



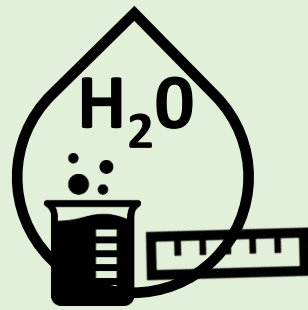
# Nonpoint Source Focus Watershed Lower Gallatin

February 7, 2020  
Stakeholder Meeting  
[etrum@mt.gov](mailto:etrum@mt.gov)

# DEQ's Water Quality Planning Process

1

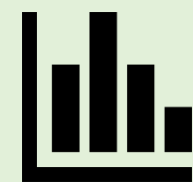
**Monitor Water Quality**



Collect data about water quality

2

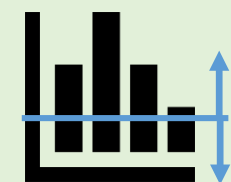
**Characterize Water Quality**



Describe and compare water quality conditions across the project area

3

**Assess Water Quality**



Determine whether waters are “impaired” (fail to meet one or more water quality standards and do not fully support beneficial uses)

4

**Identify Sources of Pollution**



Estimate amount of pollution from identified sources

6

**Support Watershed Restoration**



**NPDES Permit Revisions**

Support locally-led efforts to reduce pollution and restore watershed health with technical resources and funding

5

**Develop Total Maximum Daily Loads (TMDLs)**



Determine reductions needed for impaired waters to meet water quality standards, and recommend pollution reduction strategies

# Montana NPS Management Program

*to protect and restore water quality from the harmful effects of nonpoint source pollution*

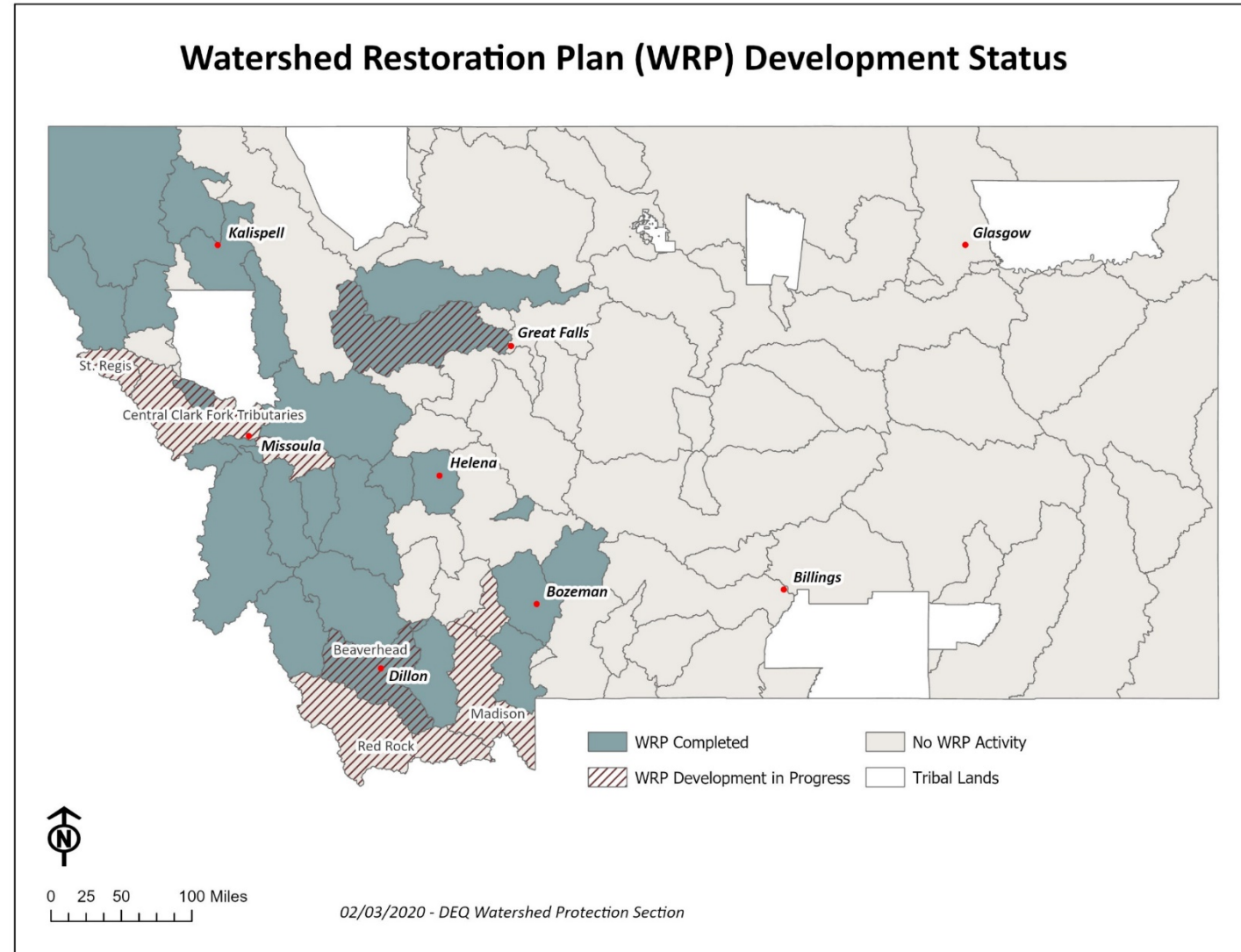


- Support local planning, decision-making, and voluntary project implementation
  - Pollution source identification
  - Watershed Restoration Plans
  - Project Development
- Approximately \$1,000,000 in project funding annually
- Project Effectiveness Reviews
- TMDL Implementation Evaluations
- Success Stories
- Education and Outreach



