



# BITTER ROOT **Water** FORUM

Clean Water for All  
through Education and  
Restoration

FALL 2015

*Fall color on the Bitterroot River  
upstream of Veteran's Bridge*



# Letter from the Executive Director



*Heather showing off  
vegetation in a newly  
restored road*

This newsletter marks my fifth year as the Executive Director of the Bitter Root Water Forum.

Thanks to a supportive community, generous funders, and an active board of directors, BRWF has come a long way since 2010. We've grown from one, half-time staff person to two full-time staff, a part-time bookkeeper, and an AmeriCorps Member. Your help in growing our organization has allowed us to more proactively approach watershed education and on the ground restoration opportunities. We've built partnerships with area schools to reach hundreds of youth annually with high quality watershed education. We've completed dozens of restoration days, working with private landowners and on public lands to restore miles of indispensable landscape and riparian areas. Just this year, we broke ground our largest restoration project yet.

Through changes and growth, one thing remains the same: BRWF is committed to a clean water future in the Bitterroot and beyond. Thanks for all you do to help keep us moving in the right direction, for this and future generations.

*Heather*

Heather Barber, Executive Director

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# RIVERFEST DAYS

August marked the 5<sup>th</sup> annual Riverfest Days. You made this party with a purpose possible. Drawing an estimated 400 area residents to this wonderful community event.

## Educational Booths



Water Bugs



Native Fish



Water Cycle Dice

## Fun Kid Activities



Face Painting



Rock Painting

Bitterroot  
RIVER  
Clean Up

Over 50 volunteers worked to pull 1,260 lbs of trash from the Bitterroot River. Among the coolest pieces of trash was this old car dashboard found by Andy Massie.

Riverfest Days is our opportunity to connect our community with the Bitterroot River through celebration and education.

**Thank event sponsors by supporting local businesses!**



Greener Montana Properties

Evans Ace Hardware - Bob Ward's - Bitterroot Disposal  
Mildenberger Motors - Pigman Builders - Angler's Roost  
Runner's Edge - Higher Ground Brewing - Hamilton Marketplace

Farmers  
State Bank

Rapp Family  
Foundation





# Breaking Ground on the Largest Watershed

Thanks to supporters like you we broke ground on our largest watershed restoration project yet. In the headwaters of Sleeping Child and Rye creeks, this project aims to drastically reduce sediment delivery to high mountain, cold water streams that provide critical habitat for Westslope Cutthroat trout and Bull trout.

Through a partnership with the Bitterroot National Forest, BRWF will restore 20 miles of old roads in a nearly 2,000 acre area in the Upper Sleeping Child and Rye Creek drainages before October 2016.

By decompacting, reshaping, and revegetating these abandoned and deteriorating roads water infiltration is improved and erosion is reduced. Excess sediment covers the bottom of the stream filling in the deep pools trout use to over-winter, smothering their eggs, and choking the aquatic insects they rely on for food. This project will keep dump truck loads of sediment from washing into these important fisheries.

## Project will Restore

20

MILES OF ROAD

42

STREAM CROSSINGS

93%

REDUCTION IN SEDIMENT\*



*Project in progress in the headwaters of Sleeping Child Creek. Road surface is decompacted to allow for infiltration, reshaped to match the grade of the hillslope, and mulched, seeded, and fertilized to encourage revegetation.*



# Improvement Project in the Bitterroot



*Abandoned deteriorating roads restored to the natural landscape in the Rye creek headwaters.*

*A project of this size and scope would not be possible without great project partners. A huge **THANK YOU** to the **Bitterroot National Forest** for technical and financial assistance, the **Bitter Root Trout Unlimited** whose significant funding commitment helped get this project through the planning process and onto the ground, the **Montana Department of Environmental Quality** and **Future Fisheries** programs and **Montana Trout Unlimited** for financially supporting this endeavor, and **YOU**. Local support turns projects like these from dreams into reality!*



*These large washouts above Upper Sleeping Child Creek will be tackled in the spring of 2016.*



# Irrigation in the Bitterroot Tour



Participants gather to listen to Al Pernichele, Bitterroot River Water Commissioner, at Lake Como storage reservoir.

