Montana

LIST OF WATERBODIES IN NEED
OF
TOTAL MAXIMUM DAILY LOAD DEVELOPMENT

1998

INTRODUCTION

The 1972 federal Clean Water Act (CWA) directed states to develop Total Maximum Daily Loads (TMDLs) which would regulate the amount of pollutants that sources could release to water quality-limited waterbodies. Water quality-limited waterbodies are lakes and stream segments that do not meet, or are not expected to meet (as determined through modeling or other analysis) state water quality standards despite the application of technology-based controls or best management practices (BMP). The CWA Section 303(d) and the U.S. Environmental Protection Agency (EPA) Water Quality Planning and Management Regulations (40 CFR, Part 130) require each state to:

- identify waterbodies that are water quality-limited;
- prioritize and target waterbodies for TMDLs; and
- develop TMDL plans to attain and maintain water quality standards for all water quality-limited waters.

TMDL development uses existing laws, regulations and guidance documents to ensure that water quality standards are met. In any watershed, voluntary cooperation by all interested parties has been and is the preferred method of TMDL development and implementation in Montana.

In 1991, EPA issued its first guidance document describing the TMDL process. As stated in 303(d) of the CWA, all states are required to compile a list of Water Quality Limited Waterbodies, prioritized in order of the need for TMDL development. States must update the 303(d) list biennially and EPA is authorized to promulgate the list when the states fail to do so. Montana has met its 303(d) reporting requirements since its first list was published in 1992.

In 1997, the Montana Legislature amended the Montana Water Quality Act (75-5-701 through 75-5-705, MCA) clarifying the authority of the Department of Environmental Quality (DEQ) to monitor water quality and bring Montana's water resources into compliance with water quality standards through the TMDL process. Currently, the Montana Water Quality Act (WQA) contains the specific requirements for the process and development of TMDLs by DEQ. The requirements include: the compilation of a schedule for completing TMDLs; full public involvement in all phases of TMDL development and implementation; a comprehensive review of listed waters by 1999; completion of TMDLs for all waters on the 1996 303(d) list by 2007; and implementation of voluntary control measures for nonpoint sources of waterbody pollution.

TMDL Development, Completion, Implementation

Development of a TMDL refers to the process used in determining what measures might be used in bringing a waterbody into compliance with standards. The process itself involves interaction among agencies and public participation, as discussed below. A TMDL is said to be

completed when a strategy for bringing the water body into compliance has been finalized, agreed to by all parties, and approved by EPA. The next stage consists of implementation, which is the actual application of the control measures specified in the TMDL. A TMDL is fully implemented when all the measures have been applied and the waterbody is no longer Water Quality Limited.

The TMDL process uses a variety of technical tools to evaluate the health of a waterbody. These include water quality modeling, analysis of toxicological data, assessment of biological and physical characteristics, and water quality sampling. Public comments are also solicited; public involvement is an integral part of all phases of the TMDL process.

A thorough review of all 303(d) waterbody listings must be completed by October 1999 using the new review provisions required by the Montana WQA. The review will be based on a sufficient and credible data test as defined in the Montana TMDL legislation. This review process was not completed by EPA's 1998 state reporting deadline of April 1, 1998. Only a revised sufficient and credible listing as required by state law will be included on the year 2000 303(d) list.

DEQ has put considerable effort into improving the 1998 303(d) reporting format. The list contains watershed maps showing the TMDL locations and priority status. The maps are keyed to accompanying data tables, which provide information on impaired water uses, stream miles and lake acres affected, and suspected pollution causes and sources.

THE TMDL PROCESS

The TMDL process described below will fulfill the regulatory policy statement in the Montana Water Quality Act (75-5-101(2)): "... to provide a comprehensive program for the prevention, abatement and control of water pollution...."

The Montana TMDL program must address the requirements of both the federal Clean Water Act (CWA) Section 303(d) and the Montana WQA. The Montana TMDL law became effective in May 1997 and is codified in 75-5-701 through 705, MCA. Prior to the passage of the 1997 WQA legislation, progress in implementing TMDLs in Montana was slow and uncertain due to limited resources and lack of a well-developed TMDL framework and process.

Understanding TMDLs

Pollution sources such as wastewater treatment plants and industrial facilities that discharge pollutants directly to a waterway are called "point sources." "Nonpoint" sources of pollution include agricultural fields or rangeland, abandoned mines, construction sites, logging operations and other land uses that may cause polluted run-off to enter watercourses. Both point and nonpoint sources contribute to the total load of pollutants reaching a waterbody.

While the calculation of acceptable pollutant loading (the amount of specified pollutants that a source may discharge to a waterbody) is a standard practice in issuing permits for point sources, it is not nearly as easy to calculate the pollution contribution (loading) from nonpoint sources.

The list of water quality limited waterbodies (also called the 303(d) list) is a key element of water quality management. It summarizes DEQ's best scientific assessment of the pollution problems in Montana's streams, rivers and lakes. As additional data are collected and analyzed, DEQ will revise the list to more accurately characterize water quality problems and to determine which waters need a TMDL to bring them into compliance.

The TMDL program for nonpoint sources is best thought of as a process of developing and implementing water quality plans. The four basic parts of this process are:

- **Assessment:** Groups interested in developing TMDLs can start with data that were used by DEQ to put the waterbody on the 303(d) list. Local groups may also supplement this data with water quality evaluations and monitoring of their own. Technical assistance to ensure that credible data is collected will be supplied by DEQ upon request.

- **Planning:** Assessment data, agency expertise, landowner knowledge and public input are used in the development of a TMDL. Watershed water quality plans set specific measurable water quality and aquatic habitat goals and identify sources of pollution, responsible parties, possible funding resources, and establish time frames for attainment (implementation) of TMDLs to bring impaired waters into compliance.

- **Implementation:** Best Management Practices or other methods are used to control pollution from the sources identified in the TMDL. Funding necessary to implement BMPs (or other pollution control measures) is available from a variety of sources. The degree to which funding is obtained is often related to the strength of the partnership developed to assess and write a TMDL.

- **Monitoring:** Monitoring is critical to determine if water quality goals are being met and to revise the TMDL, as necessary. The data can be collected by agency participants or watershed residents. DEQ and other agency staff are available to provide assistance with this part of the TMDL process.

TMDLs for Waterbodies Affected by Point and Nonpoint Sources

Beneficial uses in many of Montana's streams, rivers and lakes have not been adequately protected by standard treatment requirements at sewage treatment plants and industrial wastewater plants. Similarly, some waters are affected by nonpoint sources, such as agricultural and forest harvest runoff, where adequate BMPs are not in place to ensure that

water quality standards are met. Point and nonpoint sources commonly affect the same waterbody.

A waterbody may be water quality-limited by one or more parameters (e.g., nutrients and dissolved oxygen). An example of a water quality-limited waterbody might be described as:

> A stream that receives excessive nutrient loading (nitrogen and phosphorus) from several nonpoint sources and from a municipal wastewater treatment plant, has experienced nuisance algae growth and dissolved oxygen (DO) concentrations that often violate criteria established for the stream. The treatment plant has a current Montana Pollution Discharge Elimination System (MPDES) permit and is meeting the conditions of the permit. Several BMPs for nonpoint pollution source(s) are in place along the stream corridor.

Such a stream should be on the 303(d) list because it is not meeting water quality standards for recreation and swimming and the dissolved oxygen standard.

A TMDL that would address the example above would consist of three general components: ***waste load allocations*** (WLAs) for point sources of pollution, ***load allocations*** (LAs) for nonpoint sources of pollution, and a ***margin of safety*** (MOS).

Waste load allocations describe the amount of a pollutant that point sources can contribute to the waterbody. Load allocations are similar but are for the nonpoint sources of pollution. The margin of safety may be a specific amount of pollution, calculated to allow for the uncertainty in making WLAs and LAs and in data quality, or may be implicit in conservative estimates (such as calculating allowable discharges on the basis of a worst case scenario, e.g., 10-year low flow), use of modeling parameters selected to simulate unfavorable conditions, and by identifying critical periods, such as low-flow times of year or high temperatures. All sources of a parameter are either explicitly assigned an allocation or implicitly included in a general allocation or MOS. Natural or background levels are included in the allocation process, which relies on experience and professional judgment.

Collectively, the steps used to determine what pollutant concentrations (loads) would meet these water quality goals and to develop management plans to meet these goals and follow up monitoring are commonly called the TMDL process. The sequence of events includes:

- participation by the public in all stages of the listing, prioritization and TMDL development process.
- identifying and prioritizing waterbodies that are not fully supporting their designated uses or in which support of such uses is threatened;
- identifying the parameters of concern and sources producing or releasing these parameters;

- determining the maximum amount of a parameter a waterbody can assimilate and still maintain the legal standards;
- allocating portions of the total load to each source (natural sources and a margin of safety are included in the allocation procedure);and
- developing and carrying out the terms of the TMDL to achieve the desired goals.

Two general approaches to TMDL development have been used in Montana. The first approach is used when sufficient data are available and the probable response by the waterbody to the controls is reasonably well understood. The second approach is when data are not sufficient and a phased approach (controls implemented over a period of time) may be used. The approach to be used will be determined in the early stages of TMDL development.

A short explanation of the two approaches follows:

Abundant Information and a Good Understanding

With abundant data, a TMDL may be calculated and the appropriate WLA, LA, and MOS assigned. The modeling techniques used in the calculation of the TMDL may be simple or complex depending upon the specific situation. After EPA approval and application of the necessary controls, a follow-up monitoring program would be implemented to ensure that water quality standards are met.

If Response to Controls is Uncertain or Sufficient Data are Lacking

A more common scenario for implementing a TMDL, especially when nonpoint sources are present, is the phased approach. In the initial phase, available data are used in calculating the WLA, LA, and MOS. The MOS is often large, reflecting the lack of information or the uncertainties associated with assumptions made or the models used.

Subsequent to the initial phase, additional monitoring data and evaluation of BMP effectiveness are used to modify the TMDL management and control plan, refine modeling components, and revise the individual WLA, LA and MOS elements as necessary. Less expensive measures are applied first, with more expensive ones used if these are not sufficient.

The control strategy specified in the TMDL must be approved by EPA before the waterbody can be removed from the 303(d) list. Follow-up monitoring of the waterbody is a major component in this process and is necessary to determine the effectiveness of the proposed WLAs on the permitted sources and the BMPs used to achieve the nonpoint source LAs. The monitoring program results are evaluated and adjustments to the "final" TMDL are made as necessary.

The 303(d) Listing Process

The TMDL process begins with the identification of waterbodies that do not fully meet water quality standards, or waterbodies for which modeling results (or other analysis methods) indicate water quality standards will not be met, or are threatened, despite the use of mandated federal and state technology-based pollution controls and best management practices (BMPs). The Montana WQA defines a threatened waterbody as one for which sufficient credible data and calculated increases in loads show that it may not continue to fully support its designated uses due to documented adverse pollution trends or proposed sources that are not subject to pollution prevention or control actions.

This definition of a threatened waterbody differs from EPA's definition, which states a waterbody is threatened when there is a reasonable expectation that a new activity in the watershed may cause a decline in water quality which in turn may result in a decline to partial support or non-support of one or more designated water uses unless preventive measures are taken. Montana's 1998 list and previous lists used the EPA "threatened" definition. Beginning with the October 1999 publication the Montana WQA definition will be used.

Data Used for Listing

The primary database used to compile the list of impaired and threatened waterbodies is DEQ's Waterbody Tracking System (WBS). WBS is used to compile use-support information for Montana's biennial statewide water quality assessment report, which is required by 305(b) of the Clean Water Act. The WBS will continue to be used for tracking the waterbodies' level of use support after TMDL implementation and 303(d) de-listing. The summary assessments in the WBS are based on all water quality data readily available to DEQ. These data sources include EPA sponsored water quality programs that began in the 1970's. A short description of several examples follows.

Section 303 Water Quality Management Plans were prepared in response to the federal Water Pollution Control Amendments of 1972 (P.L. 92-500, CWA). Between 1973 and 1977, DEQ and its predecessor agencies prepared a total of 15 water quality management plans that covered Montana□s major river basins. The basin plans inventoried known sources of pollution from municipal and industrial discharges and considered the development of waste load allocations for those discharges. The water quality management plans for the Upper Missouri River Basin and the Upper Yellowstone River Basin became the basis for subsequent TMDL point source waste load allocations in those basins.

Section 208 Management Plans were developed between 1975 and 1979 in response to the CWA requirements. The State developed four areawide 208 management plans and a comprehensive statewide 208 management plan. The plans were approved by EPA in 1980. These plans inventoried both point and nonpoint sources of pollution to identify problem areas within the state and contained an assessment of nonpoint source control measures for

agriculture, silviculture, livestock and septic systems, along with plans to develop cooperative agreements between state and federal agencies for the purpose of controlling nonpoint sources.

The state's Section 304(l) list of waters affected by effluent toxicity and nonpoint sources was completed in 1989 (including a public comment period). This report provided a comprehensive analysis of Montana's waters that were affected by chlorine, ammonia, whole effluent toxicity, metals and other parameters associated with nonpoint source pollution. The report identified individual control strategies (MPDES permit waste load allocations) for point sources discharging to waters that were not meeting water quality standards.

Since 1975, the biennial Montana Statewide Water Quality Assessment reports (Section 305(b) report) have provided a comprehensive summary of the quality of Montana's surface waters. The reports and supporting data represent the single most comprehensive source of water quality and waterbody use-support information available to DEQ.

In 1988, statewide nonpoint source management plans were first developed. These plans, required by 319, contained strategies for controlling nonpoint pollution sources through education and demonstration projects designed to improve water quality. Many of these demonstration projects included recommended best management practices (BMPs) and a water quality monitoring program to assess the effectiveness of those BMPs.

The Section 314 Clean Lakes Monitoring Report was developed in 1988 and contained an inventory of the known water quality problems affecting Montana's lakes. The report also contained a monitoring and assessment program for the identified lakes and a lake water quality restoration project.

In addition to the CWA requirements, Montana has conducted several long-term data gathering activities including fixed station monitoring, intensive waterbody surveys, volunteer monitoring, and special projects. Other data used in the water quality monitoring and assessment process have been obtained from federal and state agencies, tribal monitoring, and retrievals from STORET (an EPA-supported national water quality database).

During the public comment period for the 1998 303(d) draft list of Water Quality Impaired Waterbodies, DEQ reviewed water quality information submitted from outside DEQ to determine if it was sufficient for use in making decisions about use support and listing.

Much of the information was excerpted from environmental assessments (EAs) or other narrative documentation of waterbody condition. The data submitted generally appeared to be of good quality but usually addressed parameters for which Montana does not have numeric standards and lacked information sufficient to accurately identify the reach or reaches of concern. To make accurate use-support decisions, DEQ needs more detailed information describing interpretation of the data on aquatic habitat and physical conditions.

Further acquisition, compilation and review are needed before DEQ will be able to incorporate the information and data supplied during the comment period into the waterbody assessment (305(b)) process and 303(d) listing. DEQ is in the process of identifying information needed to make assessments and making provision to help outside sources provide usable data.

If during the upcoming comprehensive review of existing information DEQ finds sufficient, credible data to substantiate any of the requests to list or de-list a waterbody, DEQ will make the appropriate revisions to the 1998 list. DEQ will provide adequate opportunity for public comment on any future draft 303(d) lists or modifications before the list is submitted to EPA for approval.

In the past, DEQ accepted water quality data collected by parties outside DEQ to support the listing or de-listing of waterbodies on the 303(d) list if the data pertained to parameters for which standards existed and if the location of the locations of the waterbodies were adequately specified. A structured process to identify sufficient credible data was not used for the assessment and listing of waters on the 1998 or earlier 303(d) lists.

Beginning with the year 2000, DEQ will review water quality information used to make assessments for the 303(d) list to ensure at least a minimum level of quality. DEQ's methodology for conducting this review will be based on modifications to guidance supplied by EPA for the biennial state water quality report (305(b) report).

MPDES/TMDL

The Montana Pollution Discharge Elimination System (MPDES) permits are part of the 303(d) listing process (Appendix A). Although the MPDES permitting and renewal process has elements similar to those used in TMDL development, the waterbody reaches affected by MPDES discharges have not been specifically included in the 1998 303(d) list prioritization because the sources permitted by MPDES are on an independent 5-year review cycle. As watershed TMDLs are developed, the appropriate permits will be included in the allocation process.

A list of the MPDES permits that will be in need of renewal (and TMDL update) during the 1998-99 biennium is in Appendix A. The parameters of concern associated with each of the MPDES permits and associated receiving water are identified in the appropriate MPDES permit file.

MPDES permits are designed to protect the waters directly impacted by the discharger. Permit effluent limits (waste load allocations) that are based on the quality of the receiving water, rather than on technology based requirements (e.g., treatment efficiency or type) can be designated TMDLs. The upstream sources of the pollutant being permitted (including nonpoint source load allocations) are usually lumped into the "upstream condition." Point source effluent quality and quantity are usually well known and the expected response of the receiving waterbody to the discharge can be modeled or calculated. The margin of safety component of

the TMDL is usually provided by basing calculations on low flow conditions (7Q10 flow) and other conservative assumptions.

MPDES effluent permits approved as TMDLs usually affect small reaches of a waterbody. When watershed scale TMDLs are developed for waterbodies affected by point and nonpoint sources, the modifications will be made to the existing permits on a parameter-specific basis. TMDLs developed in conjunction with MPDES permits do not reduce or slow development of TMDLs for watersheds. On the contrary, the need for permit renewals may accelerate development of watershed TMDLs.

