

# 2004 Montana Water Quality Integrated Report

## Introduction

This report provides an overview of the water quality status for surface waters in Montana. The information it presents reflects water quality assessments conducted by the Montana Department of Environmental Quality (DEQ) as of December 2003, and represents a “snapshot” of the ongoing water quality assessment work being conducted by the Department. This “Integrated Report” presents in a single document material, which in recent years were presented in two separate reports, the “303(d) List” and the “305(b) Report.” The 303(d) Lists contained specific information relating to waters assessed as having one or more of their beneficial uses impaired or threatened by human activities. The 305(b) Report provided a more general view including waters where all applicable beneficial uses had been found to be fully supported as well as waters in the assessment “system” for which there was not sufficient data to make use support determinations.

Both the federal Clean Water Act and the Montana Water Quality Act require an ongoing program of water quality assessments and reporting as part of a process intended to protect and improve the quality of rivers, streams, and lakes in the State. The fundamental goal of the federal Clean Water Act is to *“restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.”* While the Act *“recognizes, preserves, and protects,”* state responsibility for water quality protection and planning, it assigns overall administration of the Act to the United States Environmental Protection Agency (EPA). The change from having separate 303(d) and 305(b) reports to publishing a single Integrated Report is being made in explicit response to new guidance from the EPA.

The Clean Water Act requires states to adopt standards for the protection of surface water quality. Montana’s standards are designed to maintain water quality that will support the beneficial uses identified by the Montana Water-Use Classification System. Classifications assigned by this system require waters to support some or all of the following uses: drinking and food processing; bathing, swimming and contact recreation; growth and propagation of fish and associated aquatic life, waterfowl, and furbearers; and agricultural and industrial water supply. The water quality standards employed to maintain these uses address such parameters as coliform, dissolved oxygen, pH, turbidity, temperature, color, toxics, and other harmful substances.

When water quality monitoring data reveal changes to natural conditions that exceed those allowed by the State standards, the water is determined impaired (i.e. does not fully meet standards) or threatened (i.e. is likely to violate standards in the near future). More precisely, the specific beneficial uses, which are protected by the exceeded standard(s), are determined impaired or threatened. Under the requirements of Sections 208 and 303(e) of the federal Clean Water Act, any water found to have one or more threatened or impaired uses must be placed on a list of waters for which “water quality management plans” must be developed to correct the causes of the identified impairments. In those cases where the impairment involves the need to reduce the load (amount or concentration) of specific pollutants in the water, the water quality management planning process must include the identification of a “total maximum daily load” (TMDL) for each pollutant causing any standards exceedances.

Under Section 303(d) of the Clean Water Act, states have been required to submit their lists of impaired or threatened waters to the EPA each two years. A schedule for the development of water quality management plans (including a schedule for developing TMDLs, where necessary) has been a required element of these “303(d) Lists.” The submission to EPA of “305(b) Reports” providing a more general overview of water quality status has also been required each two years.

Now, at EPA’s direction, the two separate reports are being combined into this “Integrated Report.” This is being done by adopting a scheme for categorizing all waters in each state’s water quality monitoring and assessment system based on assessment status. Five categories are used as follows:

Category 1: Waters for which all applicable beneficial uses have been assessed and all uses have been determined to be fully supported.

Category 2: Waters for which those beneficial uses that have been assessed are fully supported, but some applicable uses have not been assessed.

Category 3: Waters for which there is insufficient data to assess the use support of any applicable beneficial use, so no use support determinations have been made.

Category 4: Waters where one or more beneficial uses have been assessed as being impaired or threatened, however, either all necessary TMDLs have been completed or are not required:

Subcategory 4A: All TMDLs needed to rectify all identified threats or impairments have been completed and approved.

Subcategory 4B: Waterbodies are on lands where “*other pollution control requirements required by local, State, or Federal authority*” (see 40 CFR 130.7(b)(1)(iii)) are in place, are expected to address all waterbody-pollutant combinations, and attain all water quality standards in a reasonable period of time. These control requirements act “in lieu of” a TMDL, thus no actual TMDLs are required.

Subcategory 4C: Identified threats or impairments result from pollution categories such as dewatering or habitat modification and, thus, the calculation of a Total Maximum Daily Load (TMDL) is not required.

Category 5: Waters where one or more applicable beneficial uses have been assessed as being impaired or threatened, and a TMDL is required to address the factors causing the impairment or threat.

## **Montana’s Assessment Process**

Montana water quality law requires that the listing of waters as impaired or threatened must be supported by "sufficient credible data" to ensure that such listings are justified. This sufficient credible data threshold applies both to the reassessment of waters listed on previously published lists and to the consideration of any additional waters for listing.

DEQ uses a two-step process to assess waters in compliance with the requirements of state law. First, DEQ searches out the available data for a waterbody and evaluates whether there are sufficient credible data to make a valid and reliable determination of beneficial use support. Then, if the data are adequate, DEQ compares the data with the applicable water quality standards to

make a beneficial use-support determination. The following paragraphs provide an overview of this process. Readers wanting a detailed explanation of the process, along with the tables and criteria used in making the sufficient credible data assessments and beneficial use determinations, will find these in Appendix A.

## **Identification of Available Water Quality Data**

In recent years, DEQ's water quality monitoring data along with information from other selected sources have been incorporated into computerized water quality databases. These records and databases provided a foundation, which is updated as new monitoring data is collected by DEQ or obtained from other sources. Then, at the beginning of each reassessment cycle, DEQ sends out requests for information to several hundred individuals, organizations, and agencies involved in water quality monitoring and management. Responses to these requests provide much useful information as well as references to additional materials available from other sources. The data and information obtained from outside sources are combined with the results derived from DEQ's ongoing monitoring efforts to provide the basis for water quality assessments.

## **Sufficient Credible Data (SCD) Assessment**

Montana law defines sufficient credible data (SCD) as "*chemical, physical, or biological monitoring data, alone or in combination with narrative information, that supports a finding as to whether a water body is achieving compliance with applicable water quality standards*" (75-5-103 MCA). This definition is consistent with a model developed by EPA for assessing the beneficial uses of streams based on a combination of physical (habitat), biological, and chemical monitoring. For example, EPA recommends that monitoring for aquatic life use support include the collection of habitat and community-level biological data as well as the measurement of chemical parameters in water and sediment.

Montana DEQ drew on the EPA model to develop sufficient credible data criteria and decision tables to evaluate data adequacy for streams, lakes, and wetlands. Methods and criteria are specified to evaluate SCD for the Montana Water-Use Classification System beneficial uses. These uses are: 1) drinking, culinary use, and food processing; 2) aquatic life support for fishes, associated aquatic life, waterfowl, and furbearers; 3) bathing, swimming, and recreation; 4) agriculture supply; and, 5) industrial supply.

The sufficient credible data review focuses on four components that contribute to data validity and reliability for water quality assessment:

- Technical soundness of methodology
- Spatial/temporal coverage
- Data quality
- Data currency.

In most cases a finding that there is sufficient credible data will result when several types of data have been collected over a period of time using sound technical methods and there are no indications of recent changes to the water body that would invalidate previously obtained results.

**Aquatic Life and Fisheries Support SCD** – The Montana Water-Use Classification System requires that all waters support the "*growth and propagation of fishes and associated aquatic life, waterfowl, and furbearers*" (ARM 17.30.604-624). Based on this requirement, the "aquatic life"

assessment considers fish, invertebrates, aquatic plants, and associated wildlife. Therefore, the aquatic life sufficient credible data assessment entails an evaluation and scoring of the following data categories:

**Habitat/physical** – includes qualitative and/or quantitative riparian and aquatic vegetation information, and hydrogeomorphic characteristics and functions.

**Biology** – includes chlorophyll *a* data; and aquatic biological community data such as fish, macroinvertebrates and algae; and wildlife community characteristics.

**Chemistry/toxicity** – includes bioassay, temperature and total suspended sediment data and chemistry data such as toxicants, nutrients, and dissolved oxygen.

Ideally, SCD for aquatic life would include data pertaining to all three categories; but very strong evidence relating to two data categories can constitute SCD for an aquatic life and fisheries beneficial use-support determination.

**Drinking Water and Contact Recreation SCD** – For drinking water and contact recreation uses, evaluation of multiple data categories is not necessary. Data are simply rated as sufficient or insufficient for these uses based on tables that apply the four general components of data adequacy to the specific standards underlying drinking water and contact recreation use support.

**Agricultural and Industrial Water Supply SCD** – Generally, if there are sufficient credible data for drinking water, contact recreation, and aquatic life beneficial use-support determinations, there are also sufficient data to make agriculture and industry beneficial use-support determinations. However, additional salinity and toxicity information may be required for agriculture supply use-support determinations.

## **Beneficial Use-support Determination (BUD)**

Once it is ascertained that sufficient credible data are available for a waterbody, the assessment process moves to determine the level of beneficial use support. The degree of support for each beneficial use is rated using four categories:

- Full support
- Partial support
- Non-support
- Threatened

A use is fully supported when all water quality standards applicable to that use are met. When one or more standards are not met due to human activities, the water body is either "not supporting" or "partially supporting" the beneficial use tied to that standard. A use that is currently fully supported but for which observed trends or proposed new sources of pollution indicate a high probability of future impairment may be rated as "threatened." Because the standards for determining use support are different for each use, the use-support determinations for the various uses of a waterbody are often not the same. Only those beneficial uses that apply to the particular water-use classification of a waterbody are evaluated for that waterbody.

**Beneficial Use Determination: Aquatic Life and Fisheries** – Making aquatic life and fisheries use-support determinations can be a complex process because of the amount and variety of

information that may bear on the decision. In some cases the reviewer will evaluate, compare, and weigh many bits of physical, biological, chemical, and habitat data in reaching the aquatic life and fisheries use-support determinations for a waterbody. In other cases clear evidence of use support or impairment or is provided from only one or two of the aquatic life data categories (habitat/physical, biology, and chemistry). Where no single data element by itself supports a conclusion, the assessor follows a process that leads to a determination based on the overall weight of evidence. A slightly different process is followed when data are not available for all the categories, yet there is clear evidence to support a particular determination. Whatever the process used, data showing that aquatic life and fisheries uses are “moderately impaired” result in a “partially supporting” determination. Data indicating that aquatic life and fisheries uses are “severely impaired” result in the waterbody being listed as “not supporting” these uses.

**Beneficial Use Determination: Other Uses** – Beneficial use determinations for the drinking water, contact recreation, agriculture supply, and industrial supply uses are relatively straightforward. Available data for a waterbody are evaluated using the criteria derived from water quality standards to make a use-support determination. Some determinations will result from clear evidence of support or impairment associated with one or two criteria; others may be derived from indications of water quality derived from the entire set of applicable criteria.

**Assessment Determination Categorization** – Upon completion of the SCD/BUD assessments for a waterbody, the use support determinations for that water are reviewed and the water is assigned to one of the five assessment categories described previously on Page 2.

## Quality Assurance Review

For the 2004 Reporting cycle, systematic review of water quality assessments was initiated and documented. This review covered both administrative and technical components of water quality assessments employing three steps.

- Staff responsible for performing the assessment (assessors) initiated the first stage of quality control by using a checklist to review their own work and ensure that they had properly documented their assessment determinations on the Assessment Record Sheets. This checklist was prepared for 100 % of assessments/reassessments performed.
- Detailed technical review was performed randomly on 10% of the assessments by management and senior technical staff. This review was recorded on a Technical Review Checklist.
- A final technical and documentation review was carried out during the entry of the assessment determinations into the actual Water Quality Assessment database. This review evaluated both the technical validity and the documentation adequacy of all assessments before keying them into the system.

## Assessment Documentation

The full record of DEQ's water quality assessments consists of three parts:

1. The Water Quality Assessment Determinations section of this report, as it appears on the “EnviroNet” Internet site <http://nris.state.mt.us/wis/environet/>, is Montana’s “official” report of state water quality status. Because it would require at least several hundred pages to print out the information provided on the web site, any hardcopy version of this report reflects at least some condensation and abridgement of the version posted on the EnviroNet website.

2. Hardcopy data files for each waterbody segment evaluated during the "sufficient credible data/beneficial use determination" assessment. These files may contain water quality data, maps, photographs, references to relevant documents, and references to electronic information sources. They may be reviewed at the office of the DEQ, Water Quality Planning Bureau.
3. Sufficient Credible Data/Beneficial Use Determination Assessment Record Sheets for each waterbody segment. The assessment of each waterbody is documented on an Excel spreadsheet. These spreadsheets display the data sources used in the assessment, the factors considered, and how those factors were used to reach the determinations. A hard copy of the record sheet for each waterbody segment is included in the segment files described above. Electronic copies of these record sheets also are linked to the EnviroNet interactive database "full report" pages.

### **Monitoring, Assessment, and Reassessment of State Waters: 2000 - 2004**

When DEQ first applied the "sufficient credible data" methodology to develop the 2000 303(d) List, it found that sufficient data were not available to make use support determinations for approximately 500 waters, which had appeared on previous 303(d) Lists. In accordance with the requirements of the 1997 amendments, these waters were placed on a list of waters to be reassessed as soon as practicable. Appendix B of this report provides, in its entirety, the original year 2000 "Waters to be Monitored and Reassessed" (Table 3-E, 2000 303(d) List). The table in Appendix B also provides the year in which the waterbody has been reassessed, allowing the public to track the fate of each waterbody segment.

The Department staff conducted monitoring and/or a use-support assessment on 86 waterbody segments from the 2000 "Reassessment List" prior to the publication of the year 2002 303(d) List. Of these 86 waterbodies, 55 segments were determined impaired and added to the 2002 303(d) List and 12 segments were determined as fully supporting all beneficial uses. The remaining 19 waterbody segments remained on the Reassessment List in 2002 with about one third of these waters being portions split off of larger segments because monitoring data revealed that the original segment was not a homogeneous unit.

Since publication of the 2002 303(d) List, the Department has conducted monitoring and/or a use-support assessment on another 115 waterbody segments (Appendix C) where 28 of these waterbodies were from the Reassessment List. Of these, 12 have been determined to be impaired for one or more uses, while 16 determined as fully supporting all beneficial uses assessed

In all, 24 of the 115 waterbody segments assessed for the 2004 Integrated Report were found to be fully supporting (i.e. Category 1) all beneficial uses (Table 1). A total of 13 new waterbody segments were added to the list of impaired waters (i.e. Categories 4 or 5) (Table 2). The assessments also resulted in some changes to listed probable causes of impairments on 43 segments (Appendix D), and modification to use support designations on 23 waterbody segments (Appendix E).

The remaining 388 waterbody segments on the original Reassessment List will be monitored and/or assessed by DEQ prior to the 2006 Integrated Report submission. The list of waters scheduled for monitoring and/or assessment appears in Appendix F.

A complete listing of all impaired waters in categories 4A, 4C, and 5 is provided in the Sub-Basin Reports Section of this document. A report from the Assessment Database was run for each of

Montana's 4<sup>th</sup> code USGS HUCs, or sub-basins, and includes a sub-basin map, a listing of each waterbody segment, its use support designations, causes and sources of impairments, and the list category.

**Table 1.** Year 2004 303(d) Waterbodies Removed from 2002 list based on new Sufficient Credible Data (i.e. listed as Category 1 waters – fully supporting all beneficial uses).

