

Montana 303 D List

A Compilation of Impaired and Threatened Waters In Need of Restoration

Part B

Waterbody Ranking, Priority Lists, and Schedule

Montana Department of Environmental Quality
Planning, Prevention and Assistance Division
Resource Protection Planning Bureau

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Summary

Water Body Rankings, Priority Lists and Schedule

Summary

This document presents the results of waterbody prioritization and scheduling for Total Maximum Daily Load (TMDL) development. This document, prepared by the State of Montana Department of Environmental Quality (DEQ), will be used to help guide DEQ decisions regarding technical and financial assistance for the development of TMDL – water quality restoration plans. The lists described in this report were prepared in accordance with the federal Clean Water Act requirements and the Montana Water Quality Act as part of a process intended to protect and improve the quality of rivers, streams, lakes, and wetlands in the State.

When technology-based pollution control practices are not sufficient to fully protect water quality, the provisions of Section 303(d) of the federal Clean Water Act come into effect. This section of the Act requires states to identify waters where wastewater effluent guidelines are not adequate to meet applicable water quality standards designed to support beneficial uses of the water. Specifically, the language of this section and related U.S. Environmental Protection Agency (EPA) regulations require states to identify state waters where quality is impaired (does not fully meet standards) or threatened (is likely to violate standards in the near future). Every two years the states are required to submit a list of these impaired or threatened waters to the EPA. This "303(d) List" report must also include a prioritization of the listed waterbodies for the development of plans identifying measures needed to bring the water quality of the listed waters into compliance with the applicable standards. The term "TMDL" (total maximum daily load) is used two ways in this report. The primary use of the term "TMDL" is to represent a plan (also called a water quality restoration plan) which has specific goals designed to achieve water quality standards. The other use of the term "TMDL" is the more conventional definition: the amount of a pollutant that a waterbody can assimilate and still meets water quality standards. Sometimes, this amount may actually be a load, in pounds or kilograms of pollutant per day, especially in the case of point sources. For nonpoint sources, however, quantifiable water quality targets designed to achieve water quality standards are often used. These targets may be pollutant reduction targets (percent reduction in loading or concentration) or a set of water quality indicators and target values that represent an unquantified loading that will result in restored beneficial uses. These targets may be based on highly technical land use modeling, scientific literature, or be based on best available scientific judgement.

Document Overview

The Montana 303(d) List for year 2000 is made up of two parts. Part A addresses water quality assessments and has been produced separately under another cover. Part B deals with prioritizing the impaired waters for the development of TMDL plans. Both parts were presented for public review during this past summer, and were revised in response to the comments received. DEQ is submitting the final Lists for EPA approval. The complete two-part package is designed to meet federal 303(d) requirements, and the mandates of state water quality law.

Legislative changes to the Montana Water Quality Act have greatly influenced the material in this 303(d) report. The Act requires Department of Environmental Quality to:

- monitor state waters to accurately assess water quality;
- develop procedures to insure that 303(d) listing and priority ranking decisions are made only when sufficient credible data to support the decision are available, remove waters lacking such data from the 2000 List, and monitor those removed waters during the next field season or as soon as possible thereafter to determine if they are impaired or threatened;
- consider 13 specified factors in prioritizing water bodies for TMDL plan development and to rank a water body as high priority only after first validating the data necessary to support the ranking;
- consult with a statewide advisory group and with local conservation districts and watershed advisory groups in revising the list of impaired or threatened waters and establishing new priority rankings.

Chapter I covers the process of ranking and prioritizing waterbodies that do not support all beneficial uses. Chapter II presents the results of the scoring and ranking. Chapter III presents a framework for scheduling TMDL development and explains how the priority designation will be used and how nonpoint source TMDL and point source TMDL development will be coordinated.

Glossary

303(d) List – A compilation of impaired and threatened waterbodies in need of water quality restoration that is prepared by DEQ and submitted to EPA for approval. This list is commonly referred to as the “303(d) List” because it is prepared in accordance with the requirements of section 303(d) of the federal Clean Water Act of 1972. The term is often used in a narrow sense to refer only to the specific list of impaired and threatened waters, which appears in Chapter 2 of this document. In a broader sense it includes all the information which must be submitted to EPA – the entire contents of both this Part A document and the accompanying Part B.

Best Management Practices (BMPs) – Those activities, prohibitions, maintenance procedures, or other management practices used to protect and improve water quality. BMPs may or may not be sufficient to achieve water quality standards and protect beneficial uses.

Impaired waterbody – A waterbody or stream segment for which sufficient credible data shows that the waterbody or stream segment is failing to achieve compliance with applicable water quality standards (nonsupport or partial support of beneficial uses). [75-5-103(11) MCA]

Nonpoint source – Source of pollution that originates from diffuse runoff, seepage, drainage, or infiltration. [ARM 17.30.602(18)] Nonpoint source pollution is generally managed through best management practices or a water quality restoration plan.

Partial support – A beneficial use determination, based on sufficient credible data, that a waterbody is not achieving all the water quality standards for the use in question, but the degree of impairment is not severe.

Point source – A discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, or vessel or other floating craft, from which pollutants are or may be discharged. [75-5-103(24) MCA]

Reasonable land, soil, and water conservation practices – Methods, measures, or practices that protect present and reasonably anticipated beneficial uses. These practices include but are not limited to structural and nonstructural controls and operation and maintenance procedures. Appropriate practices may be applied before, during, or after pollution producing activities. [ARM 17.30.602(21)]

Total Maximum Daily Load (TMDL) – The sum of the individual waste load allocations for point sources and load allocations for both nonpoint sources and natural background sources established at a level necessary to achieve compliance with applicable water quality standards. [75-5-103(32) MCA] In practice, TMDLs are

water quality restoration targets for both point and nonpoint sources that are contained in a water quality restoration plan or in a permit. *The term TMDL is sometimes used to refer to a TMDL plan, or the water quality restoration plan developed to achieve the TMDL for one or more parameters. (see also “water quality restoration plan” below)*

Waterbody – A lake, reservoir, river, stream, creek, pond, marsh, wetland or other body of water above the ground surface.

Water quality restoration plan - A plan to improve water quality to achieve state water quality standards. Such a plan may also be referred to as a "TMDL plan" if it addresses the eight criteria used by the EPA to approve TMDL plans.

Water quality standards – the standards adopted in ARM 17.30.601 *et seq.* and WQB-7 to conserve water by protecting, maintaining, and improving suitability and usability of water for public water supplies, wildlife, fish and aquatic life, agriculture, industry, contact recreation, and other beneficial uses.

Acronyms and Abbreviations

ARM	Administrative Rules of Montana
BMP	Best Management Practice
BUD	Beneficial Use Determination
DEQ	Montana Department of Environmental Quality
DFWP	Montana Department of Fish, Wildlife and Parks
EPA	U.S. Environmental Protection Agency.
HUC	Hydrologic Unit
MPDES	Montana Pollution Discharge Elimination System
RLSWCP	Reasonable Land, Soil, and Water Conservation Practices

Chapter I

Waterbody List Ranking and Prioritization Process

Introduction

Priority setting is an important component of the process to develop the state's "303(d) List," or list of waterbodies in need of TMDL development. This document summarizes the process that the Montana Department of Environmental Quality (DEQ) used to set priorities for TMDL development in the year 2000. These priorities and related TMDL development schedule will be used to help guide many of the agency's financial and technical assistance decisions on TMDL development from now until April 1, 2002, at which time a new list will likely be developed.

The 1997 amendments to the Montana Water Quality Act require DEQ to review and revise the list and priority ranking of waterbodies identified as threatened or impaired [75-5-702 (4) & (8) of the Montana Code Annotated – MCA]. The Act also establishes the Statewide TMDL Advisory Group (TMDLAG) and directs DEQ to consult with the group to score and rank waterbodies as "high," "moderate," or "low" priority [75-5-702(8) MCA]. In addition to consulting with the advisory group, DEQ is directed to consult with local interest groups such as the TMDLAG, conservation districts, local watershed groups, and hold public meetings in various parts of the state.

The Act specified 13 specific ranking factors be considered by DEQ and TMDLAG [75-5-702 (4)]. These 13 factors are:

- Impacts to human health and aquatic life
- Character of the pollutant and severity of noncompliance
- Beneficial uses of the waterbody
- Size of the waterbody
- Extent of natural factors leading to the impairment
- Whether the water body is a high quality resource in the early stages of degradation
- Degree of interest and public support
- Immediate programmatic needs
- Availability of technology and resources to correct the problem
- Whether actions or voluntary programs are currently in place to control the problems
- Recreational, economic, and aesthetic importance of the waterbody
- State priorities and policies including the restoration of native fish, when appropriate
- Judicial orders or lawsuits

The TMDLAG met routinely from October 1997 to March 2000. The group was consulted again after the public meetings and prior to the development of the final draft List in July 2000. These meetings were open to the public and interested parties were notified of the meeting dates via mail, fax, email, or the Internet. The TMDLAG provided advice to DEQ on public participation, developing waterbody scores, and ranking the waterbodies. DEQ requested that TMDLAG members advise their local associates of the local public meeting schedules for commenting on the draft 303 D List. The advisory group also evaluated the use of overriding factors that might elevate a low or medium priority waterbody to high priority.

Steps in Developing TMDL Priorities

Developing a ranking process

DEQ, in consultation with the TMDLAG, developed a score sheet with weighting values for the various statutory factors. Weights of 3, 2, or 1 were applied to all of the various ranking factors depending on the relevance to water quality and socio-economic policy concerns. The ranking factors received a score of 2, 1, or 0 depending on the extent to which the waterbody exhibited the characteristics specified on the score sheet. The product of these two numbers resulted in a score for that factor. The scores for each factor were summed to create a total waterbody score. (For example, “the degree of public interest and support” was considered a factor of moderate importance; the weight given it was “2.” If there was a high degree of public interest and support in a waterbody under consideration (*e.g. existing watershed group, high landowner interest, and an active nonpoint source project with numerous participants*), the project was given a “2” score. Multiplying the score by the weight gave this factor a score of “4” which was added to twelve other factor scores to give a total score for the waterbody.

When the majority of waterbodies were assessed (sufficient and credible data review and beneficial use determination) for a particular watershed, DEQ Watershed Management Section staff scored the waterbodies and then visited and consulted with local conservation districts and various interest groups on the scoring results. Minor clarifications and improvements were made to the scoring sheet based on these meetings. The scoring sheet was improved by adding enough space to document the rationale for scoring the various factors. The scoring sheet showing the scoring and weighting factors is included as Attachment 1.

DEQ staff held several internal training sessions to discuss how to score water bodies consistently among the staff. All DEQ TMDL regional planners, on three occasions, met to score the same waterway, discuss differences in factor scores, and develop consensus scores. Monitoring staff were consulted by the planning staff from time to time during the scoring process to make sure data sets were complete.

Scoring and ranking in 14 sub-major basins

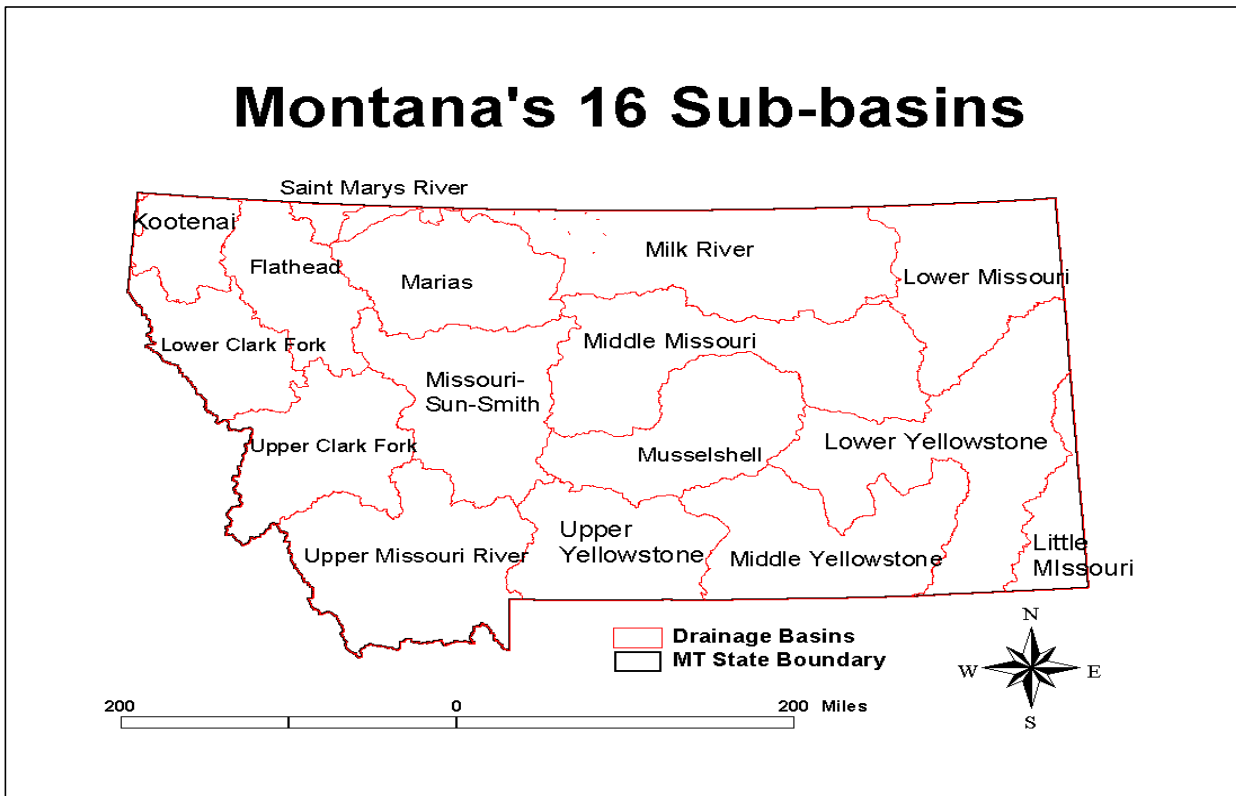
The DEQ Water Monitoring Section staff conducted a review of all 1998 listed waters for “sufficient and credible data” and made “beneficial use determinations.” Only waterbodies with sufficient and credible data and an impaired or threatened use stayed on the list and were scored and ranked. The information from the assessment was placed into spreadsheets accessible by all staff in the Planning, Prevention and Assistance Division. The staff of the DEQ Watershed Management Section scored the waterbodies that remained on the list based on the above assessments.

As an interim step in this process, the scores were charted and presented to the TMDLAG in December 1999. The group and DEQ staff discussed the relatively high ranked waterbodies. They were found to be reasonably representative of what would be considered a high priority for TMDL development. These waterbodies were generally ones with obvious impairments, they were ones with existing groups interested in water quality restoration, and often had efforts underway that were likely to result in substantial water quality improvements. The DEQ Watershed Management Section continued with the waterbody scoring after this December meeting and grouped the waterbodies on lists representing 14 sub-basins for future ranking.

The sub-basins are shown on Figure 1. The 16 sub-basins, from which the 14 were selected, are based on drainage basin boundaries or watersheds. The fourteen sub-basins were selected for ranking purposes based on a desire to promote citizen involvement and interest in implementing TMDLs at the local level. Designating “high” priority waterbodies in each sub-basin, as opposed to designating statewide priorities,

was intended to promote more widespread use of TMDLs as a water quality restoration tool. DEQ decided to combine two smaller sub-basins with adjacent sub-basins. The main reason was that there were so few listed water bodies in the St. Mary River basin and in the Little Missouri River basins. The St. Mary River sub-basin was combined with the Milk River basin for ranking and prioritization and the Lower Yellowstone, and Little Missouri River sub-basins were combined. These 16 basins have historically been used by DEQ and other agencies to promote coordination within the Montana Watershed Coordination Council.

Figure 1. Submajor basins for scoring and ranking threatened and impaired waterbodies.



Designating “High,” “Moderate,” and “Low” priority.

DEQ identified the top 15% of the scores in each of 14 sub-basins across the state and designated them as “high” priority. Scores falling in the top 15th to 30th percentile were designated as “moderate” priority. All others were given a “low” priority designation. Draft rankings and score sheet information were made available to the TMDLAG and attendees of its meetings, conservation districts, and other resource management agency staff at various locations around the state. DEQ planning and monitoring staff met with many conservation district supervisors in the state. In the western half of the state, several conservation districts did not see a need to meet on the issue or did not have enough time available to schedule meetings with DEQ.

Fifteen percent was used as the high priority cut-off for several reasons. It allows DEQ to focus on a sufficient annual number of TMDL projects to allow it to complete approximately all TMDLs in 7 years,

the amount of time remaining in the legislated 10-year schedule. (This number assumes that about 80 percent of the waterbodies de-listed in 2000 will be re-listed after they are re-evaluated in the next 3-4 years. Even though re-listed waters have 10 years to have TMDLs developed for them, DEQ plans to begin TMDL development for many of them within the 7-year time frame.

DEQ sponsored 18 public meeting to gather additional information

DEQ recognized that many of the scoring factors rely on a local knowledge and information from around the state. The public meetings on the revised 303(d) List and prioritization are particularly important for gathering information in the areas of public interest, availability of resources to address the water quality problems, the extent of natural factors leading to impairment, recreational, aesthetic, and economic importance, the likelihood that voluntary projects will be effective, and other ranking factors. Information and comments were collected at these meetings and during the public comment period on the 303(d) List. Proposed scoring criteria and scores were modified based on the information collected at the public meetings. DEQ also received additional water quality information at these meetings and comments on the de-listed waterbody re-evaluation schedule.

Statewide TMDL Advisory Group

The make up of this committee is specified in the 1997 amendments of the Montana Water Quality Act. The primary purpose of the group is to advise DEQ on the development of TMDL priorities. The DEQ Director appointed the members and meetings have been held regularly since October 1997 to discuss a ranking system and how it might be applied to those waterbodies that remain on the 303 d List for the year 2000. In the 1999 Legislature, TMDLAG was given additional authority to advise the department on TMDL-related issues besides ranking and prioritization. The advisory group is composed of 14 representatives, including one from each of the following interest groups:

- Livestock-oriented agriculture
- Farming-oriented agriculture
- Conservation or environmental interests
- Water-based recreation
- Forestry
- Municipalities
- Point source dischargers
- Mining
- Federal land management agencies
- State trust land management agencies
- Conservation districts west of the Continental Divide
- Conservation districts east of the Divide
- Hydroelectric utilities
- Fishing-related business

Scoring Sheet

Based on the comments of the TMDLAG, the score sheet underwent several changes during the 2-year development period. The results of these changes are provided in the following section. The Advisory Group recommended that the ranking factors to be divided into two types; these were Water Quality /Severity criteria and Water Resource / Policy criteria. The information used to establish the scores came primarily from the beneficial use support determination provided in spreadsheet form by the Water

Monitoring Section monitoring specialists. One modification made to the score sheet by DEQ and endorsed by the TMDLAG was to split “severity and character of the pollutants” into two separate criteria. The agency felt that the terms have substantially different meanings and it would make scoring easier.

Segmentation of waterbodies for assessment purposes posed a challenge in the ranking process. In the beneficial use support determination process, waterbodies were often segmented, because of major land use changes, changing hydrological conditions, or limited availability of various types of water quality data. If a waterbody was segmented, a separate scoring and ranking was done on each segment. In those cases where segments were not listed separately in Part A of this report, the waterbody was ranked based on the information relating to most impaired reach.

DEQ, on the advice of the TMDLAG, considered but decided not to use the ranking factor: “presence of lawsuits or other legal actions.” It was concluded that court orders would prevail over a ranking process. The actual form used for scoring waterbodies is found in Appendix A. A more thorough description of the 13 ranking factors and how they were applied by DEQ follows.

Scoring Water Quality / Severity Factors

For Water Quality / Severity there were 6 factors. The highest weight (3) were given to the “impacts on human health and aquatic life,” “character of the pollutant,” and “severity of impairment.” A weight of “2” was applied to the “beneficial uses affected” and “size of the waterbody.” A weight of “1” was applied to the “extent of natural factors.”

1. Impacts to Human Health and Aquatic Life

The information to score this factor was taken directly from the data sheets from the beneficial use determination. Three beneficial uses related to human health are water contact recreation, human consumption of drinking water, and human fish consumption. The two uses relating to aquatic life are aquatic life protection and fisheries support. Two points were assigned to this factor when both human health and aquatic life uses were impaired. (Each listed water body is assessed in terms of its support for each of the five beneficial uses and several other beneficial uses specified in Montana’s water quality standards.) One point was assigned if human health or aquatic life uses are not fully supported – but not both. No points were assigned if the water is supporting human health and aquatic life uses or if it is threatened for human health and aquatic life, even if it is impaired for its other uses.

2. Character of Pollutant

Two points were assigned when toxic pollutant criteria are being exceeded. "Priority toxic pollutants" are those toxic chemicals for which EPA has issued Clean Water Act (CWA) section 304(a) criteria guidance and whose presence or discharge could reasonably be expected to interfere with designated uses. Examples of priority pollutants include many organic solvents, pesticides, and heavy metals. "Acutely" toxic pollutants generally create conditions lethal to aquatic organisms. Lethality occurs as a function of the magnitude of pollutant concentrations and the duration of organism exposure. "Chronic" toxic pollutants cause or can be expected to cause death or functional impairment when organisms are exposed for periods of time generally exceeding 96 hours.

Nutrients, fecal coliform bacteria, sedimentation, high temperature, high or low pH, organic enrichment, salinity, or other conventional pollutants were given a score of “1,” generally because they are more easily treated than toxics and their impacts are generally felt to be less severe and long lasting.

A relatively high percentage (i.e. 80-90 percent) of naturally occurring pollutants would result in a zero score for this factor. (If a pollutant were entirely from natural sources, the waterbody would not be considered impaired for that parameter.)

3. Severity and Magnitude of Water Quality Standard Noncompliance

Determination of severity and magnitude of impairment comes from the data sheets from the beneficial use support determinations. The “threatened” category of use attainment means a water body has a documented downward trend in water quality, or that there are no permits or regulatory programs that when applied to proposed pollution sources, are likely to maintain water quality. Nonsupport of any use was given a “2” score, partial support of any use was given a “1” and threatened status rated a “0.”

4. Beneficial Uses Established

Montana’s water quality regulations classify each water body as A-1, B-1, B2, B3, C-1, C-2, C-3, and I. The regulations also designate the beneficial uses associated with each classification.