MPDES permit effluent limits that are water quality-based (rather than based on the capabilities of technology to control the pollutants of concern) will be submitted to EPA for TMDL consideration when the permits are issued, even though the receiving waterbodies may have low priority for TMDL development. A list of TMDLs (and the parameters of concern associated with each of the MPDES permits) that has been approved by EPA through the Montana Pollution Discharge Elimination System (MPDES) permitting is included as Appendix B.

The 303(d) Prioritization Process

The 1998 Montana list retains the priority methodology and designations used in previous years, pending the organization of the statewide TMDL advisory group and the development of new methods and criteria for application to Montana's water quality-limited waters. The 1998 criteria used to rank Montana waters as high, moderate or low priorities for TMDL development include:

- magnitude of noncompliance with a standard or whether the waterbody is an important high-quality resource at an early stage of degradation;
- resource value;
- size of the waterbody not attaining standards;
- the availability of technology and resources to correct the problem;
- recommendations obtained through the public review process; and
- potential for completing a TMDL within two years.

Waterbodies may be assigned high priority for TMDL development if they are severely out of compliance with standards, represent a human health risk, have technology and resources available to allow development of a strategy to remedy the water quality problem with a reasonable certainty in a two-year period, have been nominated by the public for high priority, or have strong public support for the establishment and implementation of the control measures required by a TMDL. Targeted waterbodies are those where TMDL development is under way or will be during the biennium.
Moderate priority waterbodies may be less severely degraded, have nonpoint source demonstration projects in the watershed, or require more than two years for needed water quality controls to be defined. Moderate priority waters may include waterbodies where

significant economic development is planned and site specific controls may be necessary in addition to the normally used or required technology-based methods to meet water quality standards.

Low priority waterbodies include water quality limited or threatened waters that do not meet the criteria for higher priority. As TMDL projects are completed and other factors change, some low priority waterbodies may be upgraded to higher priority.

Local input, new funding sources or other circumstances may cause TMDL development to begin on a waterbody regardless of its listed priority.

The process used to establish Montana's TMDL priorities will also change as public participation increases. Beginning with development of the 2000 list, DEQ will consult with the statewide TMDL advisory group, local conservation districts, and local watershed groups to review and develop new methods for TMDL prioritization.

A 60-day public notice period followed announcement of the draft 1998 303(d) list of waters in need of TMDLs. The list's availability was published in the legal sections of the state's major newspapers and sent to organizations and individuals known to be interested in previous lists. Approximately 450 copies of the draft 303(d) list were distributed. Responses to written and public meeting comments are in Appendix C.

The complete 1998 list of Montana's water quality limited lakes and stream segments are contained in Appendix D of this report. Proposed high and moderate priority waterbodies designated for TMDL development during the 1998-2000 biennium are identified in Tables 1 and 2.

1998 Priority Listings

TABLE 1

Waterbodies Designated as High Priority for TMDL Development
During the 1998-2000 Biennium

Waterbody Name	Montana Waterbody Number
Clark Fork of the Columbia River *#	MT76G001-1, 2, 3, 4; and
(Warm Springs Creek to the Flathead River)	MT76M001-1, 2, 3
Silver Bow Creek*	MT76G003-2
(above Warm Springs Ponds)	
Sliver Bow Creek*	MT76G003-1
(below Warm Springs Ponds)	
Mill-Willow Bypass*	MT76G004-12
Warm Springs Creek*	MT76G004-23
Flathead Lake*#	MT76LJ006-1
Swan Lake*#	MT76K002-1
Tenmile Creek#	MT41I006-14
Daisy Creek*	MT43C001-14
Fisher Creek*	MT43D002-11
Soda Butte Creek*	MT43B002-3
Muddy Creek	MT41K003-1

* The waterbody is carried over from the 1996 TMDL list.
# The waterbody is targeted for TMDL development during the 1998-2000 biennium.

TABLE 2

Waterbodies Designated as Moderate Priority for TMDL Development
During the 1998-2000 Biennium*

Waterbody Name	Montana Waterbody Number
Godfrey Creek	MT41H002-2
Big Otter Creek	MT41Q004-5
Butcher Creek	MT43C001-8
Otter Creek	MT43B004-1
Big Spring Creek	MT41S004-1, 2
East Spring Creek	MT76LJ010-2
Musselshell River	MT40A001-1
Ninemile Creek	MT76M002-25
Threemile Creek	MT76H002-29
Elkhorn Creek	MT41D004-5
Blackfoot River	MT76F001-1, 2, 3
Nevada Lake	MT76F003-2
Nevada Creek	MT76F002-8
Rock Creek	MT76N003-19
Libby Creek	MT76D002-6
Stillwater River	MT43C001-11, 12
East Boulder River	MT43BJ001-2
Whitefish Lake	MT76LJ011-1

* All of the listed waterbodies were carried over from the 1996 TMDL list.

De-listing Process

Waterbodies identified as water quality-limited on the 303(d) list can be de-listed in two ways:

1) a TMDL that addresses all pollutants of concern for the waterbody can be developed and approved by EPA, or;

2) reassessment of the waterbody indicates that it fully supports all of its beneficial uses and is not threatened.

The waterbody assessment process is intended to describe, as accurately as possible, the use-support status of a waterbody. The most recent assessment will be considered the most accurate description of a waterbody status though it may differ from earlier assessments. Waterbody status may also change in the future due to the Montana WQA requirements to thoroughly review the 303(d) list by 1999, considering new information available, and to reassess all waters lacking adequate monitoring information as soon as possible.

Waterbodies Removed or Partially Removed from the Montana 1996 303(d) List

As the result of intensive stream surveys during the past biennium, Beaver Creek in Wibaux Co. (MT39G001-1) and Little Dry Creek in Garfield Co. (MT40D002-1) were determined to be fully supporting all beneficial uses and not threatened. These waterbodies are not on the 1998 303(d) list.

Similar stream surveys found the upper portion of Beaver Creek in Hill Co. (MT40J002-1) and Big Dry Creek in Garfield Co. (MT40D001-1) to be fully supporting all beneficial uses and not threatened. But the lower 15 miles of Beaver Creek and the lower 75 miles of Big Dry Creek were partially supporting some beneficial uses and those reaches remain on the 1998 303(d) list and are in need of TMDL development.

Proposed Schedule of TMDL Development

TMDL Implementation Plan

The plan to implement the overall TMDL program at DEQ includes the development of an initial schedule (Table 3) for TMDL development and related activities. During this initial period, the state plans to help coordinate the development and approval of 100 TMDLs--primarily for waterbodies where there are non-point source demonstration projects. These implementation plans will be sent to EPA Region 8 for approval during this period.

TABLE 3

TMDL Development Schedule and Related Activities for
DEQ's TMDL Planner during the 1998-1999 Biennium

WORK PRODUCT	MILESTONES
Prepare a TMDL implementation schedule Incorporate to the fullest extent possible, all local, state, and federal management programs. The plan must include a schedule for TMDL development for all waterbodies on the 303(d) list.	May 6, 1998
Expand web page to incorporate additional TMDL and nonpoint source information.	May 1998
Prepare guidance document on preparing TMDL plans for stand- alone TMDL projects.	July 1998
Prepare and Distribute quarterly newsletter to statewide audiences.	Quarterly
Work with existing NPS project sponsors to identify 20 NPS projects that will qualify as TMDL projects and submit to EPA for approval.	May-Dec. 1998
Work with Conservation Districts and Local Watershed Groups to identify 20 watershed groups willing to begin TMDL projects.	June-Dec. 1998
Meet with DNRC, MDOT, FWP and other DEQ programs to discuss participation in the TMDL implementation strategy and discuss minimum criteria for TMDL approval by EPA with the goal of identifying 20 existing projects and	May-June 1998
Identify and support 20 new state projects that can qualify as TMDL projects and submit them to EPA as TMDLs.	June 1998- June 1999
Develop agreements with USFS, BLM and BOR on water quality restoration projects for approval as TMDLs (20 pilot projects).	May-Sept. 1998
Develop ranking and prioritizing methods	Dec. 1998
Review TMDL petitions and provide decisions for listing and delisting.	Ongoing
Develop Monitoring / Assessment Plan and begin implementing for those impaired waters lacking sufficient, credible data.	Sept. 1998-Ongoing
Review existing list (paper review) for waterbodies that do not have sufficient, credible data.	May 1998-Aug. 1999
Develop list of "candidate waterbodies" for listing and delisting.	May 1998-

	March 1999
Conduct water body assessments for priority streams.	June-Oct 1998
Perform intensive surveys, source inventories, and technical support for local TMDL efforts.	July 98-Ongoing
Begin preparation of 1999-2000 303(d) List of impaired waters.	Jan. 1999-Oct. 1999
Conduct public meetings on year 2000 303(d) List.	Dec.-Feb. 1999
Finalize 2000 303(d) list.	April, 1999
Track all TMDLs that are implemented to ensure that progress is made towards achieving water quality standards and restoring beneficial uses.	Ongoing
Hold public meetings with local watershed groups for local input into ranking and prioritization.	January-May 1999
Complete ranking of all impaired waters having sufficient, credible data and input of public and Local Watershed Groups (LWG).	October 1, 1999
Approve 150 new TMDLs in conjunction with C.D.s and LWGs.	October 1, 1999 - June 2003
Approve 150 new TMDLs from USFS, BLM, and other government agencies.	October 1, 1999 - June 2003
Approve 400 TMDLs in remaining impaired waterbodies and others on Year 2002 impaired waters list (303(d)).	June 2003 - July 2007

Montana's TMDL Strategy

The mission of the new strategy is to develop and implement effective water quality restoration plans for all water quality threatened or impaired waters in Montana through:

- **Technical Assistance:** DEQ is using four watershed management regions in the state to co-ordinate TMDL assistance: the Upper Missouri, Lower Missouri, Yellowstone, and Columbia Watersheds (Figure 1). These watersheds are made up of the 16 watershed areas identified by the Montana Watershed Coordination Council (MWCC). Each of the regions will have a planning coordinator, monitoring coordinator, and seasonal monitoring assistant at DEQ. These DEQ personnel will be responsible for monitoring water management activities in each region, and providing assistance with establishment of partnerships, plan development, data collection, and assessment of water quality.
- **Regional Coordination:** Regional Water Quality Planning Workshops will be held around the state to develop local strategies for TMDL implementation and to incorporate local

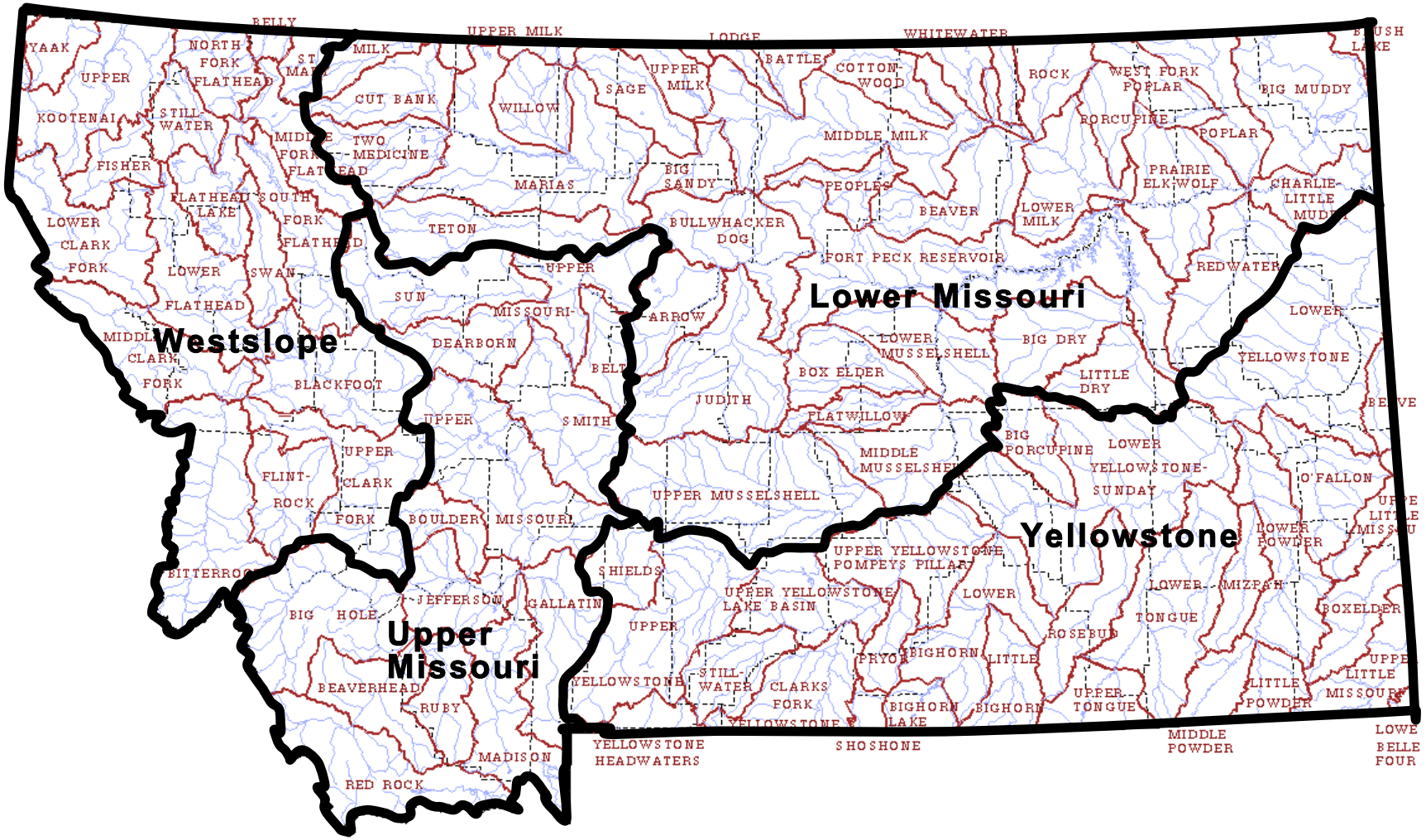
ideas for statewide TMDL prioritization and ranking procedures. A TMDL implementation plan and schedule will be developed to ensure coordination with local agencies, project sponsors, and MWCC as well as other state and federal agencies.

- **Statewide Prioritization and Ranking:** Statewide TMDL prioritization and ranking will proceed using the recommendations of the Statewide TMDL Advisory Committee. A schedule for implementation of TMDL wastewater permits and water quality plans will be developed for each of the 16 MWCC watersheds. TMDL and watershed plan needs of the 16 MWCC watersheds will be prioritized with the assistance of the MWCC, Statewide TMDL Advisory Committee, and local watershed coordinators.

- **Implementation of Water Quality Plans Statewide:** DEQ will assist those working on TMDLs to find and use appropriate sources of funding, technical assistance, and educational resources to improve water quality and aquatic habitat to restore water quality and protect water uses. DEQ will submit TMDLs for EPA Region 8 review and approval. DEQ also will provide recommendations to watershed project sponsors on the changes needed for EPA approval of TMDLs. DEQ will evaluate monitoring data for each TMDL compliance project to determine if water quality goals are being met, and if necessary, recommend adjustments to treatment methods, level of treatment, conservation practices, BMPs, or monitoring methods.

- **Statewide '303(d) List and Ranking:** The statewide 303(d) list and ranking will be re-evaluated at least every 5 years as appropriate.

Montana DEQ - Watershed Management Section - Regions



How to Use the Impaired Waters List

The 1998 Montana list includes a series of maps to assist the user in locating waterbodies. These maps are organized by Montana's three major drainage basins: Yellowstone, Missouri, and Columbia. Within each major basin a series of maps further subdivides each basin into "submajor basins." Submajor basins are further divided into a series of hydrologic units, or individual watersheds, showing each of the waterbody segments identified on the 1998 Montana list. Each hydrologic unit map is preceded by tables listing the size of the affected waterbody, the probable impaired uses, the probable causes and sources of impairment, and other information. Waterbody segments shown on the maps are keyed to the accompanying information tables by a map identification number.

After EPA's approval of the 1998 Montana 303(d) list DEQ has become aware that a few waterbodies were inadvertently left off the list and associated maps. The following list of waterbodies are water quality limited and in need of TMDL development. These waterbodies will be included in the next 303(d) submittal to the EPA.

Table 4. Waterbodies that were inadvertently not included in the submittal to EPA as part of the 1998 303(d) list for approval. These waterbodies are water quality limited and should be considered for TMDL development.

