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UNITED STATES ENVIRONMENTAL PROTECTION
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DEC 27 2006

Ref: SEPR-EP

Mark Wilson, Field Supervisor
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Request for Concurrence on Section 7 Findings-
Montana's Year 2006 Section 303(d) Waterbody
List

Dear Mr. Wilson:

We request your concurrence on EPA's findings relating to its proposed approval of Montana's Section 303(d) year 2006 waterbody list. We believe that our approval of this waterbody list may constitute an action as defined under 50 C.F.R. 402.02 pertaining to Section 7 of the Endangered Species Act.

In correspondence dated December 5, 2006, the Montana Department of Environmental Quality sent to the Environmental Protection Agency (EPA), Region VIII, its year 2006-Section 303(d) list of waterbodies in need of total maximum daily loads (TMDLs). The state included in a document the Department of Environmental Quality entitled "Quality Integrated Report for Montana 2006". This document identified 1) which waterbodies are in need of total maximum daily loads, 2) which pollutants and other stressors are affecting the waterbodies, and 3) a prioritization for each of the waterbodies which generally indicates the sequence of development.

To aid in your review, we are enclosing a biological evaluation (BE) of our proposed approval of Montana's list. The BE provides a species by species evaluation of what EPA has found to be the potential effects of the list approval. We concluded that our approval of the list would either have no effect or would not be likely to adversely affect the applicable species. The evaluation addresses possible effects on threatened and endangered species. Moreover, we have elected to include an evaluation of our action on candidate species. We realize we have no legal obligation to include candidate species in our evaluation. We feel it is prudent, however, to include candidate species in our evaluation to identify and address those conditions that may lead to future listings of candidate species. Further, while we are required neither to consult with the Service on actions that we determine have no effect on listed species, nor to receive concurrence from the Service, we are providing these determinations to you for your information.

We believe the 303(d) waterbody list was developed by the state using the applicable water quality standards as established by the state. We acknowledge that the Service and EPA have initiated informal consultation on EPA approval of the state's water quality standards as established by the state. In particular, our two agencies are using the 2001 memorandum of agreement between our agencies as a guide for this consultation effort. If the water quality standards consultation results in a change to the standards or their interpretation, we will, as appropriate, visit our conclusions on how approval of the state 303(d) list may affect applicable species.

We appreciate your review and action on our Agency approval of Montana's 303(d) list. We also welcome any suggestions you might have on the form or content of our biological evaluations. If you have any questions or comments, please give Wayne Wathen at (303) 312-6100 a call. We certainly have appreciated all the help from you and your staff in the past,

Sincerely,
Wayne Wathen, Chief
Water Quality Unit

Enclosure

cc: Claudia Massman, MTDEQ
George Mathieus, MTDEQ
Ron Steg, USEPA SMO
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Biological Evaluation

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EPA's Approval of Montana's Year 2006 Section 303(d) Waterbody List

U.s. Environmental Protection Agency Office of
Ecosystems Protection and Remediation
Region VIII; Denver, CO
December 12, 2006

Biological Evaluation of EP A's Approval of Montana's Year 2006 Section 303(d) Waterbody List

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I. Executive Summary

In correspondence dated December 8, 2006, the Montana Department of Environmental Quality (DEQ) sent to the Environmental Protection Agency (EPA), Region VIII, its year 2006 section 303(d) list waterbodies in need of total maximum daily loads (TMDLs).

The state's list was included in documents from the Department of Environmental Quality entitled "*2006 Integrated 303(d)/305(b) Water Quality Report for Montana*" (December 8, 2006). In this document the state 1) identified which waterbodies are in need of total maximum daily loads ("TMDLs"), 2) identified which pollutants and other stressors are affecting the waterbodies, and 3) identified a prioritization for each of the waterbodies which generally indicates the sequence of TMDL development.

EPA intends on taking formal action on Montana's §303(d) list by approving it. As such, the EPA is seeking concurrence from the U.S. Fish and Wildlife Service (FWS) regarding the results of its biological evaluation on the proposed list approval.

