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Idaho

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## Northwest **Power** and **Conservation** Council

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June 6, 2023

### **MEMORANDUM**

**TO: Fish Committee Members**

**FROM: Kerry Berg**

**SUBJECT: Presentation on Water Transactions in the Bitterroot Subbasin**

### **BACKGROUND:**

**Presenter:** Jed Whiteley, Project Manager, Clark Fork Coalition

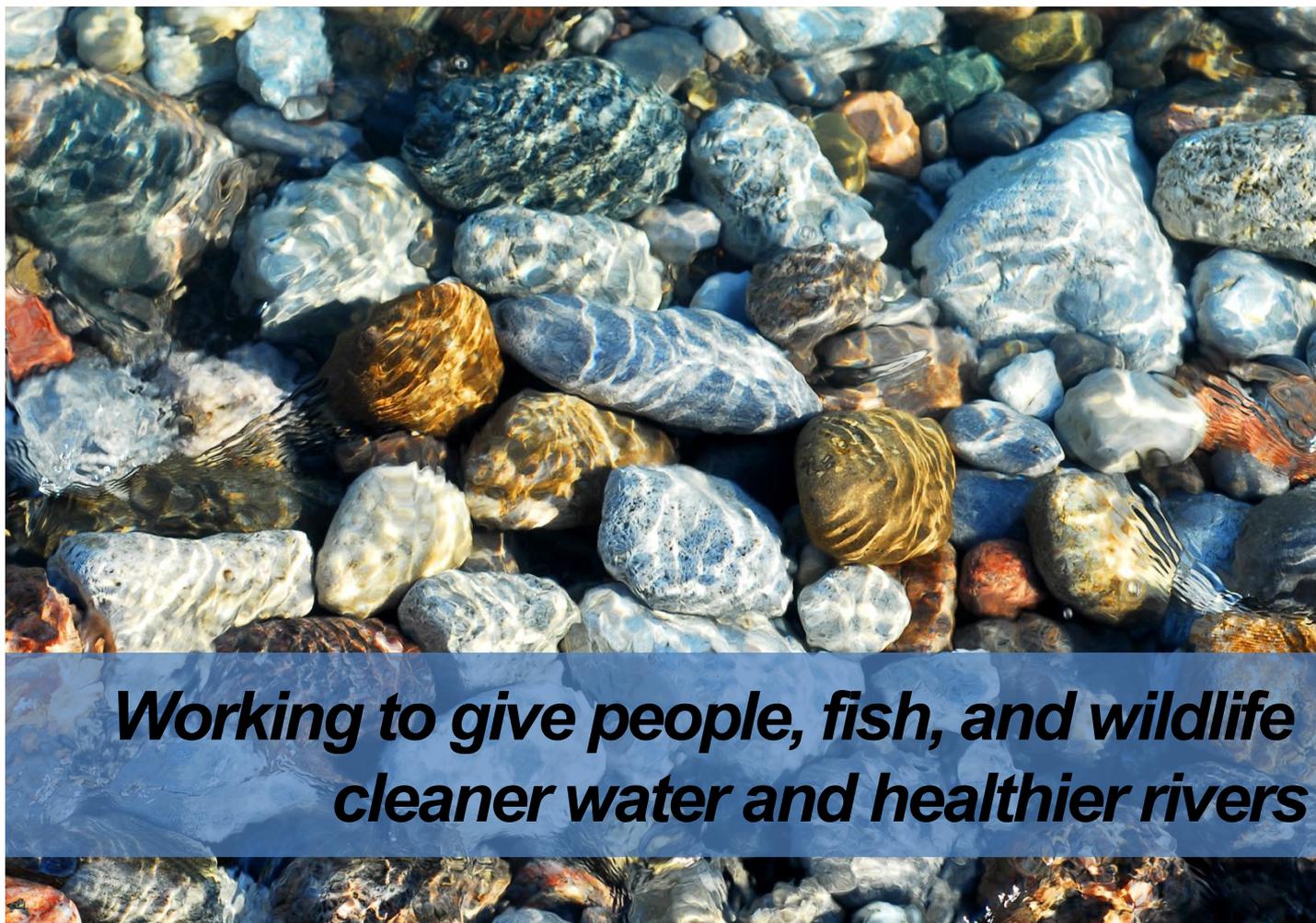
**Summary:** Jed joined the Clark Fork Coalition staff in 2013 and works to develop and implement restoration solutions for impaired tributary streams throughout the Clark Fork. Jed specializes in the development of flow and instream restoration projects in the Bitterroot Valley and the Middle Clark Fork including the use of funding from the Columbia Basin Water Transactions Program (CBWTP).