HUC	Planning Area	ID Number	Segment Name - Description
10020003	Ruby	MT41C002_060	CURRANT CREEK, Headwaters to mouth (Ramshorn Cr) T4S, R4W, S35
10020003	Ruby	MT41C002_070	MILL GULCH, Tributary to Granite Cr-Alder Cr from Forest Boundary to Headwaters T5S, R2W, S10
10020003	Ruby	MT41C002_120	HARRIS CREEK, tributary to California Cr from Forest Boundary to Headwaters T5S, R3W
10020003	Ruby	MT41C003_070	NORTH FK GREENHORN CR from headwaters to confluence with South Fk
10020003	Ruby	MT41C003_080	WEST FORK RUBY RIVER from headwaters to mouth (Ruby R)
10020003	Ruby	MT41C003_140	HAWKEYE CREEK headwaters to mouth (MF Ruby R)
10020003	Ruby	MT41C003_150	SHOVEL CREEK, headwaters to mouth (Cabin Cr - Middle Fork Ruby R)
10020007	Upper Madison	MT41F004_030	BEAVER CREEK from headwaters to the mouth (Quake Lake)
10020008	Lower Gallatin	MT41H002_032	SOUTH COTTONWOOD CREEK, Headwaters to the Middle Cr Assoc Ditch diversion
10030205	Teton	MT41O002_080	CLARK FORK OF MUDDY CREEK, Headwaters to mouth (Muddy Cr)
10040101	Bullwhacker-Dog	MT41T002_010	BULLWHACKER CREEK Headwaters to the mouth (Missouri R)
10040101	Bullwhacker-Dog	MT41T002_040	EAGLE CREEK from headwaters to Dog Cr
10040106	Big & Little Dry	MT40D004_010	LITTLE DRY CREEK, Headwaters to the mouth (Big Dry Cr)
10070002	Boulder - Big Timber	MT43B004_143	EAST BOULDER RIVER from headwaters to the NF boundary
10100005	O'fallon	MT42L001_020	SANDSTONE CREEK from headwaters to the mouth (O'Fallon Cr)
10100005	O'fallon	MT42L001_031	O'FALLON CREEK from the mouth (Yellowstone R) to Mildred
10100005	O'fallon	MT42L001_033	O'FALLON CREEK headwaters to Fallon/Carter Co. line.
10110201	Little Missouri	MT39F001_021	LITTLE MISSOURI RIVER, Highway 323 bridge to the South Dakota Border
10110201	Little Missouri	MT39F001_022	LITTLE MISSOURI RIVER, Wyoming border to the Highway 323 bridge.
17010202	Rock	MT76E002_010	ROCK CREEK mainstem from headwaters to mouth (Clark Fork)
17010206	Flathead Headwaters	MT76Q001_010	NORTH FORK FLATHEAD RIVER from the Canadian Border to the Mouth
17010207	Flathead Headwaters	MT76I001_010	MIDDLE FORK FLATHEAD RIVER, Headwaters to mouth
17010213	Lower Clark Fork	MT76N002_010	NOXON RESERVOIR
17010213	Thompson	MT76N004_010	THOMPSON RIVER from headwaters to mouth (Clark Fork)

**Table 2.** Year 2004 303(d) Waterbodies Added to the List of Impaired Streams (i.e. List Categories 4C or 5)

HUC	TPA	ID Number	Segment Name - Description	Size / Units	List Category
10040103	Big Springs	MT41S004_010	BIG SPRING CREEK from East Fork Big Spring Cr to Casino Cr	1.9 Mi	5
10040101	Bullwacker-Dog	MT41T002_020	DOG CREEK from Cutbank Cr to the mouth (Missouri R)	25.3 Mi	4C
10040101	Bullwacker-Dog	MT41T002_030	EAGLE CREEK from Dog Cr to the mouth (Missouri R)	18 Mi	4C
10070006	Clarks Fork Yellowstone	MT43D001_011	CLARKS FORK YELLOWSTONE RIVER, Bridger Cr to mouth (Yellowstone R)	41.3 Mi	5
10040103	Judith - Arrow	MT41S002_100	LAST CHANCE CREEK headwaters to mouth (Moccasin Cr)	5.4 Mi	5
10050009	Landusky	MT40I001_050	LODGE POLE CREEK headwaters to Fort Belknap Reservation boundary	4.2 Mi	5
10070002	Paradise	MT43B004_062	TOM MINER CREEK from 0.3 mi below Skully Cr to Tepee Cr.	6.7 Mi	4C
17010213	Prospect Creek	MT76N003_021	ANTIMONY CREEK DRAINAGE headwaters to mouth (Prospect Creek)	2 Mi	5
17010213	Prospect Creek	MT76N003_022	COX GULCH headwaters to mouth (Prospect Cr)	3 Mi	5
10020003	Ruby	MT41C002_090	CALIFORNIA CREEK tributary of Ruby R T-5S R-4W	10.9 Mi	5
10020003	Ruby	MT41C002_100	GARDEN CREEK, Headwaters to mouth at Ruby Reservoir	7.3 Mi	5
10020003	Ruby	MT41C003_020	COAL CREEK from headwaters to mouth (Middle Fork Ruby R)	8.3 Mi	5
17010213	Thompson	MT76N005_010	FISHTRAP CREEK from headwaters to the mouth (Thompson R)	19.8 Mi	4C

## Prioritization for TMDL Development

In compliance with the provisions of the Montana Water Quality Act, DEQ adopted in 2000 a new methodology for scheduling waters for TMDL development. This methodology was developed with the assistance of the Statewide TMDL Advisory Group. It employed a weighted scoring system, based on the 13 prioritization criteria mandated by the Montana Water Quality Act, to assign a high, moderate, or low planning priority to each water. DEQ then identified 91 watersheds in the state as appropriate “planning areas” for water quality management planning and TMDL development. Each planning area was then scheduled for plan development based upon factors including the individual water body prioritization scores, grouping waters having similar or interrelated problems, availability of data, and the degree of public interest and support.

This schedule was also compiled in response to a June 2000 United States District Court order requiring EPA and DEQ to adopt a schedule which would assure the development by May 5, 2007 of all necessary TMDLs for waters on the 1996 303(d) List. To avoid having two separate TMDL planning schedules in effect at the same time, DEQ adopted a single schedule addressing waters

appearing on either the 1996 or the 2000 list, and published this schedule in the 2000 Montana 303(d) List. When the 2002 303(d) List was published, an appeal of the court order was underway, so DEQ did not attempt a full prioritization update. Only some minor rescheduling, allowable within the limits of the court order, was done.

Since publication of the schedule in the 2000 303(d) List, two factors have substantially changed the landscape with respect to exactly which waters must have TMDLs established to address water quality impairments in Montana. The first of these factors is a change or clarification of EPA guidance. The other is an appeals court ruling on the 2000 court order.

On July 23, 2001, EPA notified DEQ that it would continue to approve or disapprove TMDLs for waters impaired by “pollutants,” but would no longer take action to approve or disapprove TMDLs for waters impaired solely by “pollution.” “Pollutants” include specific substances such as nutrients, sediment, or metals, while “pollution” is a water quality problem created by conditions such as flow alterations or habitat degradation. EPA expanded on this policy change in its guidance for 2004 Integrated Report preparation. Under this guidance waters impaired only by pollution are listed separately as “Category 4C” waters, while waters impaired by pollutants are listed as “Category 5” waters. Since the calculation of TMDLs only appropriate where the impairing factor is an excessive pollutant load, TMDLs are required only for Category 5 waters.

On July 25, 2003, the United States Court of Appeals for the Ninth Circuit ruled on EPA’s appeal of the District Court order. The ruling found that the district court did have the authority to require EPA and DEQ to establish and follow a schedule for developing TMDLs, but did not have the discretion to refuse to permit modifications to 1996 list of impaired waters.

The court order schedule allows flexibility for DEQ and EPA to respond to contingencies – so long as the pace of TMDL development is maintained. TMDLs for some planning areas may be delayed, if others are accelerated to maintain the pace. In its 2002 list update DEQ made several such schedule modifications. Since the publication of the 2002 list, consultations between DEQ and EPA have identified additional rescheduling needs and allocated lead responsibility for development of specific TMDLs to either DEQ or the EPA Montana Office staff. These proposed schedule modifications and workload allocations were presented for consideration by the Statewide TMDL Advisory Group on September 16, 2003. The advisory group provided positive comments on the changes and encouraged DEQ to complete the TMDLs as expeditiously as possible.

In 2003 the Montana State Legislature extended the original 10-year date for completing TMDLs for waters listed in 1996 by an additional 5 years. Given this legislative extension of time provided in statute, DEQ intends, at an appropriate time, to request similar schedule relief from the Court. If schedule relief is granted by the Court, DEQ and EPA will have until May 5, 2012 to complete all necessary TMDLs that were originally listed in 1996.

Table 3 displays the planning areas scheduled for TMDL development from 2004 through 2006. The list of Category 5 (TMDLs required) waters located within each of these planning areas appears in Appendix G.

During the past reporting cycle, the Montana DEQ has received EPA approval for 59 waterbody-pollutant TMDLs in five (5) TMDL planning areas. The complete list of EPA-approved non-point source TMDLs in Montana, along with a brief synopsis of each, is provided in Appendix H.

**Table 3: TMDL Planning Areas Scheduled for Completion through Year 2006**

<b>Scheduled Completion Year*</b>	<b>TMDL Schedule From 2002 List</b>	<b>Planning Area</b>	<b>Lead Agency</b>
2004	2004	Big & Little Dry	DEQ
<b>2004</b>	2003	Big Spring	DEQ
<b>2004</b>	2003	Bitterroot headwaters	DEQ
<b>2004</b>	2002	Blackfoot headwaters	DEQ
<b>2004</b>	2003	Bobtail Cr. (part of Kootenai)	DEQ
<b>2004</b>	2003	Bullwhacker - Dog (excludes Missouri mainstem)	DEQ
<b>2004</b>	2003	Dearborn	EPA
<b>2004</b>	2003	Flathead headwaters	EPA
<b>2004</b>	2005	Grave Cr. (part of Tobacco)	DEQ
<b>2004</b>	2003	Ninemile	DEQ
<b>2004</b>	2002	Tongue	DEQ/EPA
<b>2004</b>	2002	Powder	DEQ/EPA
<b>2004</b>	2007	Rosebud (Rosebud Cr. drainage of Yellowstone-Rosebud)	DEQ/EPA
<b>2004</b>	2002	Sun	DEQ
<b>2004</b>	2002	Swan	DEQ
2004	2004	Yaak	EPA
<b>2005</b>	2004	Big Hole, North Fork	DEQ
<b>2005</b>	2004	Big Hole, upper	DEQ
<b>2005</b>	2004	Boulder/Big Timber	DEQ
<b>2005</b>	2003	Cut Bank - Two Medicine	EPA
<b>2005</b>	2004	Flatwillow-Boxelder	DEQ
<b>2005</b>	2004 & 2005	Fort Peck Reservoir and Lower Missouri	EPA
<b>2005</b>	Na	Missouri mainstem (Ft. Peck to N. Dakota)	EPA
<b>2005</b>	2003	Lake Helena	EPA
2005	2005	Lake Mary Ronan (part of Flathead - Stillwater)	EPA
<b>2005</b>	2004	Little Missouri	DEQ
<b>2005</b>	2004	O'Fallon	DEQ
<b>2005</b>	2004	Prospect Creek (part of Lower Clark Fk.)	DEQ
2005	2005	Redwater (Missouri tributaries only)	DEQ
<b>2005</b>	2003	Ruby	DEQ
2005	2005	Shields	DEQ
<b>2005</b>	2003	St. Regis	DEQ
2006	2006	Beaverhead	DEQ
<b>2006</b>	2003	Benton Lake	EPA
<b>2006</b>	2004	Blackfoot, middle	DEQ
<b>2006</b>	2005	Flathead - Stillwater	DEQ
<b>2006</b>	2005	Ashley Creek (part of Flathead - Stillwater)	DEQ
<b>2006</b>	2005	Haskill Basin (part of Flathead - Stillwater)	DEQ
<b>2006</b>	2005	Stillwater River (part of Flathead - Stillwater)	DEQ
<b>2006</b>	2005	Swift Creek (part of Flathead - Stillwater)	DEQ
<b>2006</b>	2005	Whitefish River (part of Flathead - Stillwater)	DEQ
2006	2005	Whitefish Lake (part of Flathead - Stillwater)	DEQ
<b>2006</b>	2003	Madison, upper	EPA
<b>2006</b>	2006	Marias - Willow	DEQ

\* Year in **Bold** indicates TMDL schedule is revised from the year 2002 303(d) schedule.

# Public and Agency Consultation

## Consultation Actions

### Background

Both federal and state law require DEQ to engage in extensive consultation with the public when it develops procedures or processes for assessing water quality and setting priorities for TMDL planning. The 2004 Integrated Water Quality Report underwent a 63-day Public review beginning January 9, 2004 and ending March 12, 2004. Additionally, a public Water Quality Report open house was held at the DEQ offices in Helena, MT on February 26, 2004. Although the 2004 Integrated Report was formatted differently by combining the previously separate 303(d) list and 305(b) report and uses categorization to identify the status of waterbody segments, the procedures for assessment and beneficial use support determination remained largely unchanged from the procedures that underwent public and agency consultation during the 2000 and 2002 reporting cycles.

Montana's 2004 Integrated Water Quality Report (hereinafter Integrated Report or IR) reflects guidance given by EPA in a July 21, 2003 Memorandum from Diane Regas, Director of the EPA's Office of Wetlands, Oceans, and Watersheds which includes "Guidance for 2004 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d) and 305(b) of the Clean Water Act; TMDL-01-03." This guidance document details the requirements for using a categorization system to better identify the status of surface waters in state to the public, cooperating agencies, EPA, and congress.

The use of listing categories did not result in the removal of any waterbodies. In fact, the categories track all waterbodies regardless of their status. This prevents the apparent disappearance of waterbodies from the 303(d) List or 305(b) report by "de-listing." The categories were designed to track all waterbodies in a state's water quality assessment system as they progress from unassessed to partially assessed as full support (Categories 3 & 2, respectively), from impaired by either pollution or pollutants (Categories 4C or 5), to TMDLs completed and approved or other control regulations identified (Categories 4A or 4B), and finally to waters fully supporting all beneficial uses (Category 1).

## 2004 List Development Consultation

### Montana's Water Quality Assessment Methodology

The 2000 303(d) List was the first to be developed using procedures adopted to respond to the 1997 amendments to state water quality law. These procedures, especially the state's proposed assessment methodology received close public review. During its development, DEQ obtained assistance and reviews from a wide array of state, regional, and national water quality assessment experts; consulted the statewide TMDL advisory group; and discussed the proposals with a number of stakeholder groups around the state. This Water Quality Assessment Methodology (Appendix A) has not been altered since the 2000 public review and was used for the assessments that resulted in this 2004 Integrated Report.

Congress and the Montana legislature recognize challenge of determining the extent of non-point source water quality impairments in both 40 CFR part 130.7(5) and MCA 75-5-701(2). In recognizing this, federal and state law require DEQ to *assemble and evaluate* all existing and readily available water quality-related data and information as an efficient means of augmenting the data collected under the DEQ ambient water quality monitoring program.

In compliance with this requirement, DEQ sent out over 600 letters to stakeholders (local watershed groups, federal, state, and local agencies, private groups, and individuals with water quality interests) in May 2003 requesting any water quality information they might have which could be used to update the assessments included in this Integrated Report. Many of these stakeholders had provided information during the 2000 or 2002 reporting cycles while others provide data to DEQ on a continuing basis. The DEQ monitoring and assessment staff also receives data from many of these entities by means of regular working contacts.

Information received up to September 1, 2003 was included in assessments for the 2004 reporting cycle. After assembling both internal, and the aforementioned external data, an intense period of water quality assessments ran up to December 3, 2003. At that time, the Assessment Database (ABD) was closed to new entries for the 2004 reporting cycle (this allowed time for compilation and internal review of the draft 2004 Integrated Report for the public comment period beginning January 9, 2004).