This factor documents the use classification found in the water quality regulations to determine a score of “2,” “1,” or “0.” In general, waterbodies classified as A or B have a greater number of beneficial uses which include drinking, culinary, and food processing uses. These waters were given a “2” score while B&C waters were given a “1” score. Waters classified as I are impaired or in need of improvement. I waters were given a “0.”

Class A-1, B-1, B-2 and B-3 waters are suitable for drinking, culinary and food processing purposes after conventional treatment for bathing, swimming, and recreation. A-1 and B-1 waters are suitable for growth and propagation of salmonid fishes. B-2 is marginal for propagation of salmonid fishes. B-3 waters are for propagation of non-salmonid fishes. All must support associated aquatic life, waterfowl and furbearers; and agriculture and industrial water supply.

Class C-1, C-2 and C-3 waters are suitable for bathing, swimming, and recreation. C-1 waters are suitable for growth and propagation of salmonid fishes. C-2 is marginal propagation of salmonid fishes. C-3 is for propagation of non-salmonid fishes. All must support associated aquatic life, waterfowl and furbearers; and agriculture and industrial water supply.

Although Class I waters are considered severely impaired, it is the goal of the state to have these waters fully support drinking, culinary, and food processing purposes after conventional treatment; bathing, swimming, and recreation; growth and propagation of fishes and associated aquatic life, waterfowl, and furbearers; and agricultural and industrial water supply.

5. The Size of the Water Body Not Achieving Standards

The size of impaired segment is taken from the spreadsheet for the determination of beneficial use support. The size refers to the total miles or acres not supporting, partially supporting, or threatened for the segment or reach. The length was considered the most important factor for streams because it directly relates to the number of uses and potential uses. The longer the stream or river the more opportunities are likely to exist for using it for recreation, agriculture, and other uses. Flow and cross sections were not considered as important because in drier areas of the state intermittent and even very small streams may be critical to aquatic resources and other economic beneficial uses that support local economies. Surface areas of lakes were used in this factor because they determine the level of human use and in most lakes the surface waters are generally the most biologically active and productive zones of the water body.

Size categories were chosen after reviewing a state map of listed waters. The likely degree of use and variety of habitats were primary considerations.

6. Extent of Natural Factors Over Which Humans Have No Control That Are Contributing To An Impairment

This information was compiled in the spreadsheets developed in the beneficial use support determination that identified probable causes and sources of impairment.

Scoring Water Resource / Policy Value Factors

Of the factors identified as Water Resource / Policy only “important high quality resource in an early stage of degradation” was given a weight of “3”. “State priorities and policies, including protection and restoration of native fish, when appropriate was given a weight of “1”. All others were given a “2.”

1. Is the Water Body An Important High Quality Resource in the Early Stages of Degradation

In scoring this factor DEQ, evaluated the unique and valuable resources for the state or community. The primary concern was that the waterbodies must be in an early stage of degradation. The listing of a waterbody as threatened or partially supporting was also used as an indicator of “early stages of degradation,” when no other data was available.

Examples of high resource value waters, or high quality resources include A-Closed and A-1 water bodies, high quality fisheries and FWP-core target areas for fisheries of the Montana Fish, Wildlife and Parks, important native fish habitat, outstanding resource waters, spring creeks. Examples are: the Missouri River Fishery below Holter Reservoir, the fisheries of the Gallatin, Madison, or Jefferson Rivers. If in the early stages of degradation, these waters scored a “2.”

Examples of moderate quality resources include other waterbodies that are either partially supporting or are classified as threatened. If these waters were in an early stage of degradation they would score a “1.”

Examples of non-high quality resource waters include Class I waters or other waters not supporting their 303(d) listed beneficial uses would score “0.” These waters are not in early stages of degradation and score a “0.”

2. Degree of Public Interest and Support

High degree of interest can be described for watersheds that have an active watershed group, have active watershed projects, have a high degree of active landowner participation, a high degree of multi-agency participation (federal, state, local), active nonpoint source (NPS) grant projects, and grant projects having a high percentage of “matching funds ” provided on projects. Another example would be a small watershed where more than 75 percent of landowners are involved in restoration efforts. These waters would score a “2.”

Moderate degree of interest includes a moderately active or developing watershed group, 50% landowner and agency participation in a small watershed, a moderate amount of restoration work being developed and/or completed, moderate amount of local matching funds, or a moderate amount of NPS grant work. These would score a “1.”

Low degree of interest includes minimal or no local landowner or agency support, no active watershed group, or local opposition to watershed planning or water quality management. These waters would score a “0.”

3. Immediate Programmatic Needs (Programmatic is assumed to relate to TMDL Program Needs.)

These can be described as watersheds or waterbodies that have immediate needs that make TMDL development time-critical. Needs may include opportunities to coordinate with other programs, pollutant trading opportunities, water quality permitting needs (MPDES), waterbodies that are an immediate threat to human health or those that contain toxic or carcinogenic material(s). Opportunities to complete TMDLs for several adjacent impaired waterbodies or listed segments were considered a programmatic need. A “2” is scored for high and immediate need or coordination opportunity. A “1” is scored for less immediate need or coordination opportunity and “0” is scored for a low level of need or coordination opportunity.

4. Availability of Technology and Resources to Correct the Problem.

This rating relates to the amount of funding, technical expertise, and technology available. For example, a severely impaired water that will require millions of dollars to monitor, assess, and develop a TMDL may score a “0” or “1” due to the lack of funding or lack of cost effective technology to address the problem. On the other hand, a simple water quality problem that can be corrected inexpensively with volunteer help may receive a score of “2”.

5. Whether Actions or Voluntary Programs that are Likely to Correct the Impairment Are Currently in Place.

The TMDLAG debated the statutory meaning of this factor at length. They concluded that watersheds with a high level of clean up activity or voluntary program implementation should receive a high score. They rejected the idea that such activities would eliminate the need for a TMDL and therefore should receive a low score. In summary, the TMDLAG agreed that priority should be given to water bodies that have already begun the restoration process rather than those with little going on. A higher score “2” would go to waters with a high level of existing implementation activity.

This factor is scored based on whether planned actions or voluntary programs currently in place are likely to be sufficient to correct the impairment. Actions or voluntary programs may include agency (federal, state, local) priorities such as local NPS watershed projects (EPA and DEQ supported watershed or water quality restoration projects), USDA - Environmental Quality Incentive Program (EQIP) projects, etc. or whether a developed or implemented watershed plan is likely to be sufficient to correct the impairment. Whether or not active landowner participation is sufficient to address the size of the impaired segment is a consideration. Public interest and successful voluntary approaches were also considered when giving waters a score of “2.”

6. Recreational, Economic, and Aesthetic Importance.

A waterbody is important for recreational, economic, or aesthetic reasons, if it is more valuable for these purposes than other nearby waters. Some examples of importance include historical significance, the proximity of the waterbody to a national or state park, the presence of an economically important fishery, or uses of the waterbody for additional recreational activities that including fishing, floating, canoeing, and swimming. A designated "Wild and Scenic River," a public water supply for a city or large town, or a particularly important irrigation water source would justify a higher score. The degree to which the water body exhibits these values will determine a score of “2,” “1,” or “0” score.

7. *State Priorities and Policies including Protection and Restoration of Native Fish, when appropriate.
(ie: Native Fish, Whirling disease, Water Rights, T&E Species)*

This scoring factor relates to the number of DEQ and other agency programs that would benefit from the monitoring, planning, and implementation activities that go with TMDL development. These programs include drinking water priorities, source water priorities, native fish restoration areas, abandoned mine clean-up priority areas, recreation and fisheries, development, salinity control activities, and water quantity management.

Chapter II

Results of Scoring and Ranking

SUMMARY OF RANKINGS OF 14 SUB-BASINS

Table 1. Summary rankings of high, moderate, and low priority waters

<u>Priority</u>	<u>Number</u>	<u>Priority</u>	<u>Number</u>
YELLOWSTONE REGION		COLUMBIA REGION	
Upper Yellowstone Sub-basin		Upper Clark Fork Sub-basin	
High	6	High Priority Waterbodies	16
Moderate	4	Moderates	16
Low	25	Lows	84
Middle Yellowstone Sub-basin		Kootenai Sub-basin	
High	1	Highs	2
Moderate	3	Moderates	5
Low	6	Lows	16
Lower Yellowstone Sub-basin		Lower Clark Fork Sub-basin	
High	0	Highs	3
Moderate	1	Moderates	4
Low	5	Lows	13
LOWER MISSOURI REGION		Flathead Sub-basin	
Lower Missouri Sub-basin		High	7
High	1	Moderate	9
Moderate	2	Low	11
Low	6	UPPER MISSOURI REGION	
Milk and St. Mary Sub-basin		Missouri /Sun/Smith Sub-basin	
High	5	High	14
Moderate	1	Moderate	10
Low	9	Low	42
Middle Missouri Sub-basin		Upper Missouri Sub-basin	
High	4	High	16
Moderate	3	Moderate	16
Low	11	Low	66
Musselshell Sub-basin			
High	3		
Moderate	2		
Low	5		
Marias Sub-basin			
High	3		
Moderate	2		
Low	6		
		<u>Totals</u>	<u>High Mod</u>
		Yellowstone Region	7 8
		Upper Missouri Region	30 26
		Columbia Region	28 34
		Lower Missouri Region	16 10
		Totals	81 78

Table 2.

Results of Priority Scoring and Ranking for Waters in 14 Sub-basins

YELLOWSTONE RIVER PLANNING REGION

Upper Yellowstone Sub-basin

BASIN	HUC	WATERBODY .	LOCATION DESCRIPTION	PRIORITY	TOTAL
Yellowstone	10070002	MT43B003_010	YELLOWSTONE RIVER from Reese Cr to Bridger Cr.	High	41
Yellowstone	10070002	MT43B004_111	BIG CREEK from NF boundary to the mouth (Yellowstone R)	High	40
Yellowstone	10070005	MT43C002_140	DAISY CREEK from headwaters to mouth (Stillwater R)	High	40
Yellowstone	10070006	MT43D002_110	FISHER CREEK from headwaters to mouth (Clarks Fork Yellowstone R)	High	40
Yellowstone	10070003	MT43A001_012	SHIELDS RIVER from headwaters to Cottonwood Cr	High	40
Yellowstone	10070002	MT43B004_071	MILL CREEK, National Forest boundary to mouth (Yellowstone R)	High	38
Yellowstone	10070003	MT43A001_011	SHIELDS RIVER from Cottonwood Cr. to the mouth (Yellowstone R)	Moderate	37
Yellowstone	10070003	MT43A002_040	ELK CREEK from headwaters to the mouth (Shields R)	Moderate	35
Yellowstone	10070001	MT43B002_031	SODA BUTTE CREEK McLaren Tailings to the Montana Border.	Moderate	35
Yellowstone	10070003	MT43A002_031	COTTONWOOD CREEK from the mouth (Shields R) eight miles upstream	Moderate	34
Yellowstone	10070002	MT43B004_011	OTTER CREEK from 2 mi downstream of Hwy 191 bridge to the mouth (Ylstne R)	Low	32
Yellowstone	10070002	MT43B004_131	BOULDER RIVER from the mouth (Yellowstone R) five miles upstream	Low	30
Yellowstone	10070005	MT43C002_081	BUTCHER CREEK from highway 78 to the mouth (Rosebud Cr)	Low	30
Yellowstone	10070002	MT43B004_141	EAST BOULDER RIVER from Elk Cr to the mouth (Boulder R)	Low	30
Yellowstone	10070004	MT43F003_010	BIG LAKE, T2N R21E, 3081 AC.	Low	27
Yellowstone	10070006	MT43D001_020	CLARKS FORK YELLOWSTONE RIVER from headwaters to the Montana Border	Low	26
Yellowstone	10070002	MT43B004_142	EAST BOULDER RIVER from NF boundary to Elk Cr	Low	26
Yellowstone	10070005	MT43C001_010	STILLWATER RIVER from headwaters to Flood Cr	Low	26
Yellowstone	10070004	MT43F002_021	CANYON CREEK from highway 532 to the mouth (Yellowstone R)	Low	24
Yellowstone	10070004	MT43F003_020	HAILSTONE LAKE T3N R20E	Low	23
Yellowstone	10070004	MT43F003_030	HALFBREED LAKE T3N R21E SEC 33	Low	23
Yellowstone	10070006	MT43D002_070	WILLOW CREEK from headwaters to the mouth (Cooney Reservoir)	Low	21
Yellowstone	10070005	MT43C002_041	GROVE CREEK from the mouth (West Fk Stillwater R) five miles upstream	Low	20
Yellowstone	10070006	MT43D002_060	RED LODGE CREEK from Cooney Reservoir to the mouth (Rock Cr)	Low	20
Yellowstone	10070006	MT43D002_120	ROCK CREEK from Red Lodge Cr to the mouth (Clarks Fork)	Low	20
Yellowstone	10070006	MT43D002_131	ROCK CREEK from West Fork Rock Cr to Red Lodge Cr	Low	20
Yellowstone	10070002	MT43B004_102	SIX MILE CREEK, Absaroka-Beartooth Wilderness boundary to NF boundary	Low	20
Yellowstone	10070002	MT43B004_101	SIX MILE CREEK,National Forest boundary to mouth (Yellowstone R)	Low	20
Yellowstone	10070002	MT43B004_090	SUCE CREEK, Absaroka-Beartooth Wilderness bdry to mouth (Yellowstone R)	Low	20
Yellowstone	10070001	MT43B002_010	REESE CREEK from the state border to the mouth (Yellowstone R)	Low	19
Yellowstone	10070002	MT43B004_031	LOWER DEER CREEK from the mouth (Yellowstone R) four miles upstream	Low	18

Yellowstone	10070002	MT43B004_081	PINE CREEK, from the mouth (Yellowstone R) 1.6 miles upstream	Low	18
Yellowstone	10070002	MT43B004_041	UPPER DEER CREEK from the mouth (Yellowstone R) 6.5 miles upstream	Low	18
Yellowstone	10070002	MT43B004_021	BIG TIMBER CREEK from Swamp Cr. to the mouth (Yellowstone R)	Low	17
Yellowstone	10070006	MT43D002_031	BLUEWATER CREEK from mouth 9 miles upstream (Clarks Fork Yellowstone R)	Low	17

Middle Yellowstone Sub-basin

Yellowstone	10100003	MT42A001_012	ROSEBUD CREEK, N. Cheyenne Res. Bdry to an irrig. dam 3.8 mi above the mouth	High	29
Yellowstone	10100003	MT42A001_011	ROSEBUD CREEK, From the mouth 3.8 mi upstream to an irrigation dam	Moderate	25
Yellowstone	10090101	MT42B003_010	TONGUE RIVER RESERVOIR	Moderate	25
Yellowstone	10070007	MT43Q001_012	YELLOWSTONE RIVER between Alkali Cr and the Huntley Div. Dam	Moderate	25
Yellowstone	10080015	MT43R001_020	BIGHORN RIVER from Yellowtail Dam to Crow Indian Res. Boundary	Low	24
Yellowstone	10090101	MT42B002_031	HANGING WOMAN CREEK from Stroud Cr to the mouth (Tongue R)	Low	24
Yellowstone	10070007	MT43Q003_010	SPIDEL WATERFOWL PRODUCTION AREA T5N R23E SEC 33	Low	23
Yellowstone	10090102	MT42C001_011	TONGUE RIVER from div. dam just above Pumpkin Cr to the mouth (Yellowstone R)	Low	22
Yellowstone	10080010	MT43P002_010	CROOKED CREEK, Headwaters to the Wyoming Border	Low	20
Yellowstone	10080015	MT43R001_010	BIGHORN RIVER, Crow Indian Res. Boundary to the mouth (Yellowstone R)	Low	18

Lower Yellowstone/Little Missouri Sub-basin

Yellowstone	10100004	MT42M002_141	CEDAR CREEK frm the mouth (Yell. R) 26 mi. upstr. (apprx. the Prairie/Wibaux Co. line)	Moderate	35
Yellowstone	10100004	MT42M001_012	YELLOWSTONE RIVER, Powder R to the Lower Yellowstone Diversion Dam.	Low	34
Yellowstone	10100001	MT42K001_020	YELLOWSTONE RIVER from the Big Horn to the Cartersville Diversion Dam	Low	29
Yellowstone	10100004	MT42M002_171	CHERRY CREEK from the mouth (Yellowstone R) 20 miles upstream	Low	22
Yellowstone	10110201	MT39F001_010	THOMPSON CREEK, Headwaters to mouth	Low	21
Yellowstone	10110204	MT39G002_010	LAMESTEER NATIONAL WILDLIFE REFUGE T12N R60E Sec 15	Low	18

LOWER MISSOURI PLANNING REGION

Lower Missouri Sub-basin

Lower Missouri	10060001	MT40S001_010	MISSOURI RIVER from Fort Peck Dam to the Poplar R	High	41
Lower Missouri	10060005	MT40S003_010	MISSOURI RIVER from the Poplar R to North Dakata	Moderate	26
Lower Missouri	10060002	MT40P001_014	REDWATER RIVER from Pasture Cr. to the mouth (Missouri R)	Moderate	26
Lower Missouri	10060002	MT40P001_012	REDWATER RIVER from Hell Cr. to Buffalo Springs Cr.	Low	25
Lower Missouri	10060006	MT40R001_020	BIG MUDDY CREEK from Canada to northern boundary of Fort Peck Reservation	Low	23
Lower Missouri	10060006	MT40R001_010	BIG MUDDY CREEK northern Fort Peck Res. boundary to the mouth (Missouri R)	Low	23
Lower Missouri	10060002	MT40P002_020	HORSE CREEK from headwaters to mouth at Redwater R near Circle, MT	Low	17
Lower Missouri	10060001	MT40S002_010	PRAIRIE ELK CREEK from the East and Middle Forks to the mouth (Missouri R)	Low	13

Lower Missouri	10060001	MT40S002_030	SAND CREEK from the forks to the mouth (Missouri R)	Low	13
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Milk / St Mary Sub-basin

Lower Missouri	10050006	MT40G001_010	SAGE CREEK, Laird Cr to the mouth	High	41
Lower Missouri	10050014	MT40M003_010	LAKE BOWDOIN	High	38
Lower Missouri	10010002	MT40T002_010	DIVIDE CREEK from headwaters to the mouth (Saint Mary R)	High	35
Lower Missouri	10050012	MT40O002_030	WILLOW CREEK, mainstem plus North Fork below Halfpint Reservoir	High	35
Lower Missouri	10050012	MT40O002_050	LONE TREE CREEK from Headwaters to mouth at Willow Cr	High	35
Lower Missouri	10050014	MT40M001_020	BEAVER CREEK, Black Coulee to the mouth (Milk R)	Moderate	30
Lower Missouri	10050012	MT40O001_010	MILK RIVER, Beaver Cr to the mouth (Missouri R)	Low	29
Lower Missouri	10050009	MT40I001_040	KING CREEK, Headwaters to Fort Belknap Reservation boundary	Low	27
Lower Missouri	10050004	MT40J001_010	MILK RIVER, from Fresno Dam to Whitewater Cr	Low	27
Lower Missouri	10050016	MT40O003_010	PORCUPINE CREEK junction of West and Middle Forks to mouth (Milk R)	Low	27
Lower Missouri	10050004	MT40J001_020	MILK RIVER, Whitewater Cr to Beaver Cr	Low	26
Lower Missouri	10050014	MT40M003_020	NELSON RESERVOIR T32N R32E	Low	25
Lower Missouri	10050002	MT40F005_010	FRESNO RESERVOIR (on Milk R Mainstem)	Low	25
Lower Missouri	10050008	MT40J004_010	BATTLE CREEK, Canadian border to the mouth (Milk R)	Low	20
Lower Missouri	10050014	MT40M002_030	BIG WARM CREEK, Fort Belknap Res. Boundary to mouth (Beaver Cr)	Low	18

Middle Missouri Sub-basin

Lower Missouri	10040103	MT41S004_020	BIG SPRING CREEK from East Fork to mouth (Judith R)	High	48
Lower Missouri	10040103	MT41S002_080	SOUTH FORK JUDITH RIVER, headwaters to mouth	High	40
Lower Missouri	10040103	MT41S004_030	BEAVER CREEK from headwaters to mouth (Cottonwood Ck)	High	39
Lower Missouri	10040104	MT40E001_010	MISSOURI RIVER, Bullwhacker Cr to Fort Peck Reservoir	High	39
Lower Missouri	10040101	MT41T001_010	MISSOURI RIVER from the Marias R to the Bullwhacker Cr	Moderate	35
Lower Missouri	10040104	MT40E004_010	FORT PECK RESERVOIR	Moderate	33
Lower Missouri	10040104	MT40E002_070	RUBY GULCH, Headwaters to 1 Mi bel. Zortman, MT T25N R25E SEC 16 TO SEC 7	Moderate	31
Lower Missouri	10040104	MT40E002_090	ROCK CREEK, Headwaters to mouth (Missouri R)	Low	27
Lower Missouri	10040103	MT41S001_010	JUDITH RIVER from Big Spring Cr to the mouth (Missouri R)	Low	26
Lower Missouri	10040104	MT40E002_010	MONTANA GULCH, Headwtrs (Gold Bug & Yellow Boy Mine Adits) to mouth (Rock Cr)	Low	25
Lower Missouri	10040104	MT40E002_060	RUBY CREEK, 1 mi below Zortman (Alder & Ruby Gulch junction) to mouth at CK Cr.	Low	25
Lower Missouri	10040104	MT40E002_022	ARMELLS CREEK, Headwaters to Deer Cr	Low	24
Lower Missouri	10040104	MT40E002_100	MILL GULCH, tributary to Rock Cr near Landusky	Low	24
Lower Missouri	10040103	MT41S002_030	WARM SPRING CREEK from 5 miles above mouth to mouth (Judith R)	Low	23
Lower Missouri	10040105	MT40D001_010	BIG DRY CREEK, Steves Fork to mouth (Fort Peck Reservoir)	Low	22
Lower Missouri	10040104	MT40E002_050	ALDER GULCH T26N R24E SEC 13 TO T26N R25E SEC 16. Headwaters to Ruby Cr.	Low	20
Lower Missouri	10040103	MT41S002_010	DRY WOLF CREEK from headwaters to the mouth (Wolf Cr)	Low	19
Lower Missouri	10040104	MT40E003_020	NELSON CREEK, Headwaters to the mouth (Big Dry Cr Arm of Fort Peck Res)	Low	15