# Focus Watershed Attributes

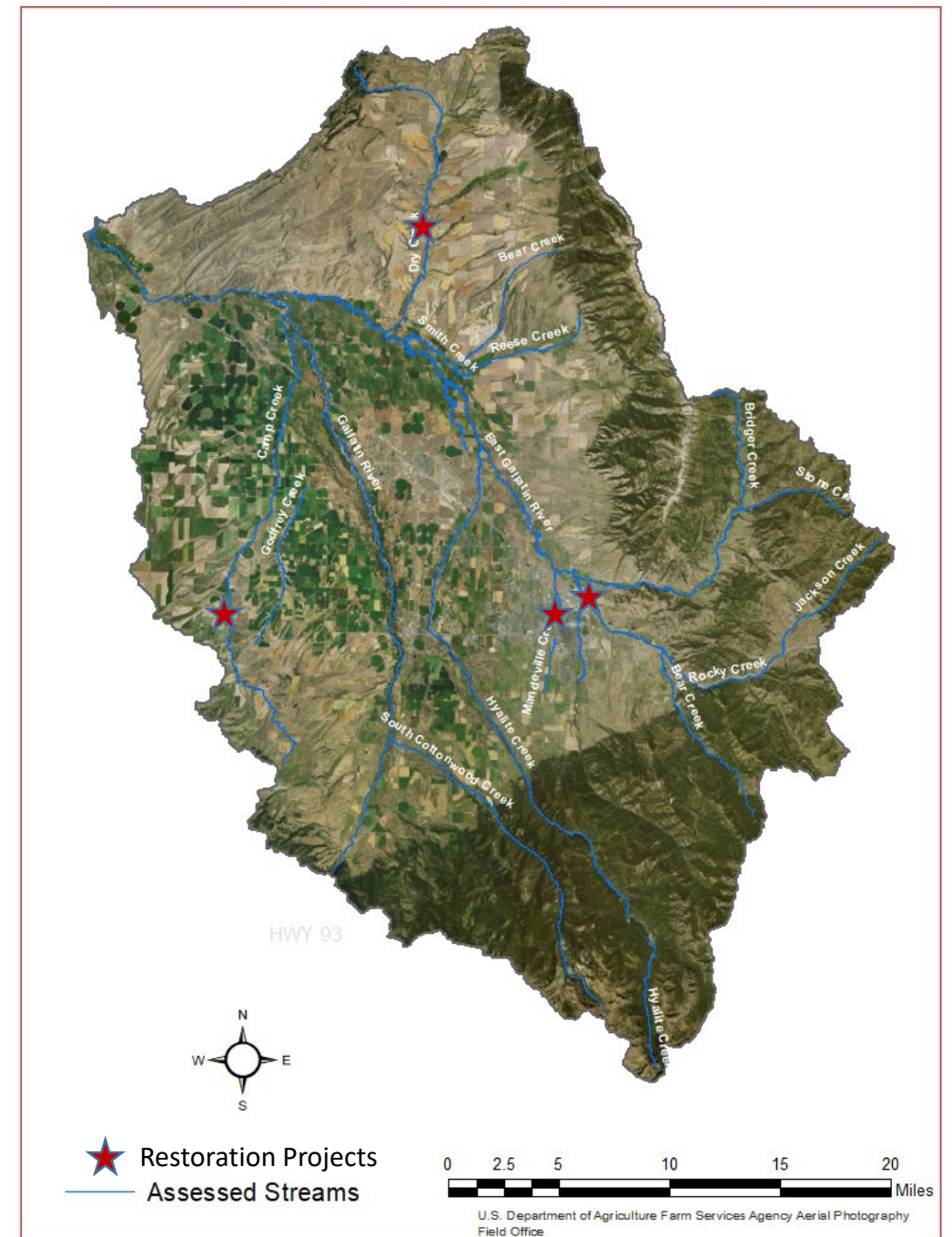
- ✓ Watershed Restoration Plan(s) in place
- ✓ Stakeholder interest
- ✓ Existing momentum with DEQ
- ✓ Ability to increase momentum with DEQ's help
- ✓ DEQ's ability to track change
- ✓ Traditional BMPs can remedy most nonpoint sources of pollution
- ✓ Potential to reduce a community's point source treatment costs
- ✓ Coinciding priorities with programs internal and external to DEQ