Publication of the Draft 2004 Integrated Report initiated a 63-day comment period (from January 9, 2004 to March 12, 2004) to obtain public review of DEQ's updated listing determinations and planning schedule. Legal notices placed in five major newspapers around the state provided formal notice of this comment opportunity. A news release announcing the comment period was also issued to most of Montana's media outlets, mailed to approximately 600 water quality stakeholders, and noticed on NewLinks and the Montana Watershed Listserve hosted by the Montana Watercourse.

The 2004 Integrated Report materials that Montana submits to the EPA consist of an electronic database, text, GIS map files, and electronic version of assessment files. Recognizing that few members of the public would have all the computer software needed to read all these files, the DEQ has developed an interactive website, EnviroNet, with the assistance of the Montana State Library's Natural Resource Information System (NRIS). The draft list was published by the Montana State Library on the Internet at <http://nr.is.state.mt.us/wis/environet/2004Home.html>. This site is readable using any computer with Internet access.

All of the comment period announcements, as well as the NRIS site, identified both a standard mailing address and an email address for submitting comments on the draft list to DEQ.

## **Public Comment/DEQ Response**

Public and Agency comments received were logged in, copied for the Record of Comments, reviewed, and distributed to the DEQ staff best able to address and/or respond to the comment content. Response and actions taken on these comments are divided into two sections:

1. Public Comment describing specific waterbodies
2. Assessment methodology, State WQ Standards, and Montana Law

The first DEQ response section includes comments related to the assessment of specific waters. These comments were forwarded to the monitoring staff responsible for assessments in the major basin where the segment is located. Monitors considered any information in the comment that indicated an error or disputed decision and reviewed the assessment record to verify the information. Comments seeking clarification on the assessment of specific segments are addressed in a detailed response.

The second DEQ response section addresses general comments related to the assessment process itself, comments related to state water quality standards, EPA policy, Montana Law, and comments related to the Integrated Reporting Format and categorization. These comments were directed to the appropriate party within the data management section, water quality standards section, Bureau Chief or DEQ legal staff.

Following the two response sections, a summary of all changes resulting from these public comments is given.

### *Public Comment describing specific waterbodies*

**Comment Number: 1**

**Waterbody Addressed: Main Stem Missouri, Toston Dam - Headwater**

**Comment:** I am interested in the water quality assessment of a portion of the Upper Missouri River, in particular, that stretch between the Missouri headwaters and Toston Dam (MT41I001\_011). After searching the databases I have found that it appears that this segment has not yet been assessed, although both the waters above and the waters below have already been assessed. It is possible that there is a mistake in the database, that the assessment for this waterbody was inadvertently omitted? If not, why has this portion not yet been assessed when all the surrounding waters have been completed?

**DEQ Response: Comment #1**

**Missouri River, Segment MT41I001\_011, from headwaters to Toston Dam**

This segment of the Missouri River is scheduled for reassessment by DEQ staff for the 2005 field season. The reassessment requires the collection of several types of data in order to fill data gaps and obtain sufficient credible data (SCD) for beneficial use support determinations.

Some other Missouri River segments had considerably more data available to the DEQ from other agencies, hence SCD was achieved and use support determinations could be made without the need of further field reassessments. Additional data may be collected for source assessment purposes at a later time. Source assessments provide the information used for load allocation and target-setting processes for the pollutants for which TMDLs are written.

There are several other waterbodies in this TMDL planning area that require the collection of more data before beneficial use determinations can be made for them. Those waters are scheduled for reassessment in the 2005 field season as well.

This comment does not prompt a change to the SCD/BUD status of this waterbody.

**Comment Number: 2**

**Waterbody Addressed: Marias below Tiber Res./ Lack of assessment for drinking water and partial assessment.**

**Comment:** In the draft 2004 report, the Marias River below Tiber Dam is listed as partially supported in the areas of Aquatic Life Support, and Cold and Warm Water Fishery, with the probable cause listed as flow alteration and other habitat alterations. It is not assessed for Drinking Water Supply quality.

In Tiber Reservoir and above, it is listed as fully supported for agriculture and industrial uses, and not assessed for any other use, including Drinking Water Supply.

This lack of assessment for Drinking Water supply is unacceptable for a number of reasons.

Reason 1—In the 2002 305(b) and 2002 303(d) reports, the area below Tiber Dam is listed as partially supported for Aquatic Life Support, and Cold and Warm Water Fishery, with Probable Causes listed as Mercury and Metals, among other causes.

Reason 2—In the 2000 303(d) report, the area below Tiber Dam is listed as partially supported for Aquatic Life support and Cold Water fishery, and NOT SUPPORTED for Drinking Water Supply, with Probable Causes listed as Mercury and Metals, among other causes, with probable Sources listed as "Source Unknown".

Reason 3—The 1995 Montana fish Consumption Advisory by the Mont Dept of Public Health and Human Services document high levels of Methyl Mercury contamination in fish from Tiber Reservoir and advise that no fish be eaten on an annual basis by women or children because of such mercury contamination.

Reason 4—The Rocky Boy/North Central Montana Regional Water system is in the process of designing and implementing a very large scale regional municipal water system that will draw water from the Marias River drainage and distribute it to a very large number of Northern Montana consumers with only a limited purification system.

One question begs answering; what happened to the analysis in past years that a number of uses, including Drinking Water Supply quality, have been not supported due to mercury contamination? Has this factor magically disappeared?

**DEQ Response: Comment #2 – Marias Below Tiber Re: Lack of assessment for drinking water Beneficial Use**

For this comment, it is best to look at the history of the Marias River downstream of Tiber.

The drinking water beneficial use for the Marias River has not been “overlooked” by the DEQ for the 303(d) list. Stated in the data matrix and impairment status worksheets in the Marias River Assessment Record Sheets is the rationale used for “not assessing” the drinking water beneficial use. The files show that sufficient credible data are lacking to make any decisions for drinking water based on the current data known to DEQ. Hard copies of the assessment are available at DEQ, at the DEQ website [http://www.deq.state.mt.us/wqinfo/303\\_d/303d\\_information.asp](http://www.deq.state.mt.us/wqinfo/303_d/303d_information.asp) or on EnviroNet <http://nris.state.mt.us/wis/environet/index.html>. Select: waterbody name | Full Report | Assessment Record Sheet.

For the 2000 list, the Marias River downstream of Tiber was listed as only one reach (MT waterbody ID: MT41P001\_020). In 2002, because of a classification change, the Marias River was split into two segments downstream of the dam; the first reflects the cold tail-out water released from the dam (MT41P001\_021, B-1 for 10.8 miles) and the other reflects warmer water toward the mouth (MT41P001\_022, B-2 for 70 miles). Data that was used for the 2000 drinking water impairment listing of the Marias River downstream of Tiber came from only two sampling locations where metals were collected. When the segment was split into two, the lower segment had only one set of metals data (collected in 1974). This data included a mercury value reported as “below detection” and the detection level reported by the lab was not low enough to determine human health criteria for drinking water. Therefore, for this lower segment of the Marias, sufficient credible data were not available to make a drinking water beneficial use determination.

Data for the upper segment of the Marias (cold-water fishery just downstream of Tiber) included several years of metals data collected by the USGS. Following are direct statements from DEQ’s most current assessment record for the Marias River, just downstream of the dam summarizing these data: “*Metals collected several times per year from 77-86, includes either or both total recoverable or filtered; 1 total recoverable Cu (6-30-82) & 2 total recoverable Pb (5-21-81 & 3-14-79) samples met or exceeded calc State chronic standards for aquatic life, based on hardness; 3 filtered Hg samples exceeded drinking water standards (0.1 ug/L on 8-26-80, 0.2 ug/L on 10-17-84, 0.1 on 9-25-85); no Hg exceedences for aquatic life*” (Reference: DEQ Assessment Record Sheet - Data Matrix, Water Chemistry Section, 13ME). Important considerations for the preceding statement are: 1) the current human health standard (HHS) for Mercury in surface water is 0.05 µg/L and the reported values are only slightly higher; and 2) the lack of constancy or availability by the data to suggest a pattern in the mercury detection. The very low values of mercury detection lend some speculation as to if the detection is “real” or an error (analytical detection limits for mercury were in the 0.1-0.2 ug/L range in the early 80’s). Dust can carry trace levels of metals, including mercury. Also, if equipment is not flushed properly, trace amounts may be detected.

DEQ does not view mercury as a metal to be taken lightly, nor should the data be omitted from our files or assessments. The following is a direct statement taken from the Use Impairment section of the most current DEQ Assessment Record Sheet for the Marias River: “*...drinking water cannot be assessed for Hg because of number of samples and relative "age" (of the samples); a more recent suite of filtered metals should be collected to ascertain Hg (and other) for HHS...*” The reason why metals and mercury are shown on the 2002 list for both reaches of the Marias River downstream of Tiber Dam is because DEQ cannot, by law, simply remove previously listed probable causes of impairment. Data must accompany any listing or delisting of impairments. The situation with the Marias was one of reassessing data that was already used for an impairment listing. No new data was provided and the probable cause remains on the list.

At present, the upper Marias River (MT41P001\_010), upstream of Tiber Reservoir, lacks sufficient and credible data to make any beneficial use determinations. Providing municipal drinking water is a regulated process. If the Rocky Boy/North Central Montana Regional Water system obtains its source water from the Marias River, they must characterize it and apply the appropriate treatment technology to deliver a drinking water product meeting National Primary Drinking Water Standards, by law. Data included in water quality reports must be made available to DEQ in order to be used in the beneficial use determination process. DEQ routinely solicits agencies and local parties for water quality data.

Fish consumption advisories are considered in primary recreational beneficial uses. Many reservoirs in Montana currently have advisories based on mercury or PCB contamination. The extent of the data made available to DEQ for these reservoirs will determine what, if any, other

beneficial uses can be assessed. Tiber Reservoir, at present, lacks sufficient and credible data to make beneficial use determinations for drinking water, contact recreation, aquatic life, and fisheries. Data to satisfy our listing needs is scheduled to be collected in the summer 2004.

These comments did not include new data.

**Comment Number: 4**

**Waterbody Addressed: Redwater River; Timber, Nelson, Horse, Prairie, Elk and Sand Creeks**

**Comment:** Water body MT40P001\_014 Redwater River-57.7—on the Spatial Layout of Data – Habitat there is a mistake in the 2000 report. There was a habitat assessment completed on site 3H. Our records show that the assessment was completed with a score of 75%. In the final report of the Redwater assessment draft report this was over looked.

Pasture Creek MT40P002-30 is not in McCone County that creek is in Dawson County. That part of Redwater where Pasture Creek flows into the Redwater is all in Dawson County.

Assessments were done on Timber Creek, Nelson Creek, Horse Creek, Prairie Elk and Sand Creek the summer of 2003. DEQ, McCone Conservation District and NRCS have done these assessments. DEQ has the assessments that were done and also the McCone Conservation District have the assessments. The district feels what the Timber, Nelson, Prairie Elk, Sand and Horse Creeks are listed for is incorrect and the information gathered to list these streams is very old data. A lot of the land practices have changed since the 1970's.

**DEQ Response: Comment #4 – Redwater River; Timber, Nelson, Horse, Prairie Elk, and Sand Creeks**

The comment for the Redwater River did have data; the tributary comments did not.

In the current Assessment Record Sheet for the Redwater River (MT41P001\_014), a statement was made regarding the lack of a habitat assessment at site (3H) visited during the Redwater River Stream Corridor Assessment (2000 final report, NRCS). The statement found in the assessment record is correct, as far as the current final NRCS report shows. Although assessment data sheets were made available to DEQ along with this comment, edits in the final NRCS report were not. This data may be used to update the Assessment Record Sheets but any changes would be reflected in the next 303(d) list (2006).

The comment from the local conservation district is appreciated; however, unless new data is provided, the current 303(d) listed impairments will remain for Nelson, Horse, Prairie Elk, and Sand Creeks. Data collected during the 2003 field season will be included in the updated assessments of the aforementioned streams. Most of the data collaborates, not refutes, with historical data and current 303(d) impairment determinations. Data used to make beneficial use determinations are put through a rigorous process to determine how sufficient and credible the data are. "Old" data is usually included in beneficial use determination; but if only old data are present, DEQ recognizes the need to collect more current data. For the streams in question, though, DEQ used data that was collected during the mid-late 1990's for the beneficial use determinations. Data collected over the past field season was used to strengthen impairment listings. Also, current land uses were noted and documented; many of the streams flowed through areas of intense, summer-long continuous grazing (not a recognized BMP).

**Comment Number: 5**

**Waterbody Addressed: Pasture Creek (MT40P002-030)**

**Comment:** I want you to know that the creek listed in McCone County have a creek that is on the list that is incorrect. Pasture Creek MT40P002-030 38.9 miles is not in McCone County. That creek is in Dawson County.

**DEQ Response: Comment #5 – Pasture Creek (MT40P002-030)** There are two Pasture Creeks in the Redwater drainage. Pasture Creek MT40P002-030 38.9 miles is a tributary to the Redwater River and is, in fact, located in Dawson County. Correction made 03/26/04.

**Comment Number: 8**

**Waterbody Addressed: General streams in Little Rocky Mountains**

**Comment:** With the Zortman and Landusky mining complex in our Little Rocky Mountains, it was noted that Montana-DEQ staff did not complete a through assessment of all streams originating from the Little Rocky Mountains, which drain into the Milk River in the north and the Missouri River in the south.

With the Zortman and Landusky mines operating without a Montana Pollution Discharge Elimination System Permit, it is the Fort Belknap Tribes priority of monitoring the drainages against Acid Mine Drainage.

**DEQ Response: Comment #8 – General streams in the Little Rocky Mountains**

Streams originating from the Little Rocky Mountains that are currently on Montana's 303(d) list of impaired streams include:

- Fort Peck HUC (10040104)
  - Alder Gulch (MT40E002\_050)
  - Ruby Creek (MT40E002\_060)
  - Ruby Gulch (MT40E002\_070)
  - Rock Creek (MT40E002\_090)
  - Mill Gulch (MT40E002\_100)
  - Montana Gulch (MT40E002\_010)
- Peoples HUC (10050009)
  - King Creek (MT40I001\_040)
  - Big Horn Creek (MT40I001\_030)

All of the above listed streams have recent chemical, biological, and/or physical data that allow beneficial uses to be determined, and if impaired, will be listed on the 303(d) list. Streams that are not listed above, but were found on the 1996 303(d) list of impaired streams and currently lack data to make beneficial use determinations include Sullivan Creek (MT40E002\_110, HUC: 10040104) and Beaver Creek, from the reservation boundary to the headwaters (MT40M001\_011, HUC: 10050014). The State of Montana is required to reassess streams that were found on the 1996 list but that do not have enough data to assess the beneficial uses for the current list. DEQ will reassess waterbodies when either or both of the following occur:

- 1) New data is made available to DEQ, from another agency or local interested parties; or
- 2) DEQ collects field measurements following standard operating procedures and evaluates the laboratory results.

By law, DEQ is required to reassess streams that were on the 1996 list but lacking sufficient and credible data for the current 303(d) list *as soon as possible*. With the current workload and scheduling, streams in the Little Rocky Mountains will be monitored by DEQ field staff in Summer 2005.

These comments did not contain any new data.

**Comment Number: 11**

**Waterbody Addressed: N. Fork Smith and General Smith Watershed Comments**

**Comment:** In Report 2 of 2, Table I. Sufficient Data – Source Checklist, the Data Source with the assigned number 2 “Laboratory Reports for samples collected during the 1999 North Fork Smith River assessment.” We believe this date should be recorded as 1998.

It appears to be correctly cited in Table II. Beneficial Use-Support Determination: Data Matrix. In this table it is identified as 9/14/1998 data.