The conclusion made by EPA in its biological evaluation is:

- EPA's approval of the Montana 2006 list will have no direct or indirect effect on any listed, proposed, or candidate species that are not aquatic or aquatic-dependent including non-aquatic or non-aquatic-dependent species associated with any activities that are interrelated or interdependent with the approval and
- EPA's approval of the Montana 2006 list will not likely adversely affect any listed or candidate aquatic or aquatic-dependent species or their habitat because any effects of the action will be beneficial to the species.

II. Introduction

Section 7(a) of the Endangered Species Act ("ESA"), 16 U.S.C. section 1536(a), requires that each federal agency

- in consultation with the U.S. Fish and Wildlife Service ("FWS"), insure that any action it authorizes, funds, or carries out is not likely to jeopardize the continued existence of any species listed pursuant to the ESA as "threatened" or "endangered" (referenced as "listed species" or as "T & E species") or to result in the destruction or adverse modification of any designated critical habitat of each such species (§7(a)(2)); and
- confer with the FWS on any agency action that is likely to jeopardize the continued existence of any species that is proposed for listing or to result in the

For certain actions not relevant here, federal agencies consult with the National Marine Fisheries Service instead.

destruction or adverse modification of any critical habitat proposed to be designated for any such species (§7(a)(4), emphasis added).

A biological evaluation analyzes how a federal action may affect species that have been listed or proposed for listing under the ESA. It also analyzes how the federal action may affect any habitat that has been designated or proposed for designation for those species.

The federal action that is the subject of this biological evaluation is the Environmental Protection Agency's (EPA's) approval of Montana's year 2006 list of water bodies in need of total maximum daily loads ("TMDLs"). According to section 303(d) of the Clean Water Act ("CW A"), 33 V.S.C. § 125 1 *et seq.*, states are required to identify waterbodies for which certain technology-based controls on point source dischargers as required by the CW A are not expected to be adequate to ensure implementation of applicable water quality standards. Such identification of waters is to be included in a list of waters submitted to EPA for review (referred to as the "303(d) waterbody list"). EPA must either approve or disapprove a state's waterbody list submitted to it pursuant to section 303(d). If EPA disapproves a state's list, it must establish a list for that state.

This biological evaluation has been prepared to assist the EPA and FWS in carrying out their activities pursuant to ESA sections 7(a)(2) and 7(a)(4) as they may pertain to EPA's approval of Montana's §303(d) list as described below. The following analysis focuses on how EPA's approval of Montana's year 2006 §303(d) list may affect listed aquatic or aquatic-dependent species in Montana. It does not address aquatic or aquatic-dependent species in Montana that have been proposed for listing because none has been proposed. Although there is no requirement to analyze effects of the federal actions on species that are candidates for listing, this biological evaluation does address candidate species. This evaluation has been done based on the best scientific or commercial information available.

III. Description of Agency Action

In correspondence dated December 8, 2006, the Montana Department of Environmental Quality ("DEQ") submitted its year 2006 section 303(d) waterbody list to EPA in a document entitled "*2006 Integrated 303(d)/305(b) Water Quality Report/or Montana.*" EPA concluded that its proposed approval may affect the continued existence of any endangered or threatened species listed under the Endangered Species Act or the designated critical habitat of any such species. As such, EPA acknowledged that its approval of Montana's list is subject to the outcome of consultation with the FWS.

EPA's approval of Montana's year 2006 list applies only to those waters that the state is required to list under the Clean Water Act and EPA's regulations. To the extent that the state included waters that are not required to be listed under federal law, EPA will take no action to such waters. Nor did EPA's approval of the list constitute any decision by EPA regarding the state's pace of developing TMDLs or total maximum daily thermal loads ("TMDTLs").

States are required to update their §303(d) lists on a periodic basis, with the next update

of lists due in 2008. Thus, there will be opportunities in the future to address new issues as they may arise in the context of listed species or their habitat.