To enhance stream flow, the CBWTP works through locally based entities to acquire water rights voluntarily from willing landowners. Using temporary and permanent water rights acquisitions and other incentive-based approaches, the CBWTP supports grantees in Oregon, Washington, Idaho, and Montana to assist landowners who wish to voluntarily restore flows to key fish habitat. Voluntary, market-based water transactions provide an effective and fair way to balance out-of-stream water uses with the need to maintain stream flow for imperiled fish.

Relevance: As early as 1991, the Council's fish and wildlife programs identified water transactions as a way to increase flows for fish. In the 2000 program, the Council recommended that the Bonneville Power Administration (BPA) establish a funding agreement for land and water acquisitions.

In 2002, BPA and the Council established the CBWTP to fund water transactions to put more water into the basin's tributaries. The program is administered through a partnership between BPA and the National Fish and Wildlife Foundation.

# Partners in Clean Water



*Working to give people, fish, and wildlife  
cleaner water and healthier rivers*

# Who We Are

CFC was formed in 1985;  
Dedicated to protecting and restoring  
the Clark Fork Watershed.



Mission: The Clark Fork Coalition is  
dedicated to protecting and restoring the  
Clark Fork River basin.

2010: CFC acquired the  
former Montana Water Trust  
and began its instream flow  
restoration program.

Key sub-basins:  
Bitterroot,  
Blackfoot,  
Upper &  
Middle Clark Fork.

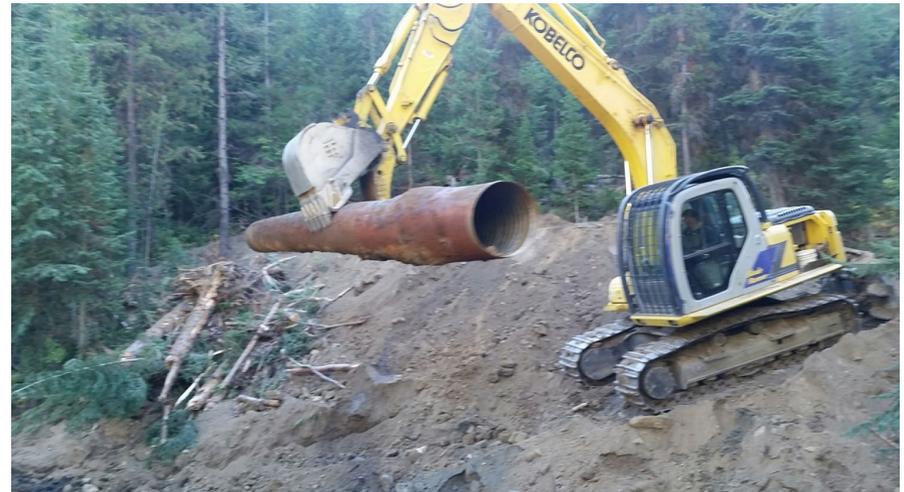


## How We Work

Focus on restoring key tributaries that have been prioritized by large scale comprehensive plans and from feedback from agency scientists.

We work to restore watersheds on a comprehensive scale working from the headwaters to the confluence. We assess all limiting factors and possible projects before starting on the ground restoration.

CFC has the in-house expertise to utilize every “tool in the toolbox” to restore watersheds.

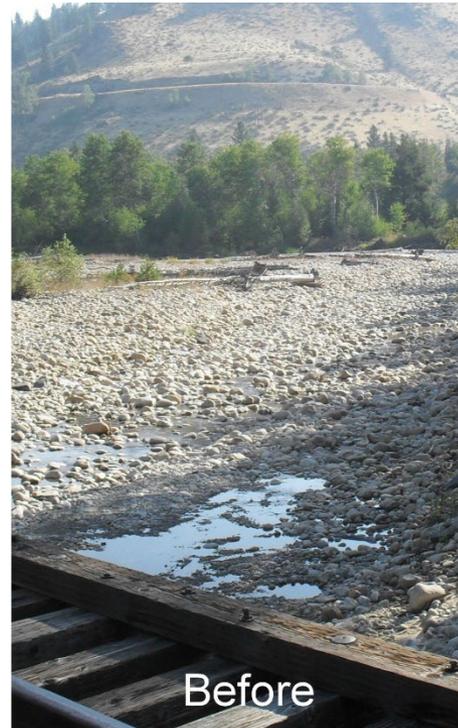


## CFC's Instream Flow Program

Total of 34 water rights under change authorizations/monitored/managed for instream flow (mix of owned and leased WRs).