**DEQ Response: Comment #11 - North Fork Smith River**

The year indicated in the waterbody Assessment Record Sheet for the collection of water chemistry data was changed to 1998, to be consistent with the collection date (9/14/1998) recorded in the chemistry report. The report indicates that DEQ collected this suite of samples. Also, a notation was made on the CD line in the Data Source Checklist to include the CD in the data collection and reassessment effort in 1998.

Field notes indicate that a macroinvertebrate kick net sample was collected by DNRC for the assessment. One other macroinvertebrate sample was collected at another site by DEQ, according to the macroinvertebrate report.

The aquatic life and fishery scoring table comments for the Habitat section indicates that habitat data was collected during the 1998 assessment by the NRCS and the DEQ. This comment does not prompt a change to the SCD/BUD status of this waterbody.

**Comment Number: 12**

**Waterbody Addressed: Bair Reservoir**

**Comment:** Bair Reservoir now appears on the Query Summary For Water bodies in Meagher County. The report shows there is “Insufficient data to assess any use”. Bair Reservoir was not on the 1998 or 2002 303d list. How was Bair reservoir added to the 2004 303d list without Credible and Sufficient Data to support adding it? No information on this water body was available in the Web database.

This Query also lists Bair Reservoir’s size as 271.8 acres. How was this size arrived at? Aerial photography shows that Bair Reservoir at a size of 150 acres to 163 acres.

**DEQ Response: Bair Reservoir (Comment 12)**

Bair Reservoir does not appear on the 2004 303d List or any previous 303d List. There is no waterbody file or Assessment Record Sheet for this reservoir. The reservoir name may be brought up in the 303d List database, but it states that there is insufficient data to assess any of the beneficial uses (Category 3). Please

note that the database also includes waterbodies that are determined to be fully supporting of all beneficial uses (e.g.: Miner Creek, in the upper Big Hole drainage)

This comment does not prompt a change to the use support status of this waterbody. Bair Reservoir size indicated in National Hydrography Dataset (USGS) is 228 acres. Correction to ADB made 03/26/04.

**Comment Number: 15**

**Waterbody: 26 Waterbodies in Flathead National Forest, Available Data, Categorization.**

**DEQ Response:** Response for categorization is given in column next to comments. Notes from the Regional Monitoring Coordinator follow the tables.

**North Fork Watershed: 17010206**

Segment Name Waterbody #	Water Type/Size Units	Current WQ Category	Suggested WQ Category	Comments	DEQ Categorization Response
North Fork Flathead River* MT76Q001-010	River / 57.5 mi.	3	3	Report 1 not available. No Assessment Record Sheet available. The USGS, NPS, Flathead Basin Commission Biennial Reports and 208 Project provide ample data.	DEQ reviewed suggested data. SCD available. All uses fully supported. Water listed in Cat. 1.
Trail Creek* MT76Q002-010	River / 8.3 mi.	3	4B	Inconsistent application of guidelines. Nothing listed for Probable Cause or Probable Sources.	Cat. 3 is correct. 4B is for impaired waters. Not known if water is impaired - lack of SCD.
Red Meadow Cr. MT76Q002-020	River / 13.9 mi.	5	4B	Most current data not used in assessment. Inconsistent application of guidelines.	DEQ/USFS determining proper use of Cat. 4B. Cat. 5 for 2004 IR.
Whale Creek MT76Q002-030	River / 21.3 mi.	5	4B	Most current data not used in assessment. Inconsistent application of guidelines.	DEQ/USFS determining proper use of Cat. 4B. Cat. 5 for 2004 IR.
South Fork Coal MT76Q002-040	River / 8.1 mi.	5	4B	Most current data not used in assessment. Inconsistent application of guidelines.	DEQ/USFS determining proper use of Cat. 4B. Cat. 5 for 2004 IR.
Upper Coal Creek MT76Q002-70	River / 9 mi.	5	4B	Most current data not used in assessment. Inconsistent application of guidelines.	DEQ/USFS determining proper use of Cat. 4B. Cat. 5 for 2004 IR.
Coal Creek MT76Q002-80	River / 10 mi.	5	4B	Most current data not used in assessment. Inconsistent application of guidelines.	DEQ/USFS determining proper use of Cat. 4B. Cat. 5 for 2004 IR.
Cyclone Creek* MT76Q002-090	River / 8.5 mi.	3	1	Nothing listed for Probable Cause or Probable Sources. Assessment Record Sheet not available. Inconsistent application of guidelines.	Water lacks SCD and will remain in Cat. 3 until information is available to make a beneficial use support determination.

\*Added to the 2002 list. (DEQ note: These waters were included in the Assessment Database in 2002, but were not added to the 303(d) list.)

**Middle Fork Watershed: 17010207**

Segment Name Waterbody #	Water Type/ Size Units	Current WQ Category	Suggested WQ Category	Comments	DEQ Categorization Response
Middle Fork Flathead River* MT76I001-010	River / 87 miles	3	4B below Bear Creek	Report 1 not available. No Assessment Record Sheet. The USGS, NPS, FBC Biennial Reports and 208 Project provide ample data. Segment above Bear Creek is Wilderness, should be Cat 1.	DEQ reviewed suggested data. SCD available. All uses fully supported. Water listed in Cat. 1.
Granite Creek MT76I002-010	River / 8.2 miles	5	4B above wilderness boundary	Most current data not used in assessment. Inconsistent application of guidelines: not assessed for any use except Aquatic Life and Coldwater Fishery but Challenge (headwaters of Granite) fully supports all uses except drinking water. Lower sections within wilderness boundaries should be Cat 1.	DEQ/USFS working to determine proper use of Cat. 4B. Remains in Cat. 5 for 2004 IR. Debate on whether wilderness waters will default to Cat. 1 is on going.
Skyland Creek MT76I002-020	River / 5.5 miles	2	4B	Reassessed August 2002. Most current data not used. Inconsistent application of guidelines.	EPA is lead on this waterbody. Assessment will be updated 10/04. Cat. 2 waters fully supporting assessed uses but not complete. Cat. 4B is an impaired water category. Cat. 2 correct until updated.
Ole Creek* MT76I002-030	River / 17.2 miles	3	1	Page 3, 2004 Montana Water Quality Atlas states waters within NPS, USFS, and BIA lands removed from MDEQ water quality management. Nothing listed for Probable Causes or Probable Sources. Assessment Record Sheet not available for download.	Waters referred to in the Atlas section of the Draft Report were USFS wilderness areas, <b>not all</b> USFS managed lands. <b>All</b> waters within Montana, with the exclusion of those on tribal lands, are of primary concern to DEQ as per the Montana Water Quality Act. No SCD, Cat 3 is correct.
Challenge Creek* MT76I002-040	River / 4.3 miles	2	1	Not listed in 2002. Inconsistent application of guidelines. Assessment Record Sheet not available for download.	Challenge Creek not assessed for drinking water, Cat. 2 is correct.
Morrison Creek MT76I002-050	River / 14.8 miles	5	4B	Most current data not used. Inconsistent application of guidelines.	DEQ/USFS working to determine proper use of category 4B. Remains in Cat. 5 for 2004 IR.

\*Added to the 2002 list. (DEQ note: These waters were included in the Assessment Database in 2002, but were not added to the 303(d) list.)

**South Fork Flathead Watershed: 17010209**

<b>Segment Name Waterbody #</b>	<b>Water Type / Size Units</b>	<b>Current WQ Category</b>	<b>Suggested WQ Category</b>	<b>Comments</b>	<b>DEQ Categorization Response</b>
South Fork Flathead River MT76J001-010	River / 5.1 miles	4C	4B	BLM changed management of discharges from hungry Horse Dam based on study done by MFWP to reduce flow alteration and temperature fluctuations harmful to trout.	Management of the Hungry Horse Dam is under the authority of the US Bureau of Reclamation not the BLM. DEQ is actively working with the BOR regarding dam operations. Water will remain in Cat. 4C for 2004 IR.
South Fork Flathead River* MT76J001-020	River / 59.6 miles	2	4B from wilderness boundary to HH reservoir	Page 3, 2004 Montana Water Quality Atlas states waters within NPS, USFS, and BIA lands removed from MDEQ water quality management. Headwaters to wilderness boundary should be Category 1 due to inclusion in wilderness areas.	No need to assume it is impaired (4B) until fully assessed. Water may be fully supporting (Cat. 1). Currently, all uses fully supporting except DW, which has higher numeric limits than ALUS. Cat. 2 is correct until chemistry data is available.
Hungry Horse Reservoir* MT76J002-010	Freshwater Lake / 21999 ac	2	4B	Inconsistent application of guidelines.	Ibid.
Sullivan Creek MT76J003-010	River / 15.3 miles	2	4B	Reassessed August 2002. Most current data not used. Inconsistent application of guidelines.	Ibid.
Emery Creek* MT76J003-030	River / 7.7 miles	3	4B	Inconsistent application of guidelines: fully supporting all uses except Agriculture and Industry. Flows parallel to Margaret, Tiger, and Hungry Horse into HH Reservoir.	Correction made. This water body has no information to support a fully supporting Ag or Industry designation. No uses have been assessed due to lack of SCD. Cat. 3 is correct.
Margaret Creek* MT76J003-040	River / 4.8 miles	3	4B	Inconsistent application of guidelines: fully supporting all uses except Agriculture and Industry. Flows parallel to Emery, Tiger, Hungry Horse into HH Reservoir.	Correction made. This water body has no information to support a fully supporting Ag or Industry designation. No uses have been assessed due to lack of SCD. Cat. 3 is correct.
Hungry Horse Creek* MT76J030-060	River / 6.1 miles	2	4B	Inconsistent application of guidelines: fully supporting all uses except drinking water. Flows parallel to Margaret, Tiger, Emery into HH Reservoir.	No need to assume it is impaired (4B) until fully assessed. Water may be fully supporting (Cat. 1). All uses fully supporting except DW. Cat. 2 is correct.
Tiger Creek* MT76J003-070	River / 4.0 miles	3	4B	Inconsistent application of guidelines: fully supporting all uses except Agriculture and Industry. Flows parallel to Margaret, Emery, Hungry Horse into HH Reservoir.	Correction made. This water body has no information to support a fully supporting Ag or Industry designation. No uses have been assessed due to lack of SCD. Cat. 3 is correct.

\*Added to the 2002 list. (DEQ note: These waters were included in the Assessment Database in 2002, but were not added to the 303(d) list.)

**Swan Watershed: 17010211**

Lion Creek and Squeezer Creek (monitoring and assessment) are scheduled for Assessment Completion by 2006 –**We believe the appropriate date for the assessment and TMDL approval was to be 2003.**

Swan Lake, Jim Creek, both segments of Goat Creek and the lower segment of Piper Creek are scheduled for TMDL completion by 2006. **We believe the appropriate date for the assessment and TMDL approval was to be 2003.**

Segment Name Waterbody #	Water Type/ Size Units	Current WQ Category	Suggested WQ Category	Comments	DEQ Categorization Response
Swan River* MT76K001-010	River / 14.2 miles	3	4B	Not sure if this segment is downstream from Swan Lake? If so I believe that the Bio Station has done some studies on ground water influences on nutrients.	Category 4B is for impaired waters. Cat. 3 appropriate until an assessment is done.
Swan River* MT76K001-020	River / 54.4 miles	3	4B	Several complete studies on the Swan River above Swan Lake – Bio-station has published info on nutrient and sediment trends and Land and Water has conducted road surveys in preparation of the Swan TMDL.	Category 4B is for impaired waters. Final Information from Swan TMDL was not available at 12/05/03 cutoff date. Cat 3 appropriate until an assessment is done.
Swan Lake MT76K002-010	Freshwater Lake / 2680 ac	5	4B	Draft available, final TMDL is over due. A Technical Advisory Group has already started working on monitoring strategy.	Final Information from Swan TMDL was not available at 12/05/03 cutoff date. Waterbody “Threatened” for ALUS and fisheries due to siltation. 4B may be appropriate when the TMDL is implemented. Cat. 5 correct for 2004 IR.
Jim Creek MT76K003-010	River / 3.8 miles	5	4B	Part of Swan Lake TMDL, due in 2003. See comment above. All species of trout have had drastic drop in population and Bull trout redd numbers have decreased. FNF questions if this linked to management given the historic trends within basin. Inconsistent application of guidelines: Threatened vs. Partially supporting??	Final Information from Swan TMDL was not available at 12/05/03 cutoff date. Waterbody “Partial support” for ALUS and fisheries due to siltation. DW not assessed. Decline in populations indicate that waterbody is beyond “threatened” and is presently “partially” impaired. 4B may be appropriate when the TMDL is implemented. Cat. 5 correct for 2004 IR.

Segment Name Waterbody #	Water Type/ Size Units	Current WQ Category	Suggested WQ Category	Comments	DEQ Categorization Response
Goat Creek MT76K003-031	River / 9.0 miles	5	4B	Part of Swan TMDL, due in 2003. Over-due as part of Swan Lake TMDL. There are many years of data, summarized in Flathead Basin Commission Biannual Reports. Most data collected and analyzed by Yellow Bay Biological Station and paid for by USFS or Friends of the Wild Swan. There was also an in-depth study conducted by Plum Creek. Inconsistent application of guidelines: Threatened vs. Partially supporting??	Final Information from Swan TMDL was not available at 12/05/03 cutoff date. Waterbody “Partial support” for ALUS and fisheries due to nutrients and Suspended Solids. DW not assessed. Assessment record indicates minor impairment so “partially” supporting is appropriate. 4B may be appropriate when the TMDL is implemented. Cat. 5 correct for 2004 IR.
Goat Creek MT766K003-032	River / 0.8 miles	5	4B	Part of Swan Lake TMDL, due in 2003. See comment above. Inconsistent application of guidelines: Threatened vs. Partially supporting??	Final Information from Swan TMDL was not available at 12/05/03 cutoff date. Waterbody “Partial support” for ALUS and fisheries due to habitat alterations and siltation. DW not assessed. Assessment record indicates moderate impairment near the mouth from habitat alterations. “Partially” supporting is appropriate. 4B may be appropriate when the TMDL is implemented. Cat. 5 correct for 2004 IR.
Elk Creek MT76K003-040	River / 4.0 miles	4C	4B	Bio-station has collects years of data, as has FWP. Overdue as part of the Swan Lake TMDL. There are many years of data, summarized in the Flathead Basin Commission Biannual Reports. Most data collected and analyzed by Yellow Bay Biological Station and paid for by USFS or Friends of the Wild Swan. There was also an in-depth study conducted by Plum Creek. Years of redd count data by FWP, investigations by Yellow Bay. Previously sampled extensively by R1-R4 surveys by USFS. Inconsistent application of guidelines: Threatened vs. Partially supporting??	4C waters are impaired or threatened waters due to pollution. Pollution under Cat. 4C must be addressed in a watershed management or restoration plan, which can be developed and implemented by any type of organization. Cat. 4B is similar but adds the element of jurisdictional authority and oversight of the “other pollution control measures” used to restore impaired beneficial uses. DEQ and USFS are working together to understand the implications of listing segments under category 4B. 4C is correct until this is resolved.

