

# 2014

## Bitterroot Watershed Restoration Plan



Bitter Root Water Forum

3/20/2014

## **We are working for the day when:**

- Residents and visitors appreciate how integral the Bitterroot River is to the valley's social, ecological, and economic well-being and make caring for and protecting the river a top priority.
- Urban and rural neighbors work together, using science and local wisdom, to proactively and continually maintain and improve water quality in our watershed.
- The Bitterroot River system continues to provide for diverse uses while achieving its potential as a world-class fishery and top-quality aquatic habitat.

*BRWF's Watershed Restoration Plan (WRP) is based upon the principles derived by our founders in 1993 and reflects our continued commitment to restore and protect the Bitterroot watershed through education and restoration projects.*

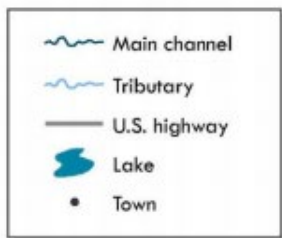


### Tier 1 Streams:

East Fork  
Rye Creek  
Cameron Creek  
Threemile Creek

### Tier 2 Streams:

Sleeping Child Creek  
Burnt Fork Creek  
Skalkaho Creek



### 3.1 WATERBODY IMPAIRMENTS, PROBABLE CAUSES, IMPAIRED USES AND TMDL STATUS

Waterbody & Location	Impairment/ Concern	TMDL Pollutant Category/Factor Contributing to Concern	Impaired Beneficial Use	TMDL Complete
<b>East Fork Bitterroot River*</b> (headwaters to confluence with West Fork)	Flow Alteration	Temperature	Aquatic Life, Cold Water Fishery	Yes
	Siltation	Sediment	Aquatic Life	Yes
	Copper	Metal	Aquatic Life	Under Development
Factors contributing to impairments	<ul style="list-style-type: none"> <li>• Alteration in stream-side or littoral vegetative covers</li> <li>• Channelization</li> <li>• Grazing in riparian or shoreline zones</li> <li>• Highways, roads, bridges, and infrastructure (new construction)</li> <li>• Streambank modifications/destabilization</li> <li>• Watershed runoff following forest fire</li> </ul>			



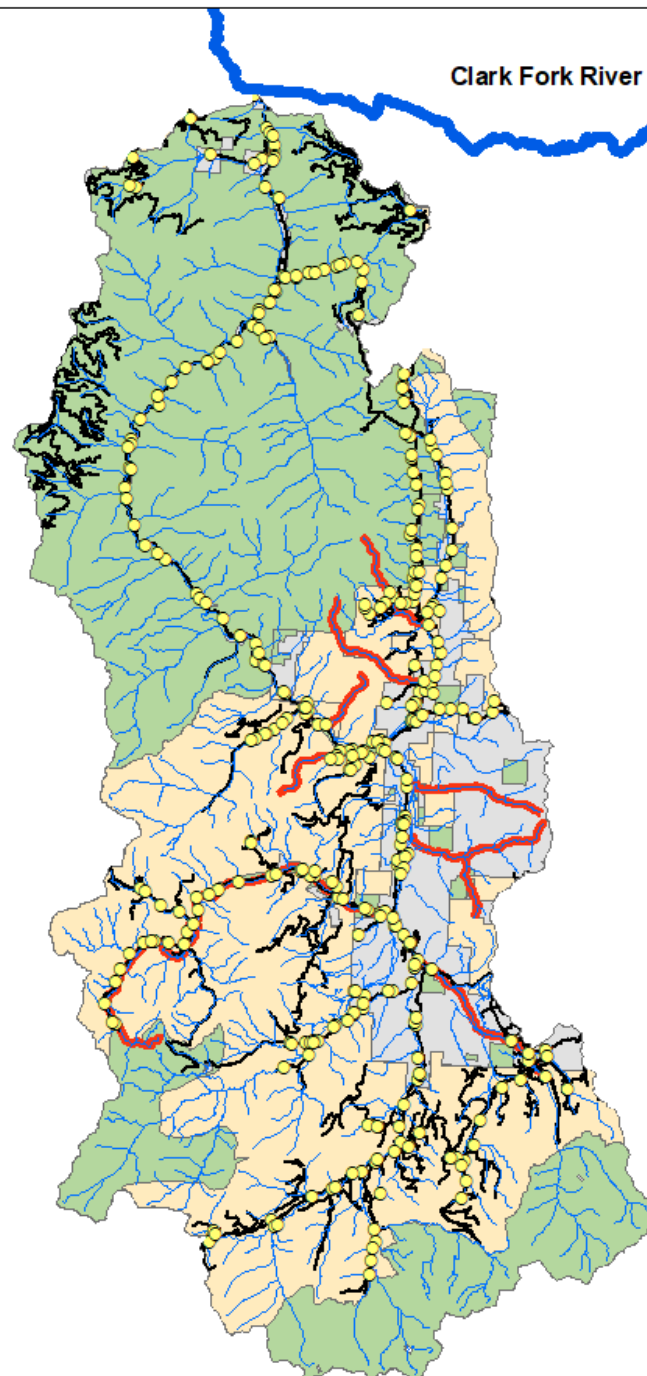
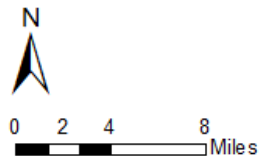