On Tuesday, October 13<sup>th</sup>, BRWF hosted its first public tour of irrigation infrastructure in the Bitterroot Valley. Previously offered as a field trip for high school students enrolled in the Future Farmers of America (FFA) program, BRWF responded to local interest and opened this opportunity to the public. Participants included people involved in irrigation themselves, those living alongside a ditch, Real Estate Agents, and folks curious about how irrigation works in the valley.

35

PARTICIPANTS

4

REALTOR CONTINUING  
EDUCATION CREDITS

30

MILES OF  
IRRIGATION

7

PARTNER  
ORGANIZATIONS

## Topics

- Water rights
- Irrigation infrastructure
- Conservation techniques for fish habitat and water quality



Hedge Diversion

## Partners

Montana DNRC, Bitterroot College, Montana Fish Wildlife and Parks, the Bitterroot River Water Commissioner, Bitter Root Irrigation District, and Daly Ditches Irrigation District

Lake Como



BRWF | 4

## Field Stops

- Lake Como storage reservoir
- Hedge Diversion and Headgate
- Republican Fish Screen

Republican Fish Screen



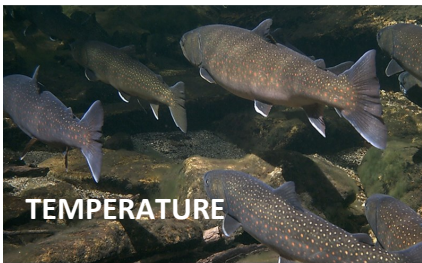


# Non Point Source Pollution

## How.

### How it happens

Non point source (NPS) pollution, unlike pollution from industrial and sewage treatment plants, comes from diffuse runoff that carries natural and human-made pollutants into lakes, rivers, wetlands, coastal waters and ground waters. Example NPS pollutants that can impair a water body are **sediment, temperature, metals, nitrogen, nitrates, phosphorous, or low flow.**



TEMPERATURE

Raised temperature can result from decreased vegetative cover and has an adverse effect on fish populations



NUTRIENTS

High nutrient runoff into waterways can spur algae blooms, crowding out other life reliant on the waterway



SEDIMENT

Increased erosion of unstable banks can cause excessive sediment in waterways, negatively affecting animal life

### How it is measured

The Department of Environmental Quality (DEQ) sets out Total Maximum Daily Loads (TMDLs) for specific waterbodies. A TMDL is the maximum amount of a pollutant a waterbody can withstand and still meet its water quality standards.

### How you can help

Your help can make a difference in curbing NPS pollution. By planting native riparian species alongside water bodies, you can help reduce the sediment and nutrients deposited by runoff, and provide shade to lower the water temperature. Plants also provide excellent habitat and encourage a robust riparian ecosystem.

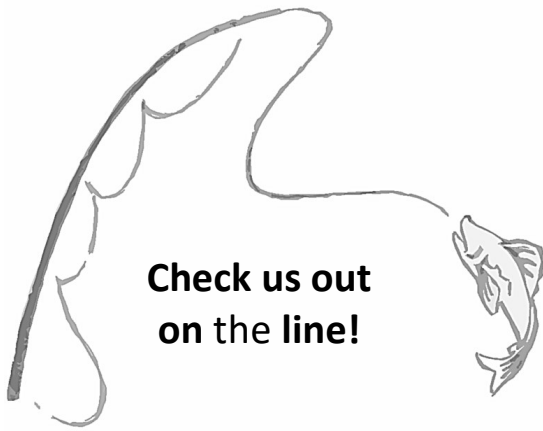




# BITTER ROOT Water Forum

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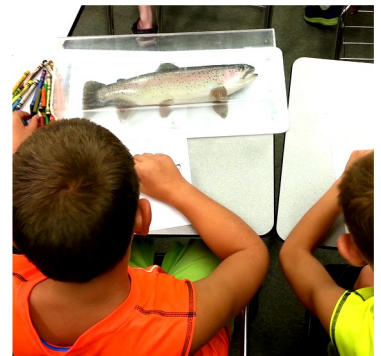
**Check us out  
on the line!**

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SUMMER is over, which means  
that it is time to FALL into the  
swing of another year of our  
**Earth Stewardship Program.**

Working with local schools,  
ESP reaches 100s of kids  
each year with lessons  
on natural resources  
and the Bitterroot  
Watershed.

Below: Insight from  
a student during the  
2015 ESP Field Trip



Fish need good clean water