

Nonpoint Source TMDL Implementation Evaluation – Bitterroot Headwaters



Robert Ray, Watershed Protection Section
Montana Department of Environmental Quality

Background on Need for Evaluation

MCA 25-5-703: Development and Implementation of Total Maximum Daily Loads

After development of the TMDL the Department shall:

- Incorporate wasteload allocations into discharge permits
- Support a voluntary program of reasonable land, soil, and water conservation practices [RLS&WCPs] to achieve compliance with water quality standards for nonpoint source activities



Background on Need for Evaluation

MCA 25-5-703: Development and Implementation of Total Maximum Daily Loads

If the TMDL is not achieving compliance with applicable water quality standards within five years of the implementation of control measures [point source permits and RLS&WCPs] the Department shall conduct a formal evaluation of progress



Background on Need for Evaluation

MCA 25-5-703: Development and Implementation of Total Maximum Daily Loads

The Department shall determine if:

- Implementation of a new or improved phase of voluntary RLS&WCPs is necessary
- Water quality is improving, but a specified time is needed for compliance with water quality standards
- Revisions to the TMDL are necessary to achieve compliance with water quality standards

Need for Prioritization for TMDL Implementation Evaluations

- Currently DEQ has developed 1,445 TMDLs in 74 watersheds (usually at the 5-6 HUC scale)
- 4 staff supporting nonpoint source TMDL implementation (319 program)
- Resources for water quality standards assessments are limited
- Nonpoint source pollution problems take time to fix

Prioritization Criteria for TMDL Implementation Evaluations

Considerations

1. RCPs (Reasonable Land, Soil, and Water Conservation Practices) have been implemented
2. TMDLs in a NPS Focus/Priority Watershed or NRCS National Water Quality Initiative watershed
3. Opportunity for “success stories” (EPA WQ-10 or SP-12, or potentially DEQ- defined)
4. Stakeholder/partner interest (including assistance in updating WRPs)
5. Value of TIE feedback toward NPS or point source implementation
6. Number of years since TMDL development (more than 5 years is higher priority than less than five years)
7. Data or information availability (Clark Fork River example)
8. Staff familiarity, opportunity to combine with other point source or NPS related activities (e.g., TMDL development, project effectiveness reviews)

TMDL Implementation Evaluation Scope/Scale

- A TIE document can be completed for a single waterbody addressing one or more completed TMDLs for that waterbody.
- A TIE document can be completed at a watershed scale addressing multiple waterbodies and multiple pollutant types (e.g., metals and nutrients); or at a watershed scale addressing multiple waterbodies and one pollutant type (e.g., only nutrients).
- The scope of a TIE document can match the same scope of waterbody – pollutant combinations as the TMDL document for a watershed or waterbody of concern.

Bitterroot Headwaters – East and West Forks (967 mi²)

Background/ What does the science say? 2005 TMDL

Originally 14 stream listed (Meadow, Moose, Martin, W Fork Deer creeks delisted)

- Currently 4 listed streams in East Fork, 6 listed streams West Fork
- Sediment/siltation listings due to forest roads, timber harvest, unstable eroding stream banks, highway traction sand; thermal, and stream-side habitat alteration listings
- Targets: Wolman riffle pebble counts of <2 & <6 mm for B and C channels, Wolman D-50 riffle pebble counts for B and C channels, Clinger richness > 14, residual pool depth >1.5; 12oC or 15oC;'; LWD; pools/ mile

Components of Bitterroot TIE

- Introduction and Background
- TMDL Document Summary
- Indicators of Progress
 - Planning
 - Restoration/ RCPs (BMPs)
 - Monitoring
- Findings and Recommendations
- Conclusions
- References

Currently Developing 2019 Project Plan

Likely to focus on Reimel, Laird, Gilbert, Buck, Ditch, Overwhich, and Hughes, with most emphasis on Buck, Ditch and Reimel creeks

FS BMP monitoring for Buck and Ditch Creeks;

Reimel Creek TIE completed in 2016

Current (anticipated) Schedule

- Finalize Project Plan for field work: early August
- Conduct field work (photos, pool-tail grid toss): late August
- Review PIBO, other data – work with partners to document planning, BMPs, monitoring: this fall
- Internal review of TIE: November 2019
- Partners review of TIE: December 2019