Musselshell Sub-basin

Lower Missouri	10040203	MT40B001_021	FLATWILLOW CREEK, Headwaters to the Highway 87 bridge	High	35
Lower Missouri	10040205	MT40C003_010	MUSSELSHELL RIVER, from Flatwillow Cr to Fort Peck Reservoir	High	35
Lower Missouri	10040201	MT40A002_050	CARELESS CREEK, Junction with Deadmans Basin Canal to Mouth (Musselshell R)	High	35
Lower Missouri	10040201	MT40A001_010	MUSSELSHELL RIVER, No & So Fk confluence to Deadmans Basin Diversion Canal	Moderate	29
Lower Missouri	10040201	MT40A002_080	PAINTED ROBE CREEK, Headwaters to the mouth (Musselshell R)	Moderate	29
Lower Missouri	10040204	MT40B002_030	COLLAR GULCH, Headwaters to mouth (Fords Cr)	Low	27
Lower Missouri	10040203	MT40B001_022	FLATWILLOW CREEK, Highway 87 bridge to the mouth (Musselshell R)	Low	27
Lower Missouri	10040202	MT40C001_010	MUSSELSHELL RIVER, from HUC boundary SW of Roundup to Flatwillow Cr	Low	24
Lower Missouri	10040201	MT40A001_020	MUSSELSHELL RIVER, Deadmans Basin Div. Canal to HUC boundary near Roundup	Low	23
Lower Missouri	10040204	MT40B002_020	CHICAGO GULCH, Headwaters to the mouth (Fords Cr)	Low	20

Marias Sub-basin

Lower Missouri	10030104	MT41K004_030	FREEZEOUT LAKE	High	42
Lower Missouri	10030205	MT41O001_030	TETON RIVER from North and South Forks to Deep Cr.	High	40
Lower Missouri	10030102	MT41Q005_020	BENTON LAKE T22N R3E	High	39
Lower Missouri	10030205	MT41O004_020	PRIEST BUTTE LAKE	Moderate	38
Lower Missouri	10030205	MT41O001_020	TETON RIVER from Deep Cr to Muddy Cr	Moderate	37
Lower Missouri	10030205	MT41O001_010	TETON RIVER from Muddy Cr to the mouth (Marias R)	Low	35
Lower Missouri	10030203	MT41P001_020	MARIAS RIVER from Tiber Dam to the mouth (Missouri R)	Low	34
Lower Missouri	10030204	MT41P005_010	OILMONT WETLAND, T35N R1W Sec35	Low	29
Lower Missouri	10030203	MT41P002_030	PONDERA CREEK/COULEE, Headwaters to the mouth (Marias R)	Low	27
Lower Missouri	10030203	MT41P002_050	CORRAL CREEK, Headwaters to mouth at Government-Cottonwood Crs	Low	19
Lower Missouri	10030204	MT41P004_020	EAGLE CREEK from headwaters to mouth at Tiber Reservoir.	Low	15

COLUMBIA PLANNING REGION**Upper Clark Fork Sub-basin**

Columbia	17010201	MT76G004_010	LITTLE BLACKFOOT RIVER from Dog Cr to the mouth (Clark Fork R)	High	53
Columbia	17010201	MT76G004_020	LITTLE BLACKFOOT RIVER from the headwaters to Dog Cr	High	53
Columbia	17010202	MT76E001_010	CLARK FORK RIVER from the Blackfoot R to Flint Cr	High	52
Columbia	17010201	MT76G002_072	LOST CREEK from the south State Park boundary to the mouth (Clark Fork R)	High	52
Columbia	17010203	MT76F001_010	BLACKFOOT RIVER from headwaters to Landers Fork	High	51
Columbia	17010203	MT76F003_011	NEVADA CREEK from headwaters to Nevada Lake	High	48
Columbia	17010203	MT76F003_012	NEVADA CREEK from Nevada Lake to the mouth (Blackfoot R)	High	48

Columbia	17010201	MT76G002_012	WARM SPRINGS CREEK (Near Warm Springs) from headwaters to Meyers Dam	High	46
Columbia	17010203	MT76F001_033	BLACKFOOT RIVER from Belmont Cr. to mouth (Clark Fork)	High	45
Columbia	17010205	MT76H001_030	BITTERROOT RIVER from Eightmile Cr to the mouth (Clark Fork R)	High	44
Columbia	17010205	MT76H001_020	BITTERROOT RIVER from Skalkaho Cr to Eightmile Cr	High	44
Columbia	17010205	MT76H001_010	BITTERROOT RIVER from the east and west forks to Skalkaho Cr	High	44
Columbia	17010203	MT76F004_110	KLEINSCHMIDT CREEK from mouth 1.5 miles upstream	High	44
Columbia	17010201	MT76G002_011	WARM SPRINGS CRK (Nr. W. Sprgs) fr. mouth (C. Fork) to Meyers Dam (T5N, R12W, SEC 25)	High	44
Columbia	17010201	MT76G001_010	CLARK FORK RIVER from Flint Cr to the Little Blackfoot R	High	43
Columbia	17010203	MT76F004_100	MONTURE CREEK from headwaters to the mouth (Blackfoot R)	High	43
Columbia	17010203	MT76F006_070	BELMONT CREEK from headwaters to mouth (Blackfoot R)	Moderate	42
Columbia	17010203	MT76F001_020	BLACKFOOT RIVER from Landers Fork to Nevada Cr	Moderate	42
Columbia	17010203	MT76F001_032	BLACKFOOT RIVER from Monture Cr. to Belmont Cr.	Moderate	42
Columbia	17010203	MT76F001_031	BLACKFOOT RIVER from Nevada Cr to Monture Cr	Moderate	42
Columbia	17010202	MT76E003_040	FRED BURR CREEK from Fred Burr Lake to mouth (Flint Cr)	Moderate	41
Columbia	17010202	MT76E003_100	DOUGLAS CREEK (Above Philipsburg), Headwaters to mouth (Flint Cr)	Moderate	40
Columbia	17010203	MT76F006_031	ELK CREEK from headwaters to Stinkwater Cr.	Moderate	40
Columbia	17010203	MT76F006_032	ELK CREEK from Stinkwater Cr. to the mouth (Blackfoot R)	Moderate	40
Columbia	17010203	MT76F003_100	NEVADA SPRING CREEK from headwaters to mouth (Nevada Cr)	Moderate	40
Columbia	17010203	MT76F004_090	ROCK CREEK from headwaters to the mouth (North Fork Blackfoot R)	Moderate	40
Columbia	17010205	MT76H004_190	RYE CREEK, headwaters to mouth (Bitterroot R)	Moderate	40
Columbia	17010203	MT76F005_060	BLANCHARD CREEK from the North Fork to the mouth (Clearwater R)	Moderate	39
Columbia	17010202	MT76E003_012	FLINT CREEK from Boulder Cr to mouth (Clark Fork)	Moderate	39
Columbia	17010202	MT76E003_011	FLINT CREEK from Georgetown Lake to Boulder Cr confluence	Moderate	39
Columbia	17010202	MT76E002_010	ROCK CREEK mainstem from headwaters to mouth (Clark Fork)	Moderate	39
Columbia	17010203	MT76F002_040	BEARTRAP CREEK from Mike Horse Cr to the mouth (Blackfoot R)	Moderate	38
Columbia	17010202	MT76E003_060	BOULDER CREEK from headwaters to mouth (Flint Cr)	Low	37
Columbia	17010201	MT76G003_020	SILVER BOW CREEK from the Warm Springs Pond 2 outlet to headwaters	Low	37
Columbia	17010202	MT76E002_030	WEST FORK ROCK CREEK from headwaters to mouth (Rock Cr)	Low	37
Columbia	17010201	MT76G001_040	CLARK FORK RIVER from Cottonwood Cr to Warm Springs Cr	Low	36
Columbia	17010202	MT76E004_041	HARVEY CREEK from headwaters to Grouse Gulch	Low	36
Columbia	17010201	MT76G002_120	MILL-WILLOW BYPASS from Silver Bow Cr to the Clark Fork R	Low	36
Columbia	17010202	MT76E004_042	HARVEY CREEK from Grouse Gulch to mouth (Clark Fork R)	Low	35
Columbia	17010201	MT76G002_090	RACETRACK CREEK from the national forest boundary to the mouth (Clark Fork R)	Low	35
Columbia	17010201	MT76G002_100	DEMPSEY CREEK from the national forest boundary to the mouth (Clark Fork R)	Low	34
Columbia	17010203	MT76F003_022	JEFFERSON CREEK from 1 mi above Madison Gulch to mouth (Nevada Cr)	Low	34
Columbia	17010202	MT76E003_030	NORTH FORK DOUGLAS CREEK, Headwaters to mouth (Douglas Cr-Flint Cr)	Low	33
Columbia	17010203	MT76F004_070	WARREN CREEK from headwaters to the mouth (Blackfoot R)	Low	32

Columbia	17010203	MT76F002_030	POORMAN CREEK from headwaters to the mouth (Blackfoot R)	Low	31
Columbia	17010205	MT76H004_100	SKALKAHO CREEK from headwaters to the mouth (Bitterroot R)	Low	31
Columbia	17010201	MT76G004_040	ELLISTON CREEK from headwaters to the mouth (Little Blackfoot R)	Low	30
Columbia	17010205	MT76H004_160	NORTH FORK RYE CREEK, Headwaters to mouth (Rye Cr - Bitterroot R., So. of Darby)	Low	30
Columbia	17010202	MT76E003_050	SOUTH FORK LOWER WILLOW CREEK, Headwaters to mouth (Flint Cr)	Low	30
Columbia	17010201	MT76G005_071	DUNKLEBERG CREEK from headwaters SW corner Sec 2, T9N, R12W	Low	29
Columbia	17010201	MT76G005_072	DUNKLEBERG CREEK from SW corner Sec 2, T9N, R12W to mouth (Clark Fork R)	Low	29
Columbia	17010205	MT76H004_150	McCLAIN CREEK from headwaters to mouth (Bitterroot R)	Low	29
Columbia	17010201	MT76G001_030	CLARK FORK RIVER from the Little Blackfoot R to Cottonwood Cr	Low	28
Columbia	17010205	MT76H004_020	KOOTENAI CREEK, Selway-Bitterroot Wilderness boundary to mouth (Bitterroot R)	Low	28
Columbia	17010205	MT76H004_090	SLEEPING CHILD CREEK from headwaters to the mouth (Bitterroot R)	Low	28
Columbia	17010205	MT76H003_010	WEST FORK BITTERROOT RIVER from headwaters to the mouth (Bitterroot R)	Low	28
Columbia	17010205	MT76H004_070	LOST HORSE CREEK from headwaters to the mouth (Bitterroot R)	Low	27
Columbia	17010201	MT76G004_052	TELEGRAPH CREEK from Hahn Cr. to the mouth (Little Blackfoot R)	Low	27
Columbia	17010201	MT76G004_051	TELEGRAPH CREEK from headwaters to Hahn Cr.	Low	27
Columbia	17010205	MT76H004_030	BEAR CREEK, Selway-Bitterroot Wilderness boundary to the mouth (Bitterroot R)	Low	26
Columbia	17010205	MT76H004_050	BLODGETT CREEK, Selway-Bitterroot Wilderness boundary to the mouth (Bitterroot R)	Low	26
Columbia	17010201	MT76G002_080	MODESTY CREEK from headwaters to the mouth (Clark Fork R)	Low	26
Columbia	17010202	MT76E004_010	WALLACE CREEK Headwaters to mouth (Clark Fork R)	Low	26
Columbia	17010203	MT76F002_020	WILLOW CREEK from Sandbar Cr to mouth, T15N R7W (Blackfoot R)	Low	26
Columbia	17010201	MT76G004_072	DOG CREEK from Meadow Cr to the mouth (Little Blackfoot R)	Low	25
Columbia	17010205	MT76H005_010	LOLO CREEK from headwaters to the mouth (Bitterroot R)	Low	25
Columbia	17010202	MT76E003_120	LONDONDERRY CREEK ADIT T8N, R13W, Sec. 4 (Near Maxville)	Low	25
Columbia	17010203	MT76F006_010	UNION CREEK from headwaters to mouth (Blackfoot R)	Low	25
Columbia	17010205	MT76H004_120	AMBROSE CREEK from headwaters to the mouth (Threemile Cr)	Low	24
Columbia	17010203	MT76F003_060	BLACK BEAR CREEK T12N R12W Sec 22SE	Low	24
Columbia	17010201	MT76G004_092	CARPENTER CREEK from Basin Cr. to the mouth (Little Blackfoot R)	Low	24
Columbia	17010201	MT76G004_091	CARPENTER CREEK from headwaters to Basin Cr	Low	24
Columbia	17010201	MT76G004_071	DOG CREEK from headwaters to Meadow Cr	Low	24
Columbia	17010201	MT76G005_091	GOLD CREEK from headwaters to the Natl. Forest boundary	Low	24
Columbia	17010201	MT76G005_092	GOLD CREEK from the forest boundary to the mouth (Clark Fork R)	Low	24
Columbia	17010201	MT76G002_052	MILL CREEK fr. section line betw. Sec 27 & 28, T4N, R11W to the mouth (Silver Bow Cr)	Low	24
Columbia	17010205	MT76H002_040	MOOSE CREEK from headwaters to the mouth (East Fork Bitterroot R)	Low	24
Columbia	17010201	MT76G006_010	ONTARIO MINE WETLAND T8N R6W SEC 21	Low	24
Columbia	17010205	MT76H004_080	TIN CUP CREEK, Selway-Bitterroot Wilderness boundary to the mouth (Bitterroot R)	Low	24
Columbia	17010201	MT76G002_062	WILLOW CREEK from T4N, R10W, Sec30 (DABC) to mouth (Silver Bow Cr)	Low	24
Columbia	17010205	MT76H005_020	SOUTH FORK LOLO CREEK, Selway-Bitterroot Wilderness boundary to mouth (Lolo Cr)	Low	23

Columbia	17010204	MT76M002_050	TROUT CREEK from headwaters to the mouth (Clark Fork R)	Low	23
Columbia	17010203	MT76F003_090	COTTONWOOD CREEK from South Fork Cottonwood Cr to mouth (Douglas Cr)	Low	22
Columbia	17010203	MT76F003_081	DOUGLAS CREEK from headwaters to Murray Cr.	Low	22
Columbia	17010205	MT76H004_040	MILL CREEK, Selway-Bitterroot Wilderness boundary to the mouth (Bitterroot R)	Low	22
Columbia	17010203	MT76F003_082	DOUGLAS CREEK from Murray Cr. to mouth (Nevada Cr)	Low	21
Columbia	17010205	MT76H002_080	GILBERT CREEK a tributary to Laird Cr, East Fork Bitterroot R T1N, R20W	Low	21
Columbia	17010205	MT76H003_040	HUGHES CREEK from headwaters to the mouth (West Fork Bitterroot R)	Low	21
Columbia	17010205	MT76H002_070	LAIRD CREEK tributary to East Fork Bitterroot T1N, R20	Low	21
Columbia	17010201	MT76G004_100	WOODSON GULCH, Trib to Carpenter Cr. T11N, R7W, Sec 29	Low	21
Columbia	17010202	MT76E004_080	ANTELOPE CR. headwaters to mouth (Clark Fk. R)	Low	20
Columbia	17010201	MT76G005_100	BROCK CREEK from headwaters to mouth (Clark Fork R)	Low	20
Columbia	17010201	MT76G002_030	CABLE CREEK from the headwaters to the mouth (Warm Springs Cr)	Low	20
Columbia	17010202	MT76E002_040	UPPER WILLOW CREEK from headwaters to the mouth (Rock Cr)	Low	20
Columbia	17010201	MT76G002_140	ANTELOPE CREEK from headwaters to the mouth (Gardner Ditch)	Low	19
Columbia	17010203	MT76F003_130	BUFFALO GULCH, headwaters to mouth (Nevada Cr)	Low	19
Columbia	17010202	MT76E004_020	CRAMER CREEK from headwaters to the mouth (Clark Fork R)	Low	19
Columbia	17010205	MT76H003_050	OVERWHICH CREEK from headwaters to the mouth (West Fk Bitterroot R)	Low	19
Columbia	17010201	MT76G005_081	HOOVER CREEK from headwaters to Miller Lake	Low	18
Columbia	17010201	MT76G005_082	HOOVER CREEK from Miller L. to the mouth (Clark Fork R)	Low	18
Columbia	17010202	MT76E004_050	MULKEY CREEK from headwaters to the mouth (Clark Fork R)	Low	18
Columbia	17010201	MT76G004_032	SPOTTED DOG CREEK from forest boundary to the mouth (Little Blackfoot R)	Low	18
Columbia	17010203	MT76F003_072	WASHINGTON CREEK from Cow Gulch to the mouth (Nevada Cr)	Low	18
Columbia	17010203	MT76F003_071	WASHINGTON CREEK from headwaters to Cow Gulch	Low	18
Columbia	17010203	MT76F004_010	FRAZIER CREEK, Headwaters to mouth (Blackfoot R) T14N R12W Sec 28	Low	17
Columbia	17010205	MT76H004_210	SWEATHOUSE CR, headwaters to mouth (Bitterroot R)	Low	17
Columbia	17010205	MT76H004_140	THREEMILE CREEK from headwaters to mouth (Bitterroot R)	Low	17
Columbia	17010201	MT76G004_112	THREEMILE CREEK, Quigley Ranch Res. to mouth (Little Blackfoot R)	Low	17
Columbia	17010202	MT76E003_020	DOUGLAS CREEK, Confluence of Middle and South Fks to mouth (Flint Cr) T9N, R13W	Low	15
Columbia	17010203	MT76F003_030	GALLAGHER CREEK from the BLM property line to the mouth (Nevada Cr)	Low	15
Columbia	17010201	MT76G002_132	PETERSON CREEK from Jack Cr. to the mouth (Clark Fork R)	Low	15
Columbia	17010202	MT76E003_090	PRINCETON GULCH from headwaters to mouth (Boulder Cr)	Low	15
Columbia	17010201	MT76G002_110	TIN CUP JOE CREEK from Tin Cup Lake to mouth (Clark Fk R)	Low	15
Columbia	17010201	MT76G005_112	WARM SPRINGS CREK (Nr Phosphate) frm line bet. R9W & R10W to mouth (C. Fork R)	Low	15
Columbia	17010201	MT76G005_111	WARM SPRINGS CREEK (Near Phosphate) Headwaters to the line bet. R9W and R10W	Low	15
Columbia	17010203	MT76F004_080	YOURNAME CREEK from headwaters to the mouth (Blackfoot R)	Low	12

Kootenai Sub-basin

Columbia	17010101	MT76D004_060	GRAVE CREEK from Foundation Cr to the mouth (Fortine Cr)	High	44
Columbia	17010101	MT76D002_090	QUARTZ CREEK, Headwaters to confluence with the Kootenai R	High	43
Columbia	17010101	MT76D004_040	SWAMP CREEK from the headwaters to the mouth at Fortine Cr	Moderate	41
Columbia	17010101	MT76D002_110	BRISTOW CREEK from the headwaters to the mouth at Lake Koocanusa	Moderate	40
Columbia	17010104	MT76A001_010	KOOTENAI RIVER between the Yaak R Confluence and the Idaho border.	Moderate	38
Columbia	17010101	MT76D001_010	KOOTENAI RIVER from the Libby Dam to Yaak R confluence	Moderate	38
Columbia	17010101	MT76D002_040	SNOWSHOE CREEK, Cabinet Wilderness boundary to the mouth (Big Cherry Cr)	Moderate	38
Columbia	17010101	MT76D002_080	BOBTAIL CREEK, headwaters to mouth (Kjootenai R)	Low	36
Columbia	17010101	MT76D002_062	LIBBY CREEK, from the highway 2 bridge to the mouth (Kootenai R)	Low	36
Columbia	17010101	MT76D002_030	KEELER CREEK from the headwaters to Lake Cr	Low	34
Columbia	17010101	MT76D004_030	EDNA CREEK from headwaters to mouth (Fortine Cr)	Low	32
Columbia	17010101	MT76D002_050	BIG CHERRY CREEK from Snowshoe Cr to Mouth (Libby Cr)	Low	31
Columbia	17010101	MT76D002_100	CRIPPLE HORSE CREEK from headwaters to mouth (Lake Koocanusa)	Low	30
Columbia	17010102	MT76C001_010	FISHER RIVER from the Silver Butte / Pleasant Valley jct. to the mouth (Kootenai R)	Low	29
Columbia	17010101	MT76D003_010	LAKE KOOCANUSA	Low	29
Columbia	17010101	MT76D004_020	FORTINE CREEK from its source to the confluence with Grave Cr	Low	28
Columbia	17010101	MT76D002_010	STANLEY CREEK to confluence with Fairway Cr T29N R34W SEC 13&24	Low	28
Columbia	17010102	MT76C001_020	WOLF CREEK headwaters to mouth (Fisher R)	Low	28
Columbia	17010101	MT76D002_061	LIBBY CREEK, from 1 mi above Howard Cr. to the Highway 2 bridge)	Low	26
Columbia	17010101	MT76D004_010	TOBACCO RIVER from confluence of Grave Cr & Fortine Cr to mouth (Lake Koocanusa)	Low	25
Columbia	17010103	MT76B002_090	WEST FORK YAAK RIVER [excluding Canadian portion] headwaters to mouth (Yaak R)	Low	25
Columbia	17010101	MT76D002_020	DRY CREEK (Trib. of Lake Cr.) 1 mile upstream from State Highway 56	Low	24
Columbia	17010101	MT76D002_070	LAKE CREEK, Bull Lake outlet to mouth (Kootenai R)	Low	19