IV. Basis of Agency Action

The purpose of this section is to describe the rationale for EPA's approval of Montana's Year 2006 section 303(d) waterbody list. EPA reviewed the entire package submitted by the state, including the methodology used by the state in developing the §303(d) list and the state's description of the data and information it considered. EPA's review and approval of Montana's §303(d) list is based on EPA's analysis of whether the state reasonably considered existing and readily available water quality-related data and information and reasonably identified waters, pollutants, priorities, and targeted waters as required by the CWA and EPA's regulations. EPA considered applicable federal laws, regulations and guidance in its approval decision.

A. Statutory and Regulatory Background

Section 303(d) of the CWA and 40 C.F.R. Section 130.7 as currently in effect establish requirements for state lists of water bodies in need of TMDLs. EPA relied on these provisions in reviewing and approving Montana's year 2006 list. EPA also considered its guidance concerning §303(d), which is included in various memoranda cited below in section IX. The following is a summary of some requirements for section 303(d) lists.

Identification of Water Quality Limited Segments for Inclusion on Section 303(d) List. Section 303(d)(1) of the Act directs each state to identify those waters within its jurisdiction for which effluent limitations required by CWA sections 301 (b)(1)(A) and (B) are not stringent enough to implement any applicable water quality standard. These waters are known as water quality-limited segments ("WQLSs"). The §303(d) listing requirement applies to waters threatened or impaired by point and/or nonpoint sources, pursuant to EPA's long-standing interpretation of §303(d).

At times, §303(d) lists are informally referred to as lists of impaired and threatened waters or as lists of waters that do not meet standards. However, it is more accurate to describe waters on section 303(d) lists as waters for which standards are not or are not expected to be implemented through the technology-based limits required by sections 301 (b)(1)(A) and (B) of the CWA. Further, EPA's TMDL regulations provide that states do not need to list waters (even though they may be impaired) where the following controls are adequate to implement applicable standards: (1) technology-based effluent limitations required by the sections 301(b), 306, 307, or other sections of the Act, (2) more stringent effluent limitations required by state or local authority, and (3) other pollution control requirements required by state, local, or federal authority. (See 40 C.F.R. section 130.7(b)(1).)

Prioritization of Waters for TMDL Development. Section 303(d)(1)(A) of the CWA and 40 C.F.R. section 130.7(b)(4) require that each state shall establish a priority ranking for the waters it identifies under §303(d), "taking into account the severity of the pollution and the uses

to be made of such waters." In addition, 40 C.F.R. section 130.7(b)(4) requires that state list "identify the pollutants causing or expected to cause violations of the applicable water quality standards" and "specifically include the identification of waters targeted for TMDL development in the next two years." EPA's review of Montana's prioritization is discussed in more detail in section F, below.

Consideration of Existing and Readily Available Data and Information. In developing §303(d) lists, each state is required to assemble and evaluate all existing and readily available water quality-related data and information, including, at a minimum, existing and readily available data and information about the following categories of waters: (1) waters identified by the state in its most recent CWA §305(b) report as "partially meeting" or "not meeting" designated uses or "threatened," (2) waters for which dilution calculations or predictive modeling indicate applicable standards will not be attained; (3) waters for which water quality problems have been reported by governmental agencies, members of the public, or academic institutions; and (4) waters identified as impaired or threatened in any §319 nonpoint assessment submitted to EPA. (See 40 C.F.R. Section 130.7(b)(5).) In addition to these minimum categories, states should consider any other relevant data and information that are existing and readily available. EPA's 1991 Guidance for Water Quality-Based Decisions describes categories of water quality-related data and information that may be existing and readily available? Please see sections C and D, for further discussion of how the state used existing and readily available data and information in compiling its list.

Assessment Criteria. Although states are required to evaluate all existing and readily available water quality-related data and information in compiling their §303(d) lists, they may decide to rely or not rely on particular data or information in determining whether to list specific waters. Each state must provide documentation to EPA to support the state's determination to list or not to list its waters. This documentation must be submitted to EPA together with the list and must include a description of the listing methodology, a description of the data and information used to develop the list, a rationale for any decision to not use any existing and readily available data and information, and any other reasonable information requested by EPA.