Segment Name Waterbody #	Water Type/ Size Units	Current WQ Category	Suggested WQ Category	Comments	DEQ Categorization Response
Lion Creek MT76K003-050	River / 14.6 miles	2	4B	Are the uses not assessed appropriate for this stream? There are many years of data, summarized in the Flathead Basin Commission Biannual Reports. Most data collected and analyzed by Yellow Bay Biological Station and paid for by USFS or Friends of the Wild Swan. There was also an in-depth study conducted by Plum Creek. Inconsistent application of guidelines: Threatened vs. Partially supporting?? Fully supporting all uses except drinking water	Yes, waters in the B-1 class must support the beneficial use of DW supply. There is a lot of chemistry data (temp. flow, pH sediment, etc.) but is extremely limited in heavy metals, which DEQ uses to assess DW beneficial use vs. human health criteria in state WQ standards. 4B is for impaired waters and this water <u>could</u> go to Cat. 1 fully supporting when chemistry data is either forwarded to DEQ or DEQ reassesses it. Cat. 2 is appropriate for now.
Piper Creek MT76K003-062	River / 3.7 miles	5	4B	Part of Swan TMDL, due in 2003. See comment above. Overdue as part of the Swan TMDL. Abundant information collected by Land and Water Consulting as preliminary to TMDL.	Final Information from Swan TMDL was not available at 12/05/03 cutoff date. Waterbody "Partial support" for ALUS and fisheries due to other habitat alterations and siltation. Assessment Record Sheet indicates minor impairment due to forest harvest in riparian area. "Partially" supporting is appropriate. Cat. 4B may be appropriate once TMDL is approved. Cat. 5 correct for 2004 IR.
Squeezer Creek MT76K003-070	River / 9.0 miles	2	4B	Are the uses not assessed appropriate for this stream? Inconsistent application of guidelines: fully supporting all uses except drinking water.	Yes, waters in the B-1 class must support the beneficial use of DW supply. No heavy metals data to assess DW beneficial use. 4B is for impaired waters and this water <u>could</u> go to Cat. 1 fully supporting when chemistry data either is forwarded to DEQ or DEQ reassesses it. Cat. 2 is appropriate for now.

\*Added to the 2002 list. (DEQ note: These waters were included in the Assessment Database in 2002, but were not added to the 303(d) list.)

**Stillwater Watershed: 17010210**

<b>Segment Name Waterbody #</b>	<b>Water Type/ Size Units</b>	<b>Current WQ Category</b>	<b>Suggested WQ Category</b>	<b>Comments</b>	<b>DEQ Categorization Response</b>
Logan Creek MT76P001-030	River / 19.2 miles	2	1	Most current data not used in assessment.	DEQ received information for Logan Creek from USFS by deadline for submittal of data for this report. As a result, the assessment was completed 03/19/04 by DEQ staff. Final 2004 IR includes this new assessment. Partial support of ALUS and CW fisheries determined. DW not assessed, due to age of metals chemistry data and changes that have occurred since samples were taken. Cat. 5 for 2004 IR.
Hand Creek MT76P001-060	River / 5.3 miles	3	4B	Most current data not used in assessment.	1994 little wolf fire rendered much of the historical data unusable. Insufficient data to assess any use. Cat. 4B is for waters impaired by anthropogenic impacts. Forest fires are natural, salvage timber harvest are not. Cat. 4B may be appropriate but an assessment must be completed to determine this. Cat. 3 correct for 2004 IR.
Swift Creek MT76P003-010	River / 16.5 miles	5	4B	Swift Creek Coalition currently developing TMDL report and gathering current data.	Note: Whitefish River is MT76P003_010. Swift Creek is MT76P003_020. DEQ/USFS working to determine proper use of category 4B. Remains in Cat. 5 for 2004 IR.
Haskill Creek MT76P003-070	River / 8.0 miles	3		Watershed group currently developing TMDL report and gathering current data.	Cat. 3 correct
Haskill Creek MT76P003-071	River / 2.5 miles	3		Watershed group currently developing TMDL report and gathering current data.	Cat. 3 correct
Whitefish Lake* MT76P004-010	Freshwater Lake / 3349.9 ac	5		YBBS recently completed WQ report submitted to Whitefish Water and Sewer District December 9, 2003.	Cat. 5 correct

\*Added to the 2002 list. **(DEQ note:** These waters were included in the Assessment Database in 2002, but were not added to the 303(d) list.)

**Flathead watershed: 17010208**

Segment Name Waterbody #	Water Type/ Size Units	Current WQ Category	Suggested WQ Category	Comments	DEQ Categorization Response
Ashley Creek MT76O002-010	River / 14.8 miles	3		FBC through the Volunteer Nutrient Reduction Program has collected data.	Cat. 3 correct
Ashley Creek MT76O002-020	River / 13.4 miles	4C		Ashley Creek Watershed Group, developed with FBC has current data.	Cat. 4C correct
Ashley Creek MT76O002-030	River / 11.8 miles	2		Ashley Creek Watershed Group, developed with FBC has current data.	Cat. 2 correct
Fish Creek MT76O002-050	River / 2.4 miles	5	4B	USFS will implement forestry and road BMPs as funding becomes available.	DEQ/USFS determining proper use of category 4B. Remains in Cat. 5 for 2004 IR.
Flathead Lake MT76O003-010	Freshwater Lake 126007 ac	5		TMDL report completed 2001.	Nitrogen and Phosphorus TMDLs completed. Until all required TMDLs are completed it must remain in Cat. 5.

**Additional DEQ Response: Comment # 15**

- Flathead Lake TMDL submitted in 2001 has not been updated at this time due to time constraints.
- Swan Lake TMDL has been updated at this time but due to cut-off date (December 5, 2003) for 303(d) list preparation, the updates were not included on the 2004 list.
- Threatened vs. Partially supporting is concluded by the assessor when information is showing causes of impairment it is “Partial” support, when there is a declining trend shown and there is reason to believe the waterbody may be impaired in the near future it is “Threatened”.
- Information was submitted for Logan Creek by the September 2003 deadline and was incorporated into the Beneficial Use Determination. Subsequent meeting with the Forest Service provided us with the final EIS so Logan Creek will be incorporated into the Final 2004 Integrated Report.
- Flathead Headwaters Planning Area has not been updated at this time. EPA is the lead on this TMDL. EPA requested that DEQ not upgrade the Assessment Record Sheets until all the information collected by EPA has been provided to DEQ. Expected time is 2004.
- The technical review was completed on 10% of all waterbody file updates for all four major basins in MT. The list of files that underwent technical review is included in the section “Public Comments related to: Assessment methodology, State WQ Standards, and Montana Law.”
- North Fork Flathead River (MT76Q001\_010) and Middle Fork Flathead River (MT76I001\_010) were updated in November 14, 2003, and November 18, 2003, respectively. These updates will appear on the 2004 Final Integrated Report.
- Trail Creek (MT76Q002\_010), Cyclone Creek (MT76Q002\_090), Ole Creek (MT76I002\_030), Emery Creek (MT76J003\_030), Margaret Creek (MT76J003\_040), and Tiger Creek (MT76J003\_070) were assessed as fully supporting all uses except for industry and agriculture on the Draft 2004 Integrated Report. This is incorrect. In researching the subject, the only information found in these waterbody files is an October, 1989 Non-point source assessment. There is no water chemistry or biology collected on

these waterbodies so we don't have sufficient credible data. These creeks were not listed on any 303(d) list and have never had an Assessment Record Sheet completed. All uses should be listed as not assessed. There are no impairments documented so there should not be any probable causes or sources listed.

- Red Meadow Creek (MT76Q002\_020), Whale Creek (MT76Q002\_030), South Fork Coal Creek (MT76Q002\_040), Upper Coal Creek (MT76Q002\_070), Coal Creek (MT76Q002\_080), Granite Creek (MT76I002\_010), Skyland Creek (MT76I002\_020), Challenge Creek (MT76I002\_040), and Sullivan Creek (MT76J003\_010) have not been updated at this time. EPA is the lead on this TMDL. EPA requested that DEQ not upgrade the Assessment Record Sheets until all the information collected by EPA has been provided to DEQ.
- Challenge Creek (MT76I002\_040) was listed as supporting all beneficial uses except drinking water because there was sufficient credible data for these uses, including water chemistry. The drinking water beneficial use was not assessed because the water chemistry data did not include enough metals parameters to support assessing that use. Granite Creek (MT76I002\_010) was listed as only assessed for aquatic life and cold-water fisheries beneficial uses due to a lack of chemical data. There is thorough habitat and biological data resulting in a sufficient credible data score of 6, which is enough to evaluate the aquatic life and cold-water fisheries uses. Because of the lack of any water chemistry data the industry, agriculture, and primary contact (recreation) uses could not be assessed. These will all be covered in the Flathead Headwaters TMDL and will be updated to reflect that document when submitted to DEQ.
- South Fork Flathead River (MT76J001\_010) – The US Bureau of Reclamation, not the BLM, manages the Hungry Horse Dam and DEQ is actively working with the BOR regarding the operation of the dam.
- Hungry Horse Creek (MT76J003\_060) is supporting of all beneficial uses except for drinking water because there isn't a sufficient data set of metals to determine if it is fully supporting. Reassessment is scheduled for summer 2004. Margaret, Tiger, and Emery flow that flow parallel have no chemistry and should be listed as not assessed for all uses (see other comments).
- Hungry Horse Reservoir (MT76J002\_010) Assessment Record Sheet is scheduled for updating in May of 2004.
- Hand Creek was not assessed because there was not enough information supplied to complete sufficient credible data.
- Flathead Stillwater TMDL is still in preliminary phase and those associated Assessment Record Sheets will be updated when the data is collected, and the information is provided to us.

**Comment Number: 21**

**Waterbody Addressed: Bitterroot NF Streams-Document used for Assessment?**

**DEQ Response: Included in Table provided by commenter**

Stream	NUMBER	COMMENTS	DEQ Response
Buck Creek	MT76H003-070	Included in the Headwaters TMDL, Draft for Public Review to be released in March 2004.	See Response following this table from DEQ monitor.
Deer Creek	MT76H003-030	Included in the Headwaters TMDL, Draft for Public Review to be released in March 2004.	See Response following this table from DEQ monitor.
Ditch Creek	MT76H003-060	Included in the Headwaters TMDL, Draft for Public Review to be released in March 2004.	See Response following this table from DEQ monitor.
EF Bitterroot	MT76H002-010	Included in the Headwaters TMDL, Draft for Public Review to be released in March 2004.	See Response following this table from DEQ monitor.

Stream	NUMBER	COMMENTS	DEQ Response
Gilbert Creek	MT76H002-080	Included in the Headwaters TMDL, Draft for Public Review to be released in March 2004.	See Response following this table from DEQ monitor.
Hughes Creek	MT76H003-040	Included in the Headwaters TMDL, Draft for Public Review to be released in March 2004.	See Response following this table from DEQ monitor.
Laird Creek	MT76H002-070	Included in the Headwaters TMDL, Draft for Public Review to be released in March 2004.	See Response following this table from DEQ monitor.
Martin Creek	MT76H002-050	Included in the Headwaters TMDL, Draft for Public Review to be released in March 2004.	See Response following this table from DEQ monitor.
Meadow Creek	MT76H002-030	Included in the Headwaters TMDL, Draft for Public Review to be released in March 2004.	See Response following this table from DEQ monitor.
Moose Creek	MT76H002-040	Included in the Headwaters TMDL, Draft for Public Review to be released in March 2004.	See Response following this table from DEQ monitor.
Nez Perce Fork	MT76H003-020	Included in the Headwaters TMDL, Draft for Public Review to be released in March 2004.	See Response following this table from DEQ monitor.
Overwhich Creek	MT76H003-050	Included in the Headwaters TMDL, Draft for Public Review to be released in March 2004.	See Response following this table from DEQ monitor.
Reimel Creek	MT76H002-020	Included in the Headwaters TMDL, Draft for Public Review to be released in March 2004.	See Response following this table from DEQ monitor.
WF Bitterroot	MT76H003-010	Included in the Headwaters TMDL, Draft for Public Review to be released in March 2004.	See Response following this table from DEQ monitor.
Bear Creek-wild bndry to mouth	MT76H004-030	<b>Change Reach: Forest Service Boundary to Mouth</b> – Flow alterations are occurring below the forest boundary. The uppermost ditch is approx. 1.5 mi. below the forest boundary (1958 water resource survey for Ravalli County). Above the forest boundary, the basin is road less.	The convention used by DEQ for splitting segments does not provide for adjustments based solely on ownership or impairment status. Upper section provides an important “internal” reference condition for this relatively short waterbody.
Blodgett Creek-wild bndry to mouth	MT76H004-050	<b>Change Reach: Forest Service Boundary to Mouth</b> – Flow alterations are occurring below the forest boundary. The uppermost ditch is Approx. 0.5 mi. below the forest boundary (1958 water resource survey for Ravalli County). Above the forest boundary, the basin is primarily road less.	The convention used by DEQ for splitting segments does not provide for adjustments based solely on ownership or impairment status. Upper section provides an important “internal” reference condition for this relatively short waterbody.
Kootenai Creek-wild bndry to mouth	MT76H004-020	<b>Change Reach: Forest Service Boundary to Mouth -</b> Flow alterations are occurring below the forest boundary. The uppermost ditch is below the forest boundary (1958 water resource survey for Ravalli County). There are approx 2 mi. of stream between the forest boundary and the wilderness boundary that flows through a steep rocky canyon. The stream fully supports all uses. There is an abandoned USGS gauge just downstream from the forest boundary. Habitat alteration not noted above the forest boundary during a 2003 stream survey by the forest service (data and protocols available). Kootenai Creek is a B3 with a bank full width 26.9. Sediment <2mm and <6 where found to be less than 5%. Above the forest boundary the basin is primarily road less.	The convention used by DEQ for splitting segments does not provide for adjustments based solely on ownership or impairment status. Upper section provides an important “internal” reference point for this relatively short waterbody.

Stream	NUMBER	COMMENTS	DEQ Response
Lost Horse	MT76H004-070	<b>Change Reach: RM 5.5 (Bitterroot irrigation ditch diversion) to mouth</b> – Flow alterations occurring at the Bitterroot irrigation supply ditch at approx. RM 5.5 (Sec. 16, T4N, R21W [1958 Water Resources survey for Ravalli County]). This stream is listed as partially supporting swimming. Probable causes are flow alteration due to agriculture. There is some minor flow alteration in the headwaters due to the small dam on twin lakes, however, this dam increases flow in the late summer months, which would increase swimming potential. However, we question the determination that this stream is partially impaired for swimming when the DEQ apparently feels that it fully supports cold-water aquatic life. (Also refer to the report: <u>Non-point nutrient and sediment assessment projection in a portion of the Bitterroot River drainage. A preliminary study of the selected tributaries to the Bitterroot River in Ravalli County, MT</u> ). <b>We request that the determination that the stream is partially impaired for swimming be removed, at least on national forest lands.</b>	Currently, Appendix A, Table 12 provides the following guidance for <u>moderately impaired</u> “Water body is partially dewatered and discourages recreation.” In contrast, Table 9 - ALUS and fisheries support decision table does not specifically consider dewatering as an independent data category. DEQ is reviewing this inconsistency in its assessment methodology tables. Also, DEQ is considering the best use of water “quantity” information from other agencies. Note: Chronic dewatering noted in the FWP dewatered streams list but the DEQ Assessment Record for the segment indicates full support for ALUS and fisheries based on habitat and biological data.
Mill Creek-wild bndry to mouth	MT76H004-040	Flow alterations, the 4 uppermost ditches are on FS system lands (1958 Water Resources survey for Ravalli County). Habitat Alterations not noted above the forest boundary, RM 6.0 (Trailhead) during a 2003 stream survey by the forest service (data and protocols available). Mill Creek is a B3 with Bfw 13.8. Sediment <2 mm and <6mm were found to be less than 2% above the forest boundary (trailhead). The basin is road less.	This Cat. 5 water requires a TMDL for thermal modifications (pollutant). DEQ requests a copy of the recent 2003 stream survey data and protocols. This may be very useful information for DEQ to consider when preparing the TMDL.
Roaring Lion	MT76H004-060	Assessment needed. Recommended reach; RM 4.5 to mouth. Roaring Lion Creek (FS system land) was surveyed by the Forest Service in 2003. The creek is a B2, Bfw 22.4, with <2mm and <6mm sediment levels less than 6%. Uppermost diversion is at the forest boundary.	Scheduled for monitoring in 2004 field season.
Skalkaho Creek	Mt76H004-100	<b>Change reach: RM 15 to mouth</b> Flow alteration, the uppermost ditch is located on private land, sec.28, approx. RM 15 (1958 Water Resources survey for Ravalli County).	Cat. 5 due to Mercury detection of 0.1 ug/l in 1980, which will prompt a TMDL. DEQ monitoring in 2004 to confirm Mercury & Flow issues.
Sleeping Child Creek	MT76H004-090	<b>Change Reach: RM 9.0 to mouth</b> Flow alteration, the uppermost ditch is located on private land below the forest service boundary. The central section of this stream flows through a road less area.	Cat. 5 due to Nutrients, Siltation, and Thermal Modifications, which require a TMDL. Flow alteration not listed as probable cause but likely adds to issue of Thermal Modifications.
Threemile Creek	MT76H004-140	Flow alteration, the uppermost ditch is located on private land below the forest service boundary (1958 Water Resources survey for Ravalli County). This stream is included in the Ambrose-Threemile Watershed Project (Tri-State WQ Council).	This segment is from Headwaters to Quigley Ranch Res. Cat. 2, full support for recreation, no other uses assessed.