Lower Clark Fork Sub-basin

Columbia	17010213	MT76N003_020	PROSPECT CREEK from headwaters to the mouth (Clark Fork R)	High	53
Columbia	17010213	MT76N003_040	BULL RIVER from the North Fork to the mouth (Cabinet Gorge Reservoir)	High	44
Columbia	17010213	MT76N003_190	ROCK CREEK Headwaters to mouth below the Noxon Dam	High	42
Columbia	17010213	MT76N001_010	CLARK FORK RIVER from the Flathead R to Noxon Reservoir	Moderate	39
Columbia	17010204	MT76M001_020	CLARK FORK RIVER from Fish Cr to Rattlesnake Cr	Moderate	37
Columbia	17010204	MT76M004_010	NINEMILE CREEK from headwaters to the mouth (Clark Fork R)	Moderate	30
Columbia	17010204	MT76M001_010	CLARK FORK RIVER from the Flathead R to Fish Cr	Moderate	29
Columbia	17010204	MT76M002_090	PETTY CREEK from headwaters to the mouth (Clark Fork R)	Low	28
Columbia	17010204	MT76M001_030	CLARK FORK RIVER from Rattlesnake Cr to the Blackfoot R	Low	27
Columbia	17010213	MT76N003_100	PILGRIM CREEK from headwaters to the mouth (Cabinet Gorge Reservoir)	Low	27

Columbia	17010204	MT76M002_150	SIXMILE CREEK from headwaters to the mouth (Clark Fork R)	Low	27
Columbia	17010213	MT76N003_130	VERMILION RIVER from headwaters to the mouth (Noxon Reservoir)	Low	26
Columbia	17010204	MT76M004_070	KENNEDY CREEK from headwaters to the mouth (Ninemile Cr)	Low	25
Columbia	17010204	MT76M003_010	ST. REGIS RIVER from headwaters to the mouth (Clark Fork R)	Low	25
Columbia	17010204	MT76M002_010	TAMARACK CREEK, Headwaters to the mouth (Clark Fork R)	Low	25
Columbia	17010213	MT76N003_080	GRAVES CREEK from headwaters to the mouth (Clark Fork R)	Low	24
Columbia	17010213	MT76N003_090	MARTEN CREEK from headwaters to the mouth (Noxon Reservoir)	Low	23
Columbia	17010204	MT76M004_031	McCORMICK CREEK from Little McCormick Cr. to the mouth (Ninemile Cr)	Low	23
Columbia	17010204	MT76M002_120	RATTLESNAKE CREEK from headwaters to the mouth (Clark Fork R)	Low	23
Columbia	17010213	MT76N003_110	TROUT CREEK from the West Fork to the mouth (Noxon Reservoir)	Low	23

Flathead Sub-basin

Columbia	17010208	MT76O003_010	FLATHEAD LAKE	High	45
Columbia	17010210	MT76P003_020	SWIFT CREEK from headwaters (East and West Forks) to mouth (Whitefish Lake)	High	36
Columbia	17010207	MT76I002_050	MORRISON CREEK from headwaters to mouth (Middle Fk Flathead R)	High	35
Columbia	17010210	MT76P003_040	WEST FORK SWIFT CREEK from headwaters to mouth (Swift Cr)	High	35
Columbia	17010206	MT76Q002_040	SOUTH FORK COAL CREEK from headwaters to mouth (Coal Cr)	High	33
Columbia	17010210	MT76P003_030	EAST FORK SWIFT CREEK from headwaters to mouth (Swift Cr)	High	32
Columbia	17010211	MT76K002_010	SWAN LAKE	High	32
Columbia	17010211	MT76K003_031	GOAT CREEK from headwaters to Squeezer Cr.	Moderate	30
Columbia	17010204	MT76M002_060	FISH CREEK from West and South Forks to the mouth (Clark Fork R)	Moderate	30
Columbia	17010207	MT76I002_010	GRANITE CREEK, Confluence of Dodge Cr & Challenge Cr to mouth (Mid. Fk Flathead)	Moderate	29
Columbia	17010210	MT76P003_010	WHITEFISH RIVER Whitefish Lake to the mouth, confluence with the Stillwater R	Moderate	29
Columbia	17010208	MT76O002_050	FISH CREEK from headwaters to mouth (Ashley Lake)	Moderate	29
Columbia	17010211	MT76K003_010	JIM CREEK from headwaters to mouth (Swan R)	Moderate	28
Columbia	17010211	MT76K003_040	ELK CREEK from headwaters to mouth (Swan R)	Moderate	27
Columbia	17010211	MT76K003_032	GOAT CREEK from Squeezer Cr. to mouth (Swan R)	Moderate	27
Columbia	17010211	MT76K003_062	PIPER CREEK from Moore Cr. to mouth (Swan R)	Moderate	27
Columbia	17010206	MT76Q002_030	WHALE CREEK from headwaters to mouth (North Fork Flathead R)	Low	26
Columbia	17010206	MT76Q002_070	COAL CREEK from headwaters to South Fork	Low	25
Columbia	17010206	MT76Q002_020	RED MEADOW CREEK from headwaters to mouth (North Fork Flathead R)	Low	25
Columbia	17010208	MT76O002_020	ASHLEY CREEK, Smith Lake to Bridge Crossing on the Kalispell Airport Road	Low	24
Columbia	17010210	MT76P001_010	STILLWATER RIVER from Logan Cr to mouth	Low	23
Columbia	17010210	MT76P001_040	SINCLAIR CREEK from headwaters to mouth (Sheppard Cr)	Low	21
Columbia	17010206	MT76Q002_050	BIG CREEK Tributary to the North Fork of the Flathead R	Low	20
Columbia	17010209	MT76J001_010	SOUTH FORK FLATHEAD RIVER from Hungry Horse Dam to mouth	Low	20
Columbia	17010210	MT76P004_010	WHITEFISH LAKE	Low	20

Columbia	17010208	MT76O004_020	LAKE MARY RONAN	Low	19
Columbia	17010206	MT76Q002_080	COAL CREEK from South Fork to mouth (North Fork Flathead)	Low	18

UPPER MISSOURI PLANNING REGION

Missouri / Sun / Smith Sub-basin

Upper Missouri	10030101	MT41I006_142	TENMILE CREEK From the Helena PWS intake above Rimini to the Helena WT plant.	High	52
Upper Missouri	10030101	MT41I006_141	TENMILE CREEK, headwaters to the Helena PWS intake above Rimini	High	52
Upper Missouri	10030105	MT41U001_010	BELT CREEK from Carpenter Cr to the mouth (Missouri R)	High	47
Upper Missouri	10030101	MT41I001_012	MISSOURI RIVER from Toston Dam to Canyon Ferry Reservoir	High	46
Upper Missouri	10030102	MT41Q001_014	MISSOURI RIVER from Morony Dam to the Marias R	High	42
Upper Missouri	10030104	MT41K001_010	SUN RIVER from Gibson Dam to Muddy Cr	High	42
Upper Missouri	10030101	MT41I002_041	CONFEDERATE GULCH from headwaters to Hunter Gulch	High	41
Upper Missouri	10030101	MT41I006_090	CORBIN CREEK from headwaters to the mouth (Spring Cr)	High	41
Upper Missouri	10030104	MT41K001_020	SUN RIVER from Muddy Cr to the mouth (Missouri R)	High	41
Upper Missouri	10030101	MT41I006_143	TENMILE CREEK from the Helena WT plant to the mouth (Prickly Pear Cr)	High	41
Upper Missouri	10030102	MT41Q001_013	MISSOURI RIVER from Rainbow Dam to the Morony Dam	High	40
Upper Missouri	10030104	MT41K002_010	MUDDY CREEK from headwaters to the mouth (Sun R)	High	40
Upper Missouri	10030103	MT41J001_020	SMITH RIVER from Hound Cr. to the mouth (Missouri R)	High	40
Upper Missouri	10030103	MT41J001_010	SMITH RIVER from North and South Forks to Hound Cr	High	40
Upper Missouri	10030101	MT41I002_030	BEAVER CREEK from headwaters to the mouth (Canyon Ferry Reservoir)	Moderate	39
Upper Missouri	10030101	MT41I003_010	CANYON FERRY RESERVOIR	Moderate	39
Upper Missouri	10030102	MT41Q003_010	DEARBORN RIVER from Falls Cr to the mouth (Missouri R)	Moderate	39
Upper Missouri	10030102	MT41Q001_011	MISSOURI RIVER from the Sun R to Rainbow Dam	Moderate	39
Upper Missouri	10030101	MT41I002_042	CONFEDERATE GULCH, Hunter Gulch to the mouth (Canyon Ferry Res)	Moderate	38
Upper Missouri	10030101	MT41I006_060	PRICKLY PEAR CREEK from headwaters to Spring Cr	Moderate	38
Upper Missouri	10030101	MT41I006_040	PRICKLY PEAR CREEK from Lump Gulch to Montana Highway 433 Crossing	Moderate	38
Upper Missouri	10030101	MT41I006_050	PRICKLY PEAR CREEK from Spring Cr to Lump Gulch	Moderate	38
Upper Missouri	10030102	MT41Q001_022	MISSOURI RIVER from Sheep Cr to the Sun R	Moderate	36
Upper Missouri	10030105	MT41U002_050	OTTER CREEK from headwaters to the mouth (Belt Cr)	Moderate	36
Upper Missouri	10030104	MT41K002_020	FORD CREEK, from mouth 2 miles upstream (Smith Cr-Elk Cr-Sun R)	Low	35
Upper Missouri	10030101	MT41I006_020	PRICKLY PEAR CREEK from Helena WWTP Discharge Ditch to Lake Helena	Low	34
Upper Missouri	10030101	MT41I006_030	PRICKLY PEAR CREEK from Highway 433 Crossing to Helena WWTP Discharge	Low	34
Upper Missouri	10030101	MT41I007_040	HAUSER LAKE	Low	33
Upper Missouri	10030101	MT41I004_030	MISSOURI RIVER from Holter Dam to Little Prickly Pear Cr	Low	33
Upper Missouri	10030101	MT41I006_130	LUMP GULCH from headwaters to the mouth (Prickly Pear Cr)	Low	32
Upper Missouri	10030105	MT41U002_010	CARPENTER CREEK from headwaters to the mouth (Belt Cr)	Low	30

Upper Missouri	10030101	MT41I007_020	HOLTER LAKE (Missouri R Mainstem Reservoir.)	Low	29
Upper Missouri	10030101	MT41I006_010	PRICKLY PEAR CREEK from Lake Helena to Hauser Lake	Low	29
Upper Missouri	10030101	MT41I006_150	SILVER CREEK from headwaters to the mouth (Lake Helena)	Low	29
Upper Missouri	10030101	MT41I006_120	CLANCY CREEK from headwaters to the mouth (Prickly Pear Cr)	Low	28
Upper Missouri	10030102	MT41Q002_030	NUMBER FIVE COULEE, Headwaters to mouth (Cottonwd Cr - Sand Coule. Cr - Miss. R)	Low	28
Upper Missouri	10030101	MT41I005_040	VIRGINIA CREEK from headwaters to the mouth (Canyon Cr)	Low	28
Upper Missouri	10030101	MT41I002_090	HELLGATE GULCH from headwaters to the mouth (Canyon Ferry Res)	Low	27
Upper Missouri	10030101	MT41I007_010	LAKE HELENA	Low	27
Upper Missouri	10030101	MT41I004_010	MISSOURI RIVER from Canyon Ferry Dam to Hauser Lake	Low	27
Upper Missouri	10030103	MT41J002_030	SHEEP CREEK from headwaters to the mouth (Smith R)	Low	26
Upper Missouri	10030101	MT41I006_080	SPRING CREEK from Corbin Cr to the mouth (Prickly Pear Cr)	Low	26
Upper Missouri	10030102	MT41Q002_020	COTTONWOOD CREEK fr. 1 mi. above Stockett to mouth (Sand Coulee Cr - Missouri R)	Low	25
Upper Missouri	10030105	MT41U002_030	DRY FORK BELT CREEK from headwaters to the mouth (Belt Cr)	Low	25
Upper Missouri	10030105	MT41U002_020	GALENA CREEK from headwaters to the mouth (Dry Fork Belt Cr)	Low	25
Upper Missouri	10030101	MT41I006_070	GOLCONDA CREEK, Headwaters to the mouth (Prickly Pear Cr) T 7N, R3W	Low	25
Upper Missouri	10030101	MT41I002_100	INDIAN CREEK from headwaters to the mouty (Missouri R)	Low	25
Upper Missouri	10030101	MT41I005_052	LITTLE PRICKLY PEAR CREEK, Clark Cr to the mouth (Missouri R)	Low	25
Upper Missouri	10030101	MT41I002_060	CROW CREEK from Crow Cr Falls to the National Forest boundary	Low	24
Upper Missouri	10030102	MT41Q002_040	SAND COULEE CREEK, Number Five Coulee to the mouth (Missouri R)	Low	24
Upper Missouri	10030103	MT41J002_110	CAMAS CREEK from junction of Big and Little Camas Creeks to mouth (Smith R)	Low	23
Upper Missouri	10030101	MT41I002_050	CROW CREEK from the National Forest boundary to the mouth (Missouri R)	Low	23
Upper Missouri	10030101	MT41I002_170	EAST FORK INDIAN CREEK from headwaters to mouth (Indian Cr)	Low	23
Upper Missouri	10030101	MT41I005_030	FALLS GULCH, Headwaters to mouth (Holter Lake) T14N, R3W, Sec. 29	Low	23
Upper Missouri	10030101	MT41I005_060	FOOL HEN CREEK, Headwaters to mouth (Virgina Cr-Canyon Cr- Little Prickly Pear Cr)	Low	23
Upper Missouri	10030101	MT41I006_170	GRANITE CREEK, Headwaters to mouth (Greenhorn Cr - Sevenmile Cr - Tenmile Cr)	Low	23
Upper Missouri	10030102	MT41Q002_060	SAND COULEE from headwaters to mouth Sand Coulee Cr-Missouri R)	Low	23
Upper Missouri	10030101	MT41I006_110	WARM SPRINGS CREEK from the Middle Fork to the mouth (Prickly Pear Cr)	Low	23
Upper Missouri	10030103	MT41J002_011	SMITH RIVER NORTH FORK from Lake Sutherlin to the mouth	Low	22
Upper Missouri	10030102	MT41Q002_010	LAKE CREEK from headwaters to the mouth (Benton Lake)	Low	21
Upper Missouri	10030101	MT41I005_051	LITTLE PRICKLY PEAR CREEK, North and South Fks to Clark Cr	Low	21
Upper Missouri	10030101	MT41I006_100	MID. FK WARM SPRINGS CRK, Headwaters to mouth (Wm Sprgs Cr - Prickly Pear Cr)	Low	21
Upper Missouri	10030101	MT41I002_140	WILSON CREEK 3.3 Miles above the mouth to the mouth (Crow Cr)	Low	21
Upper Missouri	10030101	MT41I002_010	AVALANCHE GULCH from headwaters to mouth (Canyon Ferry Res)	Low	20
Upper Missouri	10030103	MT41J002_050	BENTON GULCH from headwaters to the mouth (Smith R)	Low	20
Upper Missouri	10030103	MT41J002_081	NEWLAN CREEK from Newlan Res. to the mouth (Smith R)	Low	17

Upper Missouri Sub-basin

Upper Missouri	10020004	MT41D001_020	BIG HOLE RIVER between Divide Cr and Pintlar Cr	High	53
Upper Missouri	10020004	MT41D001_030	BIG HOLE RIVER above Pintlar Cr.	High	48
Upper Missouri	10020004	MT41D001_010	BIG HOLE RIVER from Divide Cr to the mouth (Jefferson R)	High	47
Upper Missouri	10020007	MT41F004_100	WEST FORK MADISON RIVER, Headwaters to the mouth (Madison R)	High	47
Upper Missouri	10020006	MT41E002_030	BASIN CREEK from headwaters to the mouth (Boulder R)	High	45
Upper Missouri	10020003	MT41C001_010	RUBY RIVER from Ruby Dam to the mouth (Beaverhead R)	High	45
Upper Missouri	10020003	MT41C001_020	RUBY RIVER from the East and West Forks to Ruby Reservoir	High	45
Upper Missouri	10020006	MT41E002_020	CATARACT CREEK from headwaters to the mouth (Boulder R)	High	43
Upper Missouri	10020007	MT41F006_030	WATKINS CREEK from headwaters to the mouth (Hebgen Cr)	High	43
Upper Missouri	10020006	MT41E002_040	HIGH ORE CREEK from headwaters to mouth (Boulder R.)	High	42
Upper Missouri	10020004	MT41D004_020	MUSSIGBROD CREEK, Headwaters to mouth (North Fork Big Hole R)	High	42
Upper Missouri	10020006	MT41E002_010	UNCLE SAM GULCH from headwaters to the mouth (Cataract Cr)	High	42
Upper Missouri	10020003	MT41C002_020	MILL CREEK from headwaters to mouth (Ruby R)	High	41
Upper Missouri	10020004	MT41D003_020	JERRY CREEK from headwaters to mouth (Big Hole R)	High	40
Upper Missouri	10020004	MT41D004_030	JOHNSON CREEK, Headwaters to mouth (North Fork Big Hole R)	High	40
Upper Missouri	10020007	MT41F006_020	RED CANYON CREEK from headwaters to the mouth (Hebgen Lake)	High	40
Upper Missouri	10020008	MT41H002_010	CAMP CREEK Headwaters to the mouth (Gallatin R)	Moderate	39
Upper Missouri	10020007	MT41F001_010	MADISON RIVER from Ennis Dam to the mouth (Missouri R)	Moderate	39
Upper Missouri	10020004	MT41D004_190	STEEL CREEK from headwaters to mouth (Big Hole R)	Moderate	39
Upper Missouri	10020002	MT41B001_010	BEAVERHEAD RIVER from Clark Canyon Res to Grasshopper Cr	Moderate	38
Upper Missouri	10020002	MT41B001_020	BEAVERHEAD RIVER from Grasshopper Cr to mouth (Jefferson R)	Moderate	38
Upper Missouri	10020006	MT41E001_021	BOULDER RIVER from Basin Cr to Town of Boulder	Moderate	38
Upper Missouri	10020006	MT41E001_030	BOULDER RIVER from Cottonwood Cr to the mouth (Jefferson R)	Moderate	38
Upper Missouri	10020006	MT41E001_022	BOULDER RIVER from Town of Boulder to Cottonwood Cr	Moderate	38
Upper Missouri	10020008	MT41H002_020	GODFREY CREEK from headwaters to White Ditch	Moderate	38
Upper Missouri	10020005	MT41G001_010	JEFFERSON RIVER from headwaters to mouth (Missouri R)	Moderate	38
Upper Missouri	10020007	MT41F004_060	NORTH MEADOW CREEK from headwaters to the mouth (Enis Lake)	Moderate	38
Upper Missouri	10020001	MT41A001_010	RED ROCK RIVER from Lima Dam to Clark Canyon Reservoir	Moderate	38
Upper Missouri	10020007	MT41F004_070	SOUTH MEADOW CREEK from headwaters to the mouth (Enis Lake)	Moderate	38
Upper Missouri	10020004	MT41D002_010	TRAPPER CREEK from headwaters to mouth (Big Hole R)	Moderate	38
Upper Missouri	10020004	MT41D004_150	GOVERNOR CREEK, Headwaters to mouth (Big Hole R - So. of Jackson)	Moderate	37
Upper Missouri	10020004	MT41D002_050	MOOSE CREEK, Headwaters to mouth (Big Hole R at Maiden Rock)	Moderate	37
Upper Missouri	10020007	MT41F006_010	SOUTH FORK MADISON RIVER from headwaters to Hebgen Lake	Low	36
Upper Missouri	10020008	MT41H005_060	SOUTH FK OF WEST FK GALLATIN RIVER, Headwaters to mouth (West Fk Gallatin R)	Low	35
Upper Missouri	10020004	MT41D003_070	CALIFORNIA CREEK from headwaters to mouth (French Cr-Deep Cr)	Low	34
Upper Missouri	10020004	MT41D003_080	OREGON CREEK, Headwaters to mouth (California Cr - French Cr - Deep Cr)	Low	34

Upper Missouri	10020003	MT41C002_050	RAMSHORN CREEK from headwaters to mouth (Ruby R)	Low	34
Upper Missouri	10020004	MT41D002_120	WICKIUP CREEK Tributary to Camp Cr (Big Hole R) T1S R8W	Low	34
Upper Missouri	10020003	MT41C002_040	ALDER GULCH from headwaters to mouth (Ruby R)	Low	33
Upper Missouri	10020008	MT41H001_010	GALLATIN RIVER from Spanish Cr to the mouth (Missouri R)	Low	33
Upper Missouri	10020001	MT41A005_020	LOWER RED ROCK LAKE	Low	33
Upper Missouri	10020001	MT41A005_030	UPPER RED ROCK LAKE	Low	33
Upper Missouri	10020006	MT41E001_010	BOULDER RIVER from headwaters to Basin Cr	Low	32
Upper Missouri	10020008	MT41H005_030	CACHE CREEK from headwaters to the mouth (Taylor Fork)	Low	32
Upper Missouri	10020004	MT41D002_030	CANYON CREEK from headwaters to mouth (Big Hole R)	Low	32
Upper Missouri	10020001	MT41A004_080	O'DELL CREEK from headwaters to mouth (Lower Red Rock Lake)	Low	32
Upper Missouri	10020001	MT41A004_110	RED ROCK CREEK Headwaters to the mouth (Upper Red Rock Lake)	Low	32
Upper Missouri	10020005	MT41G002_130	SOUTH WILLOW CREEK from headwaters to mouth (Willow Cr)	Low	32
Upper Missouri	10020004	MT41D003_050	FRENCH CREEK from headwaters to mouth (Deep Cr)	Low	31
Upper Missouri	10020004	MT41D004_100	RUBY CREEK from headwaters to mouth (North Fork Big Hole R)	Low	31
Upper Missouri	10020008	MT41H005_040	WEST FK GALLATIN RIVER, Conflu. Mid. & N. Fks of the W. Gal. to mouth (Gal. R)	Low	31
Upper Missouri	10020004	MT41D003_200	WISE RIVER from headwaters to mouth (Big Hole R)	Low	31
Upper Missouri	10020005	MT41G002_010	BIG PIPESTONE CREEK from headwaters to mouth (Jefferson R)	Low	30
Upper Missouri	10020004	MT41D004_220	DOOLITTLE CR tributary to the Big Hole R T1S, R14W	Low	30
Upper Missouri	10020001	MT41A003_090	HORSE PRAIRIE CREEK from headwaters to mouth (Clark Canyon Res)	Low	29
Upper Missouri	10020007	MT41F002_030	HOT SPRINGS CREEK from headwaters to the mouth (Madison R)	Low	29
Upper Missouri	10020006	MT41E002_100	MUSKRAT CREEK from headwaters to the mouth (Boulder R)	Low	29
Upper Missouri	10020007	MT41F004_020	O'DELL SPRING CREEK from headwaters to the mouth (Madison R)	Low	29
Upper Missouri	10020008	MT41H005_020	TAYLOR CREEK, Lee Metcalf Wilderness boundary to the mouth (Gallatin R)	Low	29
Upper Missouri	10020005	MT41G002_080	WILLOW CREEK, North and South Fork confluence to mouth (Jefferson R)	Low	29
Upper Missouri	10020006	MT41E002_061	ELKHORN CREEK from headwaters to Wood Gulch	Low	28
Upper Missouri	10020008	MT41H005_050	MIDDLE FK OF WEST FK GALLATIN RIVER, Headwtrs. to mouth (West Fk Gallatin R)	Low	28
Upper Missouri	10020004	MT41D003_170	PINTLAR CREEK from headwaters to mouth (Big Hole R)	Low	28
Upper Missouri	10020004	MT41D002_100	BIRCH CREEK from National Forest Boundary to mouth (Big Hole R)	Low	27
Upper Missouri	10020004	MT41D004_110	SWAMP CREEK from headwaters to mouth (Big Hole R)	Low	27
Upper Missouri	10020004	MT41D002_110	WILLOW CREEK from headwaters to mouth (Big Hole R) T4S R9W	Low	27
Upper Missouri	10020006	MT41E002_062	ELKHORN CREEK from Wood Gulch to the mouth (Boulder R)	Low	26
Upper Missouri	10020007	MT41F005_030	ENNIS LAKE	Low	26
Upper Missouri	10020007	MT41F004_130	MOORE CREEK from springs to mouth (Ennis Lake).	Low	26
Upper Missouri	10020004	MT41D004_180	WARM SPRINGS CREEK, Headwaters to the mouth (Big Hole R - Near Jackson)	Low	26
Upper Missouri	10020006	MT41E002_140	BIG LIMBER GULCH from headwaters to mouth (Cataract Cr-Boulder R)	Low	25
Upper Missouri	10020002	MT41B002_030	BLACKTAIL DEER CREEK from headwaters to mouth (Beaverhead R)	Low	25
Upper Missouri	10020002	MT41B002_010	GRASSHOPPER CREEK from headwaters to the mouth (Beaverhead R)	Low	25

