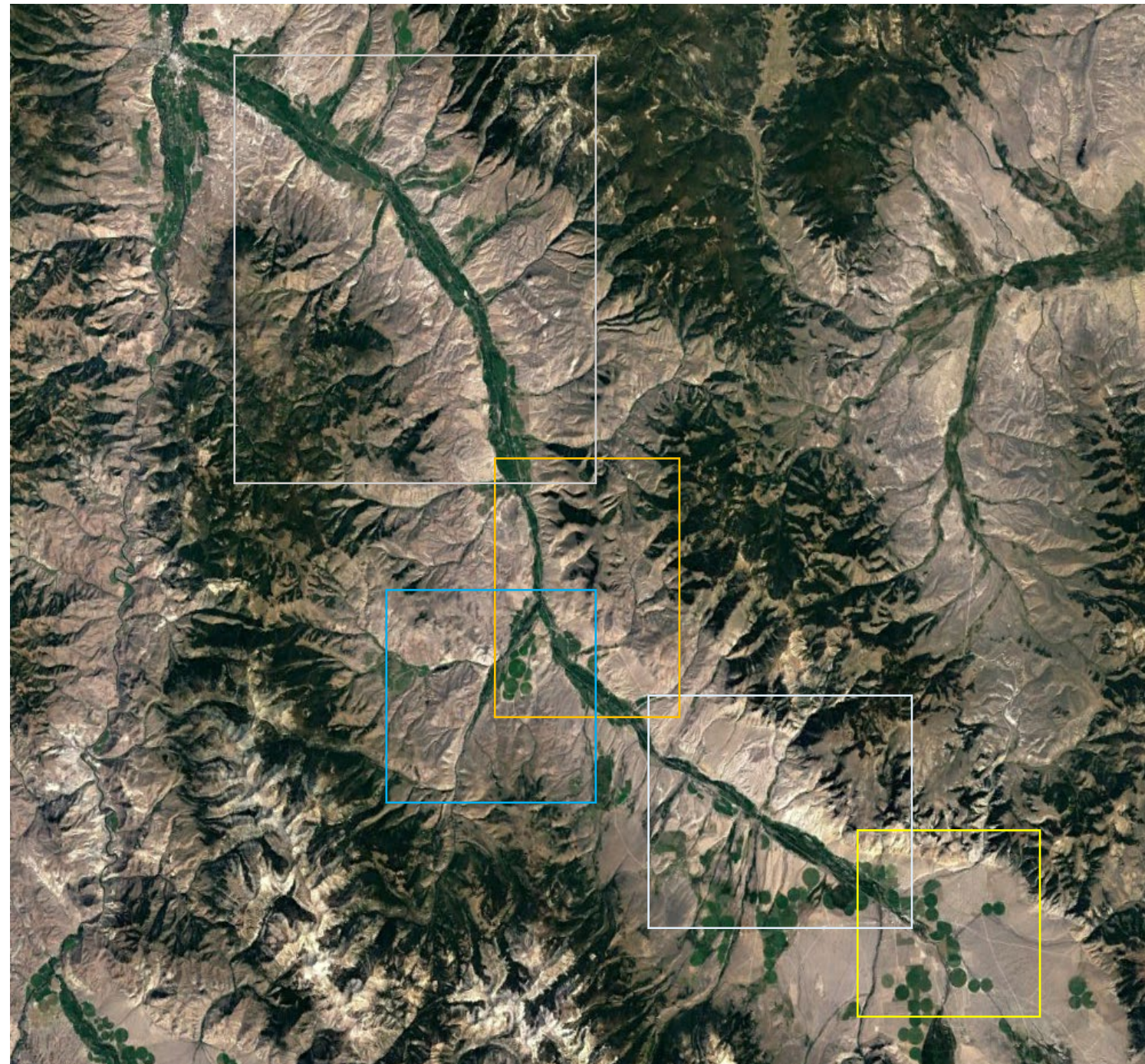
BDA





# The Future

- Improve water quality in Lemhi River headwaters above production ground.
- Establish functional connection of Texas Creek.
- Improve rearing habitat in the upper Lemhi River; enhance spring systems.
- Improve rearing habitat for transition area of upper/lower Lemhi River and Hayden Creek.
- Improve rearing habitat in lower Lemhi, particularly for over-wintering juveniles (slow water habitat).
- Improve rearing habitat in Hayden Creek; some years accounts for half of Lemhi Chinook production.







Questions?







# - Potlatch River Watershed Restoration - Latah SWCD Project Development

Presented by

**Latah Soil and Water Conservation District**

***Ken Stinson, District Manager***

Brenda Erhardt, Resource Conservation Planner

Aven Julye, Field Crew Manager

George Zamora, Field Crew Manager

August 10, 2021







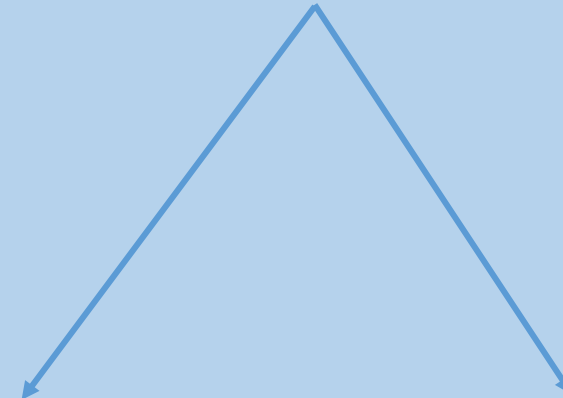
# 2002 and 2008 (Idaho Accord) Projects

**2002-061-00 Project**



**Latah SWCD  
Identify/Evaluate/Plan/Seek  
Funding**

**2008-604-00 Potlatch River Accord**



**Latah SWCD  
Implementation**

**IDFG  
Planning and  
Implementation**

\*\* Structure for Latah SWCD planning and implementation as suggested by BPA



**2002-061-00 Project Purpose – *to identify, evaluate, plan and seek funding to achieve stated goals and objectives through process-based habitat restoration strategies***



Goal 1.) Improve fish passage to suitable habitat.

Goal 2.) Provide suitable habitat for steelhead spawning and/or rearing.

Goal 3.) Improve instream water flows to support spawning and rearing habitat.

- Summer Base Flow
- Summer Stream Temperature





# Funding Sources to Secure \$8,000,000: 125 + Latah SWCD Projects Since 2004



## Local

- Private Landowners/Entities
- Latah County
- North Latah County Highway District

## State

- Idaho Department of Environmental Quality/  
EPA Clean Water Act
- Idaho Department of Lands
- Idaho Department of Transportation
- Idaho Office of Species Conservation/Pacific  
Coastal Salmon Recovery Fund
- Idaho Office of Species Conservation/Snake  
River Basin Adjudication
- Idaho Soil and Water Conservation Commission

## Federal

- **Bonneville Power Administration**
- USDA Forest Service
- USDA Natural Resources Conservation  
Service





# Latah SWCD Progress to Date (2004 – 2020)

125 + projects – summary data

- Removal of 30 migration barriers – opening ~37 stream miles
- Floodplain reconnection – 450 acres
- Stream restoration – 28 miles
- Native trees, shrubs, forbs, grasses and grasslikes planted – 269,410
- Native seed applied – TONS (literally...)