Stream	NUMBER	COMMENTS	DEQ Response
Tin Cup-wild bndry to mouth	MT76H004-080	This stream is listed as partially supporting swimming. Probable causes are flow alteration due agriculture. There is some flow alteration in the headwaters due to the Tin Cup dam, which is upstream from the wilderness boundary. This dam increases flows in the late summer months, which would increase swimming potential use. There are about 2.5 miles of stream between the forest boundary and the wilderness boundary that flows through a steep rocky canyon with cliffs. All diversions of Tin Cup water occur downstream from the forest boundary. We question the determination that this stream is partially impaired for swimming between the forest boundary and the wilderness boundary when the DEQ apparently feels that it fully supports cold water aquatic life, also refer to the report: <u>Non-point nutrient and sediment assessment projection in a portion of the Bitterroot River drainage. A preliminary study of the selected tributaries to the Bitterroot River in Ravalli County, MT</u> ). <b>We request that the determination that the stream is partially impaired for swimming be removed, at least on national forest lands.</b>	DEQ is considering the best use of water “quantity” information from other agencies. Also, DEQ is monitoring this segment in 2004 to get assessment data for the other beneficial uses.
Sweathouse Creek	MT76H004-210	<b>Change Reach: RM 5.0 to mouth</b> Flow alteration, the uppermost ditch is located on National Forest near the forest boundary, approx. RM 5 (1958 Water Resources survey for Ravalli County). The basin above the forest boundary is not roaded.	TMDL required for phosphorus. The convention used by DEQ for splitting segments does not provide for adjustments based solely on ownership or impairment status. Upper section provides an important “internal” reference condition for this relatively short waterbody.

**Additional DEQ Response: Comment # 21**

- Non-Point Nutrient and Sediment Assessment Project in a Portion of the Bitterroot River Drainage. A Preliminary Study of Selected Tributaries to the Bitterroot River in Ravalli County, Montana. Has been added to the DEQ library and is currently being used in the relevant Assessment Record Sheet updates.
- The waterbodies included in the Bitterroot Headwaters TMDL are in the process of being updated with most current information. They are scheduled for completion by May 2004.

**Comment Number: 25**

**Waterbody Addressed: Cameron, Guide, Camp and W. Fork Camp Creeks SCD Available**

**Comment:** While we have not had time to cross-reference the lists for all the 2004 categories in order to track the disposition of each individual Bitterroot stream listed on the 1996 303d list, the following are examples of problems at various scales:

Reimel Creek has been disappeared off the 1996 303d list only to show up on Category 3 list “Insufficient data to assess any use”. Reimel Creek is listed as ‘sensitive’ (“possibly at or near watershed thresholds”) in the Bitterroot National Forest Sensitive Watershed Analysis (Decker, 1991). That report specifically notes the availability of field data.

The fact that we are asked to comment on this Integrated Report while the concurrent draft Upper Bitterroot TMDL Plan has not yet been released makes it difficult to track the status of certain upper Bitterroot streams. It would be good to have that draft Plan in hand before commenting on the Integrated Report.

We believe there is sufficient credible data to support listing Cameron, Guide, Camp and West Fork Camp Creek on the Category 5 (303d) list. These streams are in the Upper Bitterroot and should have been included in the Upper Bitterroot TMDL Plan.

Camp Creek, in particular, deserves quick attention because it has been impacted in the past several years by highway construction, ski area expansion and a failed Montana Department of Transportation ‘wetland mitigation’ project that is resulting in downcutting of the stream channel, bank erosion and wetland draining.

Cameron Creek, Guide Creek and West Fork Camp Creek are listed as ‘High Risk’ in the Bitterroot national Forest Sensitive Watershed Analysis (Decker, 1991). High Risk means there is a “distinct possibility that these watersheds are well over watershed thresholds”. This analysis was well grounded in credible data.

**DEQ Response: Comment # 25**

No information was provided with the comment. The Decker, 1991 report is in the DEQ Reference Library, but on its own, is insufficient to meet requirements of sufficient credible data to complete a beneficial use assessment for waterbodies mentioned.

Regarding the exclusion of the reference waterbodies from the Bitterroot Headwaters TMDL planning effort, DEQ has been directed by court order to establish all necessary TMDLs for waterbodies listed on the state’s 1996 303(d) list by 2007. To satisfy this order the department needs to focus its available resources on those waters identified on the 1996 and the most recently approved subsequent list (i.e. 2002 303(d) list). DEQ acknowledges that other waters likely exist that do not fully support all beneficial uses, both in the Bitterroot watershed and others statewide, and will seek to make use support determinations on these waters, as well, as staff time and resources allow. The streams mentioned above will be added to the list of waters that are of interest or concern to the citizens of Montana (see also the table near the end of this comment section).

*Public Comments related to:  
Assessment methodology, State WQ Standards, and Montana Law*

A number of public comments were received that expressed views or opinions regarding DEQ and EPA policies or guidance, Montana law, Montana’s assessment methodology, and state water quality standards issues. Similar to the 2002 303(d) listing, several comments addressed the same or similar subjects. Where this occurred, the response from DEQ addresses the subject rather than individual comments.

**Subject: Valid justification for Montana using Integrated Report format.  
Comparability of 305(b) Report and 303(d) List to 2004 Integrated Report Format.  
Comments: 9, 22**

**DEQ Response:** The Integrated Report Format was included in the 2002 reporting cycle guidance documents from EPA. Montana used the 305(b) Report - 303(d) List format for the 2002 reporting cycle and made the move to the Integrated Report format for the 2004 reporting cycle according to, "Guidance for 2004 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d) and 305(B) of the Clean Water Act, July 21, 2003, USEPA."

The 2004 Integrated Report is the 305(b) report to congress. What was previously the 303(d) list (a subset of the 305(b) report), are now either:

- Category 4A waters (impaired, all TMDLs completed).
- Category 4B waters (impaired, State must demonstrate that "other pollution control requirements are required by local, State or Federal authority that are expected to address all water-pollutant combinations and attain all WQSs in a reasonable period of time),
- Category 4C waters (impaired by pollution only, TMDL not applicable), or
- Category 5 water (impaired by pollutant, TMDL required).

In addition, waters removed from the 1996 303(d) list requiring additional data to meet the SCD requirement in Montana law and were previously included as Appendix F in previous 303(d) lists are now listed in Category 3. Appendix B of the 2004 IR provides the original 2000 303(d) list Reassessment List (Table 3-E "Waters to be Monitored and Reassessed") in its entirety with the "Assessed Year" noted. This affords interested parties the opportunity to track waters that were "removed" from the 2000 303(d) list due to the lack of sufficient credible data.

**Subject: Poor public accessibility of Draft 2004 Integrated Report through NRIS site.  
Comments: 7,9,14,19,22, and 23**

**DEQ Response:** DEQ feels that publishing the Draft 2004 Integrated Report through a website operated by the Montana State Library allows greater public access to water quality information rather than limiting or restricting it. Computers with Internet connection are commonplace even in rural communities through schools, libraries, and private ownership. The majority of the public are interested in a subset of the information contained in the Integrated Report, most commonly, the previously named "303(d)" list or a portion thereof. The website allows users to look at those waterbodies specifically, without DEQ printing out a hardcopy of all information for all interested parties.

For the 2000 reporting cycle, 100 copies of the 303(d) list were prepared for an expected influx of requests for the document, which never materialized. Publishing the document on-line eliminates this waste.

Some website users noted that not all Assessment Record Sheets were available for download through the EnviroNet database site. DEQ reviewed the waterbodies that were noted as not having Assessment Record Sheets available and found that all were available. There were several comments that the Environet site was not accessible because the server was not available. This primarily occurred in the first week for public comment and was addressed quickly by the staff at NRIS upon notification.

**Subject: Issues surrounding the use of category 4C for identifying Water Quality Limited Segments (WQLS) impaired by “pollution”. Distinction between “Pollution” and “Pollutants” where temperature is the impairment. Flow and dewatering related comments. Comments: 9, 10, 16**

**Background from DEQ:** EPA 2004 Guidance Document, Part E (6), *Which waters belong in Category 4C?*” EPA gave the following instruction:

Waters should be listed in this subcategory when an impairment is not caused by a pollutant. States should schedule these segments for monitoring to confirm that there continues to be no pollutant-caused impairment and to support water quality management actions necessary to address the cause(s) of the impairment.

Pollution, as defined by the CWA, is “the man-made or man-induced alteration of the chemical, physical, biological and radiological integrity of water” (Section 502(19)). In some cases, the pollution is caused by the presence of a pollutant and a TMDL is required. In other cases, pollution does not result from a pollutant and a TMDL is not required. Elevated temperatures that result from *man-made thermal discharges* (emphasis added) does require a temperature TMDL based on the protection or propagation of a balanced indigenous population of shellfish, fish and wildlife.

...Actions that modify the landscape and may result in the introduction of sediment into a water constitute pollution when sediment (which is a pollutant) results in an alteration of the chemical, physical, biological or radiological integrity of the water. TMDLs would have to be established for each of these waters.

EPA does not believe flow, or lack of flow, is a pollutant as defined by CWA Section 502(6). Low flow can be a man-induced condition of surface water (i.e., a reduced volume of water), fitting the definition of pollution. Lack of flow sometimes leads to the increase of the concentration of a pollutant (e.g., sediment) in surface water. In the situation where a pollutant is present a TMDL, which may consider variations in flow, is required for that pollutant.

**Comment #16 describes how the lack of flow becomes its own source of a pollutant (temperature) where these reduced flows result in diminished assimilative capacity.**

**DEQ Response:** This statement may ultimately prove to be true for some flow impaired waters. Many of the segments listed for flow alterations or dewatering have limited temperature data to also make a temperature impairment determination. Listing dewatered segments in category 4C allows for any pollutant issues arising from pollution impairments to be defined when they are monitored as suggested in the first paragraph of the guidance shown above.

**Comment #10 stated,** “Our comments focus on an issue that was brought to our attention last week – that any stream listed in DEQ’s 2002 reports as impaired solely by dewatering has been dropped from the 2004 report”.

**DEQ Response:** This is not true. No streams were “dropped” from the 2002303(d) list for the 2004 Integrated Report. DEQ decided not to make a mass addition of at least 232 *additional* streams into category 4C of the 2004 Integrated Report using a dewatered streams list from another agency under the “overwhelming evidence” of the state’s EPA approved assessment methodology (Appendix A of 2004 Integrated Report).

DEQ used the dewatered streams list under the weight-of-evidence and independent evidence approaches of the state's EPA approved assessment methodology. In doing this, DEQ met all of the requirements of; 40 CFR Part 130.7, *readily available data*; MCA 75-5-702(2) *sufficient credible data to modify support modifications of the list*; and the Quality system policies of the USEPA Office of Water and DEQ Quality Management Plan. "Mass listing" under "overwhelming evidence" would have been in conflict with DEQ's assessment methodology and the quality system policies of EPA & DEQ.

In the EPA Office of Water's Quality Management Plan (QMP) and further reflected in the DEQ's draft QMP, the following statements regarding data quality are made:

- ✓ The quality of any environmental data or information used by the Bureau must be assessed (known) and documented, regardless of source. Managers and decision makers are responsible for ensuring that data quality is considered in the decision-making process.
- ✓ All environmental decisions made by the Bureau must be evaluated relative to the quality of the underlying data and information. Where the quality of the data or information cannot be controlled by the user (e.g., data from sources outside the Bureau) or does not meet the objectives set during the planning phase, the decision will be adjusted accordingly. Evaluations and adjustments will be documented.

The comment above resulted from a misunderstanding between DEQ and the state agency that produces the dewatered streams list of the terminology within the assessment methodology. It was incorrectly assumed that DEQ's decision not to use the dewatered streams list under the "overwhelming evidence" approach to mass list also meant that waters previously listed (under "weight-of-evidence" or "independent" evidence approaches), would be taken off the list. This did not occur.

The dewatered streams list is based on field observations by staff biologists of the other agency and includes categories of chronic dewatering and periodic dewatering to describe the waterbody condition. To use the overwhelming evidence approach, the reliability of the information must be evaluated as noted in the quality policies of the EPA and DEQ. The first step in evaluating certainty is determining whether the information was collected using a reproducible method (this could be as simple as a checklist for field observations). DEQ is interested in establishing greater certainty for this dewatered streams list for use in the next reporting cycle by working cooperatively with this state agency to develop a checklist to document the field observations of their staff biologists. Documentation of field observations will greatly improve the dewatered streams list's water quality assessment value.

**Subject: Failure to assemble and evaluate all readily available data. De-listing or not including waterbodies on the 303(d) list due to lack of sufficient credible data.**

**Comments: 10, 15, 16, 22, 23**

**Background from DEQ** - In May of 2003, DEQ sent out over 600 letters to stakeholders (local watershed groups, federal, state, and local agencies, private groups, and individuals with water quality interests) requesting any water quality-related information they might have which could be used to update assessments and, subsequently the listing categories.

**Comment # 16** gives a detailed background on the types of "readily available data" that must be considered by the Clean Water Act and makes the claim that these requirements are not being met

by DEQ due to the requirement in Montana Code for sufficient credible data to be used for listing. Also, the commenter states that the requirement for sufficient credible data is restrictive and exclusionary rather than expansive and inclusive of the types of information that must be considered under the CWA.

**DEQ Response:** DEQ does not exclude information within the determination of sufficient credible data and if anything, includes more *types* of information within its data assessment tool than it was originally designed to accommodate.

The SCD evaluation tool scores, using an ordinal scale, the overall assessment value of the various types of data that comprise “readily available data.” This information varies from DEQ’s own monitoring data to data from other agencies, excerpts of Lewis and Clark’s journals, conversations with landowners, large sets of chemistry data from USGS, GIS maps and models from environmental organizations, EA’s, EIS’s and chemical monitoring reports submitted by industries. The process of determining SCD looks at this collection of data and evaluates if the (whole) contents provide the technical components, spatial coverage, QA/QC, and data currency requirements necessary to make a beneficial use support determination with a high degree of certainty that any resulting impairment/non-impairment determination will be correct.