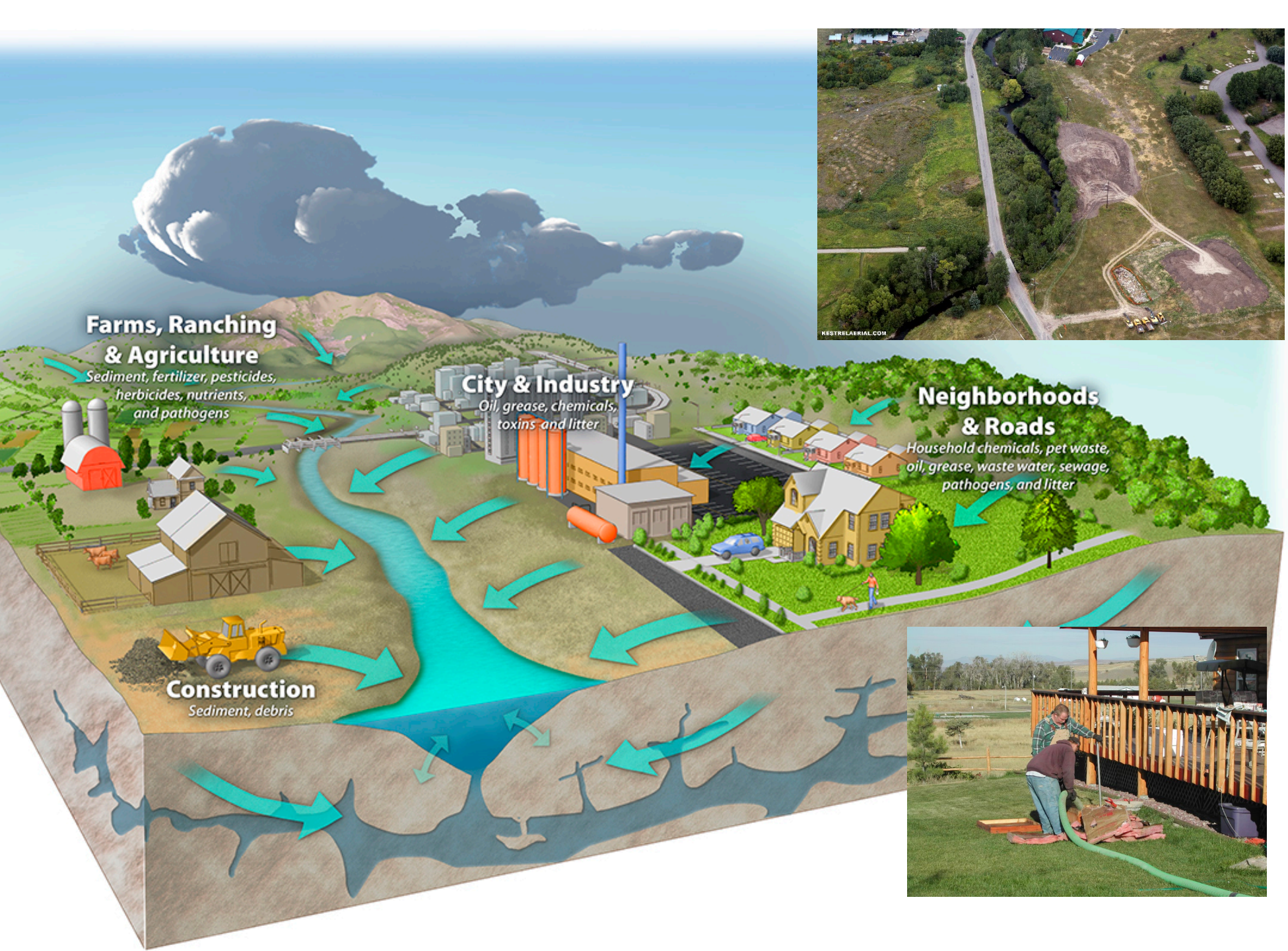


# Lower Gallatin Watershed

- Assessed Waterbodies (23)  
<http://deq.mt.gov/Water/Resources/cwaic>
  - 19 impaired waterbodies
  - 65 Impairment Causes
    - Sediment (12)
    - Nutrients (17)
    - Pathogens (5)
    - Non-pollutants (31)
- TMDL (2013)
- Watershed Restoration Plan (2014)
- \$356,00 in 319 project funds since 2016
- NWQI Watershed
- Engaged organizations
- WWTPs –
  - City of Manhattan – Dita ditch to Gallatin River
  - City of Belgrade – Groundwater (Thompson Creek, East Gallatin River)
  - City of Bozeman – East Gallatin River









# Lower Gallatin Sources





DEQ Strategies in a Focus Watershed	Example Metrics or Products
Build capacity of local groups and leaders	<ul style="list-style-type: none"> <li>• Funding received through 319 and other programs</li> <li>• Updated WRPs</li> <li>• Fine-scale source assessment/project identification</li> </ul>
Foster interest in water quality	<ul style="list-style-type: none"> <li>• Voluntary restoration and monitoring activities</li> <li>• Newly engaged landowners</li> </ul>
Identify opportunities for improved Agency coordination	<ul style="list-style-type: none"> <li>• WWTF optimization</li> <li>• Nutrient trading</li> <li>• New growth on existing public systems</li> </ul>
Track indicators of achieving better water quality	<ul style="list-style-type: none"> <li>• Social indicators - awareness and engagement</li> <li>• Improvements in riparian health</li> <li>• TMDL Implementation Evaluations</li> </ul>
Identify success stories and landowner stewardship	<ul style="list-style-type: none"> <li>• Streams achieve water quality standards</li> <li>• EPA Success Stories</li> <li>• Long term Project Effectiveness Reviews</li> <li>• Landowner achievement story map</li> </ul>