Schwartz Creek culvert

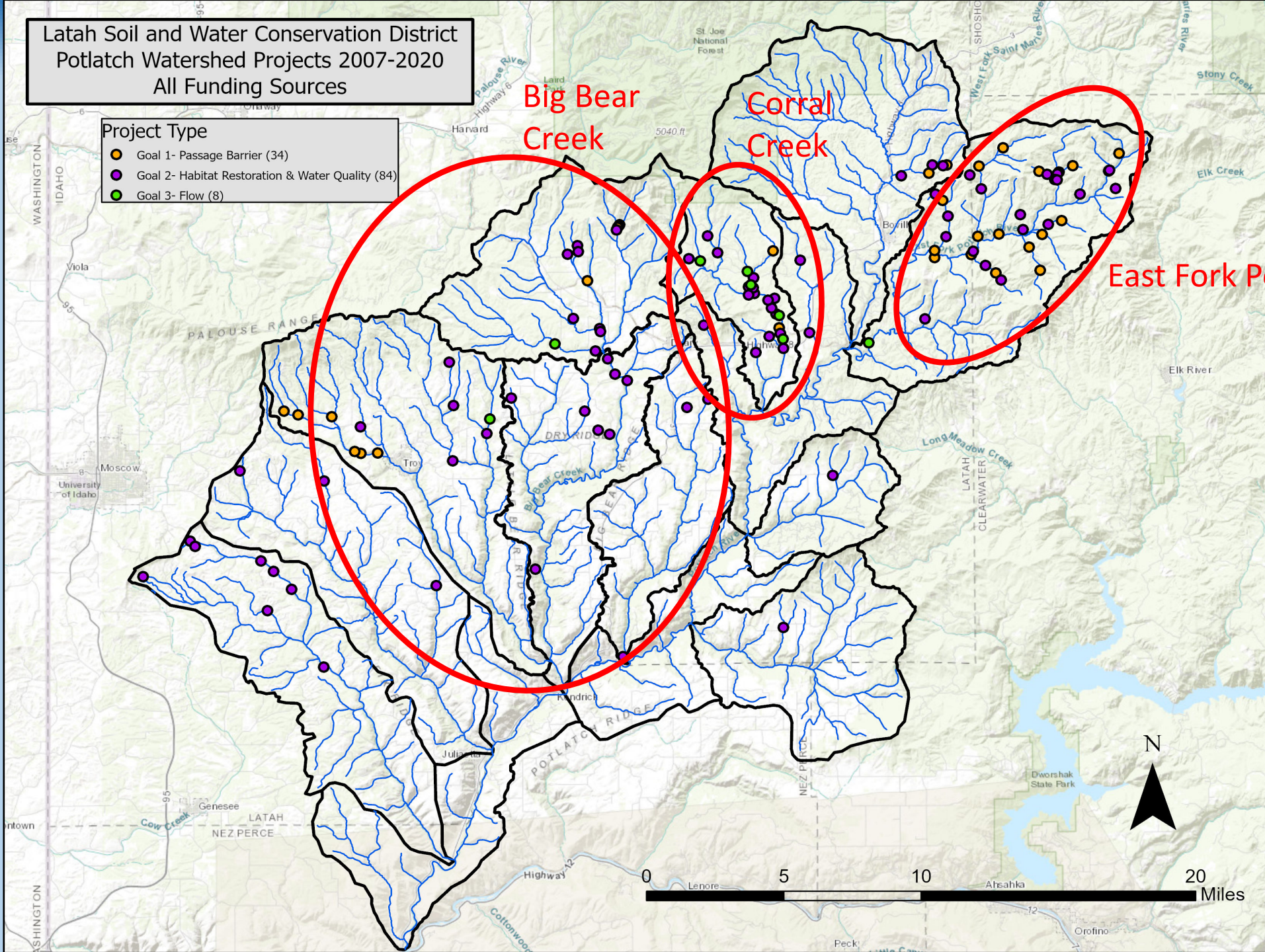


Schwartz Creek bridge



Latah Soil and Water Conservation District  
Potlatch Watershed Projects 2007-2020  
All Funding Sources

- Project Type
- Goal 1- Passage Barrier (34)
  - Goal 2- Habitat Restoration & Water Quality (84)
  - Goal 3- Flow (8)



Big Bear  
Creek

Corral  
Creek

East Fork Potlatch River







# Progress to Date – 125 + Projects

Goal 1.) Improve fish passage to suitable habitat.

- 30 passage barriers removed, opening 37 stream miles

Goal 2.) Provide suitable habitat for steelhead spawning and/or rearing.

- Treated 170 acres and 19 stream miles
- 40 miles road rocking to reduce sedimentation
- 71 acres protected through livestock fencing
- 12 off-site water ponds
- Planted 128,760 native trees, shrubs, forbs, grasses and grasslikes

Goal 3.) Improve instream water flows to support spawning and rearing habitat.

- Meadow restoration - 280 acres, 9 stream miles, 140,650 native trees, shrubs, forbs, grasses and grasslikes



# Project Examples – Goal 1, Passage Barrier



Dutch Flat Dam – West Fork Little Bear Creek, opened 14 stream miles



Dutch Flat Dam pre-removal



Old Dam Site

May 2018



# Project Examples – Goal 2, Habitat

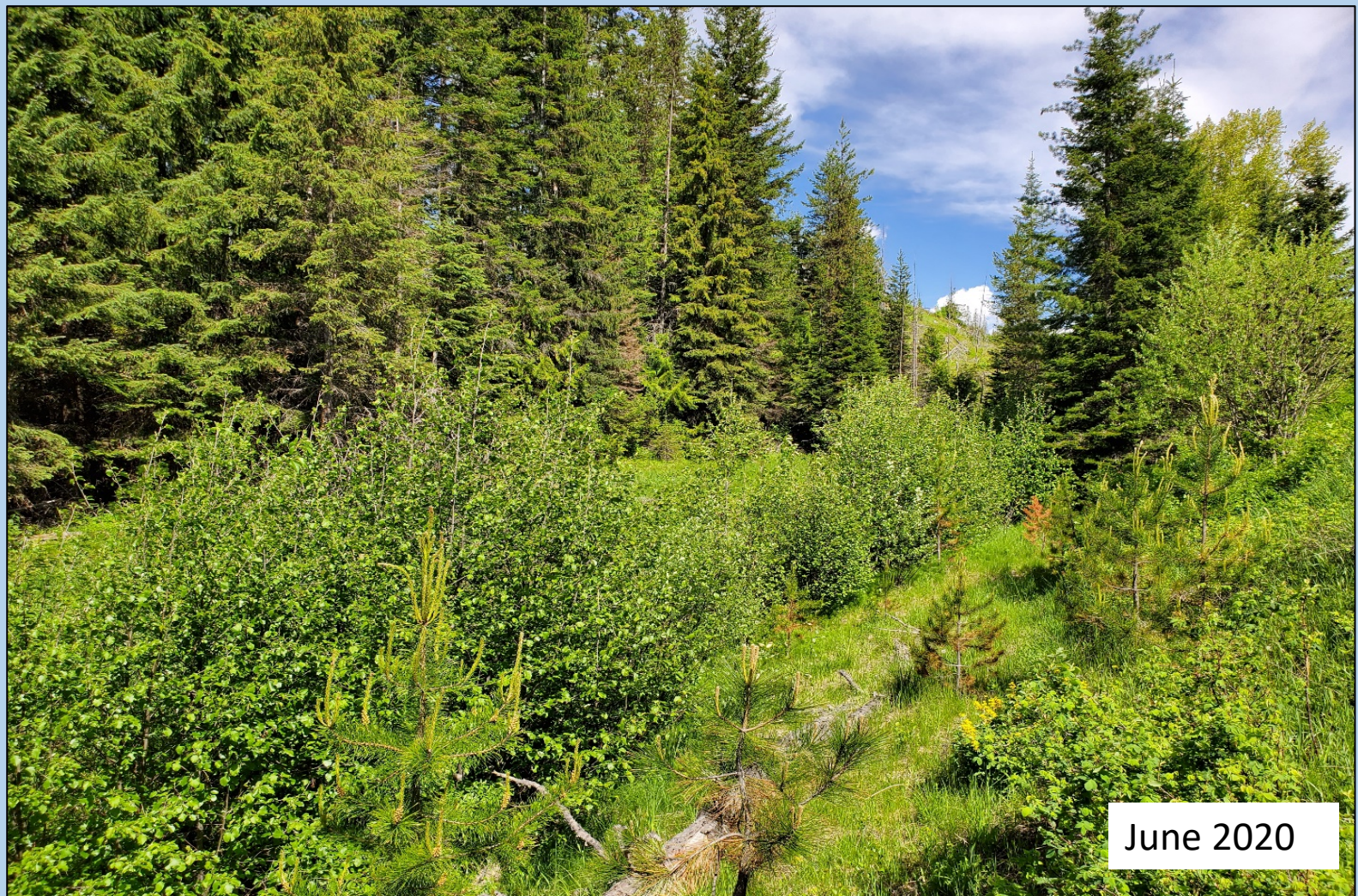
## Corduroy Creek, East Fork Potlatch River