21 water projects on 15 different streams in the Clark Fork Basin.

More than a dozen instream flow projects in development.



# The Problem

**FWP: Over 900 miles of streams & rivers are chronically dewatered in the Clark Fork Basin.**

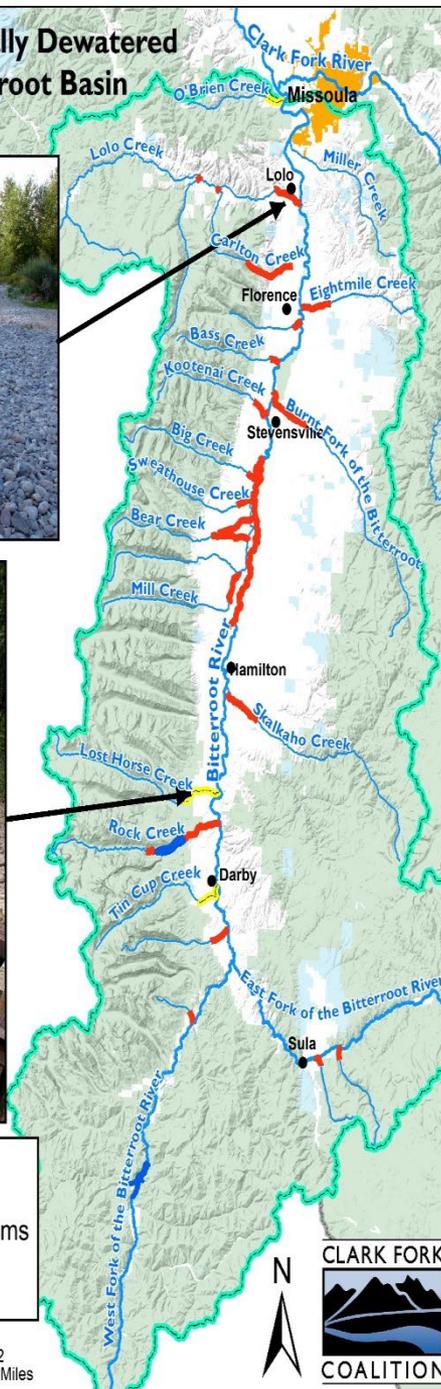
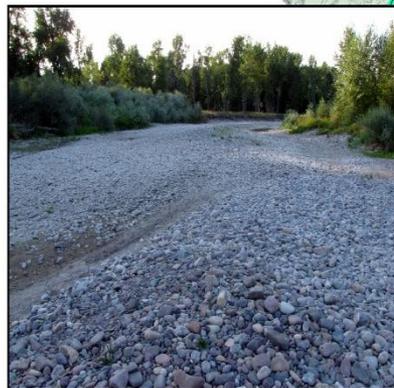


## **Impacts:**

- Fish & Wildlife
  - Lack of habitat
  - High stream temps
- Impaired ecosystem function
- Economic Impacts
  - Agriculture
  - Outdoor Recreation
  - Tourism
- Montana's Unique Quality of Life



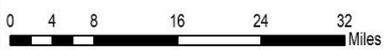
# Over 70 Miles of Chronically Dewatered Streams in the Bitterroot Basin



 CFC Rewatered Streams

 Chronically Dewatered Streams

 Bitterroot Watershed



# **Plans That Guide Our Work To Restore Native Species in the Bitterroot**

- **NWPCC Bitterroot Subbasin Plan**
- **USFWS Columbia Headwaters Recovery Unit Implementation Plan for Bull Trout**
- **Conservation Strategy for Bull Trout on USFS Lands in Western Montana**
- **Montana Westslope Cutthroat Trout Memorandum of Understanding**
- **Montana DEQ Bitterroot Watershed Restoration Plan**