Waterbody Name	Waterbody ID	County	HUC
Jones Creek	MT41A004-2	Beaverhead	10020001
Currant Creek	MT41C002-6	Madison	10020003
Poison Creek	MT41C003-11	Madison	10020003
Birch Creek	MT41D002-9	Beaverhead	10020004
Wise River	MT41D004-39	Beaverhead	10020004
Whitetail Creek	MT41G002-7	Jefferson	10020005
O'Dell Spring Creek	MT41F004-2	Madison	10020007
Dry Creek	MT41I002-8	Broadwater	10030101
Clancy Creek	MT41I006-12	Jefferson	10030101
Woodsiding Creek	MT41QJ003-6	Broadwater	10030102
Middle Fork Deerborn River	MT41U001-3	Lewis and Clark	10030102
Missouri River	MT41QJ001-1	Cascade	10030105
Rattler Gulch	MT76F002-43	Powell	17010203
Bear Creek Flats	MT76F002-44	Powell	17010203
Cramer Creek	MT76F002-45	Powell	17010203
Deep Creek	MT76F002-46	Powell	17010203
Clark Fork River	MT76M001-2	Missoula	17010204
McCormick Creek	MT76M002-27	Missoula	17010204
Little Joe Creek	MT76M002-28	Mineral	17010204
Coal Creek, North Fork	MT76LJ003-7	Flathead	17010206
East Spring Creek	MT76LJ010-2	Flathead	17010210
Hotsprings Creek	MT76L002-8	Lake	17010212
Henry Creek	MT76N003-17	Sanders	17010213
Swamp Creek	MT76N004-16	Sanders	17010213
Muddy Creek, North Fork	MT41O001-4	Teton	10030205
Muddy Creek, Clark Fork	MT41O001-11	Teton	10030205
Ruby Creek	MT40EJ002-6	Phillips	10040104
Cow Creek	MT40EJ002-4	Blaine	10040104
Montana Gulch	MT40EJ002-1	Phillips	10040104
Big Horn Creek	MT40I001-3	Phillips	10050009
Crooked Creek	MT43P002-1	Carbon	10080015
Thompson Creek	MT39F001-1	Carter	10010201

Montana

LIST OF WATERBODIES IN NEED
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APPENDIX A

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Montana Pollution Elimination System Permits That Will Need To Be Reissued During The 1998-2000 Biennium

Facility Name Short	Permit Number	Expire Date	Receiving Waters	County
Northern Plains Natural Gas Co	MT0025992	07/31/96	Various Sites Along Pipeline	
Gen Permit - Sand & Gravel	MTG490000	03/31/98	State Waters	
Gen Permit-Fac Sewage Lagoons	MTG580000	05/31/98	State Waters	
Barretts Minerals, Inc	MT0029891	11/30/96	Stone Creek	Beaverhead
Dillon- City of	MT0021458	10/31/99	Beaverhead River	Beaverhead
Hardin, City of(WTP)	MT0029947	04/30/97	Big Horn River	Big Horn
Hardin- City of	MT0020834	12/31/99	Big Horn River	Big Horn
Westmoreland Resources - Sarpy	MT0021229	07/31/97	Sarpy Creek Drainage	BigHorn
Harlem-City of (WTP)	MT0000931	01/31/98	Milk River	Blaine
Townsend, City of	MTG580020	05/31/98	Missouri River	Broadwater
Red Lodge, City of	MTG580009	05/31/98	Rock Creek	Carbon
Bridger, Town of	MT0020303	07/31/99	Clarks Fork Yellowstone River	Carbon
Fromberg- Town of	MT0021466	12/31/99	Clarks Fork of Yellowstone River	Carbon
Ekalaka- Town of	MT0020371	04/30/99	Russell Creek	Carter
Janetski, Lee	MT0025071	07/31/95	Missouri River	Cascade
Vaughn Sewer Dist	MT0021440	03/31/97	Sun River	Cascade
Great Falls (WTP)	MT0000442	01/31/98	Missouri River	Cascade
Great Falls- City of	MT0021920	03/31/98	Missouri River	Cascade
Stockett Water & Sewer Dist.	MT0030091	05/31/99	Cottonwood Creek	Cascade
Geraldine, Town of	MTG580016	05/31/98	Flat Creek	Chouteau
Highwood Sewer District	MT0022080	01/31/99	Highwood Creek	Chouteau
Miles City- City of	MT0020001	12/31/99	Yellowstone River	Custer
Glendive-City (WTP)	MT0000876	11/30/97	Yellowstone River	Dawson
Glendive- City of	MT0021628	01/31/98	Yellowstone River	Dawson
W Glendive - Sewage Lagoon	MT0021733	12/31/98	Yellowstone River	Dawson

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Montana Pollution Elimination System Permits That Will Need To Be Reissued During The 1998-2000 Biennium

Facility Name Short	Permit Number	Expire Date	Receiving Waters	County
Montana State Hospital-Warm Springs	MTG580004	05/31/98	Clark Fork River	Deer Lodge
Baker, City of	MTG580029	05/31/98	Yellowstone River	Fallon
Denton- Town of	MT0022462	12/31/99	Wolf Creek	Fergus
Lewistown- City of	MT0020044	12/31/99	Big Spring Creek	Fergus
Kalispell-City of	MT0021938	07/31/93	Ashley Creek	Flathead
Stampede Packing Co	MT0028410	10/31/96	Ashley Creek	Flathead
Burlington Northern-Whitefish	MT0000019	11/30/97	Whitefish River	Flathead
Glacier National Park (WTP)	MT0030023	08/31/98	Middle Fork Flathead River	Flathead
Columbia Falls Aluminum Co	MT0030066	02/28/99	Flathead River	Flathead
Billion, J.C., Inc	MT0029696	08/31/95	Baxter Creek	Gallatin
Holnam, Inc	MT0000485	03/31/96	Missouri River	Gallatin
Manhattan-City of	MT0021857	01/31/98	Gallatin River	Gallatin
Cut Bank-City of (WTP)	MT0028894	05/31/99	Cut Bank Creek	Glacier
Cut Bank- City of	MT0020141	11/30/99	Old Maids Coulee, Trib Cut Bank Cr	Glacier
Lavina, Town of	MTG580013	05/31/98	Musselshell River	Golden Valley
Drummond, Town of	MTG580002	05/31/98	Clark Fork River	Granite
Philipsburg, Town of	MTG580005	05/31/98	Flint Creek	Granite
Boulder Hot Springs	MT0023639	12/31/97	Little Boulder River	Jefferson
Montana Tunnels Mining, Inc	MT0028908	10/31/99	Clancy Creek	Jefferson
Stanford- Town of	MT0022161	05/31/96	Skull Creek	Judith Basin
Helena-City of (WTP)	MT0000949	09/30/96	Prickly Pear Creek	Lewis & Clark
Montana Gold & Sapphires Inc	MT0025020	10/31/98	Missouri River	Lewis & Clark
Basin Creek Mining, Inc	MT0028690	03/31/99	Grub and Monitor Creeks	Lewis & Clark
Helena, City of (WTP)	MT0028720	11/30/99	Ten Mile Creek	Lewis &Clark

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Montana Pollution Elimination System Permits That Will Need To Be Reissued During The 1998-2000 Biennium

Facility Name Short	Permit Number	Expire Date	Receiving Waters	County
Uscoe - Libby Dam	MT0022390	12/31/99	Kootenai River	Lincoln
Luzenac America, Inc	MT0028584	08/31/97	Johnny Gulch Creek	Madison
Ennis, Town of	MTG580030	05/31/98	Madison River	Madison
M & W Milling & Refining, Inc	MT0030015	07/31/98	Ground Water Near Alder Gulch	Madison
Twin Bridges, Town of	MT0028797	06/30/99	Bayers Irr Ditch Via Jefferson River	Madison
Circle- Town of	MT0020796	01/31/99	Redwater River	McCone
White Sulphur Springs	MTG580021	05/31/98	Lone Willow Creek	Meagher
Alberton-Town of	MT0021555	11/30/97	Clark Fork River	Mineral
Superior- City of	MT0020664	12/31/97	Clark Fork River	Mineral
Missoula-City of	MT0022594	03/31/93	Clark Fork River	Missoula
John R. Daily, Inc	MT0000094	09/30/97	Clark Fork River	Missoula
Stone Container Corp	MT0000035	02/28/98	Clark Fork River	Missoula
Lolo Water & Sewer District	MT0020168	04/30/98	Bitterroot River	Missoula
Stimson Lumber Co Bonner Mill	MT0000205	10/31/98	Blackfoot River	Missoula
Mountain, Inc	MT0028983	10/31/99	Ephemeral Tributaries Abv Rehder Ck	Musselshell
Envirocon, Inc	MT0029670	11/30/96	Yellowstone River	Park
Livingston- City of	MT0020435	01/31/97	Yellowstone River	Park
Park County Comm (Gardiner)	MT0022705	12/31/99	Yellowstone River	Park
Zortman Mining Inc	MT0024856	10/31/91	Glory Hole & E. Fork Ruby Creeks	Phillips
Zortman Mining Inc	MT0024864	10/31/91	King Creek	Phillips
Malta Ready Mix	MTG490005	03/31/98	Irrigation Canal to Milk River	Phillips
Dodson -Town of	MTG580001	05/31/98	Dodson Creek	Phillips
Saco, Town of	MTG580012	05/31/98	Beaver Creek	Phillips
Sleeping Buffalo Health Resort	MTG580031	05/31/98	Beaver Creek Via Saco Flats	Phillips
Brady County Water District	MTG580022	05/31/98	South Pondera Coulee	Pondera

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Montana Pollution Elimination System Permits That Will Need To Be Reissued During The 1998-2000 Biennium

Facility Name Short	Permit Number	Expire Date	Receiving Waters	County
Conrad- City of	MT0020079	12/31/99	Dry Fork Marias River	Pondera
Broadus- Town of	MTG580015	05/31/98	Powder River	Powder River
Richardson Operating Co	MTG580014	05/31/98	Belle Creek	Powder River
Fallon and Prairie County	MTG580025	05/31/98	Yellowstone River	Prairie
Terry- Town of	MTG580017	05/31/98	Yellowstone River	Prairie
Darby- Town of	MTG580011	05/31/98	Bitterroot River	Ravalli
Knife River Corporation	MT0023604	12/31/99	Yellowstone River	Richland
Montana-Dakota Utilities Co	MT0000302	12/31/99	Yellowstone River	Richland
Froid, Town of	MTG580028	05/31/98	Sheep Creek	Roosevelt
Montco	MT0028088	06/30/95	Tongue River	Rosebud
Western Energy Co-Rosebud Mine	MT0023965	01/31/98	Armells & Rosebud Creeks	Rosebud
Forsyth- City of	MT0021288	02/28/99	Yellowstone River	Rosebud
Medicine Lake, Town of	MTG580024	05/31/98	Big Muddy Creek	Sheridan
Outlook County Sewer and Water	MTG580026	05/31/98	Plentywood Creek	Sheridan
Plentywood, City of	MTG580008	05/31/98	Big Muddy Creek	Sheridan
Montana Resources	MT0000191	10/31/98	Silver Bow Creek	Silver Bow
Stillwater Mining Co	MT0024716	03/31/91	Stillwater River	Stillwater
Columbus, Town of	MTG580018	05/31/98	Yellowstone River	Stillwater
Park City, Stillwater County	MTG580007	05/31/98	Yellowstone River	Stillwater
Stillwater PGM Resources	MT0026808	02/28/93	East Boulder River	Sweet Grass
Dutton, City of	MTG580023	05/31/98	Hunt Coulee	Teton
Fairfield, Town of	MTG580003	05/31/98	Freezeout Lake	Teton
Shelby, City of	MTG580006	05/31/98	Marias River	Toole
Toole County Commissioners	MTG580010	05/31/98	Unnamed Dry Lake	Toole
Montana Aviation Research Co	MT0029980	12/31/97	E. Fork Cherry Ck Via Spring Coulee	Valley

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Montana Pollution Elimination System Permits That Will Need To Be Reissued During The 1998-2000 Biennium

Facility Name Short	Permit Number	Expire Date	Receiving Waters	County
Fort Peck, Town of	MTG580019	05/31/98	Missouri River	Valley
Valley County Sid #2	MTG580027	05/31/98	Milk River	Valley
Glasgow- City of	MT0021211	05/31/99	Milk River	Valley
Harlowton- City of	MT0000400	07/31/99	Slough to Musselshell River	Wheatland
Harlowton- City of	MT0020354	12/31/99	Musselshell River	Wheatland
Western Sugar	MT0000281	09/30/96	Yellowstone River	Yellowstone
Mont Sulphur & Chemical Corp	MT0000230	03/31/97	Dry Creek	Yellowstone
Montana Rail Link (Laurel)	MT0000353	01/31/98	Yellowstone River	Yellowstone
Cenex Harvest States Coop	MT0000264	12/31/98	Yellowstone River	Yellowstone
Exxon Co USA (Billings Refin.)	MT0000477	01/31/99	Yellowstone River	Yellowstone
Conoco Inc (Billings Refinery)	MT0000256	02/28/99	Yellowstone River	Yellowstone
Laurel- City of	MT0020311	12/31/99	Yellowstone River	Yellowstone

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LIST OF WATERBODIES IN NEED
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APPENDIX B

APPENDIX B (continued)
EPA Approved TMDLs Established Through The Montana Pollution Discharge Elimination System (MPDES)

Waterbody Name	TMDL Parameter/ Pollutant	Section '303(d)(1) TMDL	Section '303(d)(3) TMDL	Point Source	NPDES Number
Clark Fork River	TRC** fecal Coli ammonia *$CBOD_5$* *TSS***	X X	 X	City of Missoula	MT0022594
Rock Creek (MT-43D002-13)	ammonia fecal - TRC *nitrogen* *phosphorus* *$CBOD_5$* *TSS*		X X X	City of Joliet	MT0020249
Libby Creek	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
Yellowstone River	TRC fecal coli ammonia	X X	 X	Billings WWTP	MT0022586
Grant Creek	heat	X		4 B□s Inn North	MT0029840
Teton River	heat		X	Triangle Packing Inc.	MT0029807
Blackfoot River	zinc mercury lead copper cadmium iron	X X X X X X		ASARCO Inc. (Mike Horse)	MT0030031
Madison River	fecal coliform ammonia *phosphorus*		X X	Town of Three Forks	MT0020401

APPENDIX B (continued)
EPA Approved TMDLs Established Through The Montana Pollution Discharge Elimination System (MPDES)

Waterbody Name	TMDL Parameter/ Pollutant	Section '303(d)(1) TMDL	Section '303(d)(3) TMDL	Point Source	NPDES Number
	nitrogen *TSS*				
Yellowstone River	turbidity		X	Exxon Co. USA (Suction Dredge)	MT0028321
Ashley Creek	ammonia fecal coliform *nitrogen* *phosphorus* *oil/grease* *BOD_5* *TSS*	X X		City of Kalispell	MT0021938
Kootenai River	TRC fecal coli ammonia *BOD_5* *TSS* *DRO*** *cadmium* *chromium* *cooper* *iron* *lead* *zinc*		X X X	Stimson Lumber Company	MT0000221
Middle Fork of Stone Creek	nitrate oil/grease turbidity	X X X		Luzenac America Inc.	MT0027821
Prickley Pear Creek	TRC fecal coli BOD_5 TSS nitrogen phosphorus	X X X X X X		City of East Helena	MT0022560
Bear Creek	cadmium copper iron manganese lead zinc	X X X X X X		TVX Mineral Hill Mine	MT0030252

APPENDIX B (continued)
EPA Approved TMDLs Established Through The Montana Pollution Discharge Elimination System (MPDES)

Waterbody Name	TMDL Parameter/ Pollutant	Section '303(d)(1) TMDL	Section '303(d)(3) TMDL	Point Source	NPDES Number
	mercury arsenic ammonia total nitrogen cyanide nitrate+nitrite	X X X X X X			
Unnamed Drainage to Clark Fork	fecal coli BOD_5 TSS nitrogen phosphorus	X X X	 X X 	Montana Department of Corrections; Galen State Hospital	MT0021431
Prickley Pear Creek	fecal coli ammonia TRC BOD_5 TSS nitrogen phosphorus	X X X X X X	 X 	City of Helena	MT0022641
Missouri River	BOD_5 TSS nitrogen phosphorus		X X X X	City of Fort Benton	MT0021601
Kootenai River	fecal coli ammonia TRC BOD_5 TSS nitrogen phosphorus		X X X X X X X	City of Troy	MT0030333
Unnamed natural wetland	TRC TSS		X X	Ridgewood Homeowners Association	MT0030325
Unnamed stream tributary to West Gallatin Canal	fecal coli ammonia TRC BOD_5 TSS nitrogen		X X X X X X	Richard Atkins	MT0030317

APPENDIX B (continued)
EPA Approved TMDLs Established Through The Montana Pollution Discharge Elimination System (MPDES)

Waterbody Name	TMDL Parameter/ Pollutant	Section '303(d)(1) TMDL	Section '303(d)(3) TMDL	Point Source	NPDES Number
	phosphorus		X		
South Fork of McDonald Creek	fecal coli BOD_5 TSS nitrogen phosphorus		X X X X X	Town of Grass Range	MT0030309
Fleshman Creek	TRC turbidity	X	 X	City of Livingston	MT0028118
East Gallatin River	fecal coli ammonia TRC BOD_5 TSS nitrogen phosphorus	X X X X X	 X X 	City of Bozeman	MT0022608
East Fork of Armells Creek	BOD_5 TSS nitrogen phosphorus	 X X X	X	Rosebud County Commissioner (Colstrip Sewage Treatment Plant)	MT0022373
Highwood Creek	fecal coli TRC BOD_5 TSS nitrogen phosphorus	X X X X X X		Highwood Sewer District	MT0022080
Flathead Lake	fecal coliform	X		Big Fork	MT0020397
Silver Bow Creek	fecal coliform	X		Butte	MT0022012
Flathead River	fecal coliform TRC	X	 X	Columbia Falls	MT0020036
Dry Fork Marias River	fecal coliform	X		Conrad	MT0020079
Cut Bank Creek	fecal coliform	X		Cut Bank	MT0020141

APPENDIX B (continued)
EPA Approved TMDLs Established Through The Montana Pollution Discharge Elimination System (MPDES)

Waterbody Name	TMDL Parameter/ Pollutant	Section '303(d)(1) TMDL	Section '303(d)(3) TMDL	Point Source	NPDES Number
	TRC	X			
Milk River	fecal coliform TRC	X X		Glasgow	MT0021211
Yellowstone River	fecal coliform TRC ammonia	X X X		Billings	MT0022586
East Gallatin	ammonia TRC fecal coliform	X X X		Bozeman	MT0022608
Whitefish River	fecal coliform TRC	X X		Whitefish	MT0020184
Yellowstone River	fecal coliform TRC	X	 X	Miles City	MT0020001
Yellowstone River	fecal coliform TRC	X	 X	Livingston	MT0020435
Kootenai River	fecal coliform	X		Libby	MT0020494
Big Spring Creek	fecal coliform	X		Lewistown	MT0020044
Yellowstone River	fecal coliform TRC	X	 X	Laurel	MT0020311
Ashley Creek	fecal coliform TRC	X X		Kalispell	MT0021938
Milk River	fecal coliform TRC	X X		Havre	MT0022535
Bitterroot River	fecal coliform TRC	X	 X	Hamilton	MT0020028
Missouri River	fecal coliform	X		Great Falls	MT0021920
German Gulch	copper zinc lead mercury cadmium selenium	X X X X X X		Beal Mountain Mining Inc.	MT0030121

APPENDIX B (continued)
EPA Approved TMDLs Established Through The Montana Pollution Discharge Elimination System (MPDES)

Waterbody Name	TMDL Parameter/ Pollutant	Section '303(d)(1) TMDL	Section '303(d)(3) TMDL	Point Source	NPDES Number
	arsenic	X			
Clark Fork of Columbia	Color Temperature	X X		Stone Container Corp.	MT0000035
Ten Mile Creek	copper Turbidity	X X		City of Helena WTP	MT0028720
Prickley Pear Creek	cadmium iron lead manganese mercury selenium thallium	X X X X X X X		Asarco Inc.	MT0030147
Yellowstone	Temperature	X		Montana-Dakota Utilities	MT0000302
Prickley Pear Creek	Temperature	X		Air Liquide America	MT0000426

Pollutants in *italics* indicate nondegradation waste load allocation has been developed.