May 2012



October 2012



June 2020



# Project Examples – Goal 3, Meadow Restoration



## Two Mile Meadow, East Fork Potlatch River



May 2017



Treated Acres: 65

April 2019



# Project Examples – Goal 3, Meadow Restoration



Note: Changes to Flow Velocity  
and Floodplain Access

## Racetrack, Corral Creek



03.20 March 2006



April 2018



Racetrack April 2018

Treated Acres: 7.5







# Effects of Meadow Restoration

## Corral Creek – Racetrack Meadow/Constructed 2013

### Highlights from Latah SWCD Monitoring – Stream and Groundwater

- Full Access to Floodplain
  - Water levels in all monitoring wells at surface in winter/early spring by 2015
- No Flow Interval Reduced
  - 2009 – 2013 – Flow ceased by July 13 and the dry period of **116 to 171** days ←
  - 2014 – 2019 – Flow 9 to 51 days longer into summer and returns two weeks earlier
  - 2016 – Dry period ~ **71** days
  - 2017 – Dry period ~ **57** days
  - 2018 – Dry period ~ **79** days
  - **2019 – Dry period ~ 28** days ←
- Erosion nearly eliminated
  - 2012 ~ 161 tons per mile/year
  - 2017 – Negligible

Racetrack Project Metrics:  
Stream length – 0.25 miles  
Floodplain area – 7.5 acres



# Looking forward –





# Potlatch River Focus – Wild Steelhead Habitat

- “The Potlatch River likely has the **strongest component of wild steelhead** present within the Clearwater River Lower Mainstem population”
- “...the Potlatch River drainage **comprises 25% of the historic intrinsic potential** of the Clearwater River Lower Mainstem steelhead population...”
- “**Potlatch River steelhead are genetically distinct** from other Clearwater River steelhead groups...”

IDFG/Bowersox (2011)







# Guidance/Direction – Who?

- Northwest Power and Conservation Council Columbia River Basin Fish and Wildlife Program (NWPCC 2014)
- Clearwater Subbasin Management Plan (Ecovista 2003)
- ESA Recovery Plan for Snake River Steelhead (NMFS 2017)
- IDFG Fisheries Management Plan (IDFG 2019)
- IDFG – Potlatch River Steelhead Monitoring Programs
- Potlatch River Watershed Assessment and TMDL (IDEQ 2008 and 2017)
- Latah SWCD - Potlatch River Watershed Management Plan (2007) and Amendment to Potlatch River Watershed Management Plan (2019)
  - Potlatch Implementation Group – Managed by IOSC



# 2007 – Potlatch River Watershed Management Plan

- Goal – “to specify restoration and protection strategies that help restore steelhead to a robust, self-sustaining population”
- General priorities
- Limiting factors

## 2019 – Amendment

- Designates Top Tier priority watersheds
- Restoration plans/multiple agencies

# Potlatch River Watershed Management Plan - 2019 Amendment

Wild Steelhead Recovery Guidance

4 November 2019



Sponsored by

Latah Soil and Water Conservation District

220 East 5<sup>th</sup> Street  
Moscow, Idaho

Prepared by

Potlatch Implementation Group





# Guidance/Direction – What?

## Primary Limiting Factors – Recommended Restoration Methods

- **Elevated Water Temperature** – **Restore wetlands** and increase floodplain storage
- **Reduced Flow** during Critical Periods – **Restore wetlands**
- **Flow timing – extreme flow variation** – **Restore wetlands** to reduce extreme peak flows, increase soil storage, and increase base flows.
- **Excess Sediment** – Systematically **reduce sediment**
- **Floodplain Connectivity/Riparian Vegetation** – **Restore incised channels**
- **Habitat Complexity** – **Restore wetlands** and riparian vegetation
- **Migration Barriers** – **Replace passage impediments**

NMFS – 2017 ESA Recovery Plan for Snake River Idaho Spring/Summer Chinook Salmon and Steelhead Populations – Chapter 6

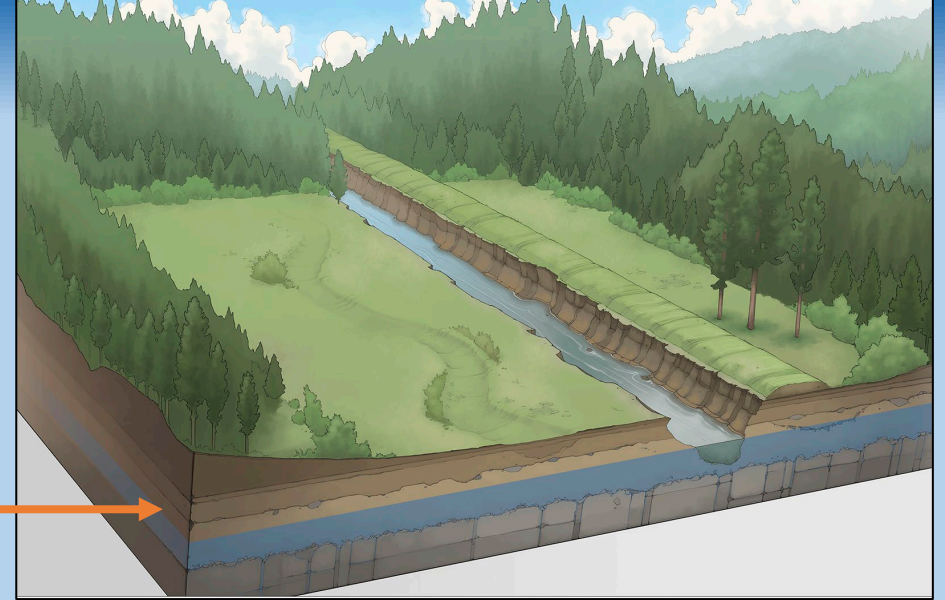


# Guidance/Direction – How?

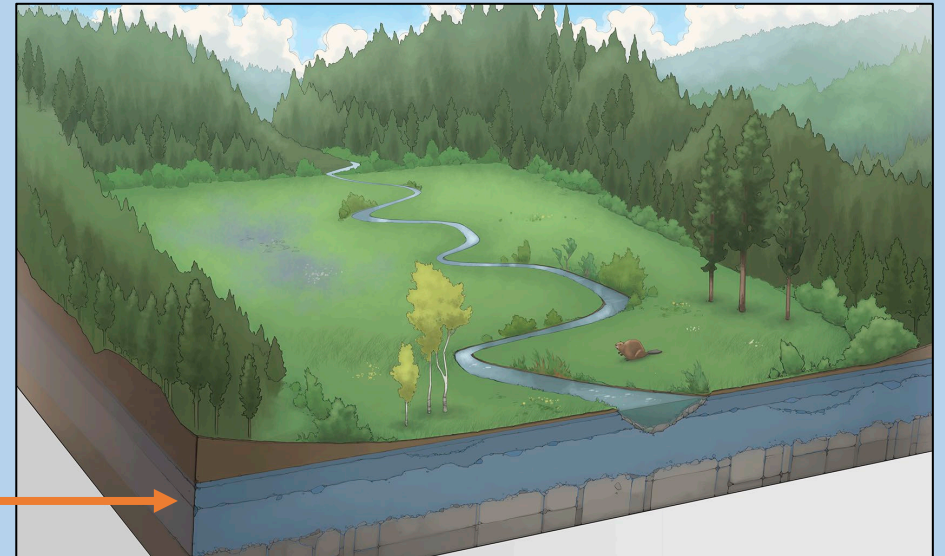
## Habitat Actions

1. **Restore hydrologic processes**
2. **Reestablish floodplains**
  - Address channel incision
3. **Reestablish riparian vegetation**
  - Shade
  - Future LWD recruitment
4. **Reduce fine sediment delivery**
5. **Eliminate fish migration barriers**