Upper Missouri	10020002	MT41B002_132	STONE CREEK above confluence with unnamed creek in NE, S34, T6S, R7W	Low	25
Upper Missouri	10020006	MT41E002_070	BISON CREEK from headwaters to the mouth (Boulder R)	Low	24
Upper Missouri	10020005	MT41G002_100	FISH CREEK from headwaters to mouth (Jefferson R)	Low	24
Upper Missouri	10020007	MT41F004_040	INDIAN CREEK, Lee Metcalf Wilderness boundary to the mouth (Madison R)	Low	24
Upper Missouri	10020007	MT41F004_050	JACK CREEK from headwaters to the mouth (Madison R)	Low	24
Upper Missouri	10020007	MT41F002_020	ELK CREEK from headwaters to the mouth (Madison R)	Low	23
Upper Missouri	10020006	MT41E002_050	LOWLAND CREEK from headwaters to the mouth (Boulder R)	Low	23
Upper Missouri	10020004	MT41D004_010	NORTH FORK BIG HOLE RIVER, Headwaters to mouth (Big Hole R)	Low	23
Upper Missouri	10020007	MT41F004_080	RUBY CREEK from headwaters to the mouth (Madison R)	Low	23
Upper Missouri	10020005	MT41G002_060	SOUTH BOULDER RIVER from headwaters to mouth (Jefferson R)	Low	23
Upper Missouri	10020002	MT41B002_100	FRENCH CREEK from headwaters to mouth (Rattlesnake Cr-Beaverhead R)	Low	22
Upper Missouri	10020008	MT41H003_100	DRY CREEK from headwaters to the mouth (East Gallatin R)	Low	21
Upper Missouri	10020008	MT41H003_070	REESE CREEK from headwaters to the mouth (Smith Cr)	Low	21
Upper Missouri	10020004	MT41D004_070	TRAIL CREEK from headwaters to Joseph Cr	Low	21
Upper Missouri	10020005	MT41G002_030	HELLS CANYON CREEK from headwaters to mouth (Jefferson R)	Low	20
Upper Missouri	10020008	MT41H003_060	SMITH CREEK from headwaters to the mouth (Bear Cr)	Low	20
Upper Missouri	10020008	MT41H005_010	SQUAW CREEK from headwaters to the mouth (Gallatin R)	Low	20
Upper Missouri	10020005	MT41G002_140	WHITETAIL CREEK tributary of the Jefferson R T3N R5W	Low	20
Upper Missouri	10020006	MT41E002_080	LITTLE BOULDER RIVER from the North Fork to the mouth (Boulder R)	Low	19
Upper Missouri	10020001	MT41A003_020	MUDDY CREEK from headwaters to mouth (Sheep Cr-Red Rock R) T13S R10W	Low	19
Upper Missouri	10020004	MT41D002_160	ROCHESTER CREEK from headwaters to mouth T3S R7W	Low	19
Upper Missouri	10020008	MT41H003_132	HYALITE CREEK, Natl. Forest Boundary to the mouth (E. Gallatin R)	Low	18
Upper Missouri	10020005	MT41G002_050	NORTH WILLOW CREEK from headwaters to mouth (Willow Cr)	Low	18
Upper Missouri	10020008	MT41H003_080	ROCKY CREEK from headwaters to the mouth (East Gallatin R)	Low	17
Upper Missouri	10020008	MT41H002_031	SOUTH COTTONWOOD CREEK, Middle Cr Assoc Ditch div. to mouth (Gallatin R)	Low	17

Chapter III

Framework for Scheduling TMDL Development

DEQ has developed a TMDL program that encourages leadership of local watershed groups in identifying sources of water quality impairment of a waterbody and implementing control measures (reasonable land, soil, and water conservation practices and Best Management Practices (BMPs) to restore water so that it supports all beneficial uses. This approach helps ensure that the benefits and interest of watershed residents and landowners are included in efforts to restore water quality. A brief description of this approach is provided in this chapter. The list of impaired and threatened water bodies includes a priority ranking for each listed stream, river, wetland, lake, or reservoir. This chapter also explains how DEQ used this development priority to schedule watershed areas for TMDL development.

TMDL Development Strategy in Montana

Healthy streams, rivers, wetlands, and lakes are a key requirement for healthy and productive ecosystems and natural resources for human use and enjoyment. High-quality water is essential to maintain healthy people and healthy communities. DEQ is charged by the legislature to conserve water by protecting, maintaining, and improving its quality and potability for use by public water supplies, wildlife, fish and aquatic life, agriculture, industry, recreation, and other beneficial uses. An important tool in achieving this is called “Total Maximum Daily Load” or TMDL, because it provides a measurable goal for water quality management.

TMDLs are in essence specific quantifiable goals for the amount of one or more pollutants allowed in a waterbody that are necessary to attain water quality standards. These goals are usually described in a water quality restoration plan (sometimes called a TMDL plan) that contains steps necessary to meet those goals. For some nonpoint source pollutants, total maximum loading rates are not practical for monitoring or managing water quality. For example, pH and bacteria are two parameters for which a waste load could not be assigned or measured. For nonpoint sources, a loading of sediment, for example, may not be coming from one site or location where the loading rate can be measured; it may be coming from 20 different sources during different rainfalls or snow melts. The TMDL in such a case, may best be described in terms of the sediment control plan or set of Best Management Practices (BMPs) at various locations in the watershed that are designed to prevent siltation problems. If fisheries are the impaired use, the TMDL may be described in terms of the load of sediment that is necessary to prevent filling in the gravel of fish spawning beds. The degree of embeddedness of the gravel, depth of the pools, or number of young fish may be a better measurement of water quality, or pollutant loading, in this case. The EPA and the State Legislature have given DEQ flexibility to determine appropriate water quality goals and to manage nonpoint source pollution. What is important is that the water quality restoration plan be developed using an appropriate level of technical analysis (that it makes good sense) and that the plan measures progress toward meeting water quality standards and restoring the beneficial uses of the water.

The development and implementation of water quality restoration plans in Montana involves a large number of organizations, landowners, and the public. Many of the same groups that are and will be preparing TMDLs in the future are already working on water quality protection and restoration plans that can serve as TMDLs. The development of hundreds of new TMDLs takes a clear understanding of what TMDLs should include and what are the roles and responsibilities of various groups. The following paragraphs explain how DEQ plans to organize this work.

Development and implementation of water quality restoration plans to meet water quality standards are what TMDLs are all about. DEQ works with wastewater dischargers, local conservation districts and watershed advisory groups, and state and federal agencies to develop plans for threatened or impaired waterbodies or segments of waterbodies. For point source discharges, the waste load allocation of the TMDL are incorporated into a regulatory permit. For nonpoint sources, DEQ coordinates with local agencies and land owner/managers and provides technical assistance on implementing voluntary practices to achieve the water quality goals of the TMDL. DEQ wishes to ensure that local agencies and land owner/managers have the opportunity to “take the lead” in developing voluntary practices that consider environmental, economic, and social costs and benefits.

Development of Water Quality Restoration Plans by DEQ

DEQ is charged with development of water quality restoration plans for all waterbodies on the May 5, 1997, 303(d) List by May 5, 2007. Water quality restoration plans for waterbodies that are subsequently added to the list, are required by state law to be completed within 10 years of being listed. In order to accomplish this task, DEQ has taken a watershed approach to grouping similar adjoining waterbodies and developed a schedule, outlined below, which calls for DEQ to make sure that all waterbodies needing TMDLs have them. This watershed approach to TMDLs calls for DEQ to take the lead in developing watershed wide water quality plans that address all impaired or threatened waters. Wherever local watershed groups wish to develop plans for their specific waterbodies within these watersheds, DEQ will provide financial or technical assistance to see that the local plans are designed to meet water quality standards and meet EPA approval criteria. Where no local group or local interest exists, DEQ will take the lead in water quality assessment and planning. Even when DEQ develops a plan with no local assistance, it must seek public review and comment before submitting the plan to EPA.

Development and Implementation of a Water Quality Restoration Plan by a Local Watershed Group

Conservation districts and other local and regional watershed groups have established an excellent record in setting up and managing nonpoint source, water quality projects throughout the state. When DEQ reviews and approves TMDLs, it uses eight criteria that include setting measurable goals and monitoring the progress of water quality restoration projects. For those existing projects that already meet the EPA’s eight approval criteria found later in this section, DEQ may work with the sponsoring group to submit the project as a water quality restoration plan independently from the schedule watershed wide plan.

DEQ will meet with local conservation districts, land management agencies, and watershed advisory groups to provide technical assistance on developing a water quality restoration plan (TMDL plan). If such groups opt to take the lead in developing a plan, DEQ will take an advisory role to ensure that the plan meets all the criteria for approval by the EPA. Whether or not a conservation district plays a lead role in developing a water quality restoration plan, the conservation district will often take the lead in obtaining and administering contracts for grants used to implement a plan. While the Montana Water Quality Act gives DEQ the authority to develop TMDLs for all waterbodies, DEQ encourages watershed groups, conservation districts, and other local agencies to take the lead in watershed management activities that will lead to water quality restoration plans.

Approval of a Water Quality Restoration Plan

Montana uses an eight-item checklist to determine if a water quality restoration plan meets all the criteria established by EPA. EPA approval must be obtained for TMDL plans in order for the state to remove the waterbody from the 303 (d) List. The eight criteria on which EPA bases their plan approval are:

1. **Achieving state water quality standards.** The plan should describe the state water quality standards that are addressed. In describing the standards, it is important to mention the classification of the waterbody as well as the reasons the water does not support all its beneficial uses. Waterbodies are classified as to use in ARM 17.30.607-614. Montana's numeric water quality standards are listed in WQB-7. There should be reasonable assurance that these standards will be attained as a result of implementing the plan. If uncertainty exists, a "phased" approach may be used, relying on post-implementation monitoring to determine the success of meeting water quality goals. Water quality standards may include numeric, narrative, use classification, and antidegradation components.

The ultimate goal of every water quality restoration plan is attaining water quality standards and restoring the waterbody to its beneficial uses at the earliest possible date.

2. **Quantified goals, targets or endpoints.** Although a numeric water quality standard can be the target for a TMDL (e.g. 5 mg/L dissolved oxygen, 200 colonies /100 ml fecal coliform), some contaminants are more easily monitored by methods other than water chemistry or bacterial tests. Instead, a goal, target or endpoint can be set to address site-specific problems. If sediment from eroding banks is the issue, then the goal can be to stabilize eroding stream banks to some measurable degree. Targets are selected, such as stream channel widths and water depths, a certain number of feet of eroding banks, or stream bed particle size in order to judge success of the measures used to restore the stream. There are a number of different targets that have been approved as part of a TMDL.

"Goals" are general statements of intent, policy, and desired outcome or future condition.

"Objectives" are specific, quantified statements of products to be created or conditions to be attained. The achievement of objectives is always measurable. Objectives should identify the time frame for implementation, the roles and responsibilities of the various parties involved (see Item 7.), how progress will be measured, and how successful achievement will be determined.

In particular, the objectives should assign load allocations to those sources most responsible for the pollutant and/or most likely to successfully reduce it (see Item 3.). Restoring the waterbody to support all the beneficial uses of the water and achieve water quality standards is the ultimate measure of success for a plan. Other aspects of watershed condition (such as eroding banks, shade cover, and stream channel morphology) often are quite useful in the short run as indicators of trends that will lead to improved water quality.

3. **Quantified targets to reduce pollution.** TMDLs can be measured in pounds per day or concentration of pollutant in the water or, based on EPA guidelines, TMDLs can be expressed as mass per unit of time, toxicity, or other appropriate measure. "Other appropriate measure" could include an estimate of percent reduction in sediment or nutrients needed to achieve water quality standards. When site-specific goals are chosen, the quantified target could be number of spawning brown trout returning to the stream in the fall. In developing a TMDL, it is most helpful to first visualize the solutions that will be used to address the water quality problem, and then adapt the TMDL to fit the solutions.
4. **Consideration of all significant sources of a pollutant.** The term "pollutant" metals, nutrients, biological oxygen demand (BOD), and fecal coliforms. However, sedimentation or elevated stream temperature due to poor riparian conditions and poor flow regimes may also be addressed in a water quality restoration plan. All major sources of the pollution must be identified or accounted for in some manner. This accounting should specify significant sources and may lump other sources together into one term. The water quality restoration plan may only address a subset of these sources if the water quality standards can be met as a result of controlling those sources. For nonpoint

sources, this often means that priority areas in the watershed can be identified and controls agreed upon. For instance, if logging roads on steep slopes are the main source of sediment, a method of logging that does not require roads on these slopes may be adopted.

5. **Use of appropriate levels of technical analysis.** The level of technical analysis can vary from site-to-site. The ultimate goal of the Clean Water Act is restoration and protection of water quality. The “correct” level of analysis will achieve this goal. For nonpoint sources, it is important to use a level of analysis that is easily understood by the stakeholders and relates to implementation of the reasonable land, soil and water conservation practices that will attain water quality goals. DEQ and EPA will approve a range of approaches for TMDL development, some relying on best professional judgement and yet others relying on computer modeling.
6. **Consideration of seasonal variation and a margin of safety.** It is important that a water quality restoration plan address the variability introduced by seasonal changes in the chemistry, temperature or quantity of water that interacts with the pollutant load. Even with these fluctuations, the water quality standards must be met.

The Clean Water Act requires each TMDL to incorporate a margin of safety. The need for a greater margin of safety is inversely proportional to the level of confidence in the success of the TMDL. For nonpoint sources, there is often high variability in the data as well as uncertainty in BMP effectiveness. Often the weather, can upset the best laid plans. When TMDL implementation incorporates proven methods to achieve water quality standards, the allocation for seasonality and margin of safety can be minimal. When experimental methods are adopted, the margin of safety is addressed by requiring increased implementation monitoring to ensure the control practices are working and the water quality standards are being met.

A plan should be developed to monitor BMP implementation and effectiveness. DEQ is available to assist with developing the monitoring component of a water quality restoration plan.

The TMDL may be adjusted over time as suggested by the monitoring results. The goals and objectives of the water quality restoration plan will guide the interpretation and evaluation of the monitoring results. Effectiveness monitoring should evaluate not only the immediate results of BMP implementation but also the longer-range issue of whether water quality is improving – or is likely to, given documented trends in watershed condition.

7. **Assigned responsibilities for implementation.** In a geographic sense, pollutant reduction allocations can be assigned to land parcels, tributary watersheds, point and nonpoint sources, land uses, and other pollution source categories. Load allocations for nonpoint sources may be best professional estimates or based on field studies or mathematical modeling. Waste load allocations for point sources are often based on measured values at easily monitored outfall pipes. Load allocations for nonpoint sources may be expressed as a loading rate or also as an allocation of responsibilities and control measures. Allocation of responsibilities can mean identifying the reasonable land, soil and water conservation practices that will be applied and where they will be applied in the watershed for the purpose of meeting water quality goals. It should also be noted that approved water quality restoration plans addressing nonpoint sources nearly always rely on voluntary control measures and monitoring to see if restoration measures are being effective.

The water quality restoration plans should state the roles, responsibilities, and commitments of the various public and private participants. Describing who will do what is crucial to understanding how the water quality restoration plan will be implemented, which in turn is crucial to ensuring its completion.

8. **Appropriate level of public involvement:** This requirement can be met by publishing a public notice of the development of a proposed TMDL and asking for comments. The fundamental requirement for public participation is that all stakeholders be offered the opportunity to be heard and shape the decisions outlined in the water quality restoration plan. In the case of water quality restoration plans that address nonpoint sources, a wide array of stakeholders are often involved from the beginning through the end. The success of implementing a plan often depends on this level of participation.

Each watershed has a unique set of interested and affected persons with a stake in developing and implementing the water quality restoration plan. Ideally, those who are involved in implementation should also be involved in developing the plan from the start. The point is to seek as much public and private support as possible in order to maximize the likelihood of success.

Public participation for TMDL relating to point sources is accomplished as part of the permitting process. During the permitting of new facilities and as part of the 5-year MPDES permitting and renewal cycle, every MPDES permit has a public comment period for gathering public comments on the water quality parameters affected by the point discharge and on the permit effluent limits. Any TMDL established through these permits has a 30-day public comment period associated with it.

Schedule for TMDL Assistance during the Next Two Years: Nonpoint Source Strategy

DEQ will continue to provide Clean Water Act, Section 319 funding for nonpoint source projects that lead to TMDL development. The schedule provided below, which incorporates most high and moderate priority waters in the earlier years, will act as a guide to prioritize funding. EPA also provides TMDL project funding to states pursuant to Section 104 (b) 3 of the Clean Water Act. These funds are specifically for TMDL development. EPA and the state have agreed to work cooperatively to fund priority TMDL projects.

TMDL Development Schedule

The Montana Department of Environmental Quality (DEQ) and the U.S. Environmental Protection Agency (EPA) have developed the following proposed schedule to develop Total Maximum Daily Loads (TMDLs) for waters on the state's 1996 list of impaired and threatened waters. A Total Maximum Daily Load is a plan to establish the maximum amount of pollutant load that can flow into a waterbody from point sources, nonpoint sources and natural background sources without exceeding state water quality standards. Montana law and federal regulations require DEQ to develop TMDLs for all waters that are not meeting water quality standards (These waters are referred to as water quality limited segments). TMDLs are required by Section 303(d) of the federal Clean Water Act and by state law. The list of waters needing TMDLs is known as a "303(d) list."

On June 21, 2000, the United States District Court of Montana ordered EPA to work with the State of Montana to develop and adopt a schedule that will result in developing all necessary TMDLs for waters on Montana's 1996 Section 303(d) list by May 5, 2007. The court further ordered EPA and the state to complete the schedule by November 1, 2000. The schedule detailed below has been developed by DEQ and EPA to meet this order and to provide a framework for future development of TMDLs on a watershed basis.

DEQ proposes to develop TMDLs on a watershed basis. DEQ has divided the state into 91 TMDL planning areas and has scheduled each area for TMDL plan development based upon groupings of similar water quality problems, land ownership, the 13 ranking criteria listed in MCA §75-5-702(7) and consideration of the priorities assigned to individual waters in the draft Year 2000 303(d) List. The proposed schedule identifies the date by which TMDLs for all listed waters within each planning area will be completed. A number of geographical units are scheduled for completion during each year with all waters on the 1996 303(d) list having TMDLs completed by 2007. DEQ has already begun collecting information on impaired waters in each of the watershed planning areas and watershed groups are in many areas developing watershed plans that address water quality, so to a certain extent TMDL development has already begun in each watershed area. The dates provided in this schedule should be viewed as completion dates for work in planning areas that has already begun or will start soon.

While the schedule addresses all waters on the 1996 list, the fact that it is based on planning areas will allow it to be used for any subsequent 303(d) list that EPA may later approve (i.e. the 2000 list). The number of water bodies and segments to be addressed by TMDLs could change in the coming years as future 303 (d) lists are improved and revised. However, the proposed format would allow DEQ to make adjustments in details of the schedule without changing the overall timeline. As provided by state law, DEQ must “provide a reasonable timeframe” for developing TMDLs for any water body added to the 303(d) list subsequent to May 5, 1997. If a water body is added to a subsequent list, DEQ will either develop a TMDL consistent with the proposed schedule for the planning area or develop an individual TMDL for the waterbody within 10 years. The decision will depend on the amount of data available for the waterbody, the complexity of the TMDL, and the time remaining on the schedule for the associated planning area.

Schedule

Montana is using a watershed approach to schedule development of TMDLs. Montana takes the position that this approach will improve the efficiency of its program to improve water quality. The EPA encourages this approach to water resources management in order to address water quality problems comprehensively and efficiently.

The schedule organizes the state into 91 TMDL planning areas. DEQ is preparing to develop planning area or watershed-wide water quality restoration plans that address multiple TMDLs and various pollutant sources and causes of pollutant loadings in all stream segments and lakes in each planning area. Each water quality plan will contain on average 4-10 TMDLs per planning area. The date presented in the schedule for a planning area is the date by which all TMDLs will be completed in that planning area. In order to have flexibility in the schedule and to be able to respond to contingencies, DEQ may need to reschedule some watershed planning areas. However, if one area is moved back in the schedule, another will be moved forward so the number of watershed TMDLs completed each year will remain the same.