Applicable Water Quality Standards. For purposes of identifying waters for the §303(d) list, the terms "water quality standard applicable to such waters" and "applicable water quality standards" refer to those water quality standards established under section 303 of the Act. On April 27, 2000, EPA promulgated a rule under which the "applicable standard" for Clean Water Act purposes depends on when the relevant state or tribe promulgated that standard. Standards that states or tribes have promulgated before May 30, 2000 are effective upon promulgation by the states or tribes. Standards promulgated by states or tribes on or after May 30, 2000 become

²See Guidance for Water Quality-Based Decisions: The TMDL Process, EPA Office of Water, 1991, Appendix C ("EPA's 1991 Guidance").

effective only upon EPA approval. (See 65 Fed. Reg. 24641).

B. Description of Year 2006 List Submittal

The state's list was submitted to EPA in correspondence nom Richard Opper, Director, Montana Department of Environmental Quality (MT DEQ) included in a document nom the Department of Environmental Quality entitled "*2006 Integrated 305(b)/303(d) Water Quality Report for Montana*" (December 8, 2006).

The year 2006 section 303(d) waterbody list that Montana submitted to EPA consisted of the following portions of the enclosures to the December 8, 2006 letter nom Richard Opper (MT DEQ), to EPA Region VIII:

- Waterbodies and corresponding pollutants that make up the state's Section 303(d) list (See waters included in Category 5 of the Montana Sub-Basin Reports in Appendix H, Section 3)
- Prioritization of water bodies for TMDL development (See section entitled "Prioritization for TMDL Development and Appendix F: TMDL Priority Schedule by TP A)
- Identification of waters targeted for TMDL development over the next biennium (See Appendix F: TMDL Priority Schedule by TPA)

EPA's approval action of Montana's year 2006 §303(d) list extended only to the items listed immediately above (i. e., the waterbodies and corresponding pollutants listed above, the prioritization of water bodies for TMDL development, and the identification of waters targeted for TMDLs over the 2006-2008 biennium.)

In addition to the §303(d) list described above, Montana also submitted the following to EP A, which EP A neither approved nor disapproved:

- an introduction and glossary of terms (page 12, Pages 172-178)
- an itemization of the de-listed waters (Table 14, Page 76-78 and attachment to the 303(d) approval letter),
- a record of public participation (pages 120-121),
- a description of the database and methodology the state used in its assessment (Pages 63-73 and the document "*Standard Operating Procedure Water Quality Assessment Process and Methods*"),
- an identification of waters with use support assessments during the 2006 listing cycle (Appendix B);
- a summary of impairment causes delisted nom the 2000 303(d) Reassessment List (Appendix C);
- a summary of waters with beneficial use changes between the 2004 and 2006 report (Appendix D);

a prioritization and scheduling of waters for TMDL completion (pages 37-39, Appendix F), and
a table summarizing the IMDLs that EPA had approved prior to the state's submission of the state's year 2006 list (Appendix G).

The State's 303(d) list includes a total of 651 stream segments and 26 lakes. Montana's 2006 list is considered an update of the State's 2004 list which consisted of 412 waters. Fifty-two segments had changes to the impairment cause or use support designation. The 2006 303(d) list includes 285 segments that were not included on the previous year 2004 list. The 2006 Section 303(d) waters are found in Appendix H, Section 3 of the State's submittal.

C. Description of Data and Information the State Utilized

In preparing its year 2006 list, Montana relied on information from its year 2004 section 305(b) report, its 2004 section 303(d) list, the assessments it had performed under its Clean Water Act section 319 non-point source program, and other data and information obtained through an extensive process to solicit information from state, federal and citizen sources. In its search for existing and readily available data and information, the state placed legal notices in five major newspapers around the state. A news release announcing the comment period was also issued to most of Montana's media outlets and mailed to nearly 600 water quality stakeholders, federal, state, and local agencies, private groups, and individuals with water quality interests.

EPA regulations require that four categories of information and data, at a minimum, be considered by states when §303(d) lists are developed. (See 40 C.F.R. Part 130.7(b)(5).) EPA reviewed Montana's description of the data and information it considered for identifying waters on the §303(d) list and concluded that the state properly assembled and evaluated all existing and readily available data and information, including data and information in the four minimum categories as described below:

1) Waters identified by the state in its most recent section 305(b) report as "partially meeting" or "not meeting" designated uses or as "threatened" (§130.7(b)(5)(i)).