# Bitterroot Strategy – Oct. 2018

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Clark Fork Coalition



# Headwaters Storage



# Why Headwaters Storage?

- **Drought/Climate Models predict that MT is likely to see increased levels of precipitation in winter/spring but decreased precipitation/higher temps in summer months.**
- **Ability to capture/preserve water supplies for use during driest months.**
- **Headwaters storage allows for minimal evaporative losses, maximum cold-water fisheries benefits and opportunities for “on-demand” releases depending on hydrologic conditions.**
- **Advantages from WRs perspective:**
  - **Defined volume;**
  - **Flexibility in management**

# Tin Cup Lake Project



**Tin Cup Lake (Summer 2008)**

# Tin Cup Lake Project



**Lake at diminished capacity (900 Acre-Feet) in 2008, prior to rebuild)**

# Tin Cup Lake Project



**Repairs brought facility back up to its historical storage capacity of 2,000 Acre-Feet. In exchange for funding assistance, TC District leased 400 Acre-Feet annually to CFC for instream flow (99-year lease).**

# Tin Cup Creek



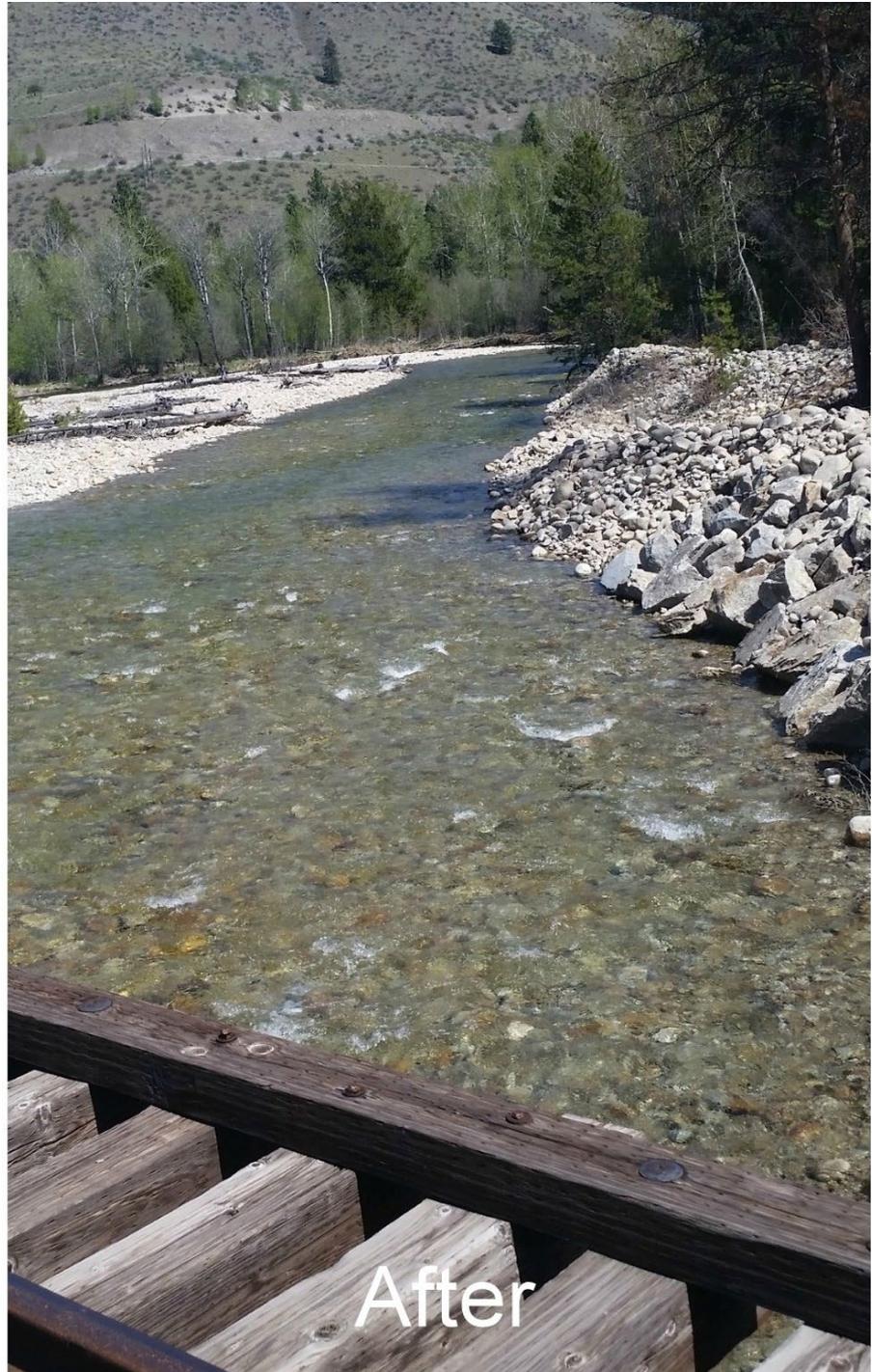
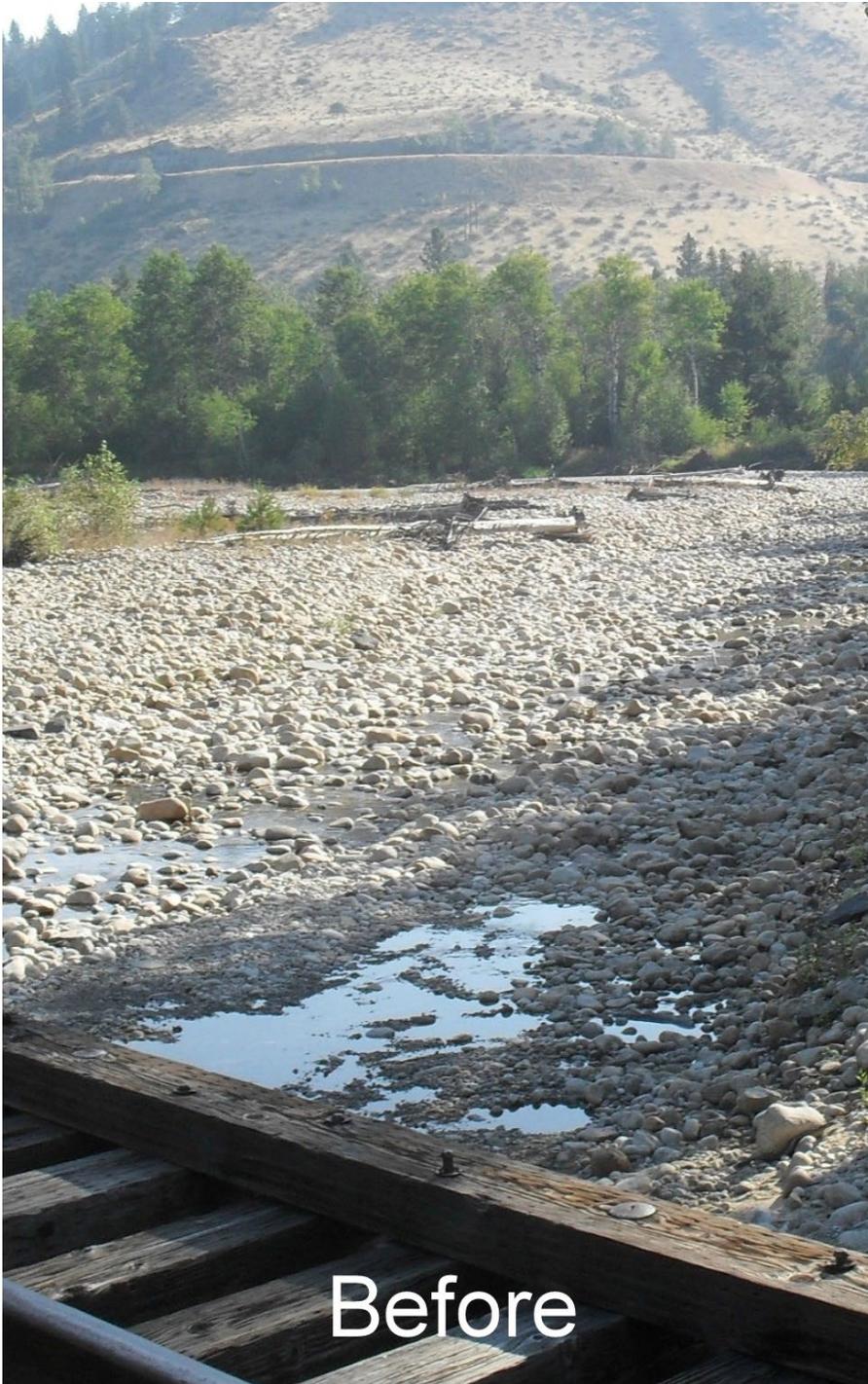
**Stored water lease provides 3.3 CFS of additional flow to Tin Cup Creek from Aug. 1 to Sept. 30. When combined with other senior rights held by CFC, maintains 7.5 to 8 CFS of flow in creek.**