From this ☹️



To this 😊





# Climate Change – Building Natural System Resiliency

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Climate vulnerability assessment for Pacific salmon and steelhead (Crozier et al. 2019)

- Correlation between habitat loss and climate stress
- Habitat restoration strategies shown for climate change
  1. Reconnecting habitats – longitudinally **AND** laterally (floodplains). **“Reconnected habitats restore natural processes and provide refuges from extremes in both temperature and flow.”**
  2. Ameliorating temperature and flow constraints through riparian restoration and other techniques designed to reduce climate stress
  3. Improve access to food-rich environments
  4. Follow habitat restoration guidelines developed to have climate benefit (Beechie 2013)





# Latah SWCD Planning Process



## Process Based Habitat Restoration

- Site Review/Evaluation
  - *Internal review first– project rejections common*
- Engineering designs/plans
- Seek funding – multiple sources
- Implementation
  - Permitting
  - Revegetation plans
  - Construction
- Adaptive Management
  - Adjust project
  - Long-term commitment to landowners



**Section 7. Timeline**  
**Latah Soil and Water Conservation District**  
**Potlatch River Watershed Restoration**  
**2002-061-00**

<b>Project Development:</b>	Initial site review/evaluation	Initial project plans/design	Seek funding	Implementation/Monitoring*
<b>Fiscal Year Timeline</b>				
<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>
Potlatch Implementation Group - Project coordination and review				
<b>East Fork Potlatch River (EFPR) subwatershed - Tier 1</b>				
EFPR, passage barrier evaluation and implementation <sup>1</sup>				
Two-Mile Phase 3, meadow restoration <sup>2,3</sup>				
EFPR, DS county line, habitat restoration <sup>2</sup>				
<b>Big Bear Creek subwatershed - Tier 1</b>				
West Fork Little Bear Creek, passage barrier evaluation and implementation <sup>1</sup>				
Upper Big Bear Creek, passage barrier evaluation and implementation <sup>1</sup>				
Middle Fork Big Bear Creek, meadow restoration <sup>2,3</sup>				
West Fork Little Bear Creek, habitat assessment and project development <sup>2,3</sup>				
<b>Corral Creek subwatershed - Tier 1</b>				
Corral Creek, passage barrier evaluation and implementation <sup>1</sup>				
USFS - meadow restoration, Leanna, Smith and Wet meadows <sup>2,3</sup>				
<b>Cedar Creek subwatershed - Tier 2, fish presence noted</b>				
Cedar Creek habitat and stream evaluation and implementation <sup>2</sup>				
<b>West Fork Potlatch subwatershed - Tier 2, fish presence noted</b>				
Purdue Creek habitat restoration <sup>2,3</sup>				
USFS - meadow restoration, Nat Brown and others <sup>2,3</sup>				
<b>Hog Meadow subwatershed - Tier 2</b>				
Hog Meadow - meadow restoration <sup>2</sup>				

\* Implementation/Monitoring funding to be secured beyond the 2002-061-00 project

<sup>1</sup> - Goal 1, improve fish passage

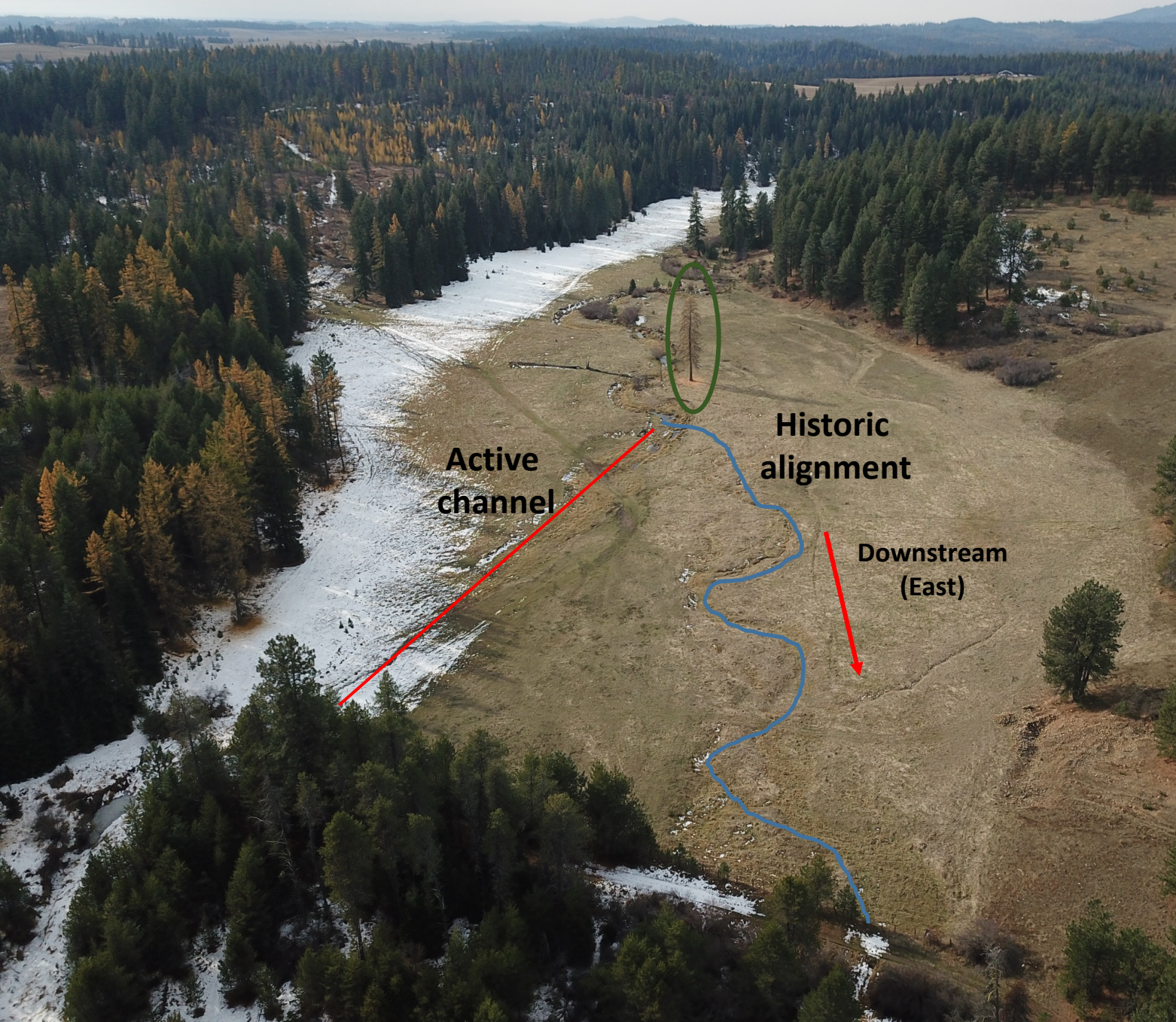
<sup>2</sup> - Goal 2, provide suitable habitat for spawning and rearing<sup>2</sup>

<sup>3</sup> - Goal 3, improve instream water flows

**See page 28 of project proposal**



# Tourmaline Habitats – Middle Fork Big Bear – Construction began July 2021



**Project Metrics:**  
Treated Area – 49 acres  
Treated Stream length – 1.28 miles



# Upcoming Projects

Corral Creek, IDL



Project Length: 0.33 miles



# Corral Creek – Livestock Exclusion Project

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2009



2021



# “Cheap and Cheerful” Restoration – Using Beaver Dam Analogs

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April 23, 2015 – Two Mile Meadow