**TRC = total residual chlorine; TSS = total suspended solids; DRO = diesel range organics; TIN = total inorganic nitrogen

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APPENDIX C

APPENDIX C

RESPONSE TO PUBLIC COMMENTS RECEIVED ON THE DRAFT 1998 303(d) LIST

Introduction

This appendix contains the Montana Department of Environmental Quality's (DEQ's) response to public comments received on Montana's draft 1998 303(d) list of water quality limited waters in need of Total Maximum Daily Load (TMDL) development. This document has been developed every two years since 1992 by DEQ in accordance with the requirements set forth in 40 CFR 130.7(d) and Section 303(d) of the Federal Clean Water Act. State legislation passed in 1997 provides additional requirements for how DEQ must develop this list and implement its TMDL water quality program. The Montana TMDL legislation, codified in 75-5-701 through 75-5-705, Montana Code Annotated (MCA), calls for a major review of the waters listed in the

1996 303(d) list by October 1999. The 1998 303(d) list does not fully reflect the review required in the 1997 modification of the Montana Water Quality Act, nor does it apply the new criteria for making listing decisions. These criteria include new state definitions for “impaired waterbody”, “threatened waterbody” and guidance for listing water on the basis of sufficient and credible data. The 1999 303(d) list required by state law will be prepared according to these new criteria, and will become Montana’s year 2000 ‘303(d) report to the U.S. Environmental Protection Agency (EPA).

The MCA requires DEQ to provide public notice and allow 60 days for public comment on the draft list prior to publishing a final list. DEQ mailed copies of the draft list in January, 1998 and published notices of availability of the 1998 draft list in Montana’s major newspapers the week of January 18, 1998. The mailing list included government agencies, conservation districts, citizen groups and representatives of business and industry. Public comment was solicited on the draft 1998 303(d) list through March 31, 1998.

DEQ conducted public meetings at 12 locations throughout the state to discuss the draft list. The purpose of the meetings was to explain the development of the list, discuss the implications of listing, and solicit public comments on the process as well as the 1998 draft list. These meetings were held as follows:

Date	Location	Time	Place
FEB. 9	Havre	7:00 p.m.	Conservation District Office
FEB. 11	Glendive	10:00 a.m.	Lower Level Dawson County Courthouse
FEB. 12	Livingston	10:00 a.m.	USDA Service Center
FEB. 17	Missoula	7:00 p.m.	Conservation District Office
FEB. 18	Kalispell	7:00 p.m.	Montana Fish, Wildlife & Parks Office
FEB. 23	Helena	7:00 p.m.	Helena National Forest Office
FEB. 24	Dillon	10:00 a.m.	USDA Service Center
MARCH 2	Great Falls	10:00 a.m.	Conservation District Office
MARCH 10	Colstrip	2:00 p.m.	Human Resources Office
MARCH 11	Glasgow	7:00 p.m.	Cottonwood Inn
MARCH 18	Lewistown	10:00 a.m.	Fergus County Conservation District Office
MARCH 19	Billings	1:30 p.m.	Montana Fish, Wildlife & Parks Office

DEQ received numerous letters of comment on the 1998 draft 303(d) list and additional oral comments during the public meetings. The public comments are paraphrased with DEQ□s responses on the following pages.

Many of the comments on the draft 1998 303(d) list requested either the addition or the removal of specific waterbodies from the list. Other commenters requested that certain

waterbodies identified on the list should be re-prioritized. Many of these comments were accompanied by information or data to support their request, while other comments suggested sources of information outside the agency which may be obtained by DEQ to make a determination on the requests.

DEQ has reviewed the information submitted to determine if it was sufficiently complete to make use support and listing decisions. Much of the information was from environmental assessments (EAs) or other narrative documentation of waterbody condition. The data submitted generally appeared to be of good quality but addressed parameters for which Montana does not have numeric standards and lacked sufficient geo-referencing information to locate the reach or reaches of concern in the geographical information system (GIS) utilized in the Montana TMDL process. DEQ also needs additional information which describes the reference conditions used as a basis for comparison with the habitat and physical data collected. Acquisition, compilation and review of referenced sources and other existing data is need before the Department will be able to incorporate the information and data supplied during the comment period into the waterbody assessment (305(b)) process and 303(d) listing.

If during the comprehensive review of existing information the Department finds sufficient, credible data to substantiate any of the requests to list or de-list a waterbody, the Department will make the appropriate revisions to the 1998 list. The Department will provide for public comment on any future draft 303(d) lists or modifications prior to submittal to the EPA for approval.

In regard to the requests to re-prioritize waterbodies which are included on the 1998 list, the Department intends to follow the process established by the Legislature in consulting with local conservation districts and local watershed advisory groups prior to making these determinations.

Requests to Add or Remove Waterbodies from the 303(d) List (See Introductory paragraph for response to these requests to List or De-List.)

COMMENT: The upper portions of Beaver Creek (MT40J002-1) and Sage Creek (MT40J003-1) in Hill County should be removed from the list. There are some areas of concern on the lower reaches of these streams, including salinity problems on some stretches of Sage Creek. Beaver Creek could use some stream bank stabilization and/or livestock distribution management.

COMMENT: In Colstrip, there are mines near creeks. Armells Creek (MT42KJ002-3 and MT42KJ002-4) is located 100 feet below a dump north of town. Runoff from the dump would cause pollution in the creek. There are a number of potential sources of impairment in the area to the East Fork of Armells Creek which should be examined. The surge pond, ash ponds, and Colstrip sewage treatment plant are all known to leak into the area□s ground water. Years of water quality data have been collected on Armells Creek due to coal mining activity in the drainage.

COMMENT: Rye Creek, a stream south of Darby, should be placed on the Montana '303(d) list due to water quality violations associated with impacts from Darby Lumber and the Big Velvet Elk Ranch located in the Rye Creek drainage. Due to these impacts, Rye Creek has been subjected to severe bank erosion and excessive sediment loads. Documentation is available regarding the threatened Westslope Cutthroat Trout and Bull Trout populations in Rye Creek.

COMMENT: The following streams are not included on the draft Montana 1998 '303(d) list, but are threatened or impaired based on USFS documents: Griffin Creek, Sheppard Creek, Squaw Meadows Creek, Flathead Basin (Forest Service timber sale EA, DN, and Flathead Basin Commission documents), Lick Creek, Upper Missouri (Hyalite II timber sale documents), and drainages in the Upper Big Hole River watershed (Trail Creek and Bender-Retie projects).

COMMENT: Much of the reach of Flathead River from Foys Bend South is fundamentally a reservoir just like Flathead Lake. It is also fundamentally affected by bank erosion due to human activity (i.e., boat traffic and hydroelectric activity). From north of Sportsmans Bridge down to the mouth there is extreme sediment deposition and during the summer there is aquatic vegetation growth which becomes noxious when it windrows on the river banks. Residents rely on the river up to Foys Bend as a source of drinking water. At least a portion of the reach of the Flathead River up to Foys Bend South should be considered as an implicit part of the Flathead Lake TMDL assessment.

COMMENT: The Big Sandy Conservation District supervisors believe Big Sandy Creek (MT40H001-1) from Lonesome Coulee should be removed from the impaired list since Lonesome Coulee only runs water once every 20 or so years.

COMMENT: The Jocko River should be considered for inclusion on the '303(d) list. Residents who live in the vicinity of the Jocko River complain about its condition.

COMMENT: Dog Creek (sometimes referred to as Big Dog Creek, Little Dog Creek, or South Fork Dog Creek), located in Sections 25-29 & 32-36 18N 18E, is probably the most seriously impacted waterbody in the entire state. The blockage of waste rock, overburden, etc. that the Kendall Venture gold mine have pushed into the main channel of the south fork of Dog Creek to a depth approaching 200 feet has completely stopped the flow of any headwaters above the canyon mouth. These stopped waters then just disappear into the underlying Madison Limestone almost like the Big Lost and Little Lost rivers of southeast central Idaho. This diverted water flow and subsequent loss into the deep underlying Madison is probably a major cause of Dog Creek being dry for the past several years. Additionally, springs have dried up in this drainage which have not been dry over the past 100 years. All aquatic wildlife and aquatic type vegetation have been killed because of dewatering. Flowing water in this creek has totally disappeared, and for all intents and purposes, the normal ground-water flow (contributions to the creek) have also disappeared. The reintroduction of beaver to this creek would be a good deed, and assist with water storage along this waterway.

COMMENT: NPRC requests DEQ to review all the streams emanating from the Kendall Mine for TMDL compliance, and to incorporate in this the new information brought out at the DEQ MPDES meeting on 3/23/98. The following waterbodies should be included in this review: South Fork of Last Chance Creek; Lower Mason Canyon drainage; Upper Barnes King Gulch drainage; Boy Scout Pond and the Ruckman□s pond in the South Fork of Last Chance Creek drainage; and Little Dog Creek.

COMMENT: The East Fork of Sarpy Creek (MT42KJ002-2) is an intermittent stream, and this limits the diversity of aquatic life and precludes the existence of a warm water fishery. Resource extraction/surface mining should be removed as probable sources of impairment for Sarpy Creek, since these activities are monitored under an Montana Pollution Discharge Elimination System (MPDES) permit. Agriculture should be added as a source of impairment to this creek, since runoff from cultivated fields and livestock feeding areas are readily apparent (in the Sarpy Creek drainage). For additional information, please refer to Exhibit I-12, Appendix D of the Mining and Reclamation Plan for the Absaloka Mine which is on file at the Industrial and Energy Minerals Bureau at DEQ.

COMMENT: The listing of waterbody number MT43P006-1, Tullock Creek, located in the Lower Bighorn watershed of the Middle Yellowstone submajor basin should be reconsidered. This waterbody has never supported cold water fisheries (trout). My family homesteaded here in 1910, and, to our knowledge, this waterbody has never supported trout. It does not flow all year long and does not have springs strong enough to support this type of fish. Also, to our knowledge, there is no one who derives their drinking water from this waterbody.

COMMENT: The Milk River should be de-listed. The river is in good shape. It is not excessively down cutting, nor is it excessively widening its channel. In most places, its banks support a multi-aged stand of Ash and Cottonwood. During floods, it spreads its water over the floodplain (our fields). Its water tends to be cloudy because of the soils and geology of the region. Many warm water fish, mink, beaver, and waterfowl thrive in the Milk River. The wildlife are an indicator of a healthy ecosystem. There are no apparent trends in the water quality data for this river, and natural conditions cause fluctuations in water quality. Therefore, remove the Milk River from your list of impaired streams.

Requests to Re-prioritize Waterbodies on the 303(d) List (See Introductory paragraph for response to these requests to re-prioritize.)

COMMENT: I am aware that some tributaries to the upper Bighorn River below Bighorn Reservoir, notably Soap Creek, are severely impaired in their ability to support the trout fishery of the Bighorn system. These tributaries often carry extremely high concentrations of suspended sediments, rendering them detrimental to trout spawning and rearing. The MT FWP has determined the importance of Bighorn River tributaries such as Soap Creek to spawning success, particularly of Rainbow trout. These tributaries carry heavy irrigation return flows and

have experienced severe degradation of their channels, resulting in the high sediment loads. I am requesting that you focus attention on these and other streams that are severely impaired for trout fisheries and consider moving them to high priority for corrective action. I suggest also that you contact MT FWP for a more complete list of fishery impaired streams and data they may have that indicates the cause of impairment.

COMMENT: Monitoring is needed on the Lower Missouri. Dams have disrupted the river, and stabilization of the mainstem should be a top priority.

COMMENT: The Missouri River should be assigned a higher priority ranking, due to Federal Environmental Quality Incentives Program (EQIP) funds spent on the river, threatened and endangered species, and the degree of local interest.

COMMENT: Monture Creek (MT76F002-34) in the Blackfoot HUC should be assigned a medium priority ranking.

COMMENT: The Madison River trout fishery continues to decline, yet TMDL development for the river is a low priority for 1998-2000. DEQ should reassess its priorities, especially for those streams containing the last remnants of cutthroat trout and bull trout populations. The survival and recovery of these fish depend on clean water. We cannot afford to delay clean-up efforts in these important strongholds.

COMMENT: ARCO Environmental Remediation L.L.C. (AERL) disagrees with the Department□s identification of metals as a probable cause of impairment for the Clark Fork River (CFR) waterbodies, due to the additional remediation work and monitoring which has been conducted in recent years in the CFR basin. The results of Superfund remediation activities (many of which are ongoing) and additional data collected since the original 1990 assessment, must be recognized and factored into the '303(d) listing process in the future. As a consequence of the work which has been completed, □contaminated sediments□, □channelization□, □mill tailings□ and □resource extraction□ should be eliminated from the '303(d) list as probable sources of impairment for Waterbody Nos. MT76G004-12 and MT76G003-1, and these waterbodies redesignated as a □low□ priority for TMDL development. As response actions are completed in the CFR basin, AERL anticipates that it will request the State to reprioritize and/or remove the CFR basin streams (or segments thereof) from the '303(d) list, consistent with the statutory procedures outlined in Section 75-5-103, MCA.

COMMENT: The following listed waterbodies should be ranked as high priorities: Beaverhead River, East Gallatin River, Prickly Pear Creek, Rock Creek, the Ruby River, and Yellowstone River. These streams should have clean water because they are adjacent to Yellowstone National Park, and because they are located in very ecologically-sensitive areas. These streams are highly valued nationwide and around the world for their fisheries, their recreational values, their wildlife, and the drinking water they provide that people depend upon.

COMMENT: The following streams on the '303(d) list which are designated as low priorities are also on the list of Core Recovery streams for Bull Trout compiled by the Montana Bull Trout Scientific Group in 1995. These streams should have at least medium priorities due to their inclusion on the Core Recovery stream list:

X East Fork Rock Creek (MT76E001-7)
X Boulder Creek (MT76GJ001-6)
X North Fork Blackfoot River (MT76F002-14)
X Cottonwood Creek (MT76F002-19)
X Deer Creek (MT76F002-31)
X West Fork Clearwater River (MT76F002-32)
X Monture Creek (MT76F002-34)
X Belmont Creek (MT76F002-35)
X West Fork Bitterroot River (MT76H002-13)
X East Fork Bitterroot River (MT76H002-19)
X Sleeping Child Creek (MT76H002-24)
X Skalkaho Creek (MT76H002-25)
X Cedar Creek (MT76M002-11)
X Trout Creek (MT76M002-14)
X Fish Creek (MT76M002-15)
X Petty Creek (MT76M002-18)
X St. Regis River (MT76M002-2)
X Rattlesnake Creek (MT76M002-21)
X Mission Creek (MT76L002-1)
X Post Creek (MT76L002-2)
X Vermillion River (MT76N003-13)
X Rock Creek (MT76N003-19)
X Prospect Creek (MT76N003-2)
X Bull River (MT76N003-4)
X Fishtrap Creek (MT76N004-1)
X West Fork Thompson River (MT76N004-5)

Comments on 303(d) Waterbody Listings and Monitoring Data

COMMENT: The 1996 list of impaired Montana lakes and reservoirs was not included in the 1998 draft Montana '303(d) impaired waterbodies list.