# Timeline

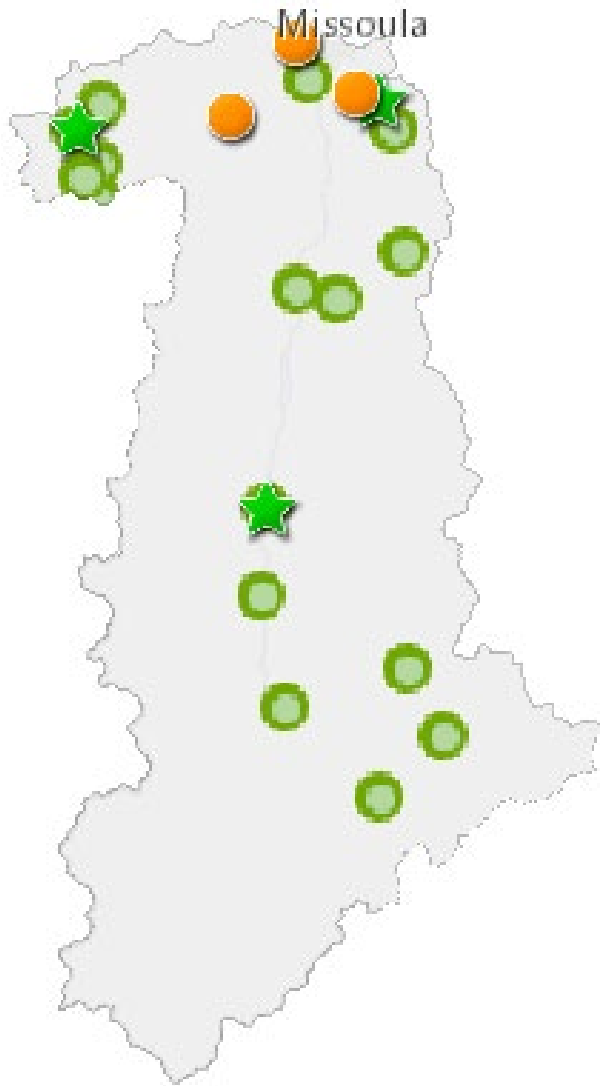
- February 7 – Initial Stakeholder meeting
- Community Readiness Assessment
- Project Planning
- November 2022 - Half of 319 project funding will be allocated to the Lower Gallatin in NPS Call for Proposals



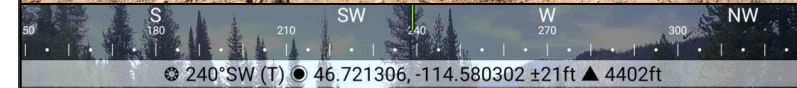
DEQ selected the Bitterroot River watershed as the first Focus area in 2019.

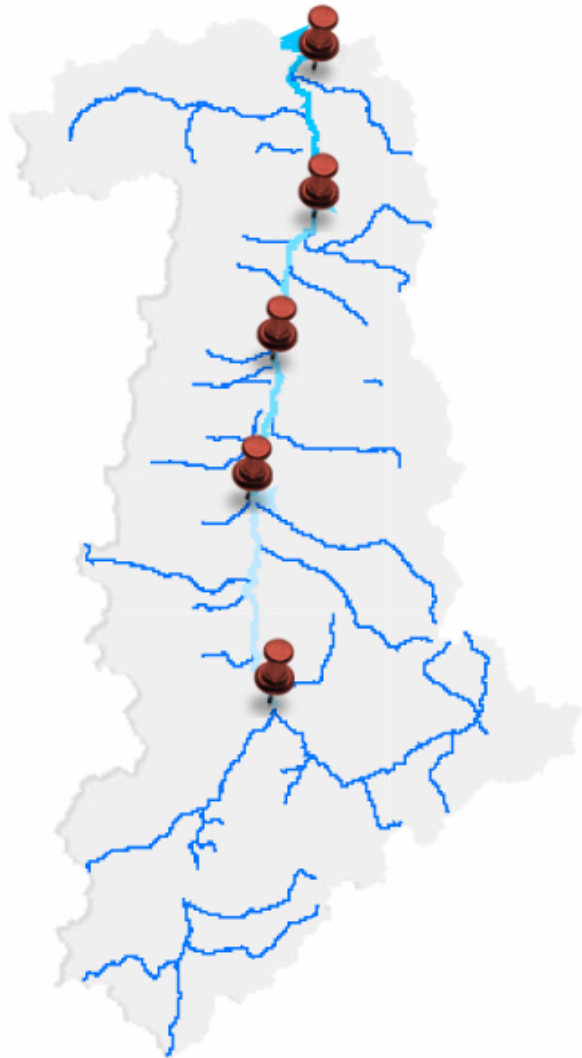
*\$23,974 of pre-project planning* “mini-grants” were distributed to *5 different local entities* to conduct pre-project planning and update a WRP.