# Two Mile Meadow Meadow Restoration Project



April 4, 2019





**Thank You!**



# Lapwai Creek Riparian Restoration

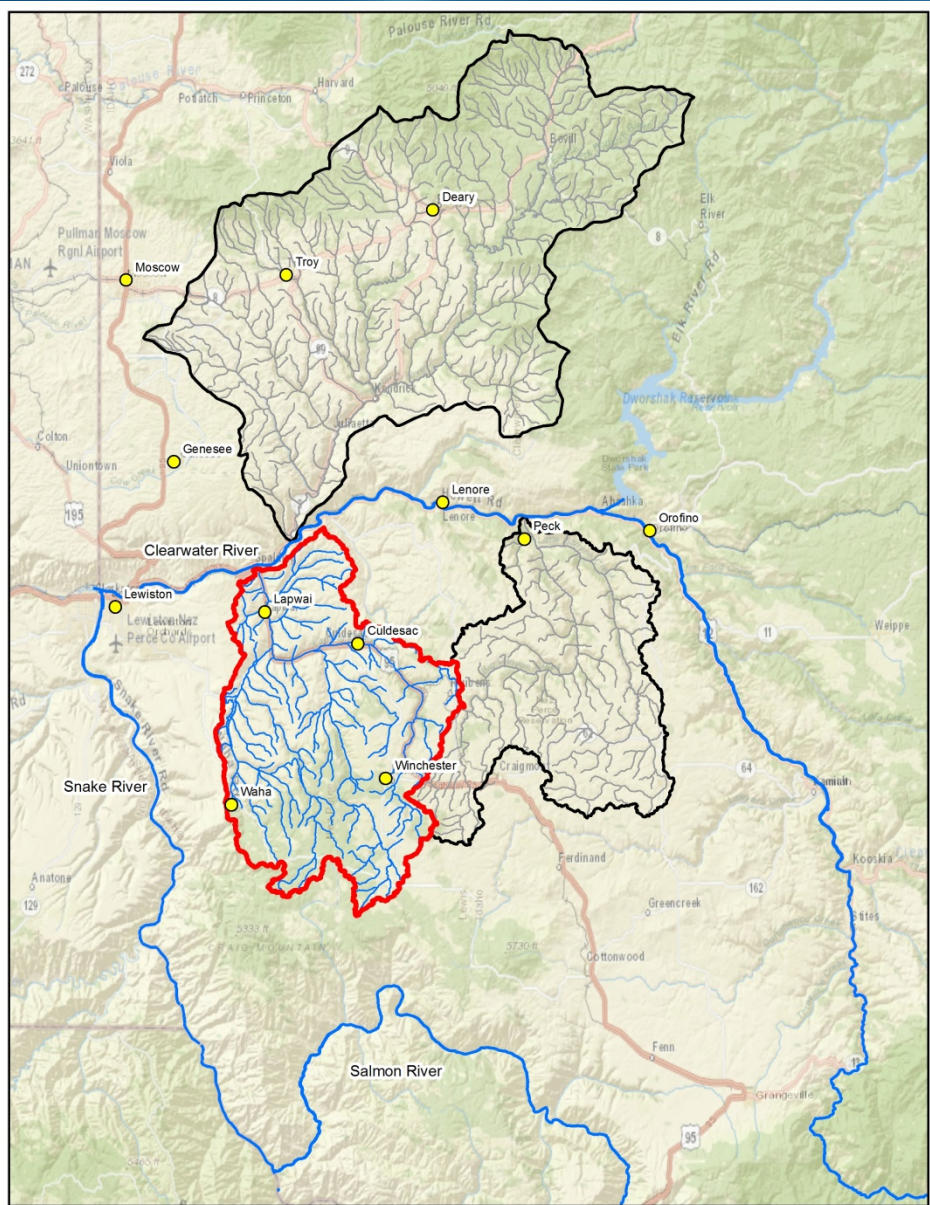


Nez Perce Soil and Water Conservation District

Project 2002-070-00

August 2021 NWPPC



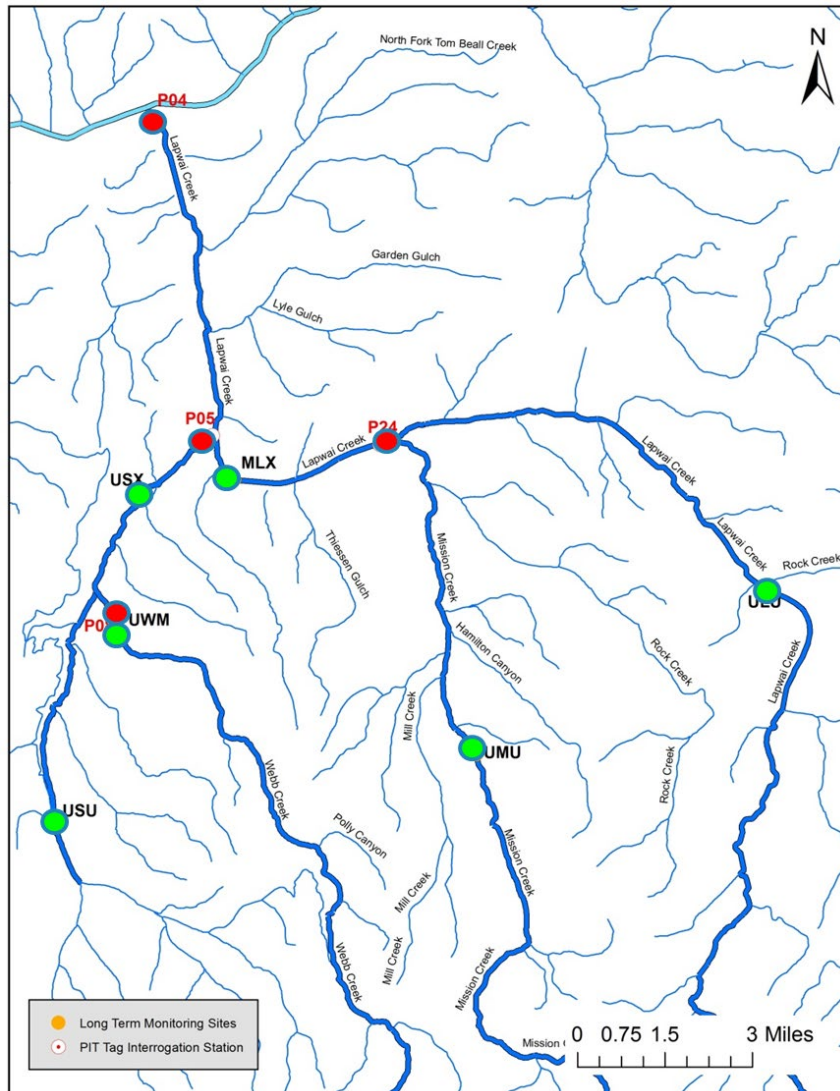




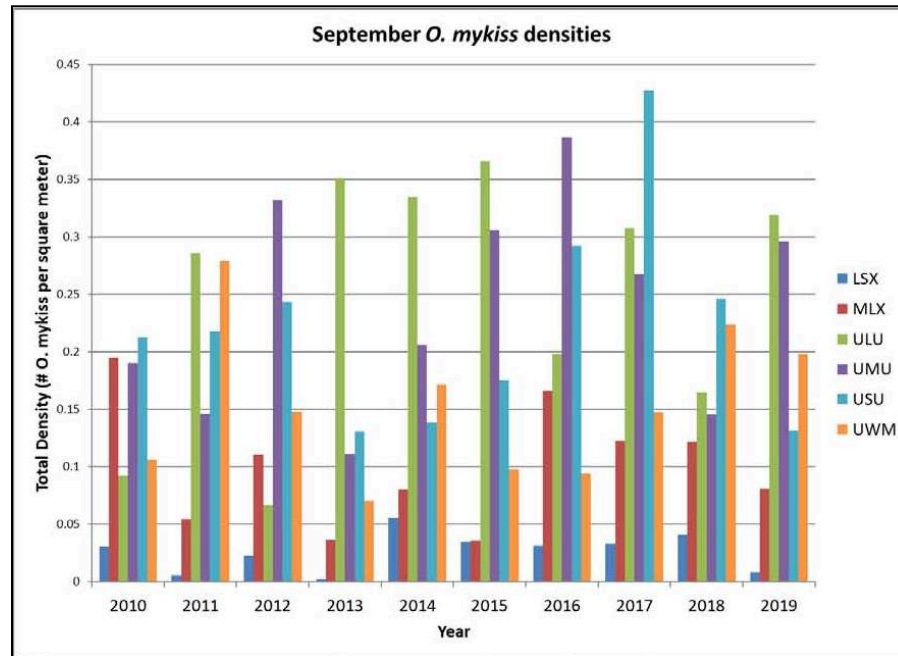




# Focal Species - Steelhead



Spawn Year	Lapwai Total	Lapwai main-stem	Mission Creek	Sweetwater Creek
2010	636	408	224	- (-)
2011	248	92	46	107
2012	- (-)	- (-)	60	123
2013	370	171	58	138
2014	374	108	115	145
2015	679	305	208	160
2016	595	267	158	167
2017	233	115	63	53
2018	226	98	79	47
2019	176	92	54	30