RESPONSE: The list of impaired Montana lakes and reservoirs was inadvertently left off the draft 1998 '303(d) list. The list of impaired lakes and reservoirs will be incorporated into the final 1998 '303(d) list which will be submitted to EPA in April.

COMMENT: Sites 35-43 from the Upper Clark Fork watershed were inadvertently grouped with sites 17-29 in the Flint - Rock watershed on pages 17 and 18. Sites 35-43 should be deleted from the Flint - Rock watershed and grouped with the Upper Clark Fork sites, as they have been deleted from the Flint - Rock map. (Alternatively, the map could be modified).

RESPONSE: Sites 35-43 will be moved from the Flint-Rock watershed and grouped with the Upper Clark Fork sites.

COMMENT: Site 33 (the Clearwater River) which appears on the map of the Blackfoot watershed is not included on the list. Has it been taken off the list?

RESPONSE: Montana water quality standards do not require treatment or application of controls that would result in a water quality better than naturally occurring. When the quality of a waterbody is less than the applicable standards and the causes are not from human activities, site specific standards or modification of the existing use classification should be considered. Therefore, DEQ removed all waterbodies from the '303(d) list for which the sole cause of impairment was natural. The Clearwater River (MT76F002-36) was removed from the 1996 '303(d) list because the impairment sources to the river were attributed only to natural causes.

COMMENT: Upper Sage Creek should be reclassified. Upper Beaver Creek should be removed from the list. The listing of the Marias River reach which flows through Hill County is questionable.

RESPONSE: Upper Sage Creek is in the process of being reclassified. The Board of Environmental Review should adopt the new classification at the June 12, 1998 board meeting after a public hearing in early May. The proposed new classification for Upper Sage Creek is B-1. This information will be taken into consideration for future listings of Upper Beaver Creek and the Marias River.

COMMENT: New water quality data are available and should be utilized for listing determinations in the Flathead basin. The Flathead Basin Commission requested these data (compiled by the University of Montana Biological Station) as part of their TMDL development project for Flathead Lake.

RESPONSE: DEQ has these water quality data, and will take it into consideration for future '303(d) listings.

COMMENT: New data are available and should be utilized for the Swan River basin listing determinations as a result of research by Plum Creek Timber Company and DNRC. Additionally, 1997 data on Bull trout spawning redd counts are also available from FWP which suggest that some Swan Valley streams, listed as partially supporting and threatened in your draft 1998 report (with a 9103 assessment date), are, in fact, fully supporting their beneficial uses.

RESPONSE: DEQ intends to acquire and use these data for future modifications of Swan Valley '303(d) listings.

COMMENT: The current draft 1998 Montana '303(d) list does not take into account the award-winning watershed project completed in 1991 on East Spring Creek. This project was featured in a 1997 EPA publication of 319 program success stories. East Spring Creek is listed as partially supporting in your draft 1998 list. The assessment date for East Spring Creek recorded on the list is 8909. Therefore, the assessment used as a basis for listing predates the 1991 completion of rehabilitation on this creek.

RESPONSE: These data and the East Spring Creek restoration project report will be considered in the future listing of East Spring Creek. This waterbody may require a reassessment or a TMDL plan, regardless of the restoration project. Other impact sources to this waterbody may not have been addressed by the restoration project.

COMMENT: What format is the watershed data available in (hard copy, electronically, etc.)?

RESPONSE: All DEQ watershed data are available in hard copy. Some data are available electronically. DEQ plans to upload watershed maps and the '303(d) list on the DEQ TMDL website in the next few years.

COMMENT: Is "sufficient and credible data" defined in 75-5-701, MCA (HB 546)?

RESPONSE: Yes, "Sufficient credible data" means chemical, physical, or biological monitoring data, alone or in combination with narrative information, that supports a finding as to whether a waterbody is achieving compliance with applicable water quality standards, pursuant to 75-5-103 (30), MCA.

COMMENT: Should DEQ compile a list of waterbodies which we have determined, based on (sufficient and credible) available data, aren't impaired?

RESPONSE: The Montana 305(b) waterbody system includes these waterbodies.

COMMENT: How are waterbodies listed and de-listed? What data are required to remove a waterbody from the list?

RESPONSE: Waterbodies can be removed from the list if one of three conditions are met: 1) a TMDL is completed for the waterbody, 2) it is determined that a waterbody was incorrectly assessed, or 3) it is determined that water quality has improved and beneficial uses are no longer threatened or impaired. We have and continue to be willing to review data submitted by any individual or organization supporting modifications to the list. All available data and

information will be considered in DEQ's comprehensive review of all '303(d) listings on the basis of sufficient credible data.

Waterbodies may also be removed or added from the '303(d) list via a petition process. Physical, chemical, and/or biological data must be submitted with the petition to substantiate requests to remove or add waterbodies to the '303(d) list. DEQ will respond within 60 days to the petition in accordance with 75-5-702 (3), MCA.

COMMENT: How are intermittent streams supposed to support beneficial uses?

RESPONSE: The submittal of information regarding the intermittent and/or ephemeral characteristics of waterbodies will facilitate DEQ's impaired waterbody prioritization process. When an intermittent stream contains water it must support it designated uses and meet applicable water quality standards.

COMMENT: How will DEQ access existing data on listed impaired waters?

RESPONSE: DEQ will review all physical, chemical, and/or biological data available on listed waters through submittal of other agency, industry, and land user '303(d) list comments and information; as well as through coordination with other agencies via the Watershed Coordination Council. DEQ monitoring staff will be responsible for making a reasonable effort to acquire all available data when making use support determinations. DEQ also plans to hire a consultant to help ensure that staff access all available data. DEQ also has hard copies of assessment data utilized for the original '303(d) listings.

COMMENT: Some impaired waterbody characteristics appear to be inaccurate on the '303(d) list. How should public comments be formatted regarding these inaccuracies?

RESPONSE: Comments should be submitted to DEQ on '303(d) list inaccuracies in hard copy format. DEQ has not developed a specific form for comments regarding the '303(d) list.

COMMENT: What data will be utilized as reference conditions, or baseline, for an impairment determination?

RESPONSE: DEQ utilizes guidelines from several sources for impairment determinations: 1) WQB-7 numerical standards, 2) scientific literature, 3) Montana ecoregion criteria developed from minimally impaired streams, 4) upstream, and 5) nearby watershed. Habitat and biological criteria are not as well developed as chemical criteria, and will improve over time as more data are collected and analyzed. DEQ is currently working on a formalized procedure for impairment assessment. DEQ will base impairment determinations upon input from local landowners as well as available physical, chemical, and biological waterbody data. Reference conditions may be represented by a least impaired segment of a nearby stream, or a regional stream.

COMMENT: The impaired waters listings should be defined by the extent of the impairment as documented by sufficient credible data. Data collected at localized sites or from small stream segments should be identified as such and not necessitate listing of long stream segments of entire stream networks (e.g., extending WQLS to the headwaters when information is not available). Extrapolating some types of data could lead to erroneous listings.

RESPONSE: DEQ assessments evaluate the overall condition of a waterbody. TMDLs will delineate and address specific source impact locations.

COMMENT: Listing impaired waters based on substitute methods must be carefully considered. In some cases methods used by Federal agencies to determine Proper Functioning Condition measure riparian health which does not directly correlate with beneficial uses of state waters. For example, a riparian area may be determined to be in less than Proper Functioning Condition due to the presence of non-native plant species, poor age-class distribution of plants, low to mid-seral stage plant communities, the presence of excessive bare ground in the riparian area, or even the wrong Rosgen stream type. These are examples of riparian health attributes that may not diminish the support of beneficial uses, but may be the primary basis of listing stream impairment. Assessment of riparian health does not directly describe the use-support status of the waterbody.

RESPONSE: DEQ will only consider those parameters evaluated in an assessment which relate to aquatic ecosystem health in '303(d) listing determinations. Habitat assessment data alone will not constitute sufficient credible data, and must be examined in conjunction with biological data, and/or water chemistry data, and/or toxicity data in order to make a '303(d) listing determination.

COMMENT: What are the criteria for waterbody impairment?

RESPONSE: If a waterbody does not meet Montana water quality standards (both numerical and narrative) and fully support the beneficial uses designated for that waterbody s classification, it is considered impaired.

COMMENT: We would like to see a table listing state and federal surface water standards.

RESPONSE: Montana s numerical surface water quality standards are listed in WQB-7. Surface water classifications and associated narrative standards and beneficial uses are designated in the Administrative Rules of Montana (ARM) 17.30.601 - 17.30.636. There are no federally promulgated surface water quality standards for Montana.

COMMENT: If there is no activity which has occurred on a given waterbody from the time that you have identified the probable source of impairment (based on historical data) to the time you actually got around to reviewing it in the field, will DEQ consider changing the listing to a low priority, or de-listing it?

RESPONSE: DEQ may change a listing priority or de-list a waterbody based on more recent, or additional data which is deemed to be both credible and sufficient.

COMMENT: Humans need to be integrated into the list as a major component of source.

RESPONSE: Almost all impairment sources are from humans or associated with land management activities. The human factor is taken into consideration in listed sources such as on-site wastewater systems, municipal point sources (e.g., municipal wastewater treatment systems), land development, and urban runoff/storm sewers.

COMMENT: How do streams end up on a list without being assessed?

RESPONSE: None. All streams on the list have been assessed to determine if they are impaired.

COMMENT: What percentage of streams (in Montana) are impaired?

RESPONSE: Of the total assessed miles of Montana streams (17, 822 miles), 81% (14, 523 miles) are impaired for one or more designated uses. However, this figure is not representative of statewide stream impairment conditions, because DEQ targeted streams with known water quality problems for assessments. DEQ is currently planning a statewide monitoring program to resolve issues regarding statewide surface water quality.

COMMENT: Where is Swan Lake sitting on the impaired list?

RESPONSE: Swan Lake (MT76K002-1) is currently designated as a high priority for TMDL development.

COMMENT: Ashley Creek is listed as a low priority. I heard that the water coming out of the sewage treatment plant was cleaner than the water in Ashley Creek.

RESPONSE: The listed waters priority ranking is only partially based on the degree of pollution in each waterbody. The waterbodies ranking as high priorities are often areas in which local watershed projects are already under way. This information will be considered for future listings of Ashley Creek (MT76LJ008-2).

COMMENT: Why are streams on the list?

RESPONSE: Streams are on the list because DEQ has determined that the streams exceed surface water quality standards or do not fully support their designated beneficial uses, and, are therefore impaired.

COMMENT: What does it mean when a stream is listed?

RESPONSE: Listed streams are impaired and require TMDL development. An impaired waterbody means a waterbody or a stream segment for which sufficient credible data shows that the waterbody or stream segment is failing to achieve compliance with applicable water quality standards, pursuant to 75-5-103 (11), MCA.

COMMENT: Several University of Montana Environmental Studies students conducted research on Elk Creek on the Georgetown-Elk Creek grazing allotment (in the Flint-Rock Creek HUC) and found it to be severely degraded by overgrazing. Has this stream been evaluated for inclusion on the '303(d) list?

RESPONSE: Elk Creek in the Flint-Rock HUC has not been assessed. Any data relevant to the water quality of this creek may be submitted to DEQ for consideration in future waterbody assessments.

COMMENT: The font in the '303(d) list tables should be larger.

RESPONSE: A smaller font size and duplexing were utilized in an effort to minimize the length of the '303(d) list to conserve paper, and to minimize copying expenses.

COMMENT: Gold Creek should be considered for inclusion on the '303(d) list. A University of Montana graduate student conducted a masters thesis on this creek.

RESPONSE: Gold Creek (MT76G004-8) is on the 1998 '303(d) list. Any data relevant to the water quality of this creek may be submitted to DEQ for consideration in future waterbody assessments.

COMMENT: DEQ has done a good job compiling the '303(d) list, given resource limitations. A natural follow -up is to concentrate on developing better data for the listings.

RESPONSE: DEQ will be conducting a comprehensive review of the bases for all Montana '303(d) listings by October, 1999, pursuant to 75-5-702 (6), MCA. In accordance with the Montana Water Quality Act, all '303(d) listings must be based upon sufficient and credible data by October, 1999.

COMMENT: Flow alteration and habitat alteration are more important than nutrients in the impairment of the Clark Fork. Lets get on with addressing them in the Clark Fork TMDL.

RESPONSE: These parameters and others will be addressed in later phases of the Clark Fork watershed TMDL in which nonpoint sources are addressed.

COMMENT: Rock Creek (MT76E001-9) should not be removed from the '303(d) list. The Rock Creek Environmental Impact Statement concluded it was already at a dangerous threshold for

sediment, and there is a proposed project that would likely put it over the threshold. Rock Creek should at least be a medium priority for a TMDL.

RESPONSE: Rock Creek will remain on the 1998 Montana '303(d) list with a moderate priority for TMDL development. Based on a petition submitted by ASARCO which was substantiated with sufficient and credible data in accordance with DEQ use support determination criteria, the Department is proposing to de-list Rock Creek as a threatened waterbody, because it does not meet the definition of threatened provided in 75-5-103 (31), MCA. Public comments may be submitted to the Department regarding this proposed action from April 3 through June 2, 1998. Further action by the Department will follow the public comment period.

DEQ will conduct a comprehensive review on the remaining threatened waterbodies on the 1998 '303(d) list to determine if there is sufficient and credible data to demonstrate a declining trend in water quality. If the Department determines that the waterbody is threatened, it will remain on the list. If there is not sufficient and credible data to determine that the waterbody is threatened, it will be reassessed to determine its beneficial use support status.

COMMENT: Why was Medicine Lodge Creek, which flows into Clark Canyon Reservoir in the Upper Missouri watershed, removed from the 1996 and 1998 '303(d) lists? Sources have indicated that this creek was included on the 1994 list.

RESPONSE: DEQs Water Body System database does not contain sufficient information to support a listing for this waterbody.

COMMENT: Why was Box Elder Creek, which flows North of Winnett in the Lower Missouri watershed, removed from the 1996 and 1998 '303(d) lists? Sources have indicated that this creek was included on the 1994 list.

RESPONSE: DEQs Water Body System database does not contain sufficient information to support a listing for this waterbody. There is a joint BLM/ University of Montana proposed for the Box Elder Creek Watershed on the evaluation of grazing utilization levels as Best Management Practices (BMPs) for protecting water quality.

COMMENT: The layout for the 1998 '303(d) list is much easier to read than the 1996 list.

RESPONSE: The Department appreciates the acknowledgment of its efforts.

COMMENT: Has the Flathead Basin Commissions (FBCs) two year synoptic study been considered in the compilation of the '303(d) list?

RESPONSE: No. The FBC study will be taken into consideration for future listings within the Flathead Basin.

COMMENT: Muddy Creek (MT41K003-1) should be de-listed or receive a high priority ranking due to ongoing monitoring activities and the recent submittal of a TMDL plan for this waterbody.

RESPONSE: The Department will take the monitoring data and the draft TMDL plan for Muddy Creek into consideration for the future listing and priority ranking of this waterbody. The Muddy Creek TMDL must be approved by the EPA prior to de-listing of this waterbody.

COMMENT: If taxpayers are paying for the TMDL process, the law and the program should be based on more accurate and current data records. Water is very important.

RESPONSE: DEQ is working within legal, monetary, and time constraints to compile a sufficient, credible, accurate and current database on which to base '303(d) listings.

COMMENT: Mining should be listed as an impairment source for Sarpy Creek (MT42KJ002-2), Rosebud (MT42A001-1) and Armells (MT42KJ002-3 and MT42KJ002-4) Creeks, and the Tongue River (MT42C001-1) on the '303(d) list. All impairment sources to these creeks should be re-examined in order to prevent the burden of limiting pollution falling too heavily on those not entirely responsible for the impairment. Years of water quality data have been collected on Rosebud Creek, Armells Creek, and the Tongue River due to coal mining activity in the drainage.

RESPONSE: This information will be taken into consideration for future listings of these waterbodies. DEQ was unable to detect impacts from mining in Armells Creek. There is no known mine adjacent to Rosebud Creek, but tributaries to the creek need to be assessed. Impairments to these creeks appear to be from impacted ground water. DEQ will take this information into consideration for the future listings of Rosebud and Armells Creeks. The conservation district, landowners, and mining company may request a reassessment of these creeks.

COMMENT: Will ground-water data be considered in the TMDL process?

RESPONSE: If impairment sources are discharged to surface water via ground water, ground-water monitoring may be considered in TMDL plans. Ground-water monitoring may assist in the delineation of impairment sources, as well as in gauging the effectiveness of source control measures (e.g., Best Management Practices).

COMMENT: It might be better to receive information from watershed committees.

RESPONSE: DEQ will use any and all data and information compiled by watershed committees on impaired waterbodies.

COMMENT: Why is Hanging Woman Creek (MT42B002-3) included on the 1998 '303(d) list?

RESPONSE: Hanging Woman Creek is listed due to impairments of the following beneficial uses: agriculture, aquatic life support, and warm water fisheries.

COMMENT: Is mining a source of point or nonpoint source pollution?

RESPONSE: Both point and nonpoint source pollution may be caused by mining activities.

COMMENT: More data gathering is needed on organics and chlorine associated with discharges from the Stone Container pulp mill on the Clark Fork River. Organochlorine compounds such as furans and dioxins should be included in Stone Container's discharge monitoring reports. Composite fish sampling, establishment of sediment criteria, issuance of fish consumption advisories, and quarterly testing of the Stone Container effluent for load allocation should be conducted as part of the Clark Fork TMDL plan.