# LOST HORSE CREEK



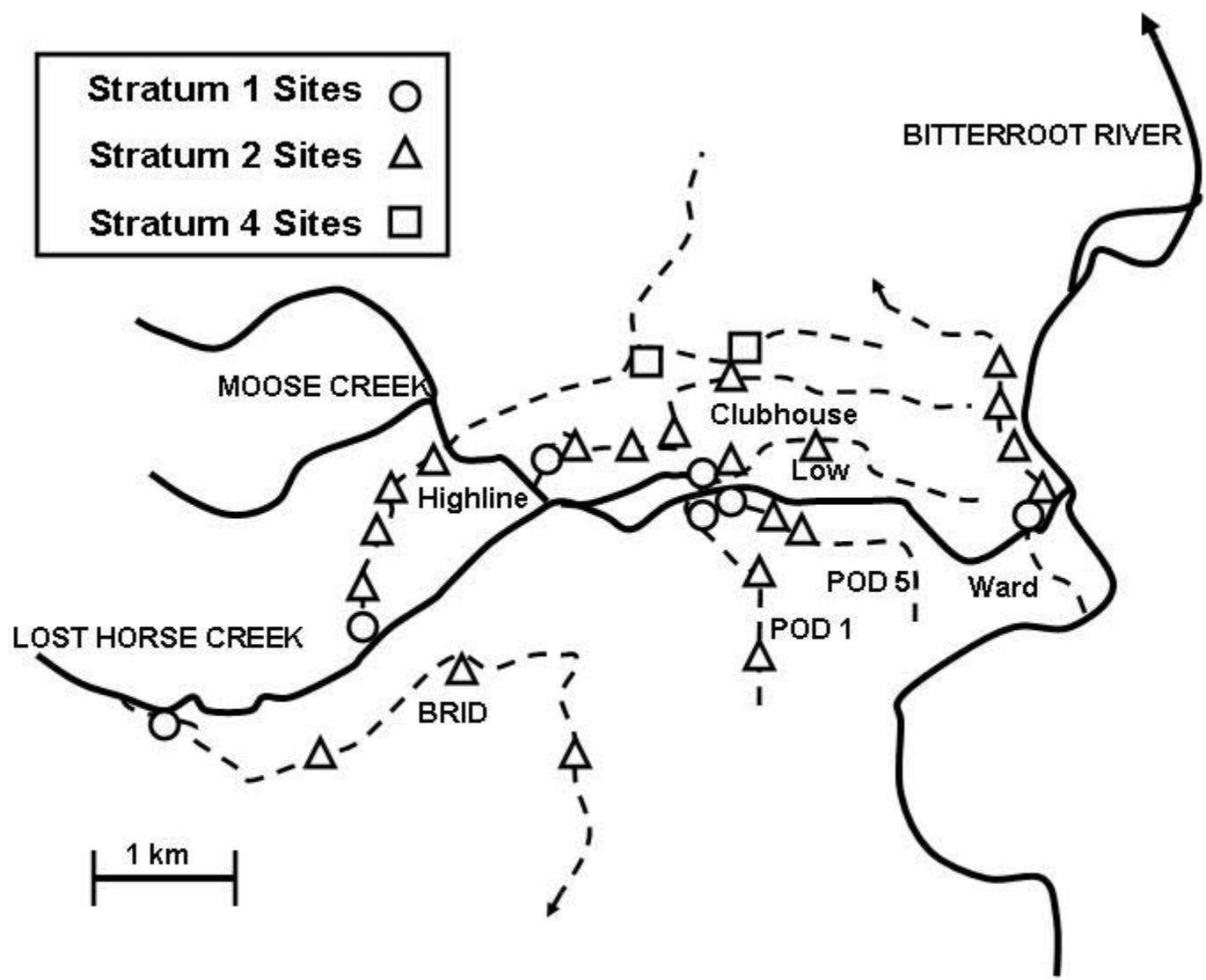


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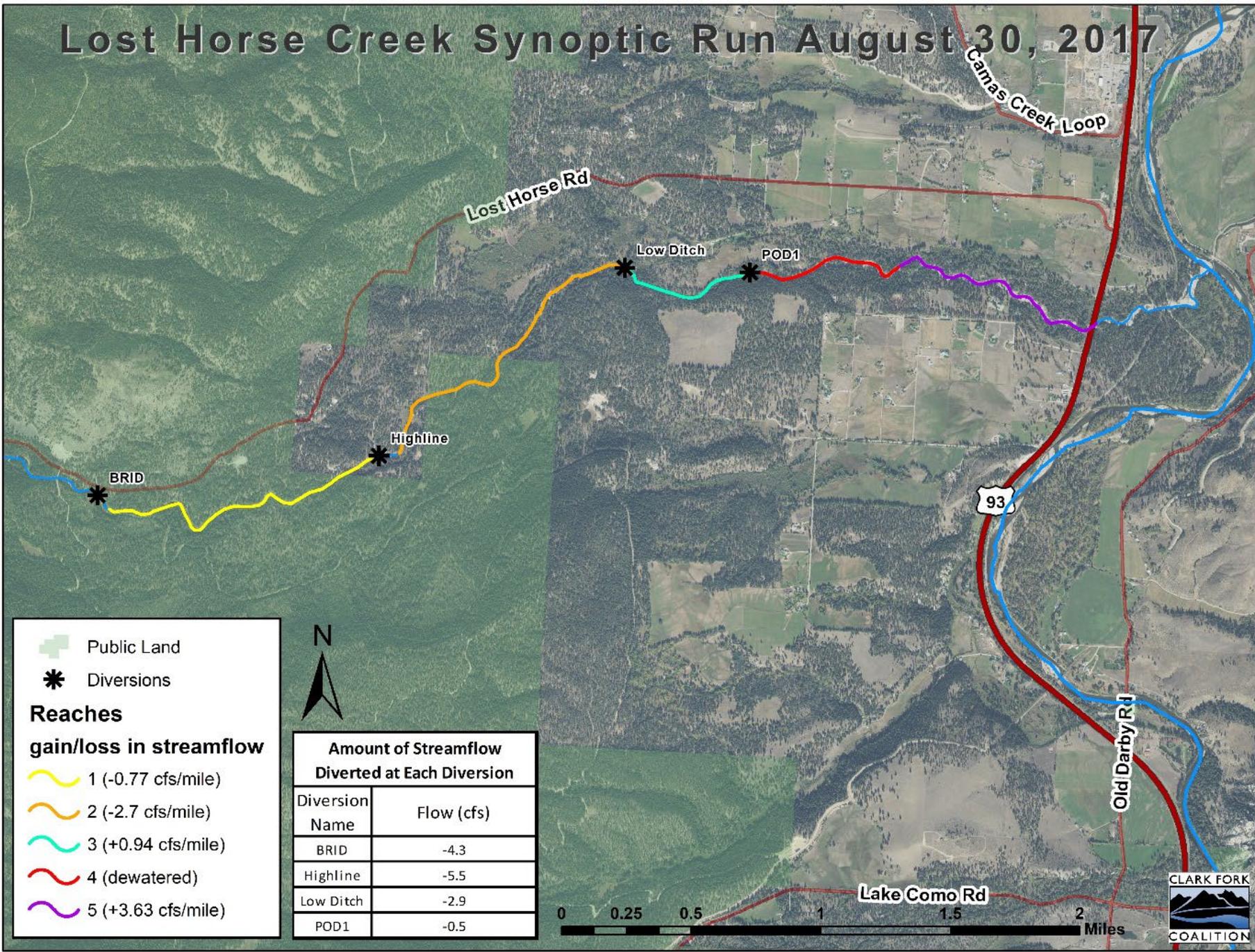


# Flow Re-established down to Bitterroot River after Project

Agreement establishes 10 cfs flow in  
historically dewatered reach for 50  
years



# Lost Horse Creek Synoptic Run August 30, 2017



- + Public Land
- \* Diversions

**Reaches**  
gain/loss in streamflow

- ~ 1 (-0.77 cfs/mile)
- ~ 2 (-2.7 cfs/mile)
- ~ 3 (+0.94 cfs/mile)
- ~ 4 (dewatered)
- ~ 5 (+3.63 cfs/mile)

Amount of Streamflow Diverted at Each Diversion	
Diversion Name	Flow (cfs)
BRID	-4.3
Highline	-5.5
Low Ditch	-2.9
POD1	-0.5