# Limiting Factors

Elevated Water Temperatures

Passage Barriers

Excess Sediment

Riparian Condition

Floodplain Connectivity

Altered Hydrology

Instream Habitat Complexity

Reduced Summer Flow





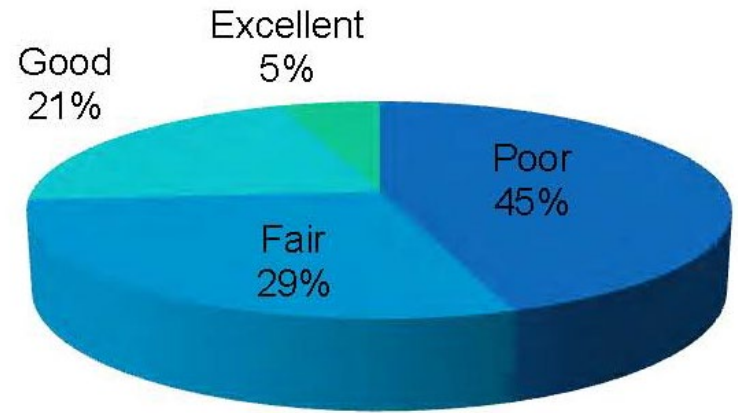
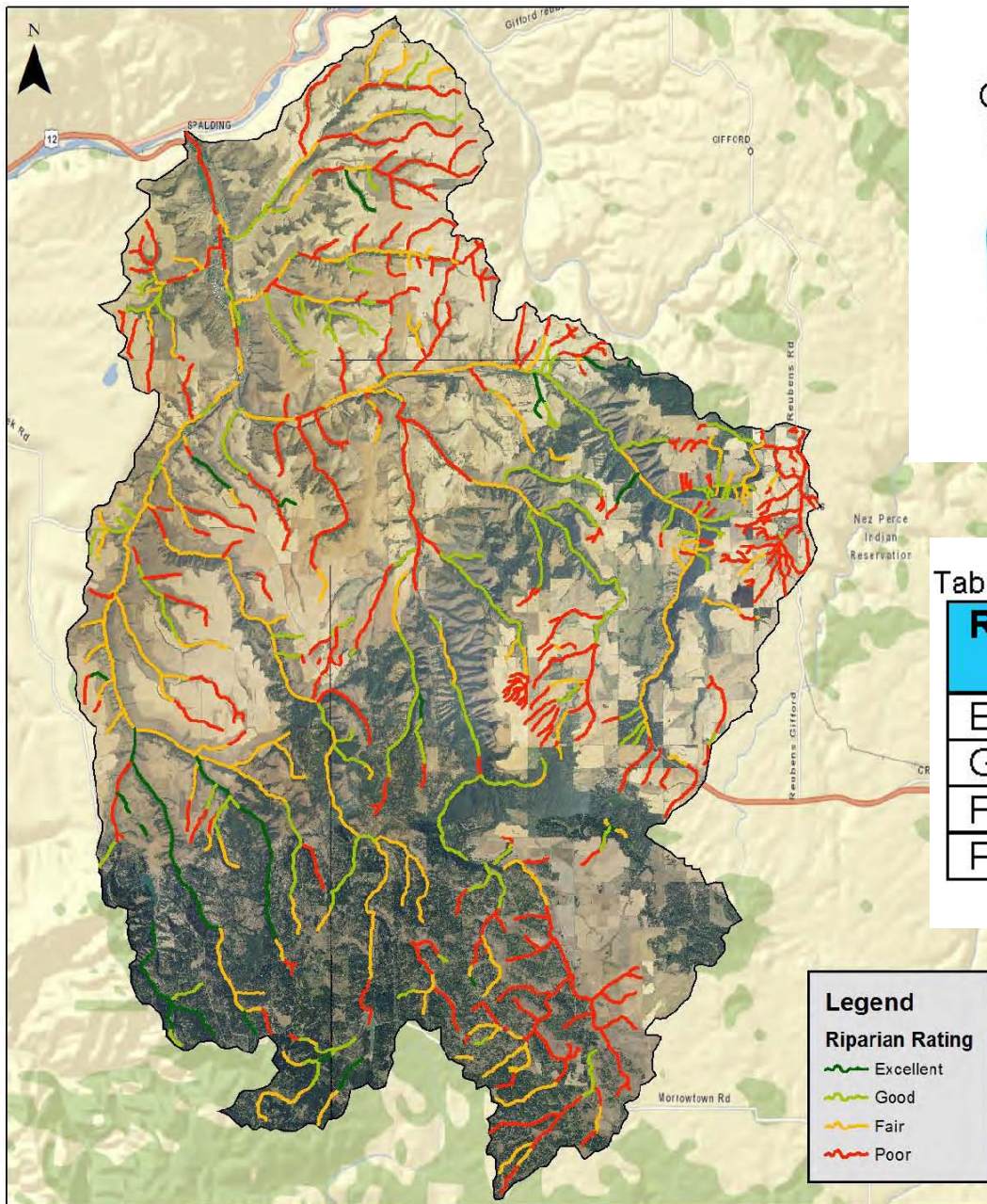


Table 3: Riparian Condition Data Summary

Rating	Number Value	Miles	% of Total
Excellent	≥ 20	23.83	5
Good	15-19	91.26	21
Fair	9-14	126.81	29
Poor	<9	196.04	45