In 2019, DEQ awarded  
*\$671,139 in 319 funds* to  
local groups implementing  
restoration projects in the  
Bitterroot.



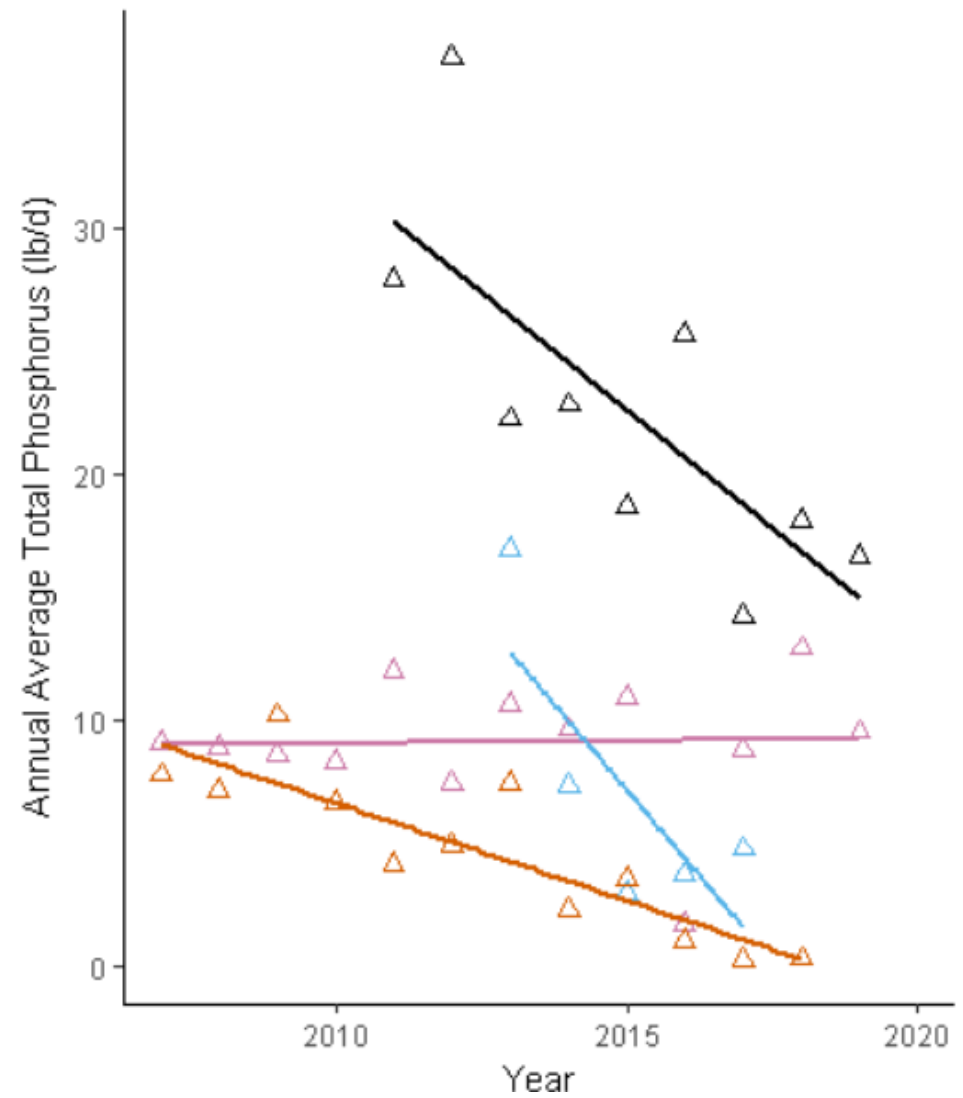
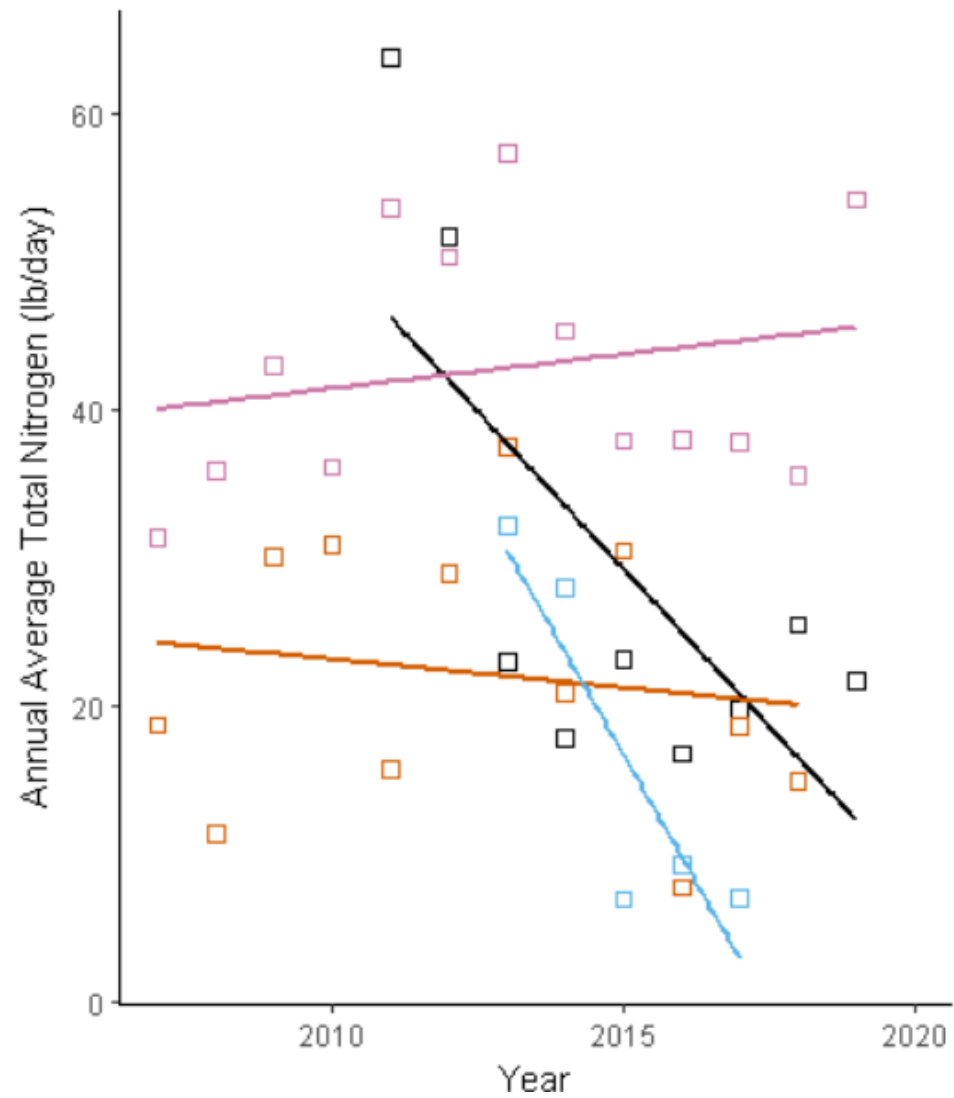