Achieving a known level of data that allows for a reasonable certainty in making beneficial use determinations is discussed in EPA’s 305(b) guidance document<sup>1</sup> that the sufficient credible data process was designed around. Within this 305(b) Guidance document, Section 3.2, Aquatic Life Use Support (ALUS) notes under the subsection, *Level of Information*:

In 1994, the 305(b) Consistency Workgroup concluded that descriptive information characterizing the level of information, or rigor, in the method is needed to more fully define an assessment of use support. Documenting this information is important because users often need to know the basis of the underlying information. The workgroup recommends that *assessment quality information become a part of State assessment databases*. (Emphasis added) Consequently, the Workgroup has developed guidance for evaluating the level of information of methods used in making ALUS.

Data types are grouped into four categories: biological (Table 3-1), habitat (Table 3-2), toxicological (Table 3-3)<sup>2</sup> and physical/chemical (Table 3-4). A hierarchy of methods corresponding to each data type and ordered by level of information is summarized in the tables. The rigor of a method within each data type is dictated by its technical components, spatial/temporal coverage, and data quality (precision and sensitivity). In the data type tables, Level 4 data are of highest quality for a data type and provide relatively high certainty. Level 1 data represent less rigorous approaches and thus provides a level of information with greater degree of uncertainty. However, in situations where severe conditions exist, a lower level of assessment quality will be adequate. For example, a severely degraded site can be characterized as impaired with a high level of confidence based on a cursory survey of biota or habitat, as in the case of repeated fish kills or severe sedimentation from mining. Data in Levels 1 through 4 vary in strengths and limitations,

---

<sup>1</sup> Guidelines for Preparation of the Comprehensive State Water Quality Assessments (305(B) Reports) and Electronic Updates: Supplement September 1997, USEPA.

<sup>2</sup> Montana did not use the toxicological table that assesses the level of quality associated with Whole Effluent Toxicity (WET) type testing. WET testing was prohibitively expensive for the targeted sampling design used by DEQ and few external data sources had WET testing data readily available. Montana’s versions of these tables are Tables 1-8 of Appendix A for this 2004 Integrated Report.

and along with site-specific conditions, *should be evaluated carefully for use in assessments*. Data not adequate for ALUS determinations should be excluded from the assessment.

There are obvious pieces of information that are cannot be used to make determinations. DEQ added the component of data currency to its data assessment tables to allow assessors to eliminate data that is not relevant to the current water quality status. For example, data from a pre-ecosystem altering activity (e.g., new subdivision or, conversely, post-mining remediation) may severely restrict its use for assessing present conditions. Regardless, old data is not removed altogether from the Assessment Record file. It may become very useful in determining changes that have (or should have) occurred for certain waterbodies over time.

**Comments #16 & 23 brought up the issue of the delisting that occurred in 2000.**

**Comment #16** specifically quoted EPA's National Clarifying Guidance for 1998 Listing Decisions extensively in their commentary included the two instances for de-listing prior to TMDL development.

1. If such waterbody is meeting all applicable water quality standards (including numeric and narrative criteria and designated uses) or is expected to meet these standards in a reasonable timeframe as a result of implementation of required pollutant controls; or
2. If, upon re-examination, the original basis for listing is determined to be inaccurate.

**DEQ Response to #16:** The TMDL requirement for waters de-listed in 2000 is the subject of litigation in American Wildlands vs. EPA and will not be addressed here.

**DEQ Response to #23:** DEQ is not presently in the business of de-listing or, as noted previously, mass listing. The waters that were de-listed in 2000 are in the process of being reassessed with completion expected prior to the next listing cycle. Reassessment waters completed between the 2002 and 2004 reporting cycles confirmed impairment in just under half of the segments. The remainder, (more than half) indicated full support of all beneficial uses. The SCD requirement in Montana Code was added to increase the certainty that impairment calls are accurate, thereby focusing resources to those waters with scientifically documented threats and impairments rather than waters fully supporting all beneficial uses. The current schedule of waters to be monitored and/or assessed between 2004 and 2006 is provided in Appendix C of this report.

**Subject: State Water Quality Standards; Reference Condition, Threatened waterbody considerations. Comments: 16, 19, 22**

**Comment 22** indicated that "reference condition" should be pre-settlement conditions as a goal rather than a "waterbody's greatest potential for water quality given historic land use activities."

**Comment 19** notes that a(n), "...apparent lack of baseline data demonstrates the notion that the perception of 'Natural Conditions' as being 'Pristine Conditions' is not realistic." Comment references accounts from Lewis & Clark's journals regarding the dysentery and sickness that the men of the voyage of discovery came down with from drinking surface waters by dipping their cups into the river. Further accounts from "Journal of a Trapper" by Osborne Russell describing the conditions of the habitat at the confluence of the Yellowstone and Clark's Fork near what is presently Laurel, "*The bottoms along these rivers are heavily timbered with Sweet Cottonwood and our horses and mules are very fond of the bark which we strip from the limbs and give them every night as the Buffaloe have entirely destroyed the grass throughout this part of the country.*" And,

*“The bottoms along the Powder River were crowded with buffaloe insomuch that it was difficult keeping them from among the horses who fed upon Sweet Cottonwood bark as the buffaloe had consumed everything in the shape of grass along the river.”*

**DEQ Response:** The removal of buffalo and beaver are an anthropogenic impact on natural conditions.

The concept of comparing a waterbody’s condition to a reference condition is implicit in Montana’s water quality standards (ARM17.30.620 – 657) and explicit in MT DEQ guidance documents like Appendix A of the Integrated Report. Reference sites and data have been used for many years, however the MT DEQ has used the term “reference” rather loosely and it has become clear that without an exacting definition its meaning is often different to different people.

The MT DEQ had recognized this problem and is currently developing a “Narrative Standards Guidance Document”. This document will provide the definitions of terms such as reference, minimally impacted, severely impaired, etc. It will also describe the type of physical and biological conditions one would expect to see at each of those levels, and will provide an approach to selecting the appropriate reference for the waterbody against which comparisons are being made.

As part of the development of the Narrative Standards Guidance Document the definition of reference cited in Appendix A of the Integrated Report is being modified. “Reference” will probably be defined in the new guidance document as natural, or essentially the same as natural (pre-settlement). This definition is in accordance with a nationally recommended approach by EPA. However, the document will also detail approaches for situations when there exists no comparable waterbody that fits the definition of reference. The MT DEQ hopes to have an internal draft of this document ready by early 2005.

**Comment 16** provided an extensive comment related to the definition of “Threatened Waterbody” in Montana Code (MCA 75-5-103). The commentor’s main point is that the State’s definition of “threatened waterbody” does not comply with [40 CFR referenced] EPA regulations, severely restricting the streams that can be considered as threatened. This limits both the 305(b) list and, therefore, the 303(d) list. Also, the commenter maintains that Montana’s restrictive definition of “threatened waterbody” violates the Montana Constitution.

**DEQ Response:** DEQ is required to use the current legally recognized definition of “threatened waterbody” when making beneficial use determinations. “Threatened” is not often used in the preliminary characterization of waterbodies for the Integrated Report because the resource limitations of the WQ Planning Bureau, coupled with the sheer size of Montana have lead to the use of a targeted sampling design using the summer season as the index period.

With only one or two site visits, determining trends is very difficult. Data from external sources often supplies the only data with sufficient temporal coverage to establish a trend. These external methods have limited information to assess the quality (bias, precision & accuracy) and purpose for collecting the data. A GIS Map or model produced by a conservation organization may make a great case for conservation value (and therefore is a valuable tool for DEQ to use when considering a monitoring design), yet does not provide the ambient water quality measurements needed to assess a waterbody’s current beneficial use support.

**Subject: Monitoring - What waters assessed between 2002 and 2004? Requests for additions to monitoring schedule; What Changes occurred from 2002 to 2004?**

**Comments: 6, 9, 16, 17, 23, and 25**

**DEQ Response:** One hundred eleven (111) waters were assessed between the 2002 listing cycle and the draft 2004 Integrated Report. Four (4) other segments were assessed as a result of information from these public comments bringing the total to one hundred and fifteen (115). The results of these assessments are reflected in the Tables 1 and 2 for this overview (Pages 7 & 8, respectively) and in Appendix E of this 2004 Integrated Water Quality Report.

Several comments included requests for monitoring of specific waterbodies. The DEQ is undertaking an enormous data collection effort to monitor and/or assess the remaining 350+ waters on the reassessment schedule by the 2006 reporting cycle. To accomplish this, two field crews from EPA Region VII in Denver will assist five field crews from DEQ. There is very little room for additional monitoring within the planned monitoring activities in the next two years due to a court ruling in 2000 that requires TMDLs to be completed for the 1996 303(d) list by 2007.

Some of the best indicators of water quality impairment (or non-impairment, as the case may be) come from these public and agency comments. Further, where there is interest, there is a higher probability that an organization will work cooperatively with the DEQ to implement water quality restoration activities to address any problems that may be identified. DEQ acknowledges the following waterbodies as of special concern to the people of Montana and will attempt to include them in DEQ's monitoring schedule, as staffing resources are available.

Major Basin	Watershed	Segment	Current Status	Comment
Columbia	Bitterroot	Tolan Creek	Not in ADB	
Columbia	Bitterroot	Cameron Creek	Not in ADB	
Columbia	Bitterroot	Guide Creek	Not in ADB	
Columbia	Bitterroot	Camp Creek	Not in ADB	
Columbia	Bitterroot	W.F. Camp Creek	Not in ADB	
Columbia	Flint-rock	Cinnamon Bear Creek	Not in ADB	
Columbia	Flint-rock	Hogback Creek	Not in ADB	
Columbia	Lower Clark Fork	McKay Creek	Not in ADB	
Columbia	Lower Clark Fork	Rock Creek	Cat. 4C	MT76N003_190
Columbia	Middle Clark Fork	Deerlick Creek	Not in ADB	
Columbia	Middle Clark Fork	Harrison Creek	Not in ADB	
Columbia	Middle Clark Fork	Lincoln Creek	Not in ADB	
Columbia	Middle Clark Fork	Lodgepole Creek	Not in ADB	
Columbia	Middle Clark Fork	Long Creek	Not in ADB	
Columbia	Middle Clark Fork	Wallace Creek	Not in ADB	
Missouri	Beaverhead	Frying Pan Creek	Not in ADB	
Missouri	Big Hole	Bryant Creek	Not in ADB	
Missouri	Big Hole	French Creek	Cat. 5	MT41D003_050
Missouri	Big Hole	Nez Perce Creek	Not in ADB	
Missouri	Big Hole	Rock Creek	Cat. 5	MT41D004_120
Missouri	Big Hole	Seymour creek	Cat. 1	MT41D003_140
Missouri	Big Hole	Stanley Creek	Not in ADB	
Missouri	Big Hole	Swamp Creek	Cat. 4C	MT41D004_110
Missouri	Big Hole	Willow Creek	Not in ADB	
Missouri	Boulder	Brady Creek	Not in ADB	
Missouri	Gallatin	Cascade Creek	Not in ADB	
Missouri	Gallatin	Daly Creek	Not in ADB	
Missouri	Gallatin	Deer Creek	Not in ADB	
Missouri	Gallatin	Porcupine Creek	Cat. 2	MT41H005_070
Missouri	Madison	Beartrap Creek	Not in ADB	

Major Basin	Watershed	Segment	Current Status	Comment
Missouri	Madison	Sheep Creek	Not in ADB	
Missouri	Madison	Trail Creek	Not in ADB	
Missouri	Red Rock	Big Beaver Creek	Not in ADB	
Missouri	Red Rock	Mud Creek	Not in ADB	
Missouri	Red Rock	Sage Creek	Not in ADB	
Missouri	Red Rock	Trail Creek	Not in ADB	
Missouri	Ruby	Divide Creek	Not in ADB	
Missouri	Ruby	Sage Creek	Not in ADB	
Missouri	Ruby	Swamp Creek	Not in ADB	
Missouri	Smith	Rock Creek	Not in ADB	
Missouri	Smith	Tenderfoot Creek	Not in ADB	
Missouri	Upper Mo.	Avalanche Creek	Cat. 4C	MT41I002_010
Missouri	Upper Mo.	Little Muddy Creek	Not in ADB	
Missouri	Upper Mo.	Wolf Creek	Not in ADB	
Yellowstone	Clark Fork Ystone	Jack Creek	Not in ADB	
Yellowstone	Lower Bighorn	Grapevine Creek	Not in ADB	
Yellowstone	Lower Bighorn	Two Leggins Creek	Not in ADB	
Yellowstone	Pryor	Indian Creek	Not in ADB	
Yellowstone	Upper Ystone	Buffalo Creek	Not in ADB	
Yellowstone	Upper Ystone	Duck Creek	Cat. 3	MT43F002_010
Yellowstone	Upper Ystone	Mission Creek	Not in ADB	

**Subject: Quality Assurance (QA) & Technical Review. Comment #14**

**DEQ Response:** Assessments used for the 2004 Integrated Report were reviewed for documentation (100%) and Technical Merit (10%). The WQPB QA Officer performed reviews for completeness prior to acceptance for entry into the Assessment Database (ADB) for all assessments. Technical Reviews were performed (randomly) on 10% of the assessments by a senior member of the staff to determine if the assessment procedure was being applied accurately and consistently. At the request of the commenter, the list of waterbodies that underwent technical review is provided below.

TPA	HUC	Waterbody Segment ID	Waterbody Segment	Technical Review
Flint-Rock	17010202	MT76E003 012	FLINT CREEK from Boulder Cr to mouth (Clark Fork)	11/10/03
Stillwater	17010210	MT76P003 030	*LOGAN CREEK, from the headwaters to the mouth	03/17/04
Big Hole	10020004	MT41D001 020	BIG HOLE RIVER between Divide Cr and Pintlar Cr	11/10/03
Madison	10020007	MT41F004 030	BEAVER CREEK from headwaters to the mouth (Quake Lake)	11/10/03
Bullwhacker-Dog	10040101	MT41T002 020	DOG CREEK from Cutbank Cr to the mouth (Missouri R)	10/22/03
Judith	10040103	MT41S004 030	BEAVER CREEK from headwaters to the mouth (Cottonwood Cr)	11/03/03
Fort Peck Res.	10040104	MT40E002 070	RUBY GULCH, Headwaters to 1 Mi Below Zortman, MT T25N R25E SEC	11/10/03
Up. Yellowstone	10070002	MT43B004 071	MILL CREEK, National Forest boundary to mouth (Yellowstone R)	10/22/03
Pryor	10070008	MT43E001 010	PRYOR CREEK, Crow Indian Res. Boundary to the mouth (Yellowstone R)	10/22/03
O'Fallon	10100005	MT42L001 032	O'FALLON CREEK from Mildred to the Fallon/Carter Co. line	11/04/03

\*Logan Creek was assessed as a result of public and agency comment.

In addition to being used for immediate feedback and corrective actions during the assessment period, the information collected from the technical reviews will be used for continuing process improvement and assessment training for the 2006 listing cycle.

## *Summary of Changes resulting from public and agency comments*

There are four (4) waterbody segments in the 2004 Final Report that had assessments performed following publication of the draft for public comment. The comments that resulted in these assessments being performed came from agencies that had submitted water quality data prior to the September 1, 2003 cut off date for submittal of “readily available data”. These are:

**Logan Creek (MT76P001\_030)** was determined to be impaired for Aquatic Life use support and Cold Water Fisheries due to the probable causes of Flow Alterations, Other Habitat Alterations and Siltation. Water is listed as Category 5.

**Middle Fork of Flathead River (MT76I001\_010)** was determined to be fully supporting all beneficial uses. Water is listed as Category 1.

**North Fork of Flathead River (MT76Q001\_010)** was determined to be fully supporting all beneficial uses. Water is listed as Category 1.