RESPONSE: We will forward this information to the Water Protection Bureau of DEQ's Permitting and Compliance Division. They can also be contacted at (406) 444-4969 regarding reported compounds in Stone Container's Montana Pollution Discharge Elimination System (MPDES) discharge.

COMMENT: West Fork Poplar Creek should be reclassified. There is no evidence that this creek supports a cold water fishery.

RESPONSE: DEQ does not possess sufficient information at this time to consider the reclassification of West Fork Poplar Creek. Stream reclassifications may be petitioned to the Board of Environmental Review.

COMMENT: Streams should not be removed from the '303(d) list without a thorough (impairment) investigation.

RESPONSE: Waterbodies will only be removed from the '303(d) list on the basis of sufficient and credible data.

COMMENT: Self-monitoring of pollution by mining companies is a joke, and not allowed in many states.

RESPONSE: National Pollutant Discharge Elimination System (NPDES) permits which rely on self-monitoring are standardized across the nation. EPA reviews all of these permits prior to issuance. There is a $25,000/day fine for falsifying these data.

COMMENT: DEQ representatives brought lots of paper (to the public meetings), but not any (information) on surface water and ground-water standards. This information should have been presented during public meetings.

RESPONSE: DEQ was attempting to limit the scope of the public meeting agenda in order to focus on the draft 1998 '303(d) list and get feedback on it. DEQ will attempt to review and explain Montana Water Quality standards in future public meetings. DEQ also intends to develop an outreach program on water quality standards.

COMMENT: I am quite concerned with the (stream) classification because a lot of data is suspect because it came from Fish, Wildlife and Parks stream reservation work. On the specific streams and rivers I live on and know about, the Fish and Game work is very unprofessional and slanted.

RESPONSE: All data (including fisheries data) utilized as a basis for listing determinations will be critically reviewed by October, 1999 to see if it meets the definition of sufficient and credible data. If the data do not meet the sufficient and credible criteria, it will not be used as a basis for listing or de-listing impaired waterbodies.

COMMENT: Sheppard Creek (MT76LJ010) was dropped from the 1994 TMDL list in 1996 for no apparent reason. It does not appear on the 1998 list. This watershed has been extremely impacted by land management activities. High road densities, clear cut logging, the 1994 Little Wolf Fire followed by large salvage logging sales as well as aerial and ground spraying of pesticides have all had cumulative adverse effects on this watershed, as well as Griffin and Hand Creeks (logged over nearly 60% of the drainage). These watersheds need to be included on the 1998 TMDL list. Hand Creek has been monitored through the Flathead Basin Commission Master Monitoring Plan. It is our understanding that these creeks are impaired in their ability to support once-native Westslope Cutthroat Trout populations.

RESPONSE: This information will be compiled, and taken into consideration with other information in future assessments and listing process pertaining to Sheppard, Griffin, and Hand Creeks. A review of the Waterbody Information System (WBS) in 1996 did not support continued listing of Sheppard Creek. Waterbody petitions for listing or de-listing, and recommendations for waterbody priority rankings should be supplied to the Department with supportive data and information necessary for the Department to make appropriate '303(d) listing decisions.

COMMENT: The bulk of the length of Pryor Creek is on the Cheyenne reservation.

RESPONSE: Waterbodies located on tribal lands lie outside the jurisdiction of the Department. DEQ will coordinate with tribal authorities and the EPA to work on impaired waterbodies located on both tribal and privately or publicly owned land.

COMMENT: Many streams which are in need of restoration are not on the list.

RESPONSE: DEQ realizes that it does not have information for all streams and lakes. The Department is working to develop a statewide monitoring system which will improve statewide assessment of water quality.

COMMENT: In the upper end of Big Spring Creek (MT41S004-1 and MT41S004-2), fish production is decreasing, the fish spawning period is shortening, fewer fish are spawning, and the gravel bedload is choked with sediment. The lower end of Big Spring Creek (BSC) is better for fish production. The upper 4 miles of Big Spring Creek (MT41S004-1) should be listed as partially supporting, rather than threatened, and should be listed as a high priority, rather than a medium priority.

Big Spring Creek is the most polluted water in Montana, per EPA-financed inventory conducted by FWP in 1994, as regards polychlorinated biphenyls (PCBs). The Montana Department of Agriculture staff identified PCB contamination of Brown and Rainbow Trout from BSC in 1986 (laboratory analyses on file). That agency apparently did nothing to address the toxic pollution problems very detrimental to public health. The Montana FWP was duly informed in person and letter at that time, and in the ensuing years, without positive response. DEQ, and its various components, also have been informed by the public and logically should have as a matter of Federal and state laws informed all other involved agencies of Montana government. This is a human health problem of grave and major magnitude. It is expected, for the above and many other factual and scientific reasons, that DEQ will immediately place Big Spring in its entirety in the Priority 1" category. A professional team of hazard materials investigator, hydrologist, fisheries biologist, chemist, and GIS coordinator at a minimum should be selected to immediately conduct an intensive hazardous materials inventory of the entire Brewery Flat area of BSC and the entire stream reach down to the Judith River to determine PCB source locations, and to immediately prepare a viable hazardous materials removal action plan to be effected in 1999.

RESPONSE: This information will be obtained, compiled, and considered with other information for future ‘303(d) listings and prioritization ranking of Big Spring Creek. PCB contamination may be addressed by the DEQ Remediation Division in the TMDL process.

COMMENT: Hydrologic units are split seemingly more on how they clump together rather than where the watersheds ultimately drain. The reasoning behind this decision is not clear.

RESPONSE: The Hydrologic Unit codes (HUCs) were designated by the USGS on hydrologic boundaries. The 16 submajor watersheds are based on the 3rd field code of the HUC i.d. system.

COMMENT: There are three segments for Ashley Creek (MT76LJ008-1, -2, and -3). The three segments should be designated numerically on the map.

RESPONSE: The reach breaks for Ashley Creek can be obtained by contacting the Monitoring and Data Management Bureau or TMDL representatives for the Columbia basin.

COMMENT: There are two segments for Beaver Creek (MT40M001-1 and -2). The two segments should be designated numerically on the map.

RESPONSE: The reach breaks for Beaver Creek can be obtained by contacting the Monitoring and Data Management Bureau or TMDL representatives for the Columbia basin.

COMMENT: Data from the Interior Columbia Basin Ecosystem Management Project describing the status of trout populations in western Montana streams should be utilized for listing streams not supporting cold water fisheries. All watersheds with depressed, predicted depressed, absent and predicted absent (where formally occurring) trout populations are water quality impaired and should be included on DEQ's '303(d) list. Streams with declining fish populations and/or declining habitat trends as documented in the Montana Department of Fish, Wildlife, and Parks (FWP) databases should be included on the list. An examination of the FWP databases alone produced over 200 segments which should be included on the '303(d) list for cold water fisheries and are not. Additionally, data from the USFS Environmental Assessments and Environmental Impact Statements should be utilized to determine if a waterbody is water quality limited. DEQ must immediately schedule key Bull Trout and Westslope Cutthroat Trout watersheds for TMDL development.

RESPONSE: This information will be compiled, and considered with other information for future listings of waterbodies not fully supporting cold water fisheries. Additional information and review will be necessary before beneficial use support decisions can be made using the above referenced reports. The Montana WCA and Administrative Rules of Montana (ARMs) do not have numeric or narrative standards or criteria for fisheries composition or density.

Fisheries problems may not be related to water quality degradation; other reasons for declining trout populations may include inter-species competition or legal (or illegal) fish harvesting. DEQ will work with the Montana Department of Fish, Wildlife, and Parks to identify problem fisheries and the parameters and sources impacting the fishery. All pertinent water quality data and other information on fisheries-impacted streams need to be reviewed to determine if sufficient credible data exist to warrant '303(d) listing.

COMMENT: The DEQ has no excuse for not expanding its '303(d) list. Much of the necessary data from other state and federal agencies is readily available and appears to have been ignored. The Department must work with these other agencies to complete a full and accurate list of impaired waterbodies in Montana. The responsibility for a complete list ultimately rests with DEQ and not private citizens.

RESPONSE: DEQ is working with other agencies to collect all available data.

COMMENT: Page 4 of the 1998 Draft List states that MPDES permit effluent limits that are water-quality based will be submitted to EPA for TMDL consideration. Additionally, Appendix B of the 1998 Draft List contains the EPA Approved TMDLs Established through Montana Pollution discharge Elimination System (MPDES). After reviewing several of those discharge permits, and the effluent limitations they contain, it is not clear how DEQ and the EPA have determined that these MPDES permits are the equivalent of a TMDL.

Developing TMDLs solely on the basis of MPDES permits precludes automatic removal from the '303(d) list. Instead of removal, there should be more monitoring throughout the WQLS's watershed for the other probable pollutants. This would allow the DEQ to develop a more appropriate TMDL that would include all probable sources of impairment.

RESPONSE: MPDES permits possess elements of a TMDL, including a waste load allocation (effluent limits), a load allocation (collective background loading just upstream of the point discharge), and a margin of safety (flow seasonality). However, a MPDES point source TMDL is only applicable to a very small segment of a given waterbody, and does not preclude the need to examine loading allocations along the remaining length of a water quality limited stream. In accordance with the Montana Water Quality Act, effluent limits for new MPDES permits must comply with approved TMDL watershed wasteload allocations.

COMMENT: Please identify the specific information and reports used to support listing decisions as identified on pages 3-4 of the draft report. As requested herein, please identify for each listed data base or report the following:

a) the date or dates each report was compiled;
b) the Department personnel involved in compiling the information;
c) the location of the information in DEQ's records; and
d) for each report or database whether EPA has previously reviewed or approved the information.

RESPONSE: This information will be incorporated into the 1998 '303(d) list introduction.

COMMENT: Page 2, first paragraph: The statement that the passage of the 1972 CWA required TMDLs for nonpoint source loadings is incorrect. Nonpoint source strategies and controls were not referenced in the CWA until the 1987 amendments passed Congress. The CWA does not require TMDLs for nonpoint source loadings. It was not until the 1992 EPA regulations and guidance for TMDLs that nonpoint source loadings were "limited" via a TMDL. Without statutory authorization, the binding effect of EPA's TMDL regulations on nonpoint source activities may be invalid. The passage of H.B. 546 by the 1997 Montana legislature authorizes nonpoint control strategies on listed waterbodies under the voluntary programs set forth therein.

RESPONSE: The federal 1972 Clean Water Act addressed the need for states to identify nonpoint sources of pollution and develop procedures and methods to control those sources in ‘208(b)(2)(F).

It has been the long standing interpretation of the CWA by the EPA that nonpoint sources of pollution are to be included in ‘303(d) lists. The Water Quality Planning and Management Regulation (Federal Register Vol. 57, No. 143, 24 July 1992) highlighted nonpoint sources as part of the TMDL process and provided examples of cause categories that States might use to characterize the waterbodies needing TMDLs.

COMMENT: Page2, fourth paragraph: H.B. 546 requires TMDLs for listed waterbodies within ten (10) years, not necessarily all water-quality limited waterbodies.

RESPONSE: The 1998 ‘303(d) list introduction will be revised accordingly.

COMMENT: Page 10, fifth and sixth paragraphs: In the discussion of two approaches to TMDL development, please identify the number of streams, and identification of streams where the necessary □abundant□ data is available to use what is termed □approach one□.

RESPONSE: TMDL approaches will be tailored to meet watershed-specific needs. The identification of streams where □abundant□ data are available will be determined prior to or during TMDL development.

COMMENT: Maps: Overall, the mapping of streams or stream segments of the waterbodies on the 1998 draft list is an excellent improvement. Each map should be carefully edited to assure mistaken locations are not referenced.

RESPONSE: Comment noted.

COMMENT: Please identify the basis for listing a stream as □partial□ vs. □non-supporting□.

RESPONSE: Use determinations are based on the definitions of □partial support□ and □nonsupport□ provided in the 1994 Montana 305(b) Report.

COMMENT: Please identify the basis, if any, for the determination of the level of support for numeric vs. narrative standards.

RESPONSE: The basis for the level of support determination relative to standards is found in the Montana Water Quality Act, and ARM 17.30.601 through 17.30.641. Continued accedence of a numeric standard is a basis for a finding that a waterbody is impaired. DEQ is now developing guidance to make use support determinations.

COMMENT: Please identify whether the assessment date represents the date when actual field work was conducted, or the date when other information was reviewed or analyzed. If other information (e.g., reports or surveys) was analyzed, where would an interested party be able to locate the date of the information relied upon, and the location of any such information.

RESPONSE: The assessment date represents the year and month in which use support analyses were entered into the Montana Water Body System database. The information utilized to conduct assessments varies in age, and may be found at DEQ.

COMMENT: What specific criteria were used to determine that aquatic life support and/or cold water fisheries uses were impaired? Please identify the same for warm water fisheries and agricultural uses.

RESPONSE: Impairment criteria were derived from EPA 305(b) Report, the Montana Water Quality Act, and ARM 17.30.601 through 17.30.641.

COMMENT: The Exxon Company, U.S.A., Billings Refinery permits are not indicated in Appendix A. Please add the following information:

Permit type	Facility	Permit #	Expires	Receiving Waters
MPDES	Exxon Company, U.S.A. (Billings Refinery)	MT0000477	01/31/99	Yellowstone River
MPDES	Exxon Company, U.S.A. (Billings Refinery)	MT0028321	06/30/02	Yellowstone River
Storm Water	Exxon Company, U.S.A. (Billings Refinery)	MTR000104	11/30/99	Yellowstone River

RESPONSE: These MPDES permits will be incorporated into the '303(d) list Appendix A.

COMMENT: Under the probable source column of reasons for a stream being impaired you list silviculture. If listing this reason, we should also list the reason, when applicable, wildfire. This is because a hot, large wildfire can and will cause more stream impairment than controlled logging.

RESPONSE: DEQ has de-listed a number of streams due to natural impairment. Some of the streams de-listed in this manner were de-listed based on information regarding extensive wildfire impacts in the watersheds.

COMMENT: I do not believe that practices miles away from any stream should be given as a reason for impairment unless scientifically proven. Example: silviculture is listed as a source of impairment for Spring Creek, but no cutting or harvest has been performed adjacent to the stream.

RESPONSE: Silvicultural practices in areas of a watershed farther removed from a stream may constitute sources of impairment such as increased sediment and nutrient loading. Additional sediments and nutrients derived from soils and organic debris may be transported downslope to a waterbody via hillslope processes and/or surface runoff subsequent to the removal of trees and understorey which function as retention structures and filters on a natural slope.

COMMENT: It has come to our attention that DEQ is intent on de-listing approximately 195 waterbodies on the draft 1998 '303(d) list pursuant to the new definition of threatened waterbody in the Montana Water Quality Act. To know that a major de-listing will occur and not disclose it in the draft list is a breach of public trust. None of these streams should be de-listed for that reason alone.

RESPONSE: DEQ will only remove streams on the draft 1998 '303(d) list as threatened on the basis of a comprehensive sufficient and credible data review and after opportunity for public comment.

COMMENT: Only 30% of the streams in the state have been assessed for water quality impairment, and 80% of those were found to qualify (as impaired). In terms of numbers of actual impaired streams across the state, the draft 1998 Waterbodies in Need of Total Maximum Daily Load TMDL Development list, like its predecessors, is woefully incomplete. Not only are too few segments given high and moderate priority for TMDL development, of those that are prioritized only a few are actually targeted for TMDL development within the upcoming planning period. This lack of high and moderate prioritization for a reasonable amount of impaired waterbodies will push TMDL development too far into the future. It is essential that the state prioritize assessments for all streams and waterbodies in the state.

DEQs prioritization appears to avoid, without adequate explanation, problems from nonpoint pollution on private forestry lands, notably Plum Creek (e.g., Lolo Creek, Thompson River, Gold Creek). These watersheds must be targeted for some high priority nonpoint source TMDLs.

We believe it is necessary that DEQ immediately list all the waterways that do not meet water quality standards, as well as those waters which are threatened by development activities. The assessment process needs to be sped up and listings should be made quickly for TMDL development and implementation. I would like to see a schedule developed which would result

in the completion of all TMDLs within three years. The first priority should be for municipalities and native fish streams.

RESPONSE: DEQ is attempting to conduct Montana waterbody assessments and TMDL plans and implementation in a rational, timely manner within legal and fiscal constraints. DEQ will conduct assessments on those waterbodies which have yet to be assessed based on the submittal or collection of additional data and information, and through a statewide monitoring program. DEQ will proceed with waterbody assessments in accordance with the priority ranking system established in conjunction with the Statewide TMDL Advisory Group and local conservation districts.

COMMENT: Polluted waterways will not be cleaned up or protected from further degradation until they are listed and TMDL□s are established.

RESPONSE: DEQ is expediting the TMDL process as time and resources allow.

COMMENT: Industry is pushing to de-list streams, such as Rock Creek near Noxon, before a TMDL has even been established.

RESPONSE: Industry, public agencies, conservation districts, citizens groups, and concerned landowners may petition DEQ to de-list or list Montana water quality limited waterbodies. If sufficient credible data indicate that listed waters fully support their beneficial uses, they may qualify for de-listing. Based on a petition submitted by ASARCO which was substantiated with sufficient and credible data in accordance with DEQ use support determination criteria, the Department is proposing to de-list Rock Creek as a threatened waterbody. Public comments may be submitted to the Department regarding this proposed action from April 3 through June 2, 1998.