TMDL planning areas were selected to improve the pace for which TMDLs are completed. Areas of similar land use and similar water quality problems were grouped together. The priority level and ranking factors developed in the draft 2000 303(d) List were considered. Watersheds containing more high and moderate priority water bodies were generally put earlier in the schedule. A few high and moderate priority water bodies were placed later in the schedule due to their expected level of complexity or the need to gather additional information to target restoration activities.

In most cases, DEQ chooses to use planning areas established by existing watershed groups that have already begun TMDL or watershed plan development. This approach increases public support and fosters local leadership. In some of the TMDL planning areas, DEQ is not aware of existing local interest groups that might be able to assist in developing TMDLs. In those cases, DEQ will attempt to identify local

partners and, if none are interested or willing, take the lead in conducting water quality assessments and developing the TMDL targets. These TMDL targets will be incorporated into watershed-wide TMDL plans developed by DEQ. DEQ will again seek support and leadership by local government and watershed groups to implement the TMDL plan once it is established.

The following Figure 2. and Table 3. identify the proposed TMDL planning areas and the year by which all TMDLs in that “watershed” are to be completed. DEQ will work closely with EPA to gain EPA’s approval of these area wide plans. A watershed group, land management agency, landowner, or other agency, including DEQ, that completes an individual waterbody TMDL within the planning area well before the identified date, has the option to have DEQ submit that plan to EPA for approval. These TMDLs will be used as models for other efforts around the state, as appropriate.

Table 3. Completion date and targeted TMDL planning area

Upper Missouri Region

Completion Date	Watershed
2002	Benton Lake
2002	Sun
2003	Lower Gallatin
2003	Lake Helena
2003	Dearborn
2003	Big Otter
2003	Ruby
2004	Upper Big Hole
2004	North Fork Big Hole
2004	Upper Smith
2005	Upper Red Rock
2005	Upper Jefferson
2005	Lower Jefferson
2005	Upper Madison
2005	Middle Madison
2005	Lower Smith
2005	Missouri - Chouteau
2006	Beaverhead
2006	Middle Big Hole
2006	Lower Big Hole
2006	Belt
2007	Lower Red Rock
2007	Upper Boulder
2007	Lower Boulder
2007	Lower Madison
2007	Upper Gallatin
2007	East Gallatin
2007	Canyon Ferry
2007	Holter Lake Area
2007	Missouri Cascade

Lower Missouri Region

Completion Date	Watershed
2001	Big Sandy - Sage
2001	Lower Musselshell
2002	Big Springs
2002	Teton
2002	Upper - Middle Musselshell
2003	Cut Bank - Two Medicine
2003	Judith - Arrow
2003	Bullwhacker - Dog
2004	Big - Little Dry
2004	Flatwillow
2004	Fork Peck Reservoir
2005	Redwater - Missouri Tribs
2005	Little Milk - Rock
2005	Lower Missouri
2006	Upper Milk
2006	Marias - Willow
2006	Beaver
2007	Landusky
2007	Middle Milk & Tribs

Yellowstone Region

<u>Completion Date</u>	<u>Watershed</u>
2001	Cooke City
2003	Bighorn Lake - Shoshone
2004	Little Missouri
2004	Shields
2004	Boulder – Big Timber
2005	O’Fallon
2005	Paradise -Tongue
2005	Rock Creek – Red Lodge
2006	Yellowstone - Sweet Grass
2006	Yellowstone – Lower Bighorn Powder
2006	Clarks Fork Yellowstone
2006	Stillwater - Columbus
2007	Yellowstone –Rosebud Lower Yellowstone
2007	Lake Basin -Spidel

Columbia Region

<u>Completion Date</u>	<u>Watershed</u>
2001	Flathead Lake
2002	Blackfoot Headwaters
2002	St. Regis
2002	Swan
2003	Flathead Headwaters
2003	Ninemile
2003	Bitterroot Headwaters
2004	Yak
2004	Middle Blackfoot
2005	Bitterroot
2005	Rock
2005	Nevada Creek
2005	Flathead - Stillwater
2005	Tobacco
2006	Lolo
2006	Fisher
2006	Lower Blackfoot
2007	Upper Clark Fork
2007	Little Blackfoot
2007	Flint
2007	Clark Fork -Drummond
2007	Middle Clark Fork
2007	Thompson
2007	Lower Clark Fork
2007	Kootenai

Point Source TMDL Strategy and Schedule

The Montana Pollutant Discharge Elimination System (MPDES) requires discharge permits for new point sources and requires permit renewal for existing sources every 5 years. The DEQ staff responsible for permitting, establish effluent limits to meet technology requirements, non-degradation policy, and water quality standards.

Where technology-based treatment and effluent guidelines for point sources (and water quality-based nondegradation requirement) are not sufficient to meet water quality standards, the permit writers may require more restrictive “water quality-based” limits. If these limits are designed to bring a waterbody into compliance with water quality standards, without additional nonpoint source treatment, then they may be approved by EPA as TMDLs. If additional NPS management is required, the permit writers may phase in the more restrictive permit limits to allow the DEQ Watershed Management Section to develop a strategy for the whole waterbody (TMDL - water quality restoration plan).

The Montana Water Quality Act allows point sources to continue to discharge to an impaired water while a water quality restoration plan or TMDL is being developed. However, the discharger must conform to the existing discharge permit or not cause a decline in water quality for the parameter causing impairment and must meet minimum treatment requirements. The issuance of a discharge permit may not be precluded because a plan is pending.

A new TMDL plan may be developed for an impaired waterbody at the time the permit is re-issued. DEQ staff generally evaluates whether point source controls are sufficient to meet water quality standards without other NPS restoration activities taking place. The permit may also be written to incorporate provisions for effluent pollutant trading between point sources and, in certain situations, effluent trading between point sources and nonpoint sources. Therefore, this report contains the schedule for permit re-issuance of all MPDES permits discharging to impaired waters for the next two-year period. The summary version of the MPDES schedule is displayed below as Table 4.

Table 4. MPDES Renewal Dates

FACILITY NAME SHORT	PERMIT NO.	Expiration Date	RECEIVING WATERS
CABLE MOUNTAIN MINE, INC.	MT0029653	07/31/2000	CABLE CREEK
LUZENAC AMERICA, INC.	MT0028932	07/31/2000	UNNAMED DRAIN. OF BLACKTAIL DEER CRK
VALIER- TOWN OF	MT0021792	07/31/2000	UNNAMED EPHEMERAL Trib. to Bullhead Cr.
BIG TIMBER-CITY OF	MT0020753	08/31/2000	BOULDER RIVER
BOZEMAN- CITY OF WWTP	MT0030155	08/31/2000	BOZEMAN CREEK
COLUMBIA FALLS-CITY OF	MT0020036	08/31/2000	FLATHEAD RIVER
LIBBY- CITY OF	MT0020494	08/31/2000	KOOTENAI RIVER
LUZENAC AMERICA, INC.	MT0026794	08/31/2000	WETLAND nr. Three Forks, Trib. to Madison R.
CHINOOK- CITY OF	MT0020125	09/30/2000	MILK RIVER
DECKER COAL CO (EAST MINE)	MT0024210	09/30/2000	TONGUE RIVER RESERVOIR
LAUREL- CITY OF WWTP	MT0030261	09/30/2000	YELLOWSTONE RIVER
ASH GROVE CEMENT COMPANY	MT0000451	10/31/2000	PRICKLY PEAR CREEK
BELT - CITY OF	MT0021571	10/31/2000	BELT CREEK
BUTTE-SILVER BOW, City County	MT0022012	10/31/2000	SILVER BOW CRK
CHOTEAU- CITY OF	MT0020052	10/31/2000	TETON RIVER
CONOCO, INC	MT0029742	10/31/2000	YELLOWSTONE RIVER VIA YEGEN DRAIN
RICHLAND COUNTY-SAVAGE	MT0024783	10/31/2000	YELLOWSTONE RIVER
WIBAUX- TOWN OF	MT0020516	10/31/2000	BEAVER CREEK
WINNETT- TOWN OF	MT0020702	10/31/2000	MCDONALD CREEK
YELLOWSTONE ENERGY L.P..	MT0030180	10/31/2000	YELLOWSTONE RIVER (at Lockwood)
BOZEMAN-CITY OF (WWTP)	MT0022608	11/30/2000	EAST GALLATIN RIVER
EVERGREEN NURSING HOME	MT0023566	11/30/2000	PRICKLY PEAR CREEK (nr. Clancy)
HAMILTON- CITY OF	MT0020028	11/30/2000	BITTERROOT RIVER
MONTANA POWER -Madison dam	MT0023167	11/30/2000	MADISON RIVER (nr. Ennis)
MONTANA RAIL LINK	MT0000388	11/30/2000	YELLOWSTONE RIVER, (nr. Livingston)
STEVENSVILLE-TOWN OF	MT0022713	11/30/2000	BITTERROOT RIVER, (at Stevensville)
BEREN CORPORATION	MTG310010	12/31/2000	UNNAMED SLOUGH, trib. to Red R., to Milk
EAGLE OIL & GAS COMPANY	MTG310006	12/31/2000	DRY RAVINE - Horton Lease (nr. Custer)
ECO INC	MTG310003	12/31/2000	UNNAMED DRAINAGE (nr. Cat Creek)
ECO INC	MTG310024	12/31/2000	UNNAMED DRY COULEE - MUSSELSHELL R
GENERAL PERMIT-Prod. Waters	MTG310000	12/31/2000	STATE WATERS
HAWKINS, ROBERT, INC.	MTG310001	12/31/2000	UNNAMED DRY DRAINAGE (nr. Kevin)
HOWELL PETROLEUM CORP.	MTG310025	12/31/2000	UNNAMED DRAINAGE OF SILVERTIP CREEK
JH OIL COMPANY	MTG310020	12/31/2000	UNNAMED COULEE (nr. Kevin)
KEESUN CORPORATION	MTG310009	12/31/2000	STOCK TANKS & EVAP. PITS (nr. Kevin)
KEVIN- TOWN OF	MT0030244	12/31/2000	UNNAMED DRY LAKE BED (at Kevin)
KIPLING ENERGY, INC.	MTG310016	12/31/2000	STOCK POND (nr. Kevin)
OMIMEX PETROLEUM, INC.	MTG310014	12/31/2000	STOCK WATERING IN WEED CK., to Alkali Cr.
PAC ENTERPRISES	MTG310029	12/31/2000	STOCK PDS. in Wild Bill Cr., to Little Powder R.
R&A OIL, INC.	MTG310002	12/31/2000	UNNAMED DRAINAGE TO JOHNSON Coulee, to Flatwillow Cr (Petrolia Res.)
RICHARDSON OPERATING CO.	MTG310030	12/31/2000	STOCK PONDS to Belle Cr., to Little Powder R.
ROCKY MOUNTAIN OPERAT. CO.	MTG310023	12/31/2000	DRY DRAINAGE to Little Ninemile to Bighorn R.
SOMONT OIL COMPANY, INC.	MTG310026	12/31/2000	UNNAMED DRAINAGE (nr. Kevin)
SOMONT OIL COMPANY, INC.	MTG310017	12/31/2000	UNNAMED DRY DRAINAGE (nr. Oilmont)
SONKAR INC.	MTG310028	12/31/2000	STOCK PONDS (nr. Sunburst)
WHITEHALL- TOWN OF	MT0020133	12/31/2000	BIG PIPESTONE CR
YELLOWSTONE TREATMENT CENTERS	MT0020460	12/31/2000	CANYON CREEK
BIG SKY COAL COMPANY	MT0000884	01/31/2001	ROSEBUD CREEK DRAINAGES
SHERIDAN- TOWN OF	MT0022098	01/31/2001	INDIAN CREEK
HOBSON- TOWN OF	MT0021636	02/28/2001	UNNAMED DRAINAGE OF JUDITH RIVER
VALLEY COUNTY - HINSDALE	MT0020656	02/28/2001	MILK RIVER
BUTTE SILVER BOW- WATER DIV.	MTG770003	03/31/2001	BASIN CREEK VIA EPHEMERAL CREEK (to Silver Bow Cr)
GEN PERMIT-DISINFECTED WATER	MTG770000	03/31/2001	STATE WATERS
SLEEPING BUFFALO HEAD FACILITY	MTG770002	03/31/2001	BEAVER CREEK VIA SACO FLATS
WHITEFISH- CITY OF	MT0020184	03/31/2001	WHITEFISH RIVER
FORT BENTON- CITY OF	MT0021601	04/30/2001	MISSOURI RIVER
MONT-GALEN STATE HOSP	MT0021431	05/31/2001	CLARK FORK RIVER
GRASS RANGE, TOWN OF	MT0030309	06/30/2001	SOUTH FORK MCDONALD CREEK

LUZENAC AMERICA, INC.	MT0027821	06/30/2001	UNNAMED TRIB of Middle Fork STONE CK.
ROUNDUP, CITY OF	MT0030295	06/30/2001	MUSSELSHELL RIVER
AIR LIQUIDE AMERICA CORP	MT0000426	08/31/2001	PRICKLY PEAR CREEK (nr. East Helena)
ASARCO INC. (EAST HELENA Plant)	MT0030147	09/30/2001	PRICKLY PEAR CREEK (nr. East Helena)
GEN PERMIT-FISH FARM	MTG130000	09/30/2001	STATE WATERS
MT DEPT FW&P-BIG SPRINGS Fish Hatchery UU	MTG130003	09/30/2001	HANSON CREEK
MT DEPT FW&P-BIG SPRINGS Fish Hatchery LU	MTG130004	09/30/2001	BIG SPRING CRK
MT DEPT FW&P-BLUEWATER SP. Fish HATCHERY	MTG130012	09/30/2001	BLUEWATER CREEK
MT DEPT FW&P-FLATHEAD L. Fish HATCHERY	MTG130014	09/30/2001	FLATHEAD LAKE
MT DEPT FW&P-GIANT SPRINGS Fish Hatchery	MTG130002	09/30/2001	MISSOURI RIVER
MT DEPT FW&P-JOCKO R. Fish HATCHERY	MTG130010	09/30/2001	JOCKO RIVER
MT DEPT FW&P-MURRAY SPRINGS Fish Hatchery	MTG130001	09/30/2001	LAKE KOOCANUSA
MT DEPT FW&P-WASHOE PARK FISH HATCHERY	MTG130013	09/30/2001	WARM SPRINGS CREEK
MT DEPT FW&P-YELLOWSTONE R. FISH HATCHERY -Miles City	MTG130011	09/30/2001	YELLOWSTONE RIVER - Miles City
ROSEBUD CO COMM. (COLSTRIP)	MT0022373	09/30/2001	ARMELLS CREEK
USDOI-FWS-BOZEMAN NFHatchery	MTG130006	09/30/2001	BRIDGER CREEK
USDOI-FWS-CRESTON NFHatchery	MTG130007	09/30/2001	MILL CREEK
USDOI-FWS-ENNIS NFHatchery	MTG130008	09/30/2001	BLAINE SPRG CRK
HELENA-CITY OF	MT0022641	10/31/2001	PRICKLY PEAR CREEK
STIMSON LUMBER (LIBBY MILL)	MT0000221	10/31/2001	KOOTENAI RIVER
HOLNAM, INC.	MT0000485	01/31/2002	MISSOURI RIVER
LIVINGSTON, CITY (SWIMMING)	MT0028118	01/31/2002	FLESHMAN CREEK
MONT SULPHUR & CHEMICAL CORP	MT0000230	01/31/2002	DRY CREEK, trib. to Yellowstone R.
TROY - CITY OF	MT0030333	01/31/2002	KOOTENAI RIVER
WILLOW CREEK SEWER DIST	MT0025038	01/31/2002	JEFFERSON RIVER
BILLINGS - CITY OF	MT0022586	02/28/2002	YELLOWSTONE RIVER
NORANDA MINERALS CORP.	MT0030279	02/28/2002	LIBBY CREEK & ALLUVIAL GROUNDWATER
EAST HELENA - CITY OF	MT0022560	03/30/2002	PRICKLY PEAR CRK
ASARCO, INC. (MIKE HORSE)	MT0030031	03/31/2002	MIKE HORSE, BEARTRAP CKS, BLACKFOOT R
FOUR (4) B'S INN	MT0029840	03/31/2002	GRANT CREEK
THREE FORKS - TOWN OF	MT0020401	03/31/2002	MADISON RIVER
TVX MINERAL HILL MINE	MT0030252	03/31/2002	BEAR CREEK
DECKER COAL CO (WEST MINE)	MT0000892	04/30/2002	TONGUE RIVER RESERVOIR
GEN PERMIT - Portable Suction Dredge	MTG370000	04/30/2002	STATE WATERS
TRIANGLE PACKING, INC.	MT0029807	04/30/2002	TETON RIVER (nr. Choteau)
POPLAR, CITY OF	MT0021695	05/31/2002	MISSOURI RIVER
EXXON CO (Suction Dredge Settling Pond)	MT0028321	06/30/2002	dredge pond to YELLOWSTONE RIVER
GEN PERMIT - CONSTRUCTION DEWATERING	MTG070000	06/30/2002	STATE WATERS

Existing Approved Point and Nonpoint Source TMDLs

DEQ has received approval from EPA for TMDL -water quality restoration plans for four waterbodies that address nonpoint sources. These approvals include water quality targets (TMDLs) for 19 pollutants. DEQ has also received approval from EPA for point source TMDLs on 74 waterbodies. These TMDLs address 179 permit parameters. A summary of these TMDLs is found in Appendix C.

Public and Agency Consultation on the 303(d) List

The initial data used in prioritizing waterbodies for TMDL development was prepared by DEQ water quality specialists in consultation with local Conservation Districts and watershed groups and summarized on score sheets. In the second step of refining the priorities, the TMDLAG received the forms and made comments. The TMDLAG provided valuable input on the priority ranking methods and data used in prioritizing these waterbodies as “high, moderate, or low priority” for water quality restoration plan development. As required by the Montana Water Quality Act, the department did not rank a waterbody as high priority under this section without first validating the data necessary to support the ranking.

DEQ published public notices of the availability of a draft 303(d) report in each major newspaper in the state and initiated a 60 day public comment period seeking public and agency comments on:

- ◆ the adequacy of the water quality data used in making 303(d) listing determinations,
- ◆ the priorities and scheduling of water quality restoration plan development, and
- ◆ the adequacy of the re-assessment schedule for gathering sufficient credible data for the waterbodies presently lacking sufficient water quality data.

As detailed in the newspaper notices and in the 303(d) report cover letter, a series of 18 public meetings were scheduled around the state during this comment period to review and update the 303(d) List, TMDL-water quality restoration plan priorities, and the waterbody reassessment schedule.

DEQ sent written notices of the 303(d) report availability to all major water resource management stakeholders and provided copies of summary reports to all interested parties. For those interested in the detailed water assessment data, data sources, water quality restoration priorities, and reassessment schedule for waterbodies lacking sufficient credible data, DEQ provided data sheets available either online or in hard copy. Each waterbody on the 303(d) list has a “data review sheet” listing the available data, the degree of waterbody impairment and the scoring for prioritizing waters for TMDL development.

In many areas, DEQ water quality specialists scheduled meetings and met with conservation districts, watershed groups, and other groups to solicit comments on the ranking priorities and identify information sources that could be used to improve the list. Written comments were received, as well. DEQ provides a response to the comments received in Part A of the accompanying report. As described there, new segments and waterbodies were added to this list. For those new listings a TMDL priority score was developed using the score sheet described above. The high, moderate and low designations for these new waters were set based on the score ranges developed in the draft Part B. 303 (d) List. These waters are described in Part A and B of the 303 d List. DEQ’s approach to TMDL development for these newly listed waters will be to include them into the watershed-based TMDL planning documents according to the schedule described in Chapter 3 of this document.

DEQ has met and continues to meet informally with water resource and water quality restoration staff from other local, state, and federal agencies and groups in Montana. These meetings, presentations, and conversations are intended to identify opportunities for cooperative water quality planning and to coordinate on the development of water resource protection priorities.