**North Creek (MT76H005\_080)** the basis for the previous impairment determination (other habitat alterations, siltation) was based on data relevant to other streams within the basin. Recent data directly attributable to North Creek included a habitat assessment, based on this information; North Creek was determined to be “reference” for the watershed in the Upper Lolo TMDL. However, North creek has no chemistry data and only a single assemblage of biology (fish populations) therefore lacking sufficient credible data to perform a complete beneficial use support assessment. DEQ placed North Creek in Category 3 for the final 2004 Integrated Report and included it in the waters to be reassessed in the 2004 field season.

During the public open house and in the public comments received herein, 11 waters were identified as incorrectly categorized (Cat. 2 or 3), described or located. These were:

**Tiger Creek - (MT76J003\_070)** was listed as Category 2 with agriculture and industry listed as fully supporting but no other uses assessed. This was incorrect. No beneficial use support assessment has been performed for this waterbody by DEQ. Waterbody corrected to Category 3.

**Margaret Creek – (MT76J003\_040)** was listed as Category 2 with agriculture and industry listed as fully supporting but no other uses assessed. This was incorrect. No beneficial use support assessment has been performed for this waterbody by DEQ. Waterbody corrected to Category 3.

**Emery Creek - (MT76J003\_030)** was listed as Category 2 with agriculture and industry listed as fully supporting but no other uses assessed. This was incorrect. No beneficial use support assessment has been performed for this waterbody by DEQ. Waterbody corrected to Category 3.

**Trail Creek – (MT76Q002\_010)** was listed as Category 2 with agriculture and industry listed as fully supporting but no other uses assessed. This was incorrect. No beneficial use support assessment has been performed for this waterbody by DEQ. Waterbody corrected to Category 3.

**Cyclone Creek – (MT76Q002\_090)** was listed as Category 2 with agriculture and industry listed as fully supporting but no other uses assessed. This was incorrect. No beneficial use support assessment has been performed for this waterbody by DEQ. Waterbody corrected to Category 3.

**Porcupine Creek – (MT41H005\_070)** was listed in Category 3, insufficient data to assess any use. This is incorrect. All uses except Agriculture and Industry are assessed and show full support. Segment corrected to Category 2.

**Bair Reservoir – (MT40A005\_040)** shown as a 270-acre waterbody. Review of NHD shows waterbody is 228 acres. Area corrected.

**Pasture Creek – (MT40P002\_030)** shown in McCone County. Waterbody is in Dawson County. County corrected.

**Hungry Horse Creek – (MT76J003\_060)** described as headwaters to the mouth at Hungry Horse Reservoir. Upon review, the segment does not include the portion in the wilderness, which is a class A-1 water according to state standards. Segment description for the class B-1 portion water redefined as “Wilderness Boundary to mouth at Hungry Horse Reservoir”.

**Granite Creek(s) – (MT41I006\_230 & MT41I006\_179)** There are two Granite Creeks in the Seven Mile Creek drainage. This has caused confusion for other agencies assisting DEQ with the reassessment of the Granite Creek that was on the 1996 303 (d) list for impairment due to metals (Arsenic and Cadmium).

- Granite Creek (MT41I006\_179), from the headwaters to the mouth at Austin Creek, Tributary to Greenhorn, which flows into Seven Mile Creek, is fully supporting all beneficial uses.
- Granite Creek (MT41I006\_230), from headwaters to the mouth at Seven Mile Creek, is not supporting the beneficial use of drinking water supply and is included in Category 5.

In the 2002 303(d) list only one Granite Creek was listed in this drainage, MT41I006\_170. The data that resulted in the 1996 303(d) listing for metals came from the Granite Creek that flows into Seven Mile Creek. However, the waterbody was mapped (latitude and longitude) incorrectly and other data included in the Assessment Record Sheet that was from the Granite Creek further up the drainage. DEQ decided that these segments needed to be distinguished from each other and the previous Segment ID retired to prevent any additional confusion.

**EPA approved TMDLs listed since publishing of draft Integrated Report.**

There are 11 additional segments listed in Category 4A for which all required TMDLs have been completed and approved by the EPA since publication of the draft Integrated Report. These undergo public review and response prior to their approval by EPA.

Previous Category	New Category	WB Segment ID	Segment Name	TMDL Planning Area
5	4A	MT40O002_070	Lone Tree Cr.	Lower Milk River Tribs
5	4A	MT41O001_010	Teton River	Teton River Mainstem
5	4A	MT41O001_020	Teton River	Teton River Mainstem
5	4A	MT41O001_030	Teton River	Teton River Mainstem
5	4A	MT41O002_010	Willow Creek	Teton River Tributaries
5	4A	MT41O002_020	Deep Creek	Teton River Tributaries
5	4A	MT41O002_060	Teton Spring Cr.	Teton River Tributaries
5	4A	MT41O002_070	Teton Spring Cr.	Teton River Tributaries
5	4A	MT41O004_020	Priest Butte Lake	Priest Butte Lake
5	4A	MT43B002_040	Miller Creek	Yellowstone Headwater Tribs
5	4A	MT76N003_060	Elk Cr.	Lower Clark Fork Tribs

### **Correction of Lake acres impaired by Salinity/TDS/sulfates.**

In the Water Quality Atlas section of the 2004 draft Integrated Report, Table 5: Draft Integrated Report Causes of Impairment indicated that 5 lakes with a total of 48,722 acres are impaired for Salinity/TDS/sulfates. This is incorrect. There are 5 lakes with a total of 4,872 acres. This error was a transcription error entered when the table was made. Acreage corrected for 2004 Final Integrated Report. This error was not reflected in the total lake acres impaired.

## **Glossary of Terms**

303(d) List – A compilation of impaired and threatened waterbodies in need of water quality restoration, which is prepared by DEQ and submitted to EPA for approval. This list is commonly referred to as the “303(d) List” because it is prepared in accordance with the requirements of section 303(d) of the federal Clean Water Act of 1972. **Note:** In response to new guidance from EPA the 303(d) List and the 305(b) Report have been combined into a single document – the Integrate Water Quality Report.

305(b) Report – A general overview report of state water quality conditions, which DEQ prepares and submits to EPA in accordance with the requirements of section 305(b) of the federal Clean Water Act of 1972. **Note:** In response to new guidance from EPA the 303(d) List and the 305(b) Report have been combined into a single document – the Integrate Water Quality Report.

Anthropogenic impacts – Human caused changes leading to reductions in water quality.

Assessment – A complete review of waterbody conditions using 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.

Basins – For water quality planning purposes, Montana is divided into four hydrologic basins or regions: the **Columbia Basin** (west slope waters draining to the Columbia River), the **Upper Missouri Basin** (all Missouri River drainages above the Marias River confluence), the **Lower Missouri Basin** (Missouri River drainages including and downstream of the Marias River, and a segment of the Saskatchewan drainage in Glacier National Park), and the **Yellowstone Basin** (waters draining into the Yellowstone and the Little Missouri rivers).

Beneficial uses – The uses that a waterbody is capable of supporting when all applicable water quality standards are met. What standards apply to a particular waterbody depend on its classification under the Montana Water-Use Classification System.

Beneficial use determination -- A finding, based on sufficient credible data, that a state water is – or is not – achieving compliance with the water quality standards for its applicable beneficial uses.

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

Biological data – Chlorophyll *a* data, aquatic biology community information (including fish, macroinvertebrates, and algae), and wildlife community characteristics.

Chemistry and toxicity data – Includes bioassay, temperature and total suspended sediment data and information relating to such factors as toxicants, nutrients, and dissolved oxygen.

Communities – Organisms of a biologically related group (i.e. fish, wildlife, macroinvertebrates or algae).

Data categories – Chemistry/physical, habitat, and biological data packages used for assessing the availability of sufficient credible data for making aquatic life and fisheries beneficial use-support determinations.

Data quality objectives – Quality control elements of a water quality monitoring plan, intended to ensure that the data obtained will be sufficient to fulfill the purpose for which it is being collected.

Degradation – A change in water quality that lowers the quality of high quality waters for a parameter. The term does not include those changes in water quality determined to be nonsignificant pursuant to 75-5-301(5)(c). [75-5-103(5) MCA]

Full support – A beneficial use determination, based on sufficient credible data, that a waterbody is achieving all the water quality standards for the use in question.

Habitat data – See physical and habitat data.

Hydrogeomorphology – The science relating to the geographical, geological, and hydrological aspects of waterbodies, and to changes to these aspects in response to flow variations and to natural and human-caused events, such a heavy rainfall or channel straightening.

Hydrologic units (HUCs) – A standardized mapping system devised by the US Geologic Survey for the hydrology of the United States. The system employs four basic levels of designation or mapping: regions, subregions, accounting units, and cataloging units. Each level is assigned a two-digit code so that a cataloging unit has an eight-digit unique identifier, or code. In Montana, there are 100 “8-digit” or “4<sup>th</sup> code” HUCs.

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

Independent evidence – An approach used to make aquatic life use-support determinations when a limited array of chemistry/physical, habitat or biological data provide clear evidence that is sufficient to make a beneficial use-support determination.

Integrated Water Quality Report (or Integrated Report) – A report providing an overview of the status of state water quality monitoring and planning programs. It combines in one document the information previously submitted to the EPA in separate 303(d) List and 305(b) Report documents.

Macroinvertebrates – Animals without backbones that are visible to the human eye (insects, worms, clams, and snails).

Montana Water-Use Classification System – Montana State regulations [ARM 17.30.606 - 614] assigning state surface waters to one of nine use classes. The class to which a waterbody is assigned defines the beneficial uses that it should support.

Naturally occurring – Water conditions or material present from runoff or percolation over which humans have no control or from developed land where all reasonable land, soil, and water conservation practices have been applied. [75-5-306(2) MCA]

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

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

Overwhelming evidence – Information or data from only one data category that, by itself, constitutes sufficient credible data for making an aquatic life use-support determination.

Parameter – A physical, biological, or chemical property of state water when a value of that property affects the quality of the state water. [75-5-103(22) MCA]

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

Pathogens – Bacteria or other disease causing agents that may be contained in water.

Physical and habitat data – Narrative and photo documentation of habitat conditions, habitat surveys and function rankings, direct measurements of riparian or aquatic vegetation communities, and other measures of hydrogeomorphic characteristics and function.

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

Pollution – Defined by Montana law [75-5-103(25) MCA] as:

1. Contamination or other alteration of the physical, chemical, or biological properties of state waters that exceed that permitted by Montana water quality standards, including but not limited to standards relating to changes in temperature, taste, color, turbidity or odor; or,
2. The discharge, seepage, drainage, infiltration, or flow of liquid, gaseous, solid, radioactive, or other substance into state water that will or is likely to create a nuisance or render the waters harmful, detrimental, or injurious to public health, recreation, safety, or welfare, to livestock, or to wild animals, bird, fish or other wildlife, or
3. Discharge, seepage, drainage, infiltration, or flow that is authorized under the pollution discharge permit rules of the board is not pollution under this chapter. Activities conducted under the conditions imposed by the department in short-term authorizations pursuant to 75-5-308 MCA are not considered pollution under this chapter.

Prioritization – A ranking of impaired waterbodies conducted by DEQ in consultation with the statewide advisory group using established criteria to rank waterbodies as high, moderate, or low priority for preparing water quality restoration plans (specifically TMDL plans).

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

Reference Condition – The condition of a waterbody capable of supporting its present and future beneficial uses when all reasonable land, soil, and water conservation practices have been applied. Reference conditions include natural variations in biological communities, water chemistry, soils, hydrology, and other natural physiochemical variations.

Region – See Basin.

Riparian area – Plant communities contiguous to and affected by surface and subsurface hydrologic features of natural waterbodies. Riparian areas are usually transitional between streams and upland.

Segment – A defined portion of a waterbody.

State water – A body of water, irrigation system, or drainage system, either surface or underground (excludes water treatment lagoons or irrigation waters, which do not return to state waters).

Sub-major basin – The aggregation of several watersheds or HUCs into a larger drainage system. The US Geological Survey has defined 16 sub-major basins (subregion) in Montana with at least two in each of the Montana basins (regions).

Sufficient credible data – 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. [75-5-103(30) MCA]

Suspended solids – Materials such as silt that may be contained in water and do not dissolve.

Threatened waterbody – A waterbody for which sufficient credible data and calculated increases in loads show that the water body or stream segment is fully supporting its designated uses but threatened for a particular designated use because of:

- (a) proposed sources that are not subject to pollution prevention or control actions required by a discharge permit, the nondegradation provisions, or reasonable land, soil, and water conservation practices; or
- (b) documented adverse pollution trends. [75-5-103(31) MCA]

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

Toxicant – A toxic agent.

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

Water Quality Assessment Categories – A system mandated by EPA guidance for classifying the water quality status based on the waters' assessment status. The five categories included in this system are:

Category 1: Waters for which all applicable beneficial uses have been assessed and all uses have been determined to be fully supported.

Category 2: Waters for which those beneficial uses that have been assessed are fully supported, but some applicable uses have not been assessed.

Category 3: Waters for which there is insufficient data to assess the use support of any applicable beneficial use, so no use support determinations have been made.

Category 4: Waters where one or more beneficial uses have been assessed as being impaired or threatened, however, either all necessary TMDLs have been completed or are not required:

Subcategory 4A: All TMDLs needed to rectify all identified threats or impairments have been completed and approved.

Subcategory 4B: Waterbodies are on lands where “*other pollution control requirements required by local, State, or Federal authority*” (see 40 CFR 130.7(b)(1)(iii)) are in place, are expected to address all waterbody-pollutant combinations, and attain all water quality standards in a reasonable period of time. These control requirements act “in lieu of” a TMDL, thus no actual TMDLs are required.

Subcategory 4C: Identified threats or impairments result from pollution categories such as dewatering or habitat modification and, thus, the calculation of a Total Maximum Daily Load (TMDL) is not required.

Category 5: Waters where one or more applicable beneficial uses have been assessed as being impaired or threatened, and a TMDL is required to address the factors causing the impairment or threat.

Water quality limited segment (WQLS) – A body of water that is not fully supporting its beneficial uses (an impaired waterbody). If there is no water quality restoration plan with an approved TMDL for a waterbody, it is listed on the 303 (d) List of impaired waters.

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

Water quality standards – the standards adopted in ARM 17.30.601 *et seq.* and WQB-7 to conserve water by protecting, maintaining, and improving suitability and usability of water for

public water supplies, wildlife, fish and aquatic life, agriculture, industry, contact recreation, and other beneficial uses.

Weight of evidence – An approach used to make aquatic life use-support determinations when there are high levels of information from all three data categories (chemistry/physical, habitat and biological), including two biological communities.

## Acronyms, & Abbreviations

ADB	Assessment Database
ALUS	Aquatic Life Use Support
ARM	Administrative Rules of Montana
BMP	Best Management Practice
BUD	Beneficial Use Determination
CW	Cold Water (fisheries)
CWA	Clean Water Act
DEQ	Montana Department of Environmental Quality
DFWP	Montana Department of Fish, Wildlife, and Parks
DQO	Data quality objectives
DW	Drinking Water
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	U.S. Environmental Protection Agency.
EQC	Montana Environmental Quality Council
FBC	Flathead Basin Commission
FNF	Flathead National Forest
HHS	Human Health Standard
HUC	Hydrologic Unit Code
IR	Integrated Report
MCA	Montana Code Annotated
MPDES	Montana Pollutant Discharge Elimination System
NHD	National Hydrography Dataset
NPS	Non-point source pollution
PS	Point source pollution
SCD	Sufficient Credible Data
TPA	TMDL Planning Area
TMDL	Total Maximum Daily Load
QA/QC	Quality Assurance / Quality Control
WQB-7	Circular WQB-7, Montana Water Quality Standards
WQPБ	Water Quality Planning Bureau (DEQ)
WQS	Water Quality Standards
WW	Warm Water (fisheries)
YBBS	Yellow Bay Biological Station (Univ. of Montana)