COMMENT: The state should maintain a list, with minimal cost and easy access by the public, of active TMDL de-listings. In other words, just because a waterbody has been de-listed, it should not disappear from view, but should be shown as a de-listed waterbody and the reason why.

RESPONSE: Waterbodies removed from the Montana ‘303(d) list will be tracked in the Montana 305(b) monitoring report. DEQ will consider this suggestion to create a separate list for ‘303(d) de-listed waterbodies.

COMMENT: The Dawson County Conservation District Board (DCCD) finds the reports on listed Dawson County streams (i.e., Cottonwood Creek, Burns Creek, Morgan Creek, Glendive Creek, Cedar Creek, and Cabin Creek) inadequate. The unsubstantial reports consisting of a one-time, one-person observation who in some cases did not take water samples, or in other cases did not physically get near the stream, are really worthless. It is DCCD□s opinion that the uses listed as impaired are supported to the same extent currently as they have been historically. Based on the limited data collected on these streams, DCCD requests that the Dawson County streams be

removed from the '303(d) list. DCCD would like to work with DEQ to set up and implement a monitoring system on these listed impaired streams, as well as neighboring "supported" streams, and (if the impairment is man-caused) allow the conservation district to do a professional job of reassessing them. After conducting three years of monitoring on these streams, they should be placed on the '303(d) list if they are found to be impaired.

RESPONSE: DEQ will take this information into consideration for future '303(d) listings of these waterbodies. DEQ will work with the DCCD to reassess and monitor the Dawson County listed waterbodies. DEQ must base all listings and de-listings on sufficient and credible data. As a result, DEQ cannot de-list these waterbodies until sufficient credible data have been collected on them through monitoring, or other available sources of information and data which post date the original stream assessments.

COMMENT: Whenever a new '303(d) list comes out, it should have with it a supplement showing waterbodies with active TMDL programs.

RESPONSE: Waterbodies with active TMDL programs will be de-listed, assuming that the TMDL plan has been approved by DEQ and EPA. DEQ will consider attaching a map as an appendix illustrating the locations of TMDL implementation areas in the 2000 '303(d) list.

COMMENT: The draft 1998 '303(d) list as it currently exists is inadequate. In several instances, data collected in recent years was not even considered in the re-listing of streams that appeared on the 1996 list. Highly subjective judgements have been rendered by a diverse cross-section of agency personnel, resulting in a cumbersome and indefensible list of about 900 waterbodies. Until the Department implements a scientific methodology using "sufficient credible data" for determining beneficial use support levels, the '303(d) list is of little practical use in terms of addressing priority water quality problems in Montana. De-listing of streams should be one of the first items undertaken. By that I mean that with a lack of credible data a stream should be de-listed until credible supporting data (for listing) is obtained.

RESPONSE: The 1998 '303(d) list doesn't address all requirements outlined in the 1997 Montana TMDL legislation, nor does the 1998 list reflect all data collected on listed waterbodies since 1989 - 1990 period (the date of many waterbody assessments). However, DEQ plans to obtain, compile, and consider pertinent information and data to initiate a comprehensive review of all Montana '303(d) listings prior to the submittal of the October 1999 list. The comprehensive review will entail verification of listing bases on "sufficient credible data", and will include consideration of all relevant data and information collected on listed waterbodies, as well as the collection of additional data and information by DEQ, local watershed groups, and conservation districts. DEQ is currently finalizing data quality objectives, standard operating procedures, and criteria for waterbody assessments and beneficial use listing determinations.

Comments on TMDL Program Policies and Procedures

COMMENT: DEQ needs to make sure that local landowners buy in on the TMDL process before it is initiated in an area.

RESPONSE: DEQ will work will local landowners and conservation districts to encourage local participation in the TMDL process to the greatest extent possible.

COMMENT: An explanation should be provided for the development of toxicity criteria.

RESPONSE: Toxin impairment is based on the exceedence of numerical Montana water quality standards listed in WQB-7. The WQB-7 standards for toxins are derived from risk-based health standards for human health and aquatic life included on the EPA's priority pollutant list under section 304(a) of the Clean Water Act. Numerical Montana water quality standards for aquatic life are based on toxicological data on a given toxin for a minimum of 5 genera and 3 families of aquatic species. Toxicological criteria such as LD_{50}, or lethal dose to 50% of the test population subsequent to exposure to a given toxin, are considered for fish, invertebrates, and plants, and adjusted for bioaccumulation in order to arrive at an aquatic life standard. The aquatic life standards are broken into chronic standards and acute standards. The acute standards represent concentrations of toxins required to kill or affect a toxicological test population over a short period of time, and the chronic standards represent concentrations of toxins required to kill or affect a toxicological test population over a longer period of time.

Human health standards for both toxins and carcinogens will be considered in an impairment assessment if a waterbody is not supporting a drinking water beneficial use. The basis for Montana WQB-7 numerical human health standards differ for toxins and carcinogens. Carcinogenic human health standards are based on the 10-3 (one person in one thousand) to 10-5 (one person in one hundred thousand) excess risk of contracting cancer after a lifetime exposure to a given carcinogen. Human health standards for toxins are based on toxicological study reference doses. Reference doses are developed from NOAELs (No Observable Adverse Effects Levels which are recorded subsequent to a test subject's exposure to a given toxin).

COMMENT: The TMDL development process should not be an exercise in shortening paperwork. The goal of TMDL development is not to simply reduce the number of streams on the list, it is to achieve tangible improvements in water quality. To meet this goal, DEQ must develop and implement comprehensive, pollutant-specific TMDLs for every impaired waterbody, and follow up with rapid, aggressive monitoring to determine whether the measures are working.

RESPONSE: DEQ plans to proceed with the TMDL process in this manner.

COMMENT: '303(d) listing determinations should be based on sufficient and credible data, and a clear, repeatable methodology for determining beneficial use support levels, including a Quality Assurance/Quality Control program. DEQ needs to take immediate steps to clarify how

beneficial use support determinations are made during the assessment process, and what data were/are used to substantiate these support determinations, before adopting and submitting the final list by April 1. Additionally, DEQ should conduct better, more detailed, and more frequent assessments of point and nonpoint sources.

RESPONSE: DEQ is currently finalizing data quality objectives, standard operating procedures, and criteria for TMDL waterbody impairment assessments and listing determinations. In the interim, DEQ is using EPA 305(b) Report Guidance for interpreting data used to determine if designated beneficial uses are supported.

Pursuant to 75-5-702 (5) and (6), MCA, DEQ must revise the '303(d) list and remove any waterbody that lacks sufficient credible data to support its listing. DEQ will review each '303(d) listing and determine the sufficiency and credibility of the data used to place each waterbody on the list. In this review, DEQ will take all available data and information into account for each waterbody listing.

Waterbodies will be reassessed using a standardized approach. DEQ plans to utilize water column chemistry analyses, biological monitoring (macroinvertebrates and/or periphyton), and physical features/habitat assessments as part of this comprehensive review. All data originating from outside the Department will be screened to make sure they meet certain data quality standards before they are used to make use support decisions. These standards, which also apply to data resulting from department monitoring activities, are defined in DEQ□s Quality Assurance Program Plan for water programs, quality assurance project plans, and the annual State/EPA Agreement (SEA).

COMMENT: Data gleaned from USFS Environmental Assessments (EAs) and Impact Statements (EISs) show additional segments which are suffering from nonpoint source pollution. The USFS□s information on sediment loading, stream temperature, structure, and native species□ populations all provide data necessary to determine whether a waterbody is a WQLS. DEQ must examine these documents for each and every state and federal land management agency□s timber sale, road construction, grazing, mining, and other projects to gain information about all impaired watersheds in this state. This information has been available for years, yet the draft 1998 '303(d) list doesn□t show that DEQ has attempted to compile it.

RESPONSE: DEQ has utilized data contained in USFS EAs and EISs to compile the '303(d) list. DEQ intends to re-examine data contained in these reports as part of the comprehensive sufficient and credible data review for '303(d) listings.

COMMENT: Is there a form for '303(d) listing and de-listing petitions? A clear, simple and understandable process should be made available to the public for adding a waterbody to the list of impaired waters.

RESPONSE: DEQ is currently finalizing guidance for '303(d) listing and de-listing petitions.

COMMENT: Montana□s newly revised Water Quality Act includes provisions that are inconsistent with the federal requirements of the Clean Water Act. The legislature narrowed the definition of a threatened waterbody making it virtually impossible for any waterbody to receive this classification. As a consequence of applying this new definition, the number of waters identified as threatened in the federally required 305(b) assessment will be substantially reduced, as will the number of waterbodies listed as WQLSs in need of TMDL development.

RESPONSE: DEQ must comply with the current definition of a □threatened waterbody□ in the Montana Water Quality Act [75-5-103 (31), MCA], as well as Federal Clean Water Act requirements.

COMMENT: According to federal law, problems identified in the 305(b) report should be analyzed through water quality management planning leading to the development of alternative controls and procedures (40 CFR 130.8). Instead of developing alternative controls and procedures for nonpoint source pollution in WQLSs, Montana is simply relying on BMPs. DEQ is requested to provide all of the evidence that it possesses that proves in a scientifically valid fashion that BMPs can fully protect impaired watersheds and restore their aquatic ecosystems to full natural functioning. The DEQ must institute alternative controls and procedures to address nonpoint pollution sources adequately.

RESPONSE: BMPs are considered □alternative controls□ in addressing sources of pollution. DEQ will address BMP effectiveness through water quality monitoring. All TMDL plans will include a WQLS-specific monitoring strategy to evaluate water quality and habitat trends after TMDL implementation. If, based on monitoring results, water quality has not improved and TMDL goals are not met, the TMDL plan and BMPs utilized will be modified in order to meet the originally proposed TMDL goals, pursuant to 75-5-703 (7) and (9), MCA.

COMMENT: If someone has concerns regarding the '303(d) listing of a local waterbody, what are the chances of a DEQ representative coming out to look at it?

RESPONSE: DEQ intends to conduct assessments of all waterbodies within the state as required by 75-5-702, MCA. Specific assessment requests will be considered on a priority basis.

COMMENT: We would like to know DEQ□s plan and schedule for assessing the streams in Montana that have not been evaluated for compliance with standards and beneficial use support. According to Montana□s 1994 305(b) Report, there are approximately 170,000 miles of perennial and intermittent streams in Montana, yet only about 17, 680 miles have been assessed.

RESPONSE: DEQ is planning a statewide monitoring plan with fixed stations. The statewide monitoring plan information will be utilized to determine statewide water quality status and

trends. One component of this plan will be probablistic-designed monitoring which will address the previously unassessed waterbodies.

COMMENT: We have concerns about being able to proceed with TMDLs in an orderly, rational fashion if DEQ must work within the constraints of EPA deadlines.
RESPONSE: DEQ must proceed with the TMDL process within the constraints of the Federal Clean Water Act, the Montana Water Quality Act, and applicable Montana case law. It is DEQ's goal to conduct TMDLS on a watershed basis using local input. Using this approach, limited DEQ personnel resources can be leveraged to finalize TMDLS in a reasonable time frame.

COMMENT: Cumulative impacts appear to be ignored when assessing the likely future condition of waterways.

RESPONSE: DEQ conducts assessments only on the current condition of waterbodies. However, future waterway conditions are considered in county planning and modeling components of the TMDL process.

COMMENT: Discharge permits with lowered water quality standards, such as the new MPDES permit recently approved for the Noranda Montanore Project, are given even when the discharge is into an impaired stream (Libby Creek) and a TMDL has not yet been established.

RESPONSE: The water quality standards have not been lowered in the discharge permit issued to Noranda. The permit limits were based upon non-degradation, which establishes limits more stringent than the standards. MPDES discharge permit effluent limits will be modified, if necessary, in accordance with watershed-wide TMDL goals upon TMDL plan approval.

COMMENT: Is there a process for assessing the streams that have not yet been assessed?

RESPONSE: DEQ is currently finalizing data quality objectives, standard operating procedures, and criteria for TMDL waterbody impairment assessments and listing determinations.

Comments on Issues Affecting the TMDL Program

COMMENT: What impacts do subdivisions had on surface water quality?

RESPONSE: Subdivisions located in areas where shallow ground water is hydrologically connected to surface water may potentially introduce nitrate, phosphorus, and bacteria to surface waters. The introduction of nutrients may cause nuisance algal growth and impair aquatic habitat.

COMMENT: How will the TMDL process take into account fish on the endangered species list (i.e., Bull Trout) and preservation of native fish species?

RESPONSE: Measures implemented on Montana streams which will enhance aquatic life habitat through the TMDL process will also be protective of Bull Trout habitat. The health of native fish populations will be taken into consideration in beneficial use determinations when fisheries data are available. The protection and restoration of native fish will also be taken into consideration in prioritization ranking for waterbodies on the '303(d) list.

COMMENT: Will pesticide surface water contamination be addressed in the TMDL program? Are pesticides predominant surface water contaminants?

RESPONSE: Pesticide monitoring is not an integral part of waterbody impairment assessments unless historical data, field indicators, or other information demonstrate impairment attributable to pesticides. Pesticides may be contributors to surface runoff impairment sources.

COMMENT: How will the self audit bill affect the TMDL process?

RESPONSE: It is not anticipated that the TMDL process will be directly affected by this law. The environmental self audit law may affect pollutant concentrations from point source discharges, but should not have an impact on nonpoint sources. If a facility exceeds the Montana Pollutant Discharge Elimination System (MPDES) effluent limits in their point source discharge and report these exceedances through an environmental self audit, they are still required to come back into compliance with their MPDES permit limits on a schedule negotiated between the facility and DEQ.

COMMENT: What affect does illegal spraying for noxious weeds have on the TMDL process? Does DEQ have any interagency agreements regarding this issue?

RESPONSE: Pesticide and herbicide use can be components of a watershed TMDL if local watershed groups or DEQ consider pesticides an impairment to local surface water quality. DEQ has a Memorandum of Understanding with the Montana Department of Agriculture for the regulation of pesticides in ground water.

COMMENT: What is the impetus for TMDLs?

RESPONSE: Under Section '303(d) of the CWA, states are required to develop TMDLs for impaired waters. House Bill 546 was passed by the 55th Montana State Legislature and incorporated into the Montana Water Quality Act in response to state TMDL requirements under Section '303(d) of the Federal Clean Water Act.

COMMENT: Littering along highways, spills from railroad trucks, and the spread of noxious weeds from these sources affect water quality.

RESPONSE: All significant sources contributing to impairment of surface waterbodies will be considered in the TMDL process. Watershed TMDLS have the potential to include issues that

are not necessarily water related but are best addressed through the watershed planning process.

COMMENT: For centuries there have been cows and wildlife drinking from and swimming in surface waters. Animals are not the cause of water pollution.

RESPONSE: Surface water nutrient, sediment, and coliform contamination which are introduced by domestic and wild animals may impair water quality. If these contamination sources are significant, they should be addressed in a TMDL plan. If animal-introduced impairments are not addressed, degraded surface water quality will continue to endanger aquatic habitat and native fisheries and reduce the useability of water for drinking, swimming, irrigation, and recreation. Additionally, cattle can significantly degrade riparian habitat and streambank stabilization with improper management.

COMMENT: Lewistown area residents have been after DEQ for ten years to deal with local stream dewatering issues. Some streams have flowed historically since 1885, and stopped flowing seven years ago.

RESPONSE: This is principally a water rights issue under the jurisdiction of the Montana Department of Natural Resources and Conservation (DNRC). However, local planning groups may choose to address this issue (impacts of flow alteration on water quality and aquatic habitat) in the TMDL process. Dewatering is currently being addressed in the TMDL process for the Ruby River.

COMMENT: How will the Federal Clean Water Act initiatives going to affect Montana?

RESPONSE: The potential impacts of these proposed programs are unknown.

COMMENT: It wasn't made clear at the Billings meeting if there are any effects on the Yellowstone River form the years of septic tanks and oil refineries in Lockwood. Will those with MPDES permits (point source dischargers) get their full discharge, and subdivisions and agriculture have to take whatever may be left, fighting over who gets what share?

RESPONSE: The impacts associated with individual drainfields, wastewater treatment plants, and oil refinery discharges will be taken into account in the Yellowstone River TMDL. Point and nonpoint source discharges will receive equitable consideration in a watershed-wide TMDL plan.

COMMENT: What about water rights? Can someone pollute my state waters?

RESPONSE: Any person who causes pollution of any state water is liable for penalties under the WQA. Water rights only extend to water quantity, and do not address the quality of the water

received through a water right. For more information regarding water rights issues, contact the Water resources Division of the Montana DNRC at (406) 444-6601.

Comments on Interagency Coordination

COMMENT: How is DEQ coordinating with other agencies on TMDL issues, and how will cooperative efforts be pursued in the future? DEQ must disclose what type of cooperative efforts the Department has sought from other agencies, private and educational groups to support their own knowledge base.

RESPONSE: DEQ is currently incorporating other agencies comments into the draft 1998 '303(d) list. DEQ will continue coordinating with other agencies via the Montana Watershed Coordination Council, Memoranda of Understanding, and meetings. DEQ is also a member of a Cumulative Effects Cooperative Technical Committee on forest impacts in watersheds. The Committee includes the Bureau of Land Management (BLM), the United States Forest Service (USFS), the Montana Department of Fish, Wildlife and Parks (FWP), and private resource managers working on watershed projects west of the Continental Divide. This group has provided a valuable technical link among the agencies technical staffs regarding TMDLs and other ways to assess and manage cumulative impacts.