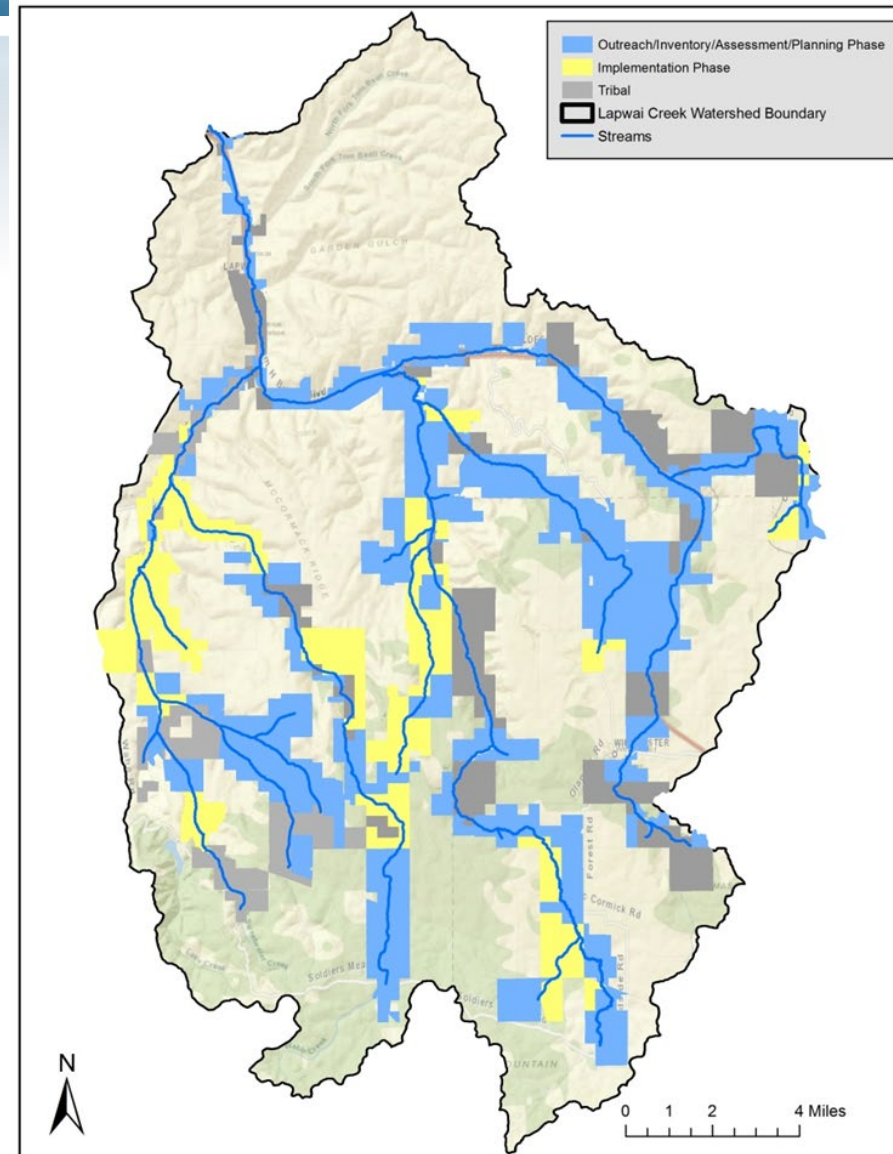






# Project Selection

- Watershed Plan
- Geographic Priority Areas
- Reach Level / Planning Unit
- Landowner Participation
- Biological Review and prioritization

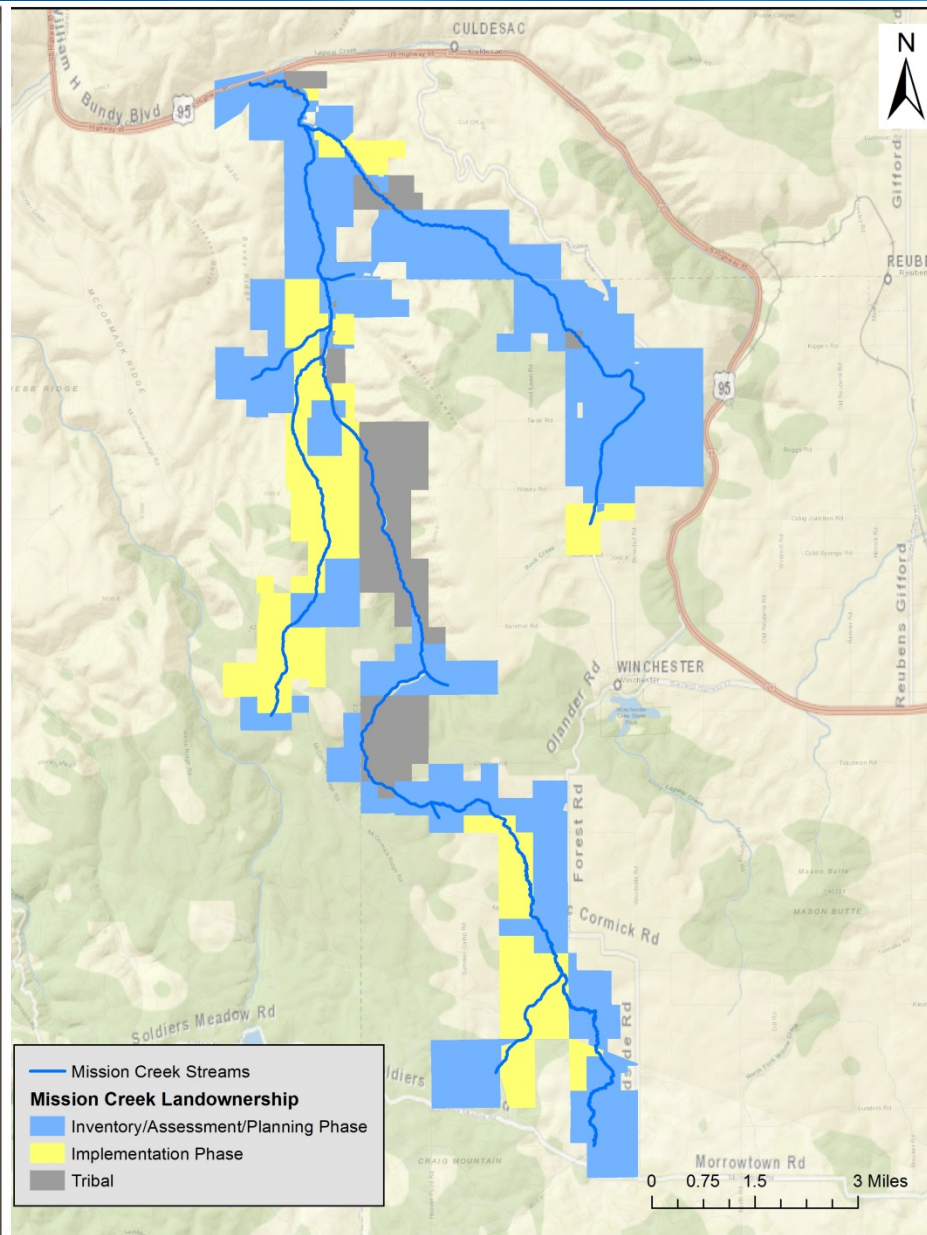
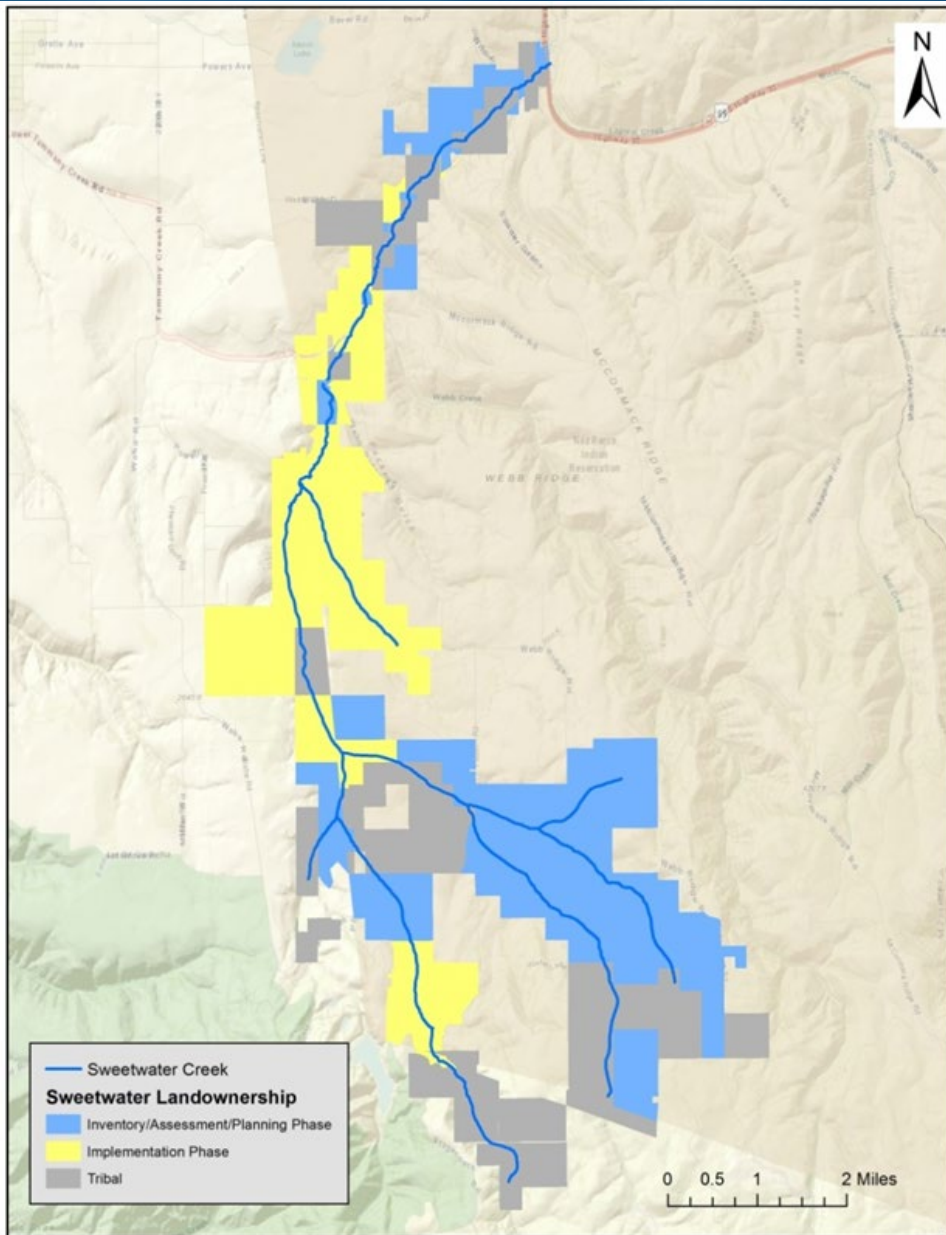