# 2019 Additions + Lead Editors

- **Bitterroot Mainstem: TU**
- **West Fork: TU**
- **O'Brien Creek: CFC + Traci Syltem**
- **Pattee Creek: MVWQD**
- **Develop maps/tables to display all Bitterroot impairments: BRWF**

# Rock Creek Sediment Impairments

- Sediment  
Impaired  
Streams
- Roads
- RoadCrossings
- BLM and USFS  
Pastures and  
Grazing  
Allotments





# Rock Creek Nutrient Impairments

Nutrient Impaired  
Streams

FWP Riparian  
Assessment  
Vegetation Rating

- 0-50%
- 50-80%
- 80-100%

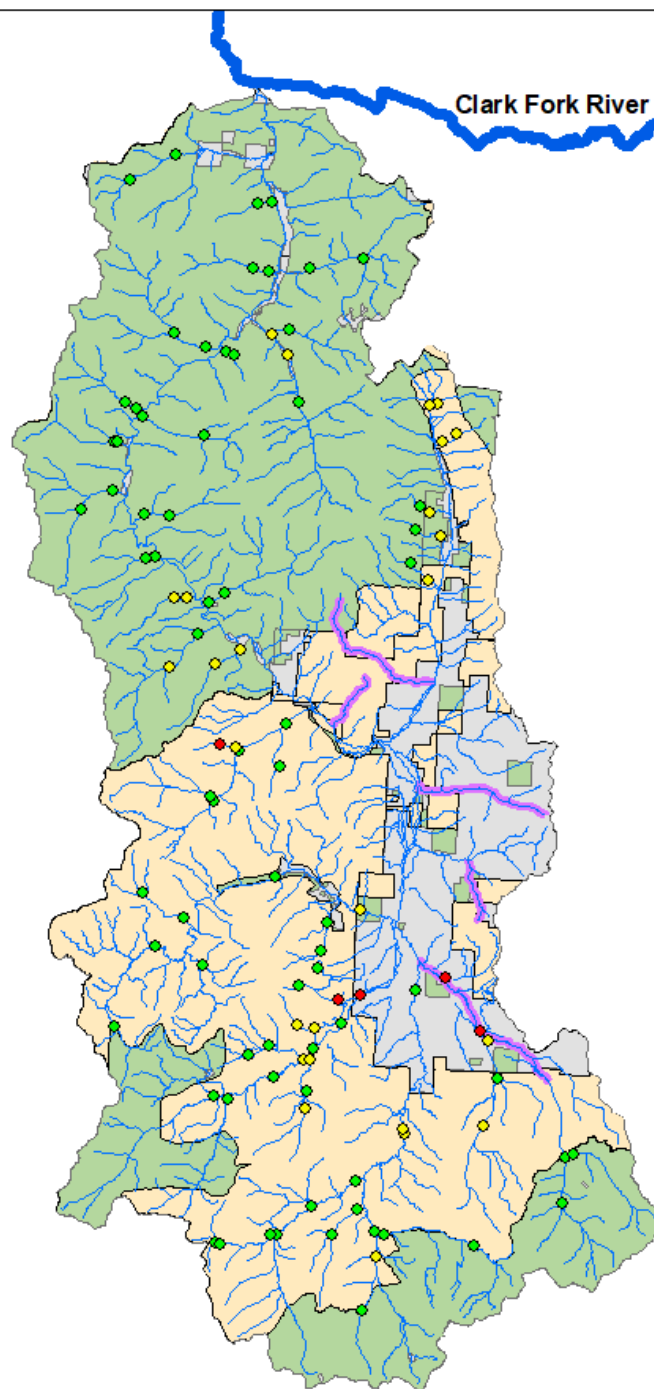
BLM and USFS  
Pastures and Grazing  
Allotments