DEQ began *long-term nutrient monitoring* along the Bitterroot mainstem, in partnership with the Clark Fork Coalition, the Bitterroot River Protection Association, and the University of Montana.



FacilityName

CITY OF HAMILTON WWTP	STEVENSVILLE WWTP
LOLO WWTP	TOWN OF DARBY WWTF





A TMDL Implementation Evaluation (TIE) is in the works for the Bitterroot headwaters. This will:

- Document BMP and restoration efforts
- Inform local stakeholders what actions are still needed to achieve water quality standards.
- Inform DEQ which streams may now be meeting water quality standards.

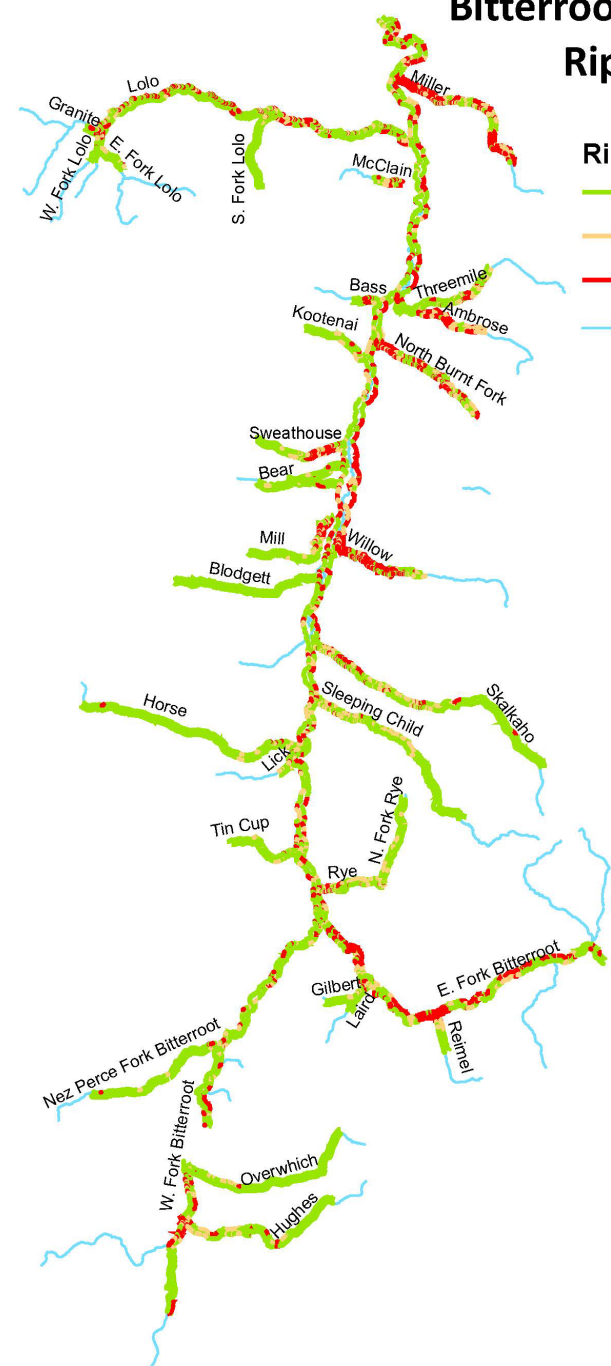


# Bitterroot River Watershed

## Riparian Cover

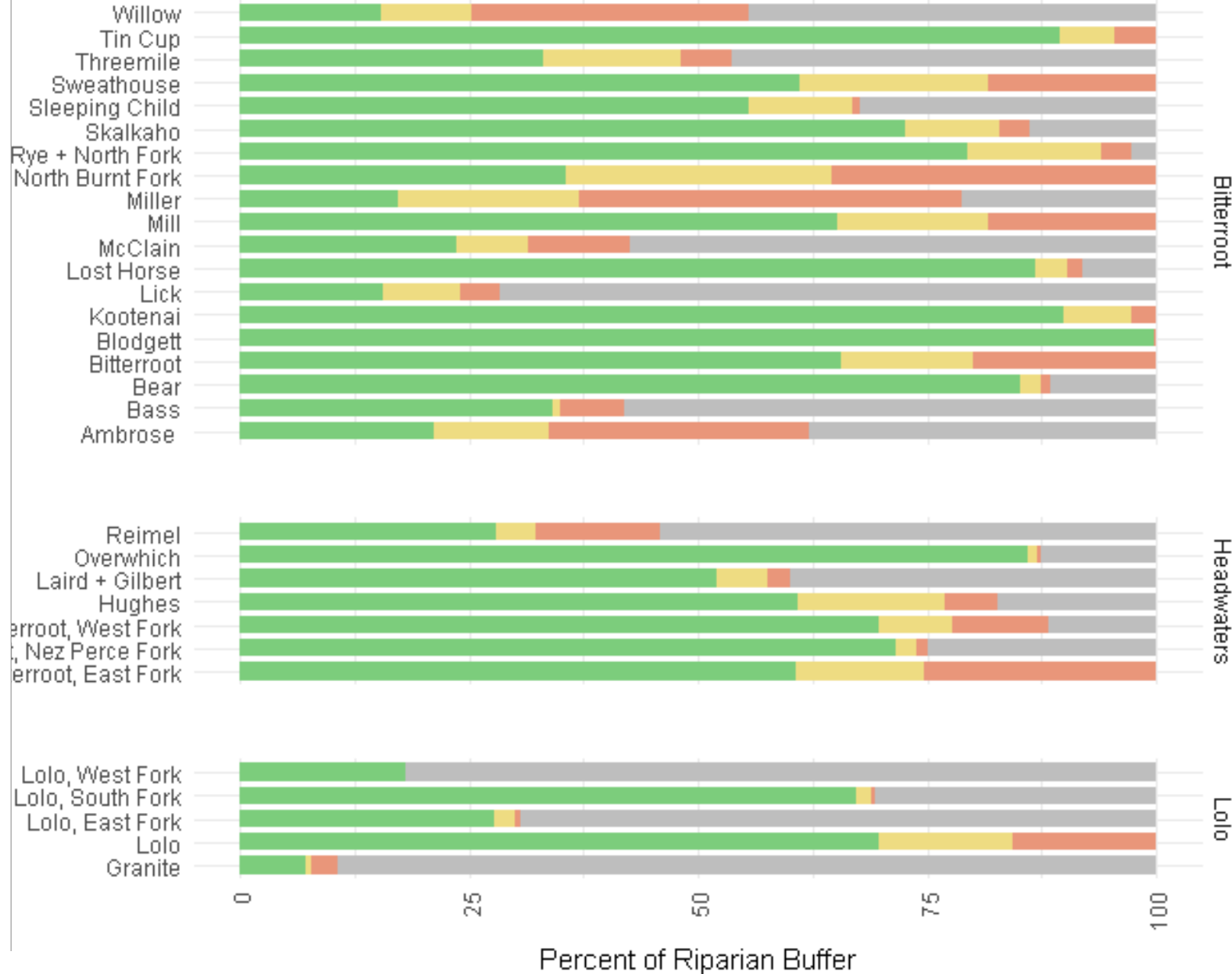
### Riparian Cover (%)

- 75 or more
- 25 to 75
- Less than 25
- Assessment Unit Streams



Percent Riparian Cover

- 75 or more
- 25 to 75
- Less than 25
- Not evaluated





A scenic landscape featuring a range of mountains in the background under a blue sky with scattered clouds. In the middle ground, there is a dense forest of green trees. The foreground is a lush field of tall green grass and numerous small yellow wildflowers.