Appendix A - Scoring sheet used for ranking

Water Resource/Policy Values

Factor/Score (in parenthesis)	Score	Weight	Total	Suggested Considerations (please write in specifics)
1. Important High Quality Resource in the <u>Early Stages of Degradation</u> <i>(unique or particularly valuable resources for the state or community)</i>				<input type="radio"/> A-1 Water body _____ <input type="radio"/> High Quality Fisheries _____ <input type="radio"/> Important native fish habitat _____ <input type="radio"/> "Outstanding Resource Waters" _____ <input type="radio"/> Other _____ _____ _____
<input type="checkbox"/> High Resource Value Waters, or High Quality Resources in early stages	(2)	x 3		
<input type="checkbox"/> Moderate Quality Resources in early stages	(1)	x 3		
<input type="checkbox"/> Not High Quality Resource in early stages	(0)	x 3		
2. Degree of Public Interest and Support				<input type="radio"/> Conservation District _____ <input type="radio"/> Landowner Interest _____ <input type="radio"/> Agency(s) Interest _____ <input type="radio"/> Watershed Groups _____ <input type="radio"/> Other _____ _____ _____
<input type="checkbox"/> High – Clearly High Interest and Support	(2)	x 2		
<input type="checkbox"/> Moderate	(1)	x 2		
<input type="checkbox"/> Low Interest or Local Opposition	(0)	x 2		
3. Immediate Programmatic Needs <i>(Programmatic is assumed to relate to TMDL Program Needs.)</i>				<input type="radio"/> TMDL Coordination Opportunity _____ <input type="radio"/> Pollutant Trading Opportunity _____ <input type="radio"/> Water Quality Permits _____ <input type="radio"/> Other: _____ _____ _____
<input type="checkbox"/> Immediate Anticipated Programmatic Needs	(2)	x 2		
<input type="checkbox"/> Potential Contribution to Programmatic Needs	(1)	x 2		
<input type="checkbox"/> No Programmatic needs identified	(0)	x 2		
4. Availability of Technology and Resources to Correct the Problem				<input type="radio"/> Other: _____ _____ _____ _____
<input type="checkbox"/> It Is Likely that Technology and Resources Are Available and Adequate	(2)	x 2		
<input type="checkbox"/> Technology and/or Resources Uncertain	(1)	x 2		
<input type="checkbox"/> Technology and/or Resources Unlikely to be Available	(0)	x 2		
5. Whether Actions or Voluntary Programs that are Likely to Correct the Impairment Are Currently in Place				<input type="radio"/> Agency Priority _____ <input type="radio"/> Watershed Plan _____ <input type="radio"/> Active Government Programs _____ <input type="radio"/> USDA EQIP Priority _____ <input type="radio"/> Other _____ _____ _____
<input type="checkbox"/> High Likelihood That Existing or Planned Local Actions or Programs Will Restore Water Quality	(2)	x 2		
<input type="checkbox"/> Moderate Likelihood	(1)	x 2		
<input type="checkbox"/> Low Likelihood	(0)	x 2		
Factor/Score (in parenthesis)	Score	Weight	Total	Suggested Considerations (please write in specifics)

6. Recreational, Economic, and Aesthetic Importance			<input type="radio"/> Historical Significance _____ <input type="radio"/> Adjacent to National or State Park _____ <input type="radio"/> High Quality Fishery _____ <input type="radio"/> Floating _____ <input type="radio"/> Wild and Scenic River _____ <input type="radio"/> Agriculture/Irrigation _____ <input type="radio"/> Other _____ _____
<input type="checkbox"/> Supports High Value Recreational, Economic and/or Aesthetic Activities (2)	x 2		
<input type="checkbox"/> Moderate Level of Recreational, Economic and/or Aesthetic Value (1)	x 2		
<input type="checkbox"/> Limited Recreational, Economic and/or Aesthetic Value (0)	x 2		
7. State Priorities and Policies including Protection and Restoration of Native Fish, when appropriate (i.e. Native Fish, Whirling Disease, Water Rights, T&E Species)			
<input type="checkbox"/> High Goal Overlap (2)	x 1		<input type="radio"/> Drinking Water Priority _____ <input type="radio"/> Source Water Priority _____ <input type="radio"/> Native Fish Restoration Area _____ <input type="radio"/> Abandoned Mine & Land Priority _____ <input type="radio"/> Recreation/Fishery _____ <input type="radio"/> Other _____ _____
<input type="checkbox"/> Moderate Goal Overlap (1)	x 1		
<input type="checkbox"/> Minimal Goal Overlap (0)	x 1		
Total Resource / Policy Score			
Comments:			

Appendix B
MPDES permit schedule

**MPDES PERMITS EXPIRING BETWEEN
7/2000 AND 6/2002**

FACILITY NAME SHORT	PERMIT NO.	Expiration Date	RECEIVING WATERS	IDB Segment	Facility Type	Monitored Discharges	COUNTY	MAJ/MIN RIVER BA
CABLE MOUNTAIN MINE, INC.	MT0029653	07/31/2000	CABLE CREEK	MT76G002_030	Placer Mine	Discharge Event	Deer Lodge	PN/CLARK FORK-ORFILI
LUZENAC AMERICA, INC.	MT0028932	07/31/2000	UNNAMED DRAIN. OF BLACKTAIL DEER CRK	Trib to MT41B002_030	Talc Mine	Flow Rate, PH, TSS, Oil & Grease	Fergus	MR/UP MO R-MILK R.
VALIER- TOWN OF	MT0021792	07/31/2000	UNNAMED EPHEMERAL Trib. to Bullhead Cr.	Bullhead Cr. is trib. to Marias R. MT41P001_010	Sewage Treatment Lagoon	Flow Rate, BOD, TSS	Pondera	MR/UP MO R-MILK R.
BIG TIMBER-CITY OF	MT0020753	08/31/2000	BOULDER RIVER	MT43B004_130	Sewage Treatment Lagoon	Flow Rate, BOD, TSS, Nitrogen, Phosphorus, Coliform	Sweet Grass	MR/YELLOWSTONE R
BOZEMAN- CITY OF (Waste Treat.Plant)	MT0030155	08/31/2000	BOZEMAN CREEK	MT41H003_040	Waste Treatment Plant	PH, TSS, Nitrogen, Phosphorus, Flow, Chlorine, Coliform, BOD	Gallatin	MR/UP MO R-MILK R.
COLUMBIA FALLS-CITY OF	MT0020036	08/31/2000	FLATHEAD RIVER	MT76O001_010	Wastewater Treatment Plant	PH, TSS, Nitrogen, Phosphorus, Flow, Chlorine, Coliform, BOD	Flathead	PN/CLARK FORK-ORFILI
LIBBY- CITY OF	MT0020494	08/31/2000	KOOTENAI RIVER	MT76D001_010	Wastewater Treatment Plant	PH, TSS, Nitrogen, Phosphorus, Flow, Chlorine, Coliform, BOD	Lincoln	PN/KOOTENAI R.
LUZENAC AMERICA, INC.	MT0026794	08/31/2000	WETLAND nr. Three Forks, Trib. to Madison R.	Trib. to MT41F001_010	Talc Mill	Flow Rate, PH, TSS, Oil & Grease	Gallatin	MR/UP MO R-MILK R.
CHINOOK- CITY OF	MT0020125	09/30/2000	MILK RIVER	MT40J001_010	Sewage Treatment Plant	Flow Rate, PH, BOD, TSS, Nitrogen, Phosphorus, Coliform	Blaine	MR/UP MO R-MILK R.
DECKER COAL CO (EAST MINE)	MT0024210	09/30/2000	TONGUE RIVER RESERVOIR	MT42B003-010	Coal Mine	Flow Rate, PH, TSS, Oil & Grease, Iron,	Big Horn	MR/YELLOWSTONE R
LAUREL- CITY OF (Waste Treat. Plant)	MT0030261	09/30/2000	YELLOWSTONE RIVER	MT43Q001_010	Waste Treatment Plant	PH, TSS, Flow, Chlorine, Aluminum	Yellowstone	MR/YELLOWSTONE R
ASH GROVE CEMENT COMPANY	MT0000451	10/31/2000	PRICKLY PEAR CREEK	MT41I006_040	Cement Plant	Temperature, Flow Rate, PH, TSS, Thermal Discharge	Jefferson	MR/UP MO R-MILK R.
BELT - CITY OF	MT0021571	10/31/2000	BELT CREEK	MT41U001_010	Waste Treatment Plant	BOD, TSS, Nitrogen, Phosphorus, Flow, Coliform	Cascade	MR/UP MO R-MILK R.
BUTTE-SILVER BOW, CITY&COUNTY	MT0022012	10/31/2000	SILVER BOW CRK	MT76G003_020	Wastewater Treatment Plant	PH, TSS, Nitrogen, Phosphorus, Flow, Chlorine, Coliform, BOD	Silver Bow	PN/CLARK FORK-ORFILI
CHOTEAU- CITY OF	MT0020052	10/31/2000	TETON RIVER	MT41O001_030	Sewage Treatment Lagoon	Flow Rate, BOD, TSS, Nitrogen, Phosphorus, Chlorine, Coliform	Teton	MR/UP MO R-MILK R.
CONOCO, INC	MT0029742	10/31/2000	YELLOWSTONE RIVER VIA YEGEN DRAIN	MT43Q001_010	Hyrostatic Test Water	Flow Rate, PH, Oil & Grease, Chlorine	Yellowstone	MR/YELLOWSTONE R
RICHLAND COUNTY-SAVAGE	MT0024783	10/31/2000	YELLOWSTONE RIVER	MT42M001_010	Sewage Treatment Lagoon	Flow Rate, BOD, TSS, Nitrogen, Phosphorus,	Richland	MR/YELLOWSTONE R
WIBAUX- TOWN OF	MT0020516	10/31/2000	BEAVER CREEK	MT39G001_010	Sewage Treatment Lagoon	Flow Rate, BOD, TSS, Nitrogen, Phosphorus, Chorine, Coliform	Wibaux	MR/CEN MO R-SPRING
WINNETT- TOWN OF	MT0020702	10/31/2000	MCDONALD CREEK	MT40B002_010	Sewage Treatment Lagoon	Flow Rate, BOD, TSS, Nitrogen, Phosphorus, Coliform	Petroleum	MR/UP MO R-MILK R.

YELLOWSTONE ENERGY LTD. PARTNERSHIP	MT0030180	10/31/2000	YELLOWSTONE RIVER (at Lockwood)	MT43Q001_010	Plant Discharge	Flow Rate, PH, TSS, Phosphorus, Oil & Grease	Yellowstone	MR/YELLOWSTONE R
BOZEMAN-CITY OF (Waste Water Treat. Plant)	MT0022608	11/30/2000	EAST GALLATIN RIVER	MT41H003_020	Wastewater Treatment Plant	PH, TSS, Nitrogen, Phosphorus, Flow, Chlorine, Coliform, BOD, Oil & Grease	Gallatin	MR/UP MO R-MILK R.
EVERGREEN NURSING HOME	MT0023566	11/30/2000	PRICKLY PEAR CREEK (nr. Clancy)	MT41I006_050	Sewage Treatment Plant	Flow Rate, PH, BOD, TSS, Nitrogen, Phosphorus, Chlorine, Coliform	Jefferson	MR/UP MO R-MILK R.
HAMILTON- CITY OF	MT0020028	11/30/2000	BITTERROOT RIVER	MT76H001_010	Wastewater Treatment Plant	PH, TSS, Nitrogen, Phosphorus, Flow, Chlorine, Coliform, BOD	Ravalli	PN/CLARK FORK-ORFILI
MONTANA POWER CO-MADISON DAM	MT0023167	11/30/2000	MADISON RIVER (nr. Ennis)	MT41F001_010	Powerhouse Wastewater Treatment Plant	Flow, BOD, PH, TSS, Nitrogen, Phosphorus,	Madison	MR/UP MO R-MILK R.
MONTANA RAIL LINK	MT0000388	11/30/2000	YELLOWSTONE RIVER, (nr. Livingston)	MT43B003_010	Treatment Plant Facility	Flow Rate, PH, TSS, Phosphorus, Nickel, Cadmium, Lead, Chromium, Copper, Zinc, Oil & Grease	Park	MR/YELLOWSTONE R
STEVENSVILLE-TOWN OF	MT0022713	11/30/2000	BITTERROOT RIVER, (at Stevensville)	MT76H001_010	Oxidation Plant	Flow Rate, BOD, TSS, Nitrogen, Phosphorus, Coliform	Ravalli	PN/CLARK FORK-ORFILI
BEREN CORPORATION	MTG310010	12/31/2000	UNNAMED SLOUGH, trib. to Red R., to Milk	N.A.	Oil Well Produced Water- Cross Lease	Flow, Oil & Grease, TSS	Glacier	MR/UP MO R-MILK R.
EAGLE OIL & GAS COMPANY	MTG310006	12/31/2000	DRY RAVINE - Horton Lease (nr. Custer)	Trib. to Alkali Cr, to MT42K001_020	Horton Oil Well Lease Discharge	Flow, Oil & Grease, TSS	Yellowstone	MR/YELLOWSTONE R
ECO INC	MTG310003	12/31/2000	UNNAMED DRAINAGE (nr. Cat Creek)	Trib to MT40C003_010	Unit 1 Battery	Flow, Oil & Grease, TSS	Petroleum	MR/UP MO R-MILK R.
ECO INC	MTG310024	12/31/2000	UNNAMED DRY COULEE OF MUSSELSHELL R	Trib. to MT40C003_010	Oil Well Produced Water	Flow, Oil & Grease, TSS	Garfield	MR/UP MO R-MILK R.
GENERAL PERMIT-PRODUCED WATERS	MTG310000	12/31/2000	STATE WATERS	N.A.	Oil Well Produced Water	Flow, Oil & Grease, TSS	Statewide	Statewide
HAWKINS, ROBERT, INC.	MTG310001	12/31/2000	UNNAMED DRY DRAINAGE (nr. Kevin)	N.A.	Oil Well Produced Water	Flow, Oil & Grease, TSS	Toole	MR/UP MO R-MILK R.
HOWELL PETROLEUM CORP.	MTG310025	12/31/2000	UNNAMED DRAINAGE OF SILVERTIP CREEK	MT43D002_100	Oil Well Produced Water	Flow, Oil & Grease, TSS	Carbon	MR/YELLOWSTONE R
JH OIL COMPANY	MTG310020	12/31/2000	UNNAMED COULEE (nr. Kevin)	N.A.	Texaco Battery Oil Well Discharge	Flow, Oil & Grease, TSS	Toole	MR/UP MO R-MILK R.
KEESUN CORPORATION	MTG310009	12/31/2000	STOCK TANKS & EVAP. PITS (nr. Kevin)	N.A.	Oil Well Produced Water	Flow, Oil & Grease, TSS	Toole	MR/UP MO R-MILK R.
KEVIN- TOWN OF	MT0030244	12/31/2000	UNNAMED DRY LAKE BED (at Kevin)	N.A.	Sewage Lagoon	Flow Rate, BOD, TSS	Toole	MR/UP MO R-MILK R.
KIPLING ENERGY, INC.	MTG310016	12/31/2000	STOCK POND (nr. Kevin)	N.A.	Oil Well Produced Water - Agency State Lease	Flow, Oil & Grease, TSS	Toole	MR/UP MO R-MILK R.
OMIMEX PETROLEUM, INC.	MTG310014	12/31/2000	STOCK WATERING IN WEED CK., to Alkali Cr., to Yellowstone R.	N.A.	Oil Well Produced Water -MAART #3-2	Flow, Oil & Grease, TSS	Yellowstone	MR/YELLOWSTONE R
PAC ENTERPRISES	MTG310029	12/31/2000	STOCK PONDS in Wild Bill Cr., to Little Powder R.	N.A.	Oil Well Produced Water - Fed. #35-5	Flow, Oil & Grease, TSS	Powder River	VI/ST. THOMAS
R&A OIL, INC.	MTG310002	12/31/2000	UNNAMED DRAINAGE TO JOHNSON Coulee, to Flatwillow Cr (Petrolia Res.)	Trib. to MT40B001_020	Oil Well Produced Water	Flow, Oil & Grease, TSS	Petroleum	MR/SOUTH PLATTE R.
RICHARDSON OPERATING COMPANY	MTG310030	12/31/2000	STOCK PONDS to Belle Cr., to Little Powder R.	N.A.	Oil Well Produced Water	Flow, Oil & Grease, TSS	Powder River	MR/UP MO R-MILK R.
ROCKY MOUNTAIN OPERATING CO.	MTG310023	12/31/2000	DRY DRAINAGE to Little Ninemile to Bighorn R.	N.A.	Oil Well Produced Water - Kendrick Lease	Flow, Oil & Grease, TSS	Bighorn	MR/YELLOWSTONE R

SOMONT OIL COMPANY, INC.	MTG310026	12/31/2000	UNNAMED DRAINAGE (nr. Kevin)	N.A.	Oil Well Produced Water - Ellingson Lease	Flow, Oil & Grease, TSS	Toole	MR/UP MO R-MILK R.
SOMONT OIL COMPANY, INC.	MTG310017	12/31/2000	UNNAMED DRY DRAINAGE (nr. Oilmont)	N.A.	Oil Well Produced Water - Husted Lease	Flow, Oil & Grease, TSS	Toole	MR/UP MO R-MILK R.
SONKAR INC.	MTG310028	12/31/2000	STOCK PONDS (nr. Sunburst)	N.A.	Oil Well Produced Water - Baker Lease	Flow, Oil & Grease, TSS	Toole	MR/UP MO R-MILK R.
WHITEHALL- TOWN OF	MT0020133	12/31/2000	BIG PIPESTONE CR	MT41G002_010	Sewage Treatment Lagoon	Flow Rate, BOD, TSS, Nitrogen, Phosphorus, Coliform	Jefferson	MR/UP MO R-MILK R.
YELLOWSTONE TREATMENT CENTERS	MT0020460	12/31/2000	CANYON CREEK	MT43Q003_020	Sewage Lagoon	Flow Rate, BOD, TSS, Nitrogen, Phosphorus, Chlorine, Coliform, Temperature	Yellowstone	MR/YELLOWSTONE R
BIG SKY COAL COMPANY	MT0000884	01/31/2001	ROSEBUD CREEK DRAINAGES	MT42A001_011	Big Sky Coal Mine	Flow Rate, PH, TSS, Oil & Grease, Iron, BOD, TSS,	Rosebud	MR/YELLOWSTONE R
SHERIDAN- TOWN OF	MT0022098	01/31/2001	INDIAN CREEK	MT41C002_030	Sewage Treatment Lagoon	BOD, TSS,	Madison	MR/UP MO R-MILK R.
HOBSON- TOWN OF	MT0021636	02/28/2001	UNNAMED DRAINAGE OF JUDITH RIVER	Trib to MT41S001_020	Sewage Treatment Lagoon	Flow Rate, BOD, TSS, Nitrogen, Phosphorus, Coliform	Fergus	MR/UP MO R-MILK R.
VALLEY COUNTY - HINSDALE	MT0020656	02/28/2001	MILK RIVER	MT40O001_010	Wastewater Treatment Plant	PH, TSS, Nitrogen, Phosphorus, Flow, Chlorine, Coliform, BOD	Valley	MR/UP MO R-MILK R.
BUTTE SILVER BOW-WATER DIV.	MTG770003	03/31/2001	BASIN CREEK VIA EPHEMERAL CREEK (Silver Bow Cr)	Trib to (to MT76G003_020)	unknown	N.A.	Silver Bow	MR/UP MO R-MILK R.
GEN PERMIT-DISINFECTED WATER	MTG770000	03/31/2001	STATE WATERS	N.A.	Discharge	N.A.	Statewide	
SLEEPING BUFFALO HEAD FACILITY	MTG770002	03/31/2001	BEAVER CREEK VIA SACO FLATS	MT40M001_020	Discharge	N.A.	Phillips	
WHITEFISH- CITY OF	MT0020184	03/31/2001	WHITEFISH RIVER	MT76P003_010	Sewage Treatment Lagoon	Flow, PH, BOD, TSS, Nitrogen, Phosphorus, Coliform	Flathead	PN/CLARK FORK-ORFILI
FORT BENTON- CITY OF	MT0021601	04/30/2001	MISSOURI RIVER	MT41Q001_010	Wastewater Treatment Plant	TSS, Nitrogen, Phosphorus, Flow, BOD	Chouteau	MR/UP MO R-MILK R.
MONT-GALEN STATE HOSP	MT0021431	05/31/2001	CLARK FORK RIVER	MT76G001_040	Wastewater Treatment Plant	PH, TSS, Nitrogen, Phosphorus, Flow, Chlorine, Coliform, BOD	Powell	PN/CLARK FORK-ORFILI
GRASS RANGE, TOWN OF	MT0030309	06/30/2001	SOUTH FORK MCDONALD CREEK	Trib to MT40B002_010	Sewage Lagoon	TSS, Nitrogen, Phosphorus, Flow, Coliform, BOD	Petroleum	MR/UP MO R-MILK R.
LUZENAC AMERICA, INC.	MT0027821	06/30/2001	UNNAMED TRIB of Middle Fork STONE CK.	Trib to MT41B002_0130	Talc Mine	Flow Rate, PH, TSS, Nitrogen, Oil & Grease	Beaverhead	MR/UP MO R-MILK R.
ROUNDUP, CITY OF	MT0030295	06/30/2001	MUSSELSHELL RIVER	MT40C001_010	Sewage Lagoon	Flow, BOD, TSS, Nitrogen, Phosphorus, Coliform	Musselshell	MR/YELLOWSTONE R
AIR LIQUIDE AMERICA CORP	MT0000426	08/31/2001	PRICKLY PEAR CREEK (nr. East Helena)	MT41I006_030	Noncontact Cooling Water	Flow Rate, Oil & Grease, Temperature, Thermal Discharge	Lewis & Clark	MR/UP MO R-MILK R.
ASARCO INC. (EAST HELENA Plant)	MT0030147	09/30/2001	PRICKLY PEAR CREEK (nr. East Helena)	MT41I006_030	Lower Pond Outfall to Prickly Pear Cr.	Flow Rate, BOD, Oxygen Demand, PH, TSS, Nitrogen, Phosphorus, Arsenic, Iron, Selenium, Thallium, Silver, Aluminum,, Cadmium, Lead, Copper, Zinc, Antimony, Manganese, Mercury, Oil & Grease	Lewis & Clark	MR/UP MO R-MILK R.
GEN PERMIT-FISH FARM	MTG130000	09/30/2001	STATE WATERS	N.A.	Fish Farm Discharge	N.A.	Statewide	