Montana has begun using a unified approach to its waterbody assessments in its Clean Water Act section 303(d), 305(b), and 319 programs. There is true consistency between these programs since the same assessment methodology and the results may be used by all three. (The only exception is where the state has updated its assessment as a result of public comment on its 303(d) list and it has not updated its 305(b) or 319 reports to reflect that change).

2) Waters for which water quality problems have been reported by local, state, or federal agencies; members of the public; or academic institutions (§130.7(b)(5)(iii)).

As noted above, the state solicited and considered data and information from local, state,

or federal agencies, members of the public, and academic institutions while preparing the year 2006 §303(d) list.³ The state utilized mailing, public notices, and the Internet to make solicitation for data and information.

3) Waters identified by the state as impaired or threatened in a nonpoint assessment submitted to EP A under section 319 of the CW A or in any updates of the assessment (§ I 30. 7(b)(5)(iv)).

Section 319 of the CW A requires states to develop a nonpoint source assessment report as well as a nonpoint source management plan. Montana completed its management plan by 1988 and its assessment of non point sources by 1992. During the mid-1990's, Montana fully integrated its assessment under the 319, 305(b), and 303(d) programs. The assessment reported under each of these programs stem from the same assessment process to assure consistency from one program to the next.

EP A believes that consolidation of 319 and 303(d) assessments is a reasonable approach to assuring consistency between the two programs.

D. Description of Assessment Methodology

In preparation for its year 2006 section 303(d) lists, the state used the same listing methodology it used in the year 2002 and 2004 listing cycles. The state developed its assessment methodology in consultation with a statewide TMDL advisory group established under MCA section 75-5-704 and with consideration of comments made by the public through an open review process. This year's 2006 listing methodology contains a set of criteria, based largely on EP A guidance addressing state development for the section 305(b) report, for the state to apply in deciding whether to use certain existing and readily available data and information as a basis for including waters on the list (*e.g.*, what constitutes "sufficient credible" data and information as defined in Montana law). These criteria were developed in accordance with the following provisions from Montana law, which require the Montana DEQ to make its listing decisions based on existing and readily available data.

After close review, EP A concluded that the listing methodology developed and employed by DEQ in developing its year 2006 section 303(d) list is consistent with section 303(d) of the CW A, EP A's regulations, and EP A's guidance and is a reasonable approach to determine waters that should be included on the state's §303(d) list.

In evaluating Montana's listing methodology, EPA compared the state's methodology

³See, for example, Part A, Appendix A, pages 6-7 of Montana's submission.

with its own guidance on assessing waters. EPA has long taken the position that the methods states used to determine whether waters meet standards for purposes of §303(d) lists are the same as the methods to make this same determination for purposes of §305(b) reports. See, for example, the following statement in a 1992 EPA guidance document:

Q. How does EPA define attainment of water quality standards?

The methods used to determine non-attainment of standards for water quality reporting under 305(b) should also be used for identifying waters pursuant to 303(d). These decision criteria and methodologies are provided in Appendix B - "Making Use-Support Determinations" of Guidelines for Preparation of the 1992 State Water Quality Assessments (305(b) Reports). This guidance document addresses the use of monitoring data and evaluative information to decide whether standards are being met and provides specific criteria for what constitutes an exceedance.⁴

Montana's listing methodology for its year 2006 section 303(d) list followed this approach by substantially relying on EPA's most recent section 305(b) assessment guidance as a model. In particular, Montana generally followed EPA's most recent 305(b) assessment guidance, which provides for evaluating the level of rigor in qualitative and quantitative data, determining which data could be excluded from assessment procedure, which thresholds could be used to determine water body impairment conditions, and how to organize and report results.

Montana's listing methodology is described in the 2006 Integrated Report and in the document, *Standard Operating Procedure Water Quality Assessment Process and Methods*. The methodology has not been altered substantially since the 2004 public review and was used

⁴ This statement comes from an attachment to the August 13, 1992 memorandum from Geoffrey H. Grubbs to Water Quality Branch Chiefs, Regions IX and TMDL Coordinators Regions X. It is the answer to the second question in the "Questions and Answers For the EPA State Workshops Held Winter 1991-2." ..