# Landowner Strategy

- 1,988 landowners
- 983 with riparian areas identified in the poor, fair range
- Sweetwater Creek  
Mission Creek
- Marketing Plan
- Newsletter
- Twitter
- Local Events
- Direct Mailings
- One-on-one meetings
- Tours
- Annual Meetings







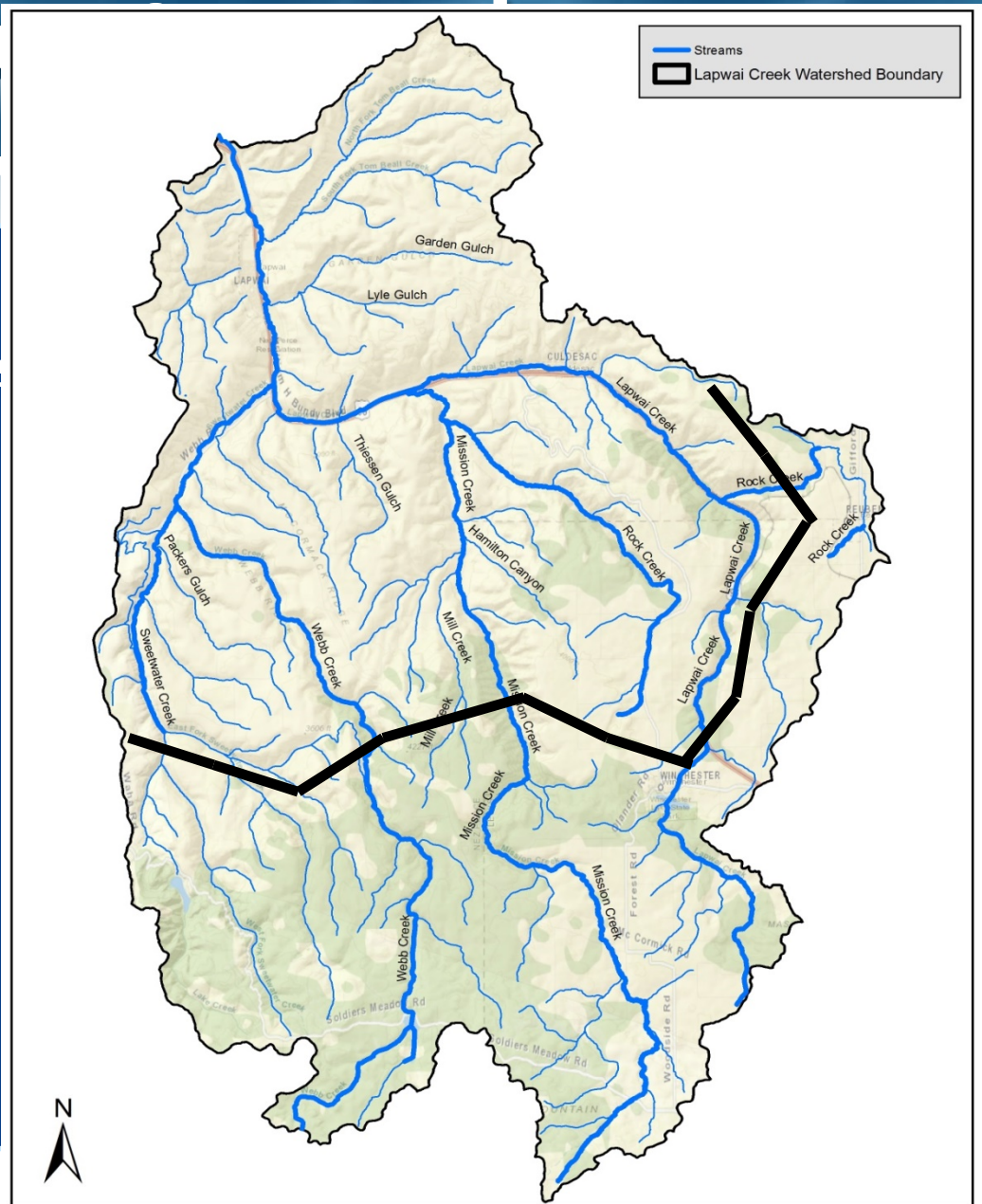
# Lesson

## Data:

- BOR/UI
- NOAA
- LiDar
- Temperature Data
- Floodplain Analysis
- Flow Gauges

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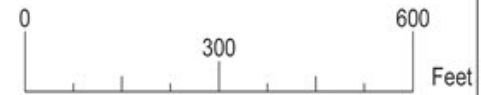


**South Tom Beall Buffer  
Project Concept Plan**

October 4, 2013

Prepared By: Kayla Dau, Nikki Lane  
Seth Du Chemin

Funded by: Bonneville Power Administration

**Site G Riparian Planting**



**Site C Berm Removal**



**Site F Spring Planting Enhancement**



**Site D Wetland Enhancement**



**Site A Berm Removal**



**Site B Biologs**



**Site E Riparian Planting**



- Key**
- █ Site A-Berm Removal #1
  - █ Site B-Biolog Installation
  - █ Site C-Berm Removal #2
  - █ Site D-Wetland Enhancement
  - █ Site E- Riparian Plantings
  - █ Site F-Spring Planting Enhancement
  - █ Site G-Riparian Plantings
  - Site A-Excavated Berm #1 Material Placement
  - Site C-Excavated Berm #2 Material Placement
  - Site D-Wetland Enhancement Material Placement

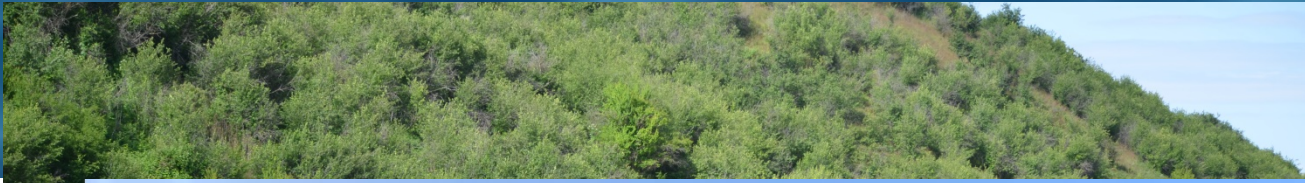




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# Questions?

Spawning Steelhead at Lapwai-Rock Creek Confluence