

Total Maximum Daily Load (TMDL) Development (9-12-05)

1) Initial Planning

- a) Watershed Characterization (basic information such as geology, land use, etc)
- b) Initial Target Development Planning

NOTE: It is DEQ's role to develop the TMDL targets; these targets are numeric standards and/or a translation of narrative standards that take into account natural variability, stream potential, and the types and levels of human activities in the watershed. DEQ builds a certain level of flexibility into the targets through adaptive management and monitoring.

- i) Identify target parameters, available data, data gaps, initial target values (if possible), and approaches to fill data gaps.
- c) Initial Source Assessment Planning
 - i) Inventory all potentially significant sources, including future sources; identify available data, data gaps, and approaches to fill data gaps. Identify modeling needs.

2) Field Work & Source Quantification

- a) Develop detailed sampling and analysis plans and source assessment approaches
- b) Collect data, manage and summarize the data
- c) Perform modeling and other source quantification activities. Document results.

3) Update the Water Quality Impairment Status

- a) Compare data to target values
- b) Document uncertainties and incorporate adaptive management

NOTE: At this point it is possible to conclude that the stream is not impaired for one or more pollutants and no TMDL is needed.

4) Develop the Allocations and Define the TMDL

- a) Evaluate overall total load reduction needed to meet the targets
- b) Allocate a load or load reduction to all significant sources/categories; must consider feasible loading reductions (using reasonable land, soil and water conservation practices and/or BMPs); focus on largest controllable loads
- c) Document uncertainties and incorporate adaptive management

5) Develop a Monitoring Strategy (TMDL Development is Completed after this Step)

- a) Address the five year review and adaptive management at a minimum

6) Implementation Section (Optional Section Currently Added to all Plans)

- a) Incorporate recommendations, past work, local commitments and/or specific stakeholder implementation plans that can be linked to the targets and allocations.

Stakeholder Involvement and Opportunities for Input (9-16-05)

All “necessary” TMDLs for streams that were identified as impaired on the 1996 303(d) list must be completed by 2012. This is a very large workload that will require efficient development of TMDLs and effective use of stakeholder involvement. While DEQ and/or EPA will take the lead role in developing TMDLs, there are many opportunities for local stakeholders to participate and/or provide input. The role of stakeholders during TMDL development can vary from no involvement to providing important input on several aspects of TMDL development such as the specific examples identified below.

Initial Planning:

- 1) Help identify available data, historical context, existing pollutant sources, unique landscape features, future sources of concern, historic natural events (floods, fires), and ongoing assessment activities.
- 2) Provide technical input on planning documentation; often via a technical advisory type group.

Field Work:

- 1) Provide technical input on assessment details.
- 2) Help with access on private lands.
- 3) Provide professional data collection assistance.

Allocations

- 1) Provide input on BMPs or other potential water quality protection practices (what works or has worked; feasibility input).
- 2) Help identify adaptive management considerations.

Monitoring Strategy

- 1) Help link the strategy to existing activities in the watershed.
- 2) Provide technical input.

Implementation

- 1) Local stakeholders can take a lead role in implementation of water quality restoration/protection efforts for most nonpoint sources, and sometimes take the lead role on writing or directing much of this section of the document.
- 2) Provide input on local commitments and local goals.

Five – Year Review

- 1) Local stakeholder can play a significant role in five – year review and adaptive management activities in the watershed.

STATUS OF TMDL DEVELOPMENT IN MONTANA – SEE ATTACHED SPREADSHEET

If you have any questions, please contact:

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