⁵ "Guidelines for Preparation of the Comprehensive State Water Quality Assessments (305(b) Reports) and Electronic Updates: Supplement," September 1997, EPA841-B-97-002B. Unless otherwise indicated, any reference to EPA's "Section 305(b) assessment guidance," "1997 guidance," "1997 Section 305(b) assessment guidance" will mean this document.

for the assessments that resulted in this 2006 Integrated Report. There are significant similarities between EPA's section 305(b) guidance and Montana's methodology. For example, the tables in EPA's 1997 guidance concerning the rigor of biological, habitat, toxicological and physical/chemical data (Tables 3-1, 3-2, 3-3, 3-4) use many of the same factors as used in the state's tables for biology, chemistry/toxicity, and habitat/physical evaluation (Tables 1-3 in the document, "*Standard Operating Procedure Water Quality Assessment Process and Methods*"). The factors included in both EPA's guidance and in the state's methodology include such things as temporal and spatial coverage of the data, the age of the data, the quality assurance protocols used to collect the data, and precision associated with the data. Likewise, the numeric thresholds used by the state to determine whether a waterbody was impaired are very similar to the thresholds recommended by EPA in its 1997 guidance.

Because the state followed EPA's section 305(b) assessment guidance in structuring its methodology for developing its 303(d) list, EPA finds the state's methodology reasonable. EPA has approved Montana's 2006 list, recognizing that states have discretion to determine the manner in which they will use particular existing and readily available data and information.⁶ Further, EPA's 1997 Section 305(b) assessment guidance allows states to exclude data not adequate for use determinations from their assessments. (See pages 3-6 in EPA's 305(b) assessment guidance). According to this guidance, states may elect to exclude data that lacks rigor. EPA's guidance mentions several reasons why data may lack sufficient rigor, such as low precision or sensitivity in the data type, a limited number of samples, limited visual observations, age of data, lack of quality assurance in the field or lab. (See discussion in Part 3.2 of EPA's 1997 Section 305(b) assessment guidance). Montana has elected to use this approach in its year 2006 assessment methodology for both its section 303(d) list and section 305(b) report by evaluating data for its sufficiency and credibility. In its previous waterbody lists, Montana decided to take a conservative approach to listing, including waters based on a broad range of information (including non-quantitative, anecdotal information).⁷ For the 2006 list, Montana

⁶In promulgating the section 303(d) regulations, EPA recognized that states would have some degree of discretion in identifying waters. See 57 Fed. Reg. at 33046 (July 24, 1992) ("EPA agrees that the states should retain a certain amount of flexibility in developing their section 303(d) lists, but at the same time states should be prepared to demonstrate to EPA that all existing and readily available data and information relevant to identifying water quality limited waters are used to develop section 303(d) lists.")

⁷ Although the 1997 definition of "sufficiently credible data" was in effect as of the time Montana

revised its listing methodology to include evaluation of data and information using an approach in EPA's §305(b) assessment guidance. This resulted in a list that relied on data and information that met a certain level of credibility.

The term "sufficient credible data" is important to Montana's determination. Under Montana law, as amended in 1997, that term is defined as follows:

"Sufficient credible data" is defined 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. See MCA Section 75-5-103(30)

According to EPA regulations, states must supply a rationale for any decision to not use any existing and readily available data and information. (See 40 C.F.R. Part 130.7(b)(6)(iii).) For Montana, this rationale is basically the test of sufficient credibility. This test of sufficient credibility was patterned after EPA's 1997 section 305(b) assessment guidance. In assessing whether data met the threshold for being "sufficiently credible" under Montana state law, DEQ considered all data that it had identified as existing and readily available from the searches described above. In evaluating the sufficiency of the data, DEQ ranked the data using factors included in EPA's assessment guidance for the purpose of evaluating the rigor of data. (See EPA's 1997 section 305(b) assessment guidance.) The assemblage of data and information for any given waterbody was ranked for its sufficiency according to the procedure identified in Figure 2, Appendix A of the state's submittal. Again, this constitutes the state's rationale for using or not using any particular data or information in its listing decision.