Public Lands

Private Lands



0 2 4 8  
Miles



## **1.1 NINE MINIMUM ELEMENTS OF AN EPA WATERSHED RESTORATION PLAN**

- 1. Identification of causes of impairment and pollutant sources or groups of similar sources that need to be controlled to achieve needed load reductions, and any other goals identified in the watershed plan. (Section 4)**
- 2. An estimate of the load reductions expected from management measures. (Section 6)**
- 3. A description of the nonpoint source management measures that will need to be implemented to achieve load reductions in number 2, and a description of the critical areas in which those measures will be needed to implement this plan. (Section 5)**
- 4. Estimate of the amounts of technical and financial assistance needed, associated costs, and/or the sources and authorities that will be relied upon to implement this plan. (Section 7)**
- 5. An information and education component used to enhance public understanding of the project and encourage their early and continued participation in selecting, designing, and implementing the nonpoint source management measures that will be implemented. (Section 8)**
- 6. Schedule for implementing the nonpoint source management measures identified in this plan that is reasonably expeditious. (Section 5, Table 5.4)**
- 7. A description of interim measurable milestones for determining whether nonpoint source management measures or other control actions are being implemented. (Section 5, Table 5.5)**
- 8. A set of criteria that can be used to determine whether loading reductions are being achieved over time and substantial progress is being made toward attaining water quality standards. (Section 10)**
- 9. A monitoring component to evaluate the effectiveness of the implementation efforts over time, measured against the criteria established under item 8 immediately above. (Section 9)**

TABLE 4.4. SCHEDULE FOR IMPLEMENTATION

Table 4.4 includes a schedule for implementing current NPS management measures that we have identified to date. As other projects materialize, they will be added to the implementation schedule.

*Boxes highlighted in grey indicate when action will be taken.*

Measurable Milestones	2014	2015	2016
<b>Decommission 100 miles of Road: Rye Creek</b>			
• Secure funding for implementation			
• Begin implementation			
<b>Reduce livestock grazing effects: Cameron Creek</b>			
• Monitor riparian fencing installed in 2013			
<b>Increase Stream shading: Cameron Creek</b>			
• Design a plan for plant/tree installation			
• Secure funding for plant/tree installation			
• Install plants/trees			
<b>Implement streambank stabilization and riparian vegetation: Rye Creek</b>			
• Secure funding for implementation			
• Complete restoration design			
• Implement project			
<b>Reduce effects of encroaching U.S. Highway 93 by increasing riparian vegetation: East Fork</b>			
• Secure funding for riparian planting			
• Implement riparian planting project			
<b>Further Inventory and assess diversions: Burnt Fork</b>			
• Inventory data gaps			
• Collect flow and temperature data above barriers			
<b>Education and Outreach, Cameron Creek, East Fork: Burnt Fork</b>			
• Site visits and tours of completed Cameron Creek projects			
• Site visits and tours of completed East Fork projects			
• Educational presentation to the Sula Community Club			
• Assist Stevensville High School students and teachers in additional monitoring on Burnt Fork Creek			
<b>Education and Outreach: Threemile Creek, Rye Creek</b>			
• Landowner meetings on Threemile Creek			
• Site visits highlighting existing conditions and recommended BMPs to reduce sediment delivery on Rye Creek			

# Discussion

- Areas to partner?
- Additional streams for consideration?
- Outyear project ideas?