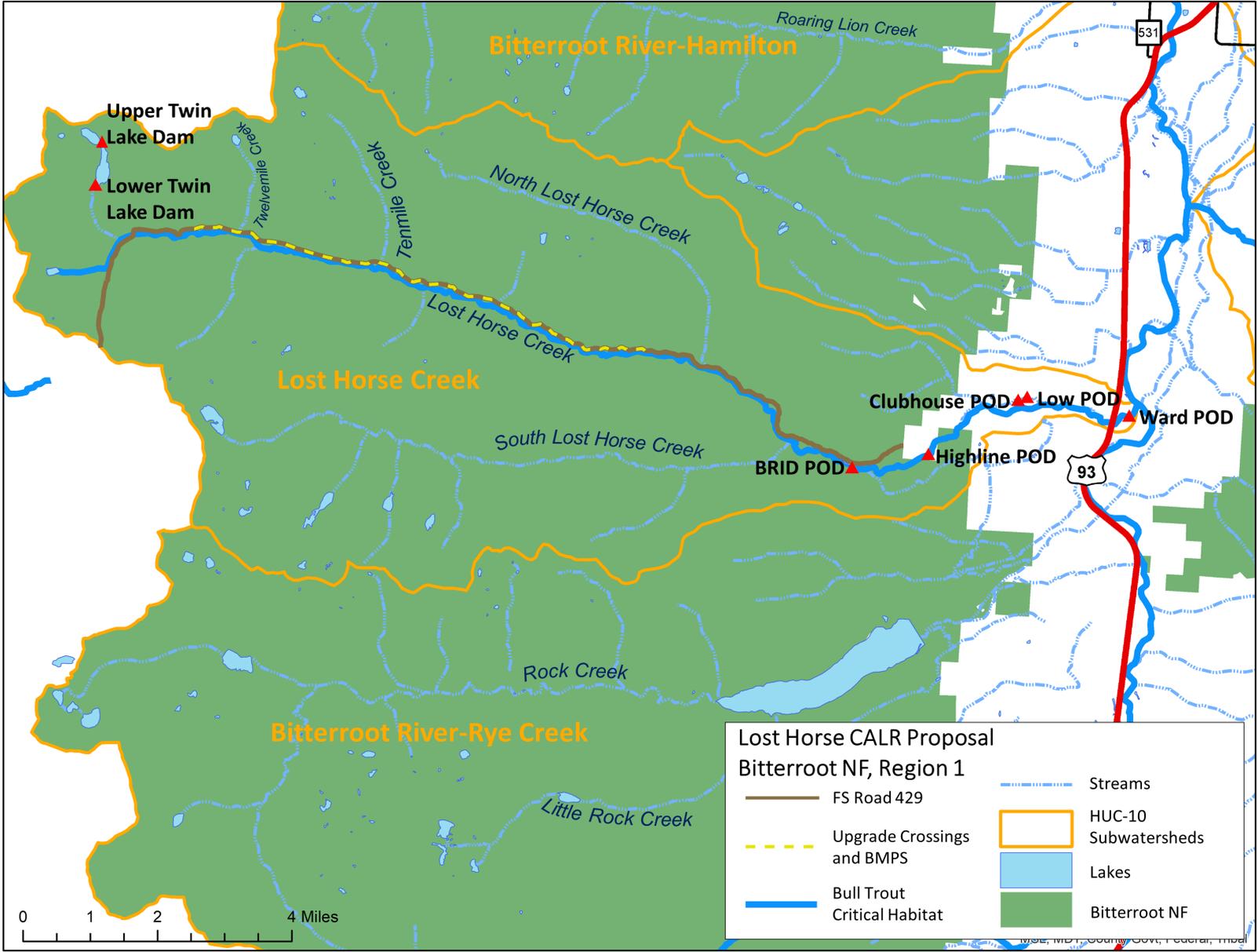












Bitterroot River-Hamilton

Upper Twin Lake Dam

Lower Twin Lake Dam

Lost Horse Creek

Bitterroot River-Rye Creek

**Lost Horse CALR Proposal  
Bitterroot NF, Region 1**

-  Streams
-  HUC-10 Subwatersheds
-  Lakes
-  Bitterroot NF
-  FS Road 429
-  Upgrade Crossings and BMPs
-  Bull Trout Critical Habitat

0 1 2 4 Miles

Map of Lost Horse Creek Watershed, Bitterroot National Forest, Montana



## Lolo Creek Fish Screen

- » Installed on Maclay Ditch
- » 38 CFS
- » Corrugated Water Screen
- » \$200k

Focus on success....and thank you



[www.clarkfork.org](http://www.clarkfork.org)