The factors used to evaluate data and information for sufficiency included temporal and spatial coverage of the data, age of the data, quality assurance protocols used to collect the data, and precision associated with the data. For example, Montana took into account age of data as one of the factors it considered in deciding whether to list waters. In some cases, historical data by itself was not used as a basis for listing, such as locations where land use practices have changed since the data was collected. In other cases, historical data was used as a basis for listing, such as situations where the state concluded that the data had been collected using good quality control and there was no indication that conditions had changed since the data was collected. Thus; no single factor was used to list or remove previously-listed waters. Instead, these factors were considered together using the state's methodology for scoring data and information, described in more detail in the state's list submission. These factors are consistent

submitted its 1998 section 303(d) list EPA, Montana did not apply this definition to its 1998 list, because the statutory deadline of October J, 1999 under MCA Section 755-702(5) and (6) for compiling and instituting a data management system had not yet occurred.

with EP A's guidance on evaluating data and information for waterbody assessments.

This evaluation of data sufficiency was performed on a waterbody-by-waterbody basis. The state's documented results of the waterbody-by-waterbody evaluation by including for each waterbody file a description of the data and information available for the waterbody, the sources of the data and information, and results of the data ranking.

EP A acknowledges that states may re-evaluate the waters on their 303(d) lists. In a 1997 memorandum, EP A stated that ". . . Regions and states should keep in mind that waterbodies may be added or subtracted over time as new lists are developed". Accordingly, in an August 27, 1997 memorandum, EPA identified several conditions that allow states to remove previously-listed waters from §303(d) lists. In addition to de-listing a waterbody when a TMDL has been established for it, states may delist a waterbody when:

- 1) the waterbody is meeting all applicable water quality standards or is expected to meet these standards in a reasonable time frame (*e.g.*, two years) 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.⁸

Further, the existing EP A regulations require states, at the request of the Regional Administrator, to demonstrate good cause for not including waterbodies on their lists. Good cause includes, but is not limited to, more recent and accurate data, more sophisticated water quality modeling, flaws in the original analysis that led to the waterbody being listed, or changes in conditions, *e.g.*, new control equipment, or elimination of discharges. (See 40 C.F.R. 130.7(b)(6)(iv)).

Montana's basis for de-listing is its re-examination of its prior listing decisions. In approving the year 2006 list, EPA did not find that Montana's earlier lists were improperly approved or that they somehow falsely indicated that waterbodies were not supporting their uses when in fact they were. Instead, EP A found that Montana acted reasonably and consistently with EPA's current TMDL regulations in choosing a different methodology for evaluating use attainment. Both the former methodology and the present methodology are properly within the state's discretion under current EPA regulations.

Montana de-listed a substantial number of previously-listed waters. As described above, some waters were de-listed because EP A had approved TMDLs for them, some because Montana

⁸August 27, 1997 memorandum from Robert H. Wayland III, Director, Office Wetlands, Oceans, and Watershed, Office of Water, EPA Headquarters, to Water Division Directors, Regions I X, and Directors, Great Water Study Programs, and Water Quality Branch chiefs, Regions J. X, regarding "National Clarifying Guidance For 2000 State and Territory section 303(d) Listing Decisions."

detennined that they are within Tribal, not Montana, jurisdiction, and some because they were found in full support of their beneficial uses. Most de-listed waters were excluded as a result of applying the new assessment methodology. Under Montana's new methodology, unless there is "sufficient credible data" to support a finding that an~ required use of a waterbody is impaired, then the waterbody is not on the current §303(d) list.

Each waterbody Montana de-listed for lack of "sufficient credible data" is named in Appendix B of the state's submission from the 2006 303(d) list. More detailed records on each watershed are available for public viewing at the office of the DEQ in Helena, Montana and on the Internet, at "<http://nris.state.mt.us/wislenvironet>." In addition, DEQ has provided EPA with a compact computer disk (CD) including the waterbody-by-waterbody records. This CD also is available for review at DEQ's offices.