# **Bitterroot Perspectives on “If we had more time...”**

**“Phasing”**

**“Scheduling”**

**“Staffing”**



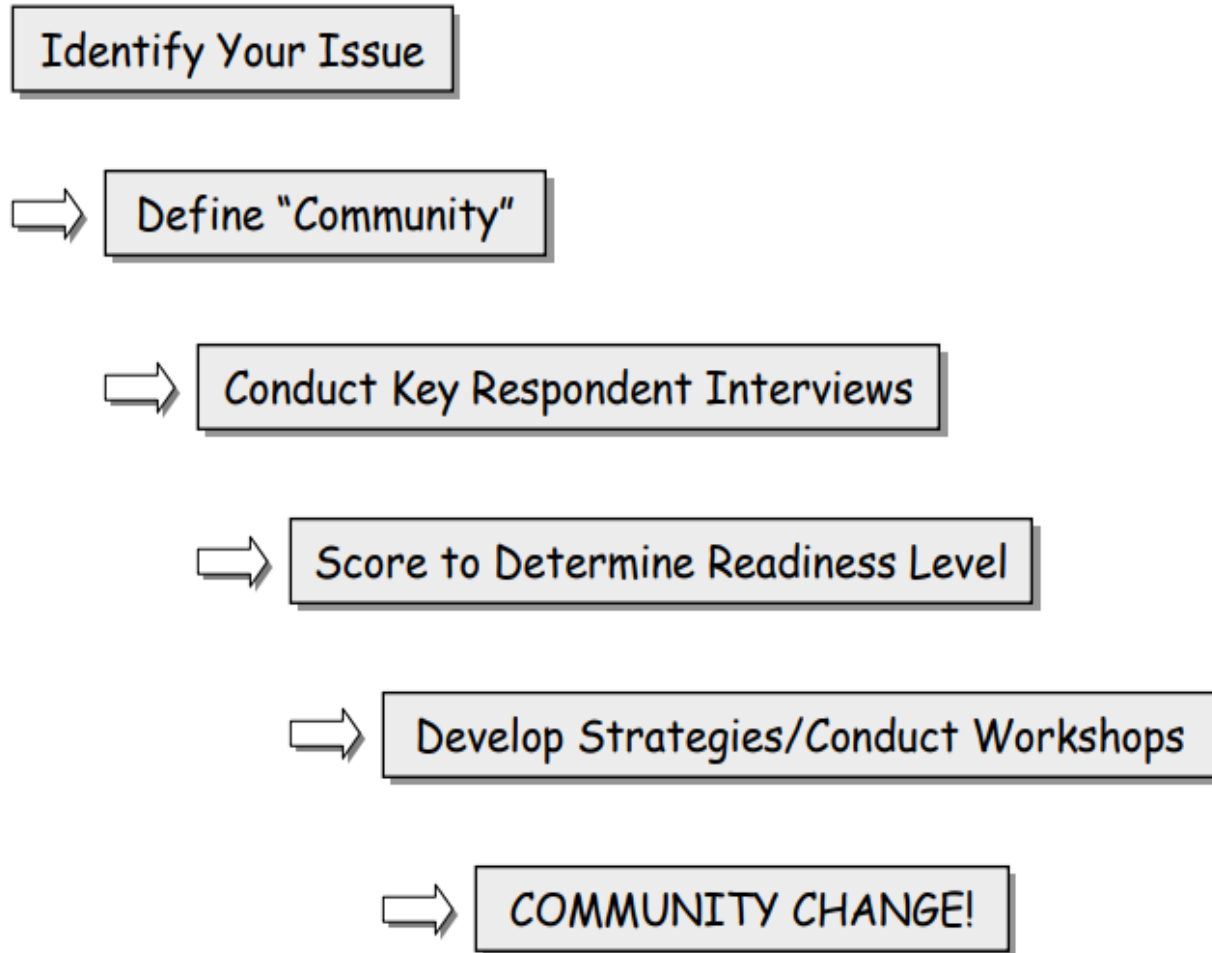
# Community Readiness Assessment

- Community readiness = how prepared the community is to take action to address a particular issue
  - Used to identify approaches for addressing new issues or ongoing efforts
- NPS implementation is voluntary; requires broad buy-in to value of clean water
- Water quality improvement takes a long time
- Potential leading indicator for changes in water quality
- Provides a metric for changes in social behavior, awareness, and willingness to address water quality (quantity?) issues





# CRA Process



**Dimensions of readiness** are key factors that influence your community's preparedness to take action on an issue.

**A. Community Efforts:** To what extent are there efforts, programs, and policies that address the issue?

**B. Community Knowledge of the Efforts:** To what extent do community members know about local efforts and their effectiveness, and are the efforts accessible to all segments of the community?

**C. Leadership:** To what extent are appointed leaders and influential community members supportive of the issue?

**D. Community Climate:** What is the prevailing attitude of the community toward the issue? Is it one of helplessness or one of responsibility and empowerment?

**E. Community Knowledge about the Issue:** To what extent do community members know about the causes of the problem, consequences, and how it impacts your community?

**F. Resources Related to the Issue:** To what extent are local resources – people, time, money, space, etc. – available to support efforts?