MT DEPT FW&P-BIG SPRINGS Fish Hatchery UU	MTG130003	09/30/2001	HANSON CREEK	Trib to MT41S004_010	Discharge	N.A.	Fergus	MR/UP MO R-MILK R.
MT DEPT FW&P-BIG SPRINGS Fish Hatchery LU	MTG130004	09/30/2001	BIG SPRING CRK	MT41S004_010	Discharge	N.A.	Fergus	MR/UP MO R-MILK R.
MT DEPT FW&P-BLUEWATER SP. Fish HATCHERY	MTG130012	09/30/2001	BLUEWATER CREEK	MT43D002_030	Discharge	N.A.	Carbon	MR/YELLOWSTONE R
MT DEPT FW&P-FLATHEAD L. Fish HATCHERY	MTG130014	09/30/2001	FLATHEAD LAKE	MT76O003_010	Discharge	N.A.	Lake	PN/CLARK FORK-ORFILI
MT DEPT FW&P-GIANT SPRINGS Fish Hatchery	MTG130002	09/30/2001	MISSOURI RIVER	MT41Q001_010	Discharge	N.A.	Cascade	MR/UP MO R-MILK R.
MT DEPT FW&P-JOCKO R. Fish HATCHERY	MTG130010	09/30/2001	JOCKO RIVER	N.A.	Discharge	N.A.	Lake	PN/CLARK FORK-ORFILI
MT DEPT FW&P-MURRAY SPRINGS Fish Hatchery	MTG130001	09/30/2001	LAKE KOOCANUSA	MT76D003_010	Discharge	N.A.	Lincoln	PN/KOOTENAI R.
MT DEPT FW&P-WASHOE PARK FISH HATCHERY	MTG130013	09/30/2001	WARM SPRINGS CREEK	MT76G002_010	Discharge	N.A.	Deer Lodge	PN/CLARK FORK-ORFILI
MT DEPT FW&P-YELLOWSTONE R. FISH HATCHERY -Miles City ROSEBUD CO COMM. (COLSTRIP)	MTG130011	09/30/2001	YELLOWSTONE RIVER - Miles City	MT42K001_010	Discharge	N.A.	Custer	MR/YELLOWSTONE R
	MT0022373	09/30/2001	ARMELLS CREEK	MT42K002_110	Sewage Discharge	PH, TSS, Nitrogen, Phosphorus, Flow, Chlorine, Coliform, BOD	Rosebud	MR/YELLOWSTONE R
USDOI-FWS-BOZEMAN NFHatchery	MTG130006	09/30/2001	BRIDGER CREEK	MT41H003_110	Discharge	N.A.	Gallatin	MR/UP MO R-MILK R.
USDOI-FWS-CRESTON NFHatchery	MTG130007	09/30/2001	MILL CREEK	N.A.	Discharge	N.A.	Flathead	PN/CLARK FORK-ORFILI
USDOI-FWS-ENNIS NFHatchery	MTG130008	09/30/2001	BLAINE SPRG CRK	Trib to MT41F001_020	Discharge	N.A.	Madison	MR/UP MO R-MILK R.
HELENA-CITY OF	MT0022641	10/31/2001	PRICKLY PEAR CREEK	MT41I006_020	Wastewater Treatment Plant	PH, TSS, Nitrogen, Phosphorus, Flow, Chlorine, Coliform, BOD, Oil & Grease	Lewis & Clark	MR/UP MO R-MILK R.
STIMSON LUMBER (LIBBY MILL)	MT0000221	10/31/2001	KOOTENAI RIVER	MT76D001_010	Effluent	Flow Rate, BOD, Temperature, PH, TSS, Nitrogen, Phosphorus, Iron, Cadmium, Lead, Copper, Zinc, Oil & Grease	Lincoln	PN/KOOTENAI R.
HOLNAM, INC.	MT0000485	01/31/2002	MISSOURI RIVER	MT41I001_010	Wastewater	Flow Rate, BOD, PH, TSS, Nitrogen, Phosphorus, Oil & Grease	Broadwater	MR/UP MO R-MILK R.
LIVINGSTON, CITY (SWIMMING)	MT0028118	01/31/2002	FLESHMAN CREEK	Trib to MT43B003_010	Swimming Pool Backwash	PH, Flow, Turbidity, Chlorine,	Park	MR/YELLOWSTONE R
MONT SULPHUR & CHEMICAL CORP	MT0000230	01/31/2002	DRY CREEK, trib. to Yellowstone R.	Trib to MT43Q001_010	Noncontact Cooling Water	Flow Rate, Temperature, PH, TSS	Yellowstone	
TROY - CITY OF	MT0030333	01/31/2002	KOOTENAI RIVER	MT76D001_010	Sewage Treatment Lagoon	Flow, BOD, TSS, Nitrogen, Phosphorus	Lincoln	PN/KOOTENAI R.
WILLOW CREEK SEWER DIST	MT0025038	01/31/2002	JEFFERSON RIVER	MT41G001_010	Wastewater Treatment Plant	PH, TSS, Flow, Chlorine, Coliform, BOD	Madison	MR/UP MO R-MILK R.
BILLINGS - CITY OF	MT0022586	02/28/2002	YELLOWSTONE RIVER	MT43Q001_010	Wastewater Treatment Plant	PH, TSS, Nitrogen, Phosphorus, Flow, Chlorine, Coliform, BOD, Oil & Grease	Yellowstone	MR/YELLOWSTONE R
NORANDA MINERALS CORP.	MT0030279	02/28/2002	LIBBY CREEK & ALLUVIAL GROUNDWATER	MT76D002_060	Percolation Pond/Groundwater Infiltration System	Flow Rate, PH, Nitrogen, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Zinc, Mercury, Sulfate	Lincoln	PN/KOOTENAI R.

EAST HELENA - CITY OF	MT0022560	03/30/2002	PRICKLY PEAR CRK	MT41I006_020	Sewage Treatment Lagoon	Flow Rate, BOD, PH, TSS, Nitrogen, Phosphorus, Copper, Lead, Zinc, Chlorine, Coliform	Lewis & Clark	MR/UP MO R-MILK R.
ASARCO, INC. (MIKE HORSE)	MT0030031	03/31/2002	MIKE HORSE,BEARTRAP CKS,BLACKFOOT R	MT76F002_040	Wetlands Treatment Discharge	Flow Rate, PH, TSS, Sulfate, Disolved Oxygen, Arsenic, Aluminum, Cadmium, Copper, Iron, Lead, Manganese, Mercury, Zinc	Lewis & Clark	PN/CLARK FORK-ORFILI
FOUR (4) B'S INN	MT0029840	03/31/2002	GRANT CREEK	MT76M002_130	Noncontact Heat Exchanger	Temperature, Flow Rate, Thermal Discharge, Oil & Grease	Missoula	
THREE FORKS - TOWN OF	MT0020401	03/31/2002	MADISON RIVER	MT41F001_010	Sewage Treatment Lagoon	Flow, BOD, PH, TSS, Nitrogen, Phosphorus	Gallatin	MR/UP MO R-MILK R.
TVX MINERAL HILL MINE	MT0030252	03/31/2002	BEAR CREEK	MT43B002_020	Adit, Tailings Water, Groundwater Seep	Flow Rate, PH, TSS, Nitrogen, Arsenic, Cadmium, Copper, Iron, Lead, Manganese, Mercury, Zinc, Cyanide	Park	MR/YELLOWSTONE R
DECKER COAL CO (WEST MINE)	MT0000892	04/30/2002	TONGUE RIVER RESERVOIR	MT42B003-010	Coal Mine Effluent	Flow Rate, PH, TSS, Oil & Grease, Iron, Aluminum, Nitrogen, Solids	Big Horn	MR/YELLOWSTONE R
GEN PERMIT - Portable Suction Dredge	R MTG370000	04/30/2002	STATE WATERS	N.A.	Dredge Mining	N.A.	Statewide	
TRIANGLE PACKING, INC.	MT0029807	04/30/2002	TETON RIVER (nr. Choteau)	MT41O001_030	Noncontact Cooling Water	Flow Rate, Temperature, PH	Teton	MR/UP MO R-MILK R.
POPLAR, CITY OF	MT0021695	05/31/2002	MISSOURI RIVER	MT40S003_010	Wastewater Treatment Plant	PH, TSS, Nitrogen, Phosphorus, Flow, BOD	Roosevelt	MR/UP MO R-MILK R.
EXXON CO (Suction Dredge Settling Pond)	MT0028321	06/30/2002	dredge pond to YELLOWSTONE RIVER	MT43Q001_010	Cooling and Suction Dredge Effluent	Flow Rate, Turbidity, Oil & Grease	Yellowstone	MR/YELLOWSTONE R
GEN PERMIT - CONSTRUCTION DEWATERING	MTG070000	06/30/2002	STATE WATERS	N.A.	Discharge	N.A.	Statewide	

Appendix C
Approved TMDLs
(point and nonpoint source)

Listing of Approved TMDL's

Summary Table of TMDL Approvals in Montana

Approved 303(d) TMDLs

Nonpoint Source TMDLs for 19 pollutants

APPROVED NONPOINT SOURCE TMDLs					
Waterbody Name	TMDL Parameter/ Pollutant	Water Quality Goal/Endpoint	TMDL	Reference Document(s)	Approval Date
Deep Creek*	Sediment Flow Temperature	Sediment: 30% substrate fines(<6.35mm) 0.26 slope of TSS v. Q plot Temperature: >73°F in only 10 days annually Biotic: 3,000 female trout captured/year	<ul style="list-style-type: none"> ◆ TSS load same as ref reach ◆ 50% reduction in erosive bands ◆ 2275' increase in channel length ◆ 3-9 cfs min. flow 	A Development of a TMDL to Reduce NonPoint Source Sediment Pollution in Deep Creek, Montana (Montana DEQ; March 1996)	October 16, 1996
Clark Fork River* USGS HUC 17010204 segment: MT76G001-1, MT76G001-2, MT76G001-3, MT76G001-4, USGS HUC 17010201 segments: MT76M001-1, MT76M001-2, MT76M001-3	Total nitrogen Total phosphorus	Algae: 100 mg/m ² (summer mean) chlorophyll a 150 mg/m ² (peak) chlorophyll a Phosphorus: 30 ug/l total P upstream of the Reserve St. Nitrogen: 300 ug/l total N Nutrient ratio: 15:1 N:P	(kg/day) <i>Clark Fork below <u>Deer Lodge</u></i> Total N: 52 Total P: 0.84 <i>Clark Fork above <u>Missoula</u></i> Total N: 689 Total P: 59 <i>Clark Fork Below <u>Stone Container</u></i> Total N: 801 Total P: 77	A Clark Fork River, Voluntary Nutrient Reduction Program (Tri-State Implementation Council; August 1998)	October 21, 1998
Elk Creek*	Sediment	Restoration of native trout	50% reduction in annual sediment load at the mouth of Elk Creek	Green Mtn. Watershed PIP (February 1997) Elk Creek Watershed Council letter and maps to R. Lincoln(MDEQ) from M.Miller (ECWC) (July 3, 1998) Elk Creek Near Heron: WC level 2.5 Stream Survey; Reach Health Assessment Management and Rehabilitation Recommendations" (June 12, 1997)	December 8, 1998
Teton River*	Salinity	Specific conductance of 1000 micro-ohms/cm (at 25° C) total dissolved solids (TDS) of 700 mg/l (TMDL endpoints measured at Teton River at State Highway 221 Bridge)	$TMDL = Q_{down} C_{down} = C_{up} + Q_{PB} C_{PB}$ Where: Q_{down} = flow in Teton River below Priest Butte outlet C_{down} = TMDL endpoint (ie 1000 umhos/cm or 400 mg/l TDS) Q_{up} = upstream flow in Teton River C_{up} = upstream concentration of either specific conductivity or TDS Q_{PB} = flow in Priest Butte outlet C_{PB} = concentration	See list of supporting documentation in State TMDL submittal.	March 23, 1999

APPROVED NONPOINT SOURCE TMDLs					
Waterbody Name	TMDL Parameter/ Pollutant	Water Quality Goal/Endpoint	TMDL	Reference Document(s)	Approval Date
			of either specific conductivity of TDS in Priest Butte outlet		

303(d)(1) and 303(d)(3) Approved Point Source TMDLs

Point Source TMDLs for 179 Pollutants

APPROVED POINT SOURCE TMDLs						
Waterbody Name	TMDL Parameter/ Pollutant	Section 303(d)(1) TMDL	Section 303(d)(3) TMDL	Point Source	NPDES Number	Approval Date
<i>Prickly Pear Creek*</i>	Fecal coliform Ammonia TRC	X X X		City of Helena	MT0022641	01/14/97
<i>Flathead Lake*</i>	Fecal Coliform	X		Big Fork	MT0020397	01/31/97
<i>Silver Bow Creek*</i>	Fecal Coliform	X		Butte	MT0022012	01/31/97
<i>Flathead River*</i>	Fecal Coliform TRC (not listed)	X X		Columbia Falls	MT0020036	01/31/97
<i>Dry Fork Marias River*</i>	Fecal Coliform	X		Conrad	MT0020079	01/31/97
<i>Cut Bank Creek*</i>	Fecal Coliform TRC	X X		Cut Bank	MT0020141	01/31/97
<i>Mills River*</i>	Fecal Coliform TRC	X X		Glasgow	MT0021211	01/31/97
<i>Yellowstone River*</i>	Fecal Coliform TRC Ammonia	X X X		Billings	MT0022586	01/31/97
<i>East Gallatin River*</i>	Fecal Coliform TRC Ammonia	X X X		Bozeman	MT0022608	01/31/97
<i>Whitefish River*</i>	Fecal Coliform TRC	X X		Whitefish	MT0020184	01/31/97
<i>Yellowstone River*</i>	Fecal Coliform TRC (not in list)	X X		Miles City	MT0020001	01/31/97
<i>Yellowstone River*</i>	Fecal Coliform TRC (not on list)	X X		Livingston	MT0020435	01/31/97
<i>Kootenai River*</i>	Fecal Coliform	X		Libby	MT0020494	01/31/97
<i>Big Spring Creek*</i>	Fecal Coliform	X		Lewiston	MT0020044	01/31/97
<i>Yellowstone River*</i>	Fecal Coliform TRC (not on list)	X X		Laurel	MT0020311	01/31/97
<i>Ashley Creek*</i>	Fecal Coliform TRC	X X		Kalispell	MT0021938	01/31/97
<i>Milk River*</i>	Fecal Coliform TRC	X X		Havre	MT0022535	01/31/97
<i>Bitterroot River*</i>	Fecal Coliform TRC (not on list)	X X		Hamilton	MT0020028	01/31/97
<i>Missouri River*</i>	Fecal Coliform	X		Great Falls	MT0021920	01/31/97
<i>German Gulch*</i>	Copper Zinc Lead Mercury Cadmium Selenium Arsenic	X X X X X X X		Beal Mountain Mining Inc.	MT0030121	01/31/97
<i>Clark Fork of Columbia*</i>	Color Temperature	X X		Stone Container Corp	MT0000035	01/31/97
<i>Ten Mile Creek*</i>	Copper	X		City of Helena	MT0028720	01/31/97

APPROVED POINT SOURCE TMDLs						
Waterbody Name	TMDL Parameter/ Pollutant	Section 303(d)(1) TMDL	Section 303(d)(3) TMDL	Point Source	NPDES Number	Approval Date
	Turbidity	X		WWTP		
<i>Prickly Pear Creek*</i>	Cadmium Iron Lead Manganese Mercury Selenium Thallium	X X X X X X X		Asarco Inc.	MT0030147	01/31/97
<i>Yellowstone*</i>	Temperature	X		Montana-Dakota Utilities		01/31/97
<i>Prickly Pear Creek*</i>	Temperature	X		Air Liquide America		01/31/97
<i>Unnamed Drainage to Clark Fork*</i>	Fecal Coliform BOD ₅ TSS Nitrogen Phosphorus	X X X	X X	Montana Department of Corrections; Galen State Hospital	MT0021431	04/28/97
<i>Prickly Pear Creek*</i>	Fecal Coliform Ammonia TRC BOD ₅ TSS Nitrogen Phosphorus	X X X X X X	X	City of Helena	MT0022641	04/28/97
<i>Missouri River</i>	BOD ₅ TSS Nitrogen Phosphorus		X X X X	City of Fort Benton	MT0021601	04/28/97
<i>Kootenai River</i>	Fecal Coliform Ammonia TRC BOD ₅ TSS Nitrogen Phosphorus		X X X X X X X	City of Troy	MT0030333	04/28/97
<i>Unnamed natural wetland</i>	TRC TSS		X X	Ridgewood Homeowners Association	MT0030325	04/28/97
<i>Unnamed tributary to West Gallatin Canal</i>	Fecal Coliform Ammonia TRC BOD ₅ TSS Nitrogen Phosphorus		X X X X X X X	Richard Atkins	MT0030317	04/28/97
<i>South Fork of McDonald Creek</i>	Fecal Coliform BOD ₅ TSS Nitrogen Phosphorus		X X X X X	Town of Grass Range	MT0030309	04/28/97
<i>Fleshman Creek*</i>	TRC Turbidity	X	X	City of Livingston	MT0028118	04/28/97
<i>East Gallatin River*</i>	Fecal Coliform Ammonia TRC BOD ₅ TSS Nitrogen Phosphorus	X X X X X	X X	City of Bozeman	MT0022608	04/28/97
<i>East Fork of Armells</i>	BOD ₅		X	Rosebud County	MT0022373	04/28/97

APPROVED POINT SOURCE TMDLs						
Waterbody Name	TMDL Parameter/ Pollutant	Section 303(d)(1) TMDL	Section 303(d)(3) TMDL	Point Source	NPDES Number	Approval Date
<i>Creek*</i>	TSS Nitrogen Phosphorus	X X X		Comm. (Colstrip WWTP)		
<i>Highwood Creek*</i>	Fecal Coliform TRC BOD ₅ TSS Nitrogen Phosphorus	X X X X X X		Highwood Sewer District	MT0022080	04/28/97
<i>Tributaries to Spring Creek*</i>	no TMDL needed			Spring Creek Coal Company	MT0024619	04/28/97
<i>Prickly Pear Creek*</i>	TRC Fecal Coliform BOD ₅ TSS Nitrogen Phosphorous	X X X X X X		City of East Helena	MT0022560	05/23/97
<i>Bear Creek*</i>	Cadmium Copper Iron Managanese Lead Zinc Mercury Arsenic Ammonia Total nitrogen Cyanide Nitrate+nitrite	X X X X X X X X X X X X		TVX Mineral Hill Mine	MT0030252	05/23/97
<i>Yellowstone River*</i>	TRC Fecal Coliform Ammonia	X X	X	Billings WWTP	MT0022586	08/28/97
<i>Libby Creek*</i>	TIN Chromium Copper Iron Manganese Zinc Cadmium Mercury Lead	X X X X X X X X X		Noranda Minerals Corp. (Outfall 003)	MT0030279	08/28/97
<i>Tongue River Reservoir</i>	TSS Iron Oil/grease			Decker Coal Co. (West)	MT0000892	08/28/97
<i>Grant Creek</i>	Heat	X		4 B=s Inn North	MT0029840	08/28/97
<i>Teton River</i>	Heat		X	Triangle Packing Inc.	MT0029807	08/28/97
<i>Blackfoot River</i>	zinc mercury lead copper cadmium iron	X X X X X X		ASARCO Inc.	MT0030031	08/28/97
<i>Madison River</i>	Fecal coliform ammonia phosphorous nitrogen TSS		X X	Town of Three Forks	MT0020401	08/28/97

APPROVED POINT SOURCE TMDLs						
Waterbody Name	TMDL Parameter/ Pollutant	Section 303(d)(1) TMDL	Section 303(d)(3) TMDL	Point Source	NPDES Number	Approval Date
<i>Jefferson River</i>	<i>phosphorus</i> <i>nitrogen</i> <i>TSS</i>			Willow Creek Sewer District #306	MT0025038	08/28/97
<i>Yellowstone River</i>	Turbidity		X	Exxon Co. USA	MT0028321	08/28/97
<i>Ashley Creek</i>	Ammonia Fecal Coliform <i>nitrogen</i> <i>phosphorus</i> <i>oil/grease</i> <i>BOD</i> <i>TSS</i>	X X		City of Kalispell	MT0021938	08/28/97
<i>Kootenai River*</i>	TRC Fecal Coliform Ammonia		X X X	Stimson Lumber Company	MT0000221	(2)08/28/97
<i>Missouri River*</i>	BOD ₅ phosphorus nitrogen TSS			City of Poplar	MT0221695	No TMDL
<i>Middle Fork of Stone Creek*</i>	nitrate oil/grease turbidity	X X X		Luzena America Inc.	MT0027821	(2)08/28/97
<i>Clark Fork River*</i>	TRC Fecal coliform Ammonia CBOD ₅ TSS	X X	X	City of Missoula	MT0022594	09/24/97
<i>Rock Creek*</i>	Ammonia Fecal Coliform TRC <i>nitrogen</i> <i>phosphorus</i> <i>CBOD₅</i> <i>TSS</i>		X X X	City of Joliet	MT0020249	11/18/97
<i>Libby Creek*</i>	TIN Chromium Copper Iron Manganese Zinc Cadmium Mercury Lead	X X X X X X X X X		Noranda Minerals Corp. (Montanore Mine-Libby Creek Adit)	MT0030279	11/18/97
<i>Pen Yan Creek</i>	No TMDLs Developed			Montana Tunnels Mine	MT0028428	11/18/97
<i>Silver Bow* and Sheep Gulch</i>	TDS Fluoride Antimony Arsenic Cadmium Copper Iron Lead Nickel Selenium Silver (Sheep Gulch Only) Zinc	X X X X X X X X X X X	X	Advanced Silicon Materials, Inc.	MT0030350	02/18/98
<i>Baxter Creek* (anti-deg TMDL)</i>	Ammonia nitrite+nitrate	X X		J.C. Billion, Inc.	MT0029696	02/18/98
<i>Dry Creek</i>	No TMDLs Developed			Montana Sulpur and Chemical Co.	MT0000230	02/18/98

APPROVED POINT SOURCE TMDLs						
Waterbody Name	TMDL Parameter/ Pollutant	Section 303(d)(1) TMDL	Section 303(d)(3) TMDL	Point Source	NPDES Number	Approval Date
<i>Bitterroot River*</i> (anti-deg. TMDL)	Lead Copper Zinc	X X X		Rocky Mtn. Laboratories (US DHHS)	MT0028487	02/18/98
<i>Ashley Creek*</i>	Temperature		X	Stampede Packing	MT0028410	09/09/98
<i>Stillwater River*</i>	Cadmium Copper Iron Lead Mercury Nickel Nitrogen Phosphorus Zinc	X X X X X X X		Stillwater Mine	MT0024716	09/09/98
<i>Clark Fork River*</i>	TIN WET Aluminum Ammonia Arsenic Cadmium Copper Lead Manganese Mercury Zinc Nitrate+Nitrite Total Nitrogen Total Phosp. Orthophosp. Barium Iron Silver	X X X X X X X X X X X X X X X	 X X X X X X X X X	ASARCO Rock Creek Mine	MT0030287	09/09/98
<i>Gallatin River</i>	Nitrogen Phosphorus	X X		Big Sky Water and Sewer District	MT0030384	01/29/99
<i>Little Boulder River*</i>	Fecal Coliform Chlorine	X X		Boulder Hot Springs	MT0023639	01/29/99
<i>Yellowstone River*</i>	Chlorine		X	City of Glendive	MT0000876	01/29/99
<i>Milk River*</i>	Chlorine		X	City of Harlem	MT0000931	01/29/99
<i>Yellowstone River*</i>	BOD Ammonia		X X	Holly Sugar Corp.	MT0000248	01/29/99
<i>Yellowstone River*</i>	Fecal Coliform Chlorine Ammonia	X	X X	City of Livingston	MT0020435	01/29/99
<i>Gallatin River*</i>	Fecal Coliform	X		City of Manhattan	MT0020664	01/29/99
<i>Clark Fork River*</i>	Fecal Coliform Ammonia		X X	Town of Superior	MT0020664	01/29/99
<i>East Boulder River*</i>	Temperature Nitrogen Phosphorus Cadmium Chromium Copper Iron Lead Manganese Nickel Zinc	X X X X X X X X X X X		Stillwater Mining Co.	MT0026808	01/29/99
<i>Yellowstone River</i>	Dissolved Oxygen		X	Western Sugar	MT0000281	01/29/99