Montana has Memoranda of Agreement with the Forest Service and the BLM relating to nonpoint source consistency. DEQ works very closely with the Natural Resources Conservation Service (NRCS) and local conservation districts in designing and implementing nonpoint source watershed plans. These plans have (for the most part) contained essential elements of TMDLs and, according to EPA, could be approved as such. We have two interagency contractual positions at DEQ which are partially funded and managed by NRCS. One is also partly funded by the U.S. Fish and Wildlife Service. DEQ also has a liaison with FWP. These positions have created important links among these agencies.

DEQ has obtained reports and data from other agencies, private and educational groups through personal communications, written requests, the Natural Resource Information System database, and the Montana State Library. The BLM and the USFS send DEQ their annual water quality reports, as well as Environmental Assessments and Environmental Impact Assessments.

COMMENT: How will the Environmental Protection Agency (EPA) be involved in the TMDL process?

RESPONSE: Montana implements the TMDL program. However, the EPA must approve all TMDLs developed by the state, as well as all biannual Montana '303(d) lists.

COMMENT: DEQ should check with other states to see what they've done in their TMDL programs.

RESPONSE: DEQ has interacted with state representatives from Colorado, Idaho, and Oregon regarding TMDL programs. DEQ has also reviewed several TMDL program reports from other states, including South Carolina, Washington, and Idaho. DEQ plans to continue communicating with other states on TMDL issues.

COMMENT: The Montana Pollution Discharge Elimination System (MPDES) and the TMDL process address the same issues/solutions. They are duplicative, unnecessary, and by default or intent are counterproductive. The two efforts should be combined into the single effort of TMDL establishment, then get on with the resolution of the identified pollution problems.

RESPONSE: The TMDL process is required when minimum technology based controls and existing nonpoint source controls (e.g., MPDES permit effluent limitations) have not succeeded in protecting beneficial uses.

Comments on Public Interaction/Education

COMMENT: The public has not been adequately informed and educated on the TMDL process.

RESPONSE: Public information and education efforts have begun and will continue as TMDLs are established and implemented. DEQ has uploaded TMDL information on the DEQ home page; interacts with the Statewide TMDL Advisory Group; has established a mailing list; and held public meetings in Kalispell, Missoula, Livingston, Dillon, Glendive, Great Falls, Helena, Havre, Colstrip, Glasgow, Lewistown, and Billings in order to inform the public on TMDL issues. Public comment will be solicited on proposed decisions concerning the '303(d) list. DEQ also participated in a Montana Watershed Symposium in Great Falls in December, 1997.

COMMENT: The TMDL public meetings should be better advertised. The phone numbers for conservation district offices where TMDL meetings are held should be included in meeting advertisements. TMDL meetings should be advertised in local free papers (such as the Consumer Press in Great Falls) in addition to daily papers. Advertisements should have been broadcast on the television and radio. Meetings should be conducted at noon, or in the evening so that working people can attend.

RESPONSE: DEQ issued press releases to major newspapers in towns where public meetings were held. The public meeting schedule was also listed on DEQ□s TMDL web page (http://www.deq.mt.gov/ppa/tmdl_wel.htm), and mailed out with the draft 1998 '303(d) list to all parties on the TMDL mailing list. To get on the DEQ TMDL mailing list, contact DEQ at (406) 444-5319. DEQ will incorporate these suggestions for future TMDL public meetings, and hold them in the evenings whenever possible. Meetings were scheduled at times based on suggestions from local conservation districts, and in accordance with room availability.

COMMENT: Notification should be provided to landowners on local waterbody water quality standard exceedances and new '303(d) listings. DEQ should solicit feedback from local landowners on water quality issues and '303(d) listings.

The general public, as well as those who request notification, should be made aware of any suggested changes in de-listing with enough time allotted for comment before any final action. It should include assessments and a reason for a requested change in status.

RESPONSE: Under Section 75-5-704, MCA, DEQ is required to schedule meetings with local watershed advisory groups and conservation districts in order to review and revise the list. Additionally, pursuant to 75-5-702 (2), MCA, the Department is required to issue a public notice and allow 60 days for public comment prior to publishing a final list (every 2 years). In accordance with 75-5-702 (3), MCA, the Department is required to issue public notice and allow 60 days for public comment prior to listing, de-listing, or reprioritizing waterbodies in response to submitted requests.

COMMENT: DEQ should use a list server for public notices on petitions, which will automatically notify interested parties.

RESPONSE: DEQ□s current Internet capabilities are under development.

Comments on '303(d) list Priority Rankings

COMMENT: DEQ has failed to sufficiently define the basis for priority ranking. Streams having the most pollution should be addressed first in the TMDL process (e.g., receive the highest priority ranking).

RESPONSE: Historically, waterbodies were prioritized in accordance with the degree of local interest and locations of locally active watershed projects. DEQ, the Statewide TMDL Advisory Group, and local conservation districts are currently working together to determine a priority ranking system for waterbodies on the '303(d) list. Pursuant to 75-5-702 (7), MCA, DEQ and the Statewide TMDL Advisory Group will take the following factors into consideration in the development of prioritization ranking for '303(d) listed waterbodies:

X beneficial uses established for a waterbody;
X the extent that natural factors over which humans have no control are contributing to any impairment;
X the impacts to human health and aquatic life;
X the degree of public interest and support;
X the character of the pollutant, and the severity and magnitude of water quality standard noncompliance;

X whether the waterbody is an important high-quality resource in an early stage of degradation,
X the size of the waterbody not achieving standards;
X immediate programmatic needs such as waste load allocations for new permits or permit renewals, and load allocations for new nonpoint sources;
X court orders and decisions relating to water quality;
X state policies and priorities, including the restoration and protection of native fish when appropriate;
X the availability of technology and resources to correct the problems;
X whether actions or voluntary programs that are likely to correct the impairment of a particular waterbody are currently in place; and
X the recreational, economic, and aesthetic importance of a particular waterbody.

COMMENT: Why weren't the priorities identified in the draft 1998 '303(d) list edited and approved by the TMDL Advisory Group?

RESPONSE: DEQ, the Statewide TMDL Advisory Group, and local conservation districts are currently working together to determine a priority ranking system for waterbodies on the '303(d) list.

COMMENT: How can you have a high priority lake (i.e., Flathead Lake) and a bunch of streams running into the lake which are not high priority? Somehow that doesn't make sense.

RESPONSE: The priority rankings appearing in the Montana's draft 1998 '303(d) list are only partially based on the degree of pollution in each waterbody. Waterbodies ranked as high priorities on the current list are often areas in which watershed groups are actively pursuing watershed management plans. In the case of Flathead Lake, 40% of the pollutants found in the Lake are from smoke and dust, which is not attributable to pollutant loading from the Lake's tributaries. Only some of the tributaries are contributing significant amounts of nutrients, while others are relatively clean. A phased approach is being used in the Flathead Basin in which the tributaries will be addressed according to the needs of the residents and direction from the Flathead Basin Commission.

COMMENT: I have prioritized the list of 13 ranking criteria as follows: (a) impacts (negative) to human health and aquatic environments; (b) type, severity, and magnitude of pollutants; (c) if the water is an important high quality resource in an early stage of degradation; (d) the obvious beneficial uses of the water; (e) court orders and decisions that direct Montana to correct identified problems and/or preclude proposed/continued water quality violations.

Eliminate other criteria. They are generic, some of potential import are logically included in the definitions of the above five priority criteria, some are outside the CWA criteria, and some are specifically scams designed to circumvent CWA standards and criteria by allowing the very

consumptive interests that have degraded the waters of Montana to interpret to their benefit which waters will not be inventoried and the problems resolved.

RESPONSE: This comment will be taken into consideration in the priority ranking system developed by DEQ, the Statewide TMDL Advisory Group, and local conservation districts for waterbodies on the '303(d) list. DEQ must work with the criteria established in the Montana Water Quality Act.

COMMENT: While citizen interest in a watershed is extremely important, it is also important that the most impaired waterbodies be addressed first, whether there is a high level of citizen interest in that waterbody or not.

RESPONSE: This comment will be taken into consideration in the priority ranking system developed by DEQ, the Statewide TMDL Advisory Group, and local conservation districts for waterbodies on the '303(d) list.

COMMENT: Who makes the decision on which stream is going to be worked on first?

RESPONSE: DEQ, the Statewide TMDL Advisory Group, and local conservation districts are working together to determine a priority ranking system for waterbodies on the '303(d) list. DEQ will focus attention on areas where local planning groups are established and actively addressing watershed management issues.

COMMENT: DEQ should act immediately on all streams serving as drinking water supplies, those supporting native fish such as Bull Trout and Westslope Cutthroat Trout, and recreational waters.

RESPONSE: This comment will be taken into consideration in the priority ranking system developed by DEQ, the Statewide TMDL Advisory Group, and local conservation districts for waterbodies on the '303(d) list

COMMENT: It seems to me that when the priority list is revised, there should be a priority listing within each category- high, moderate and low- so local groups could then respond to that listing as far as DEQ is concerned. The list could then be revised with that input from DEQ, the TMDL Advisory Group, and local groups.

RESPONSE: The priority list will be revised based on input from the Statewide TMDL Advisory Group, local conservation districts, and local watershed groups.

Comments on TMDL Plan Development and Implementation

COMMENT: Who pays for the work outlined in a TMDL plan?

RESPONSE: Funding for TMDL plan development and implementation is available through DEQ, the Department of Natural Resources and Conservation (DNRC), the Natural Resource Conservation Service (NRCS), EPA, FWP, the United States Department of Agriculture (USDA), and private nationwide foundations. Funding and assistance is available for TMDL planning and implementation through the following sources (this is not an inclusive list, however):

X DEQ - 319 grants, wetland restoration
X DNRC - RD & G grants
X FWP - Future Fisheries Grants, MT wildlife Trust Fund
X USGS - will match time for monitoring projects
X NRCS - Environmental Quality Incentives Program cost share

However, local industry, ranches, farms, municipalities and landowners may also be responsible for some of the costs. Watershed groups are more likely to receive grants from these funding sources than a single landowner.

COMMENT: Do all of the landowners in a watershed have to participate in a TMDL effort? What are the sticks of enforcement if voluntary compliance is not successful?

RESPONSE: No. Nonpoint TMDL plan development, implementation, and monitoring is voluntary. DEQ will work with local watershed groups across Montana to formulate local solutions to surface water quality problems. It is anticipated that a cooperative effort will ensure participation with most landowners. If voluntary efforts are not apparent in a given listed waterbody drainage, DEQ will conduct TMDL plan development, implementation, and monitoring.

COMMENT: How far away from running water do these TMDL districts have jurisdiction--all the way to the dry divides? If so, what kind of regulation may affect dry land operators?

RESPONSE: TMDL plans may be voluntarily implemented on a watershed-wide basis, but they should not be considered districts. Dry land operators may voluntarily implement Best Management Practices (BMPs) as part of a TMDL plan if nonpoint impairment sources are identified on their properties.

COMMENT: How will the return flows of irrigators be approached, since in many cases, the Federal government designed, built, and encouraged the settlement for irrigated agriculture, and now the Federal government wants to bathe and swim in the same waters? They should provide some research and assistance to enable farmers to comply with the changed Federal goals.

RESPONSE: Numerous federal agencies will provide assistance in the planning and development of TMDLS.

COMMENT: Once a TMDL is approved and the waterbody comes off the list, does it have to be implemented?

RESPONSE: Yes. Implementation responsibilities and deadlines are designated in the implementation plan for the TMDL. Failure to implement the TMDL plan or achieve water quality goals will result in the re-listing of the impaired waterbody. Pursuant to 75-5-703 (6), MCA, DEQ will incorporate appropriate TMDL waste load allocations into point source water discharge (MPDES) permits, and assist landowners in their voluntary construction and implementation of Best Management Practices to minimize nonpoint pollution sources upon the approval of a TMDL. Subsequent to the emplacement of these point and nonpoint source control measures, DEQ will assist local watershed groups in the development of a monitoring plan to evaluate their long-term effectiveness. If the TMDL effectiveness monitoring data demonstrates that TMDL goals are not being met within 5 years of a TMDL plan approval, DEQ will conduct a formal progress evaluation during which the TMDL plan and/or control measures may be modified, in accordance with 75-5-703 (9), MCA. All impaired waterbodies will continue to be tracked and listed in Montana□s 305(b) report after they have been removed from the '303(d) list.

COMMENT: Erecting shelters for cattle and other BMPs as part of TMDL plan implementation adds significantly to operating costs not only initially, but also in repairs over the long term. In addition, □farm□ buildings are on a 41 year depreciation schedule with the income tax.

RESPONSE: Several funding sources are available to reduce costs associated with BMP construction and implementation.

COMMENT: How many years were spent on the Deep Creek TMDL implementation?

RESPONSE: The implementation of the Deep Creek TMDL has been conducted over the past three years.

COMMENT: What was the total cost of the Deep Creek TMDL implementation?

RESPONSE: $350,000 was spent from grants and cost-share programs.

COMMENT: Who gets a watershed committee together? How can local watershed groups develop and implement a TMDL plan when they don□t have grant writing expertise?

RESPONSE: DNRC, Montana State Resource Conservation and Development Association (R, C & D), local conservation districts, consultants, and DEQ can provide assistance with the establishment of local watershed planning groups and grant writing.

COMMENT: How long will the TMDL process last by statute?

RESPONSE: In accordance with 75-5-703 (3), MCA, DEQ will develop TMDLs for all waterbodies on the 1996 '303(d) list within 10 years from May 5, 1997 (May 5, 2007). However, this deadline does not apply to those waterbodies which are removed or added to the '303(d) list subsequent to May 5, 1997. The TMDL requirements apply to waters which were added to the lists developed subsequent to the 1996 list. There will be no statutory time frames for TMDL development of subsequently added streams.

COMMENT: How will TMDLs be addressed on streams where there is no local interest or participation in TMDL plan development and implementation?

RESPONSE: DEQ will first address TMDLs on impaired waterbodies in areas where local interest has been generated on watershed planning. If there is no local interest in TMDL planning on an impaired waterbody, the responsibility will then fall to DEQ to develop and implement the TMDL.

COMMENT: Local watershed users lack not only money, but time to devise and implement watershed plans and appropriate Best Management Practices (BMPs).

RESPONSE: DEQ anticipates that TMDLS will take time to implement. DEQ plans to work with local groups to implement TMDLS at a practical rate. Assistance for TMDL plan development and implementation (including the design and construction of appropriate BMPs) is available through local conservation districts, watershed consultants, DEQ, and NRCS.

COMMENT: If we want to de-list a stream, can we ask for monitoring assistance from DEQ?

RESPONSE: DEQ will provide monitoring assistance to watershed groups as requested, as resources and time allow, and in accordance with listed waterbody priority rankings.

COMMENT: What is the appropriate role for conservation districts in the TMDL process?

RESPONSE: Conservation districts have the opportunity to play a lead role in the establishment of local watershed groups and procurement of funding and assistance for TMDL plans, monitoring and implementation.

COMMENT: Can watershed groups hire a third party to conduct monitoring and/or perform assessments?

RESPONSE: Yes.

COMMENT: When a group puts together a TMDL, DEQ and the group should sign an agreement on the goals, objectives, tasks, and timelines.

RESPONSE: This matter is addressed through the TMDL plan development process in which DEQ staff work closely with local planning efforts.

COMMENT: One cannot expect the landowner to contribute too much if there is no return on investment! The margins are too slim. The rationale that it has to be done because it is the law will only force the landowner to sell his land to someone who can afford it and is ignorant of the requirements.

RESPONSE: Local involvement will help ensure that implementation is carried out in a manner which minimizes financial and other hardships. Additionally, several previously mentioned funding sources are available to subsidize TMDL plans and projects. There are also potential benefits to be gained from TMDL implementation, including: increased land productivity; increased water useability for livestock and irrigation; improved livestock health; increased property values; healthy fisheries; water and energy conservation; and improved aesthetics.

COMMENT: TMDLs for point sources are regulated. Point sources should not be expected to do more to clean up discharges if nonpoint sources are not also working to clean up water. How will TMDLs for nonpoint sources affect point source permits?

RESPONSE: TMDLs will address all impairment sources to a waterbody, including point and nonpoint sources. Additionally, TMDL legislation allows point source "trading" with landowners generating nonpoint pollution sources. In this "trading" process, MPDES-permitted point sources may provide funding to mitigate upstream or downstream nonpoint sources in lieu of upgrading treatment systems to meet new MPDES effluent limits in order to achieve TMDL goals for an impaired waterbody. In this manner, permitted point sources may contribute to reductions in impaired waterbody loads at a fraction of the cost of treatment system upgrades necessary to comply with more stringent effluent limitations in order to meet TMDL goals.

COMMENT: The consensus process invariably fails when dealing with out-of-state and big money interests. There is no sense in locals being sucked into a committee process on permitting/mining issues, especially when they deal with violations of the law.

RESPONSE: The consensus process guarantees that everyone has equal input in a decision. DEQ will ensure that all point and nonpoint sources are considered and that equitable TMDLs are developed for impaired Montana waterbodies. The Blackfoot Challenge is a good example of an effective consensus process.

Montana

LIST OF WATERBODIES IN NEED
OF
TOTAL MAXIMUM DAILY LOAD DEVELOPMENT

1998

APPENDIX D