In its review of the State's year 2006 waterbody list, EPA took special care to review the methodoiogy and resultant de-listings from Montana's list. EPA and MTDEQ instituted a technical and administrative review process for the 2006 Integrated Report to insure consistent application of the State's Sufficient and Credible Data Process. Having reviewed Montana's submission and supporting documentation, EP A has concluded that Montana has acted reasonably and within the discretion that current EP A regulations allow in de-listing waterbodies. EPA reviewed all waterbody-pollutant combinations delisted from the 1996 303(d) list and requested additional rationale from MTDEQ regarding an estimated 65 waterbodies. MTDEQ's response to EPA's comments on these waterbodies demonstrates that MTDEQ consistently followed its assessment process in making impairment determinations.

E. Monitoring of Waters Removed from the 303(d) List

Montana law requires DEQ to monitor and reassess all "de-listed" waters, which will more accurately identifY waters that do not meet their designated uses and result in TMDLs for all waters that need them. Waterbodies delisted in 2000 due to a lack of "sufficient credible data" were monitored and assessed between 2002-2006. If "sufficient credible data" indicated the waterbody was impaired,. the waterbody was listed.

For the 2006 list, DEQ sampled all the waterbodies removed from the 2000 303(d) list, with the exception of a few waterbodies that were dry or where access was denied. The 2006 303(d) list reflects the results of the attainment decisions for all waters removed from the 2000 303(d) list.

F. Prioritization and Scheduling

As part of their lists, states must prioritize waters for TMDL development, taking into

⁹See page 3-9, Chapter 3, Part A of the state's submission.

account the severity of the pollution and the uses to be made of such waters. (See section 303(d)(1)(A) of the CWA and 40 C.F.R. section 130.7(b)(4). As long as states take these required factors into account, the CWA does not require states to prioritize their waters in any specified manner. States may use their discretion in establishing priorities for TMDLs.

The factors that Montana used in its prioritization are set out in MCA section 75-5702(7). EPA finds that these factors are acceptable for a state to apply in prioritizing the waters for TMDL development because, as described in more detail below, they include not only the factors that required by the CWA and EPA's TMDL regulation but also those recommended by EPA's guidance.

As mentioned above, the CWA and EPA's TMDL regulation require states to consider the severity of pollution and the uses for the listed waters. Montana's law requires DEQ to consider the uses to be made of listed waters. (See MCA section 75-5-702(7)(a), requiring DEQ to consider "the beneficial uses established for a water body.") In addition, the following factors from Montana's law relate to the severity of pollution:

1. Impacts to human health and aquatic life (MCA 75-5-702(7)(c));
2. Character of pollutant (MCA 75-5-702(7)(e));
3. Severity and magnitude of water quality standard noncompliance (MCA 75-5-702(7)(e));
4. Beneficial uses established (MCA 75-5-702(7)(a));
5. Size of the waterbody not attaining standards (MCA 75-5-702(7)(g)); and
6. Extent of natural factors over which humans have no control that is contributing to impairment (MCA 75-5-702(7)(b)).

Not only did Montana include the required factors (*i.e.*, severity of pollution and uses of waterbodies) in its prioritization, it also included additional factors that EPA has recommended that states consider. These EPA-recommended factors include immediate programmatic needs, vulnerability of particular waters as aquatic habitats, recreational, economic, and aesthetic importance of particular waters, degree of public interest and support, state or national policies and priorities, court orders and decisions relating to water quality. (See 57 Fed. Reg. at 33040, 33044-33045 (July 24, 1992), and EPA's 1991 Guidance, pages 13-14.) Montana has also included these recommended factors, as listed below:

1. Immediate programmatic needs - MCA 75-5-702(7)(h);
2. Vulnerability of particular waters as aquatic habitats - MCA 75-5-702(7)(f);
3. Recreational, economic, and aesthetic importance - MCA 75-5-702(7)(m);
4. Degree of public interest and support - MCA 75-5-702(7)(d);
5. State or national policies and priorities - MCA 75-5-702(7)(j); and
6. Court orders and decisions relating to water quality - MCA 75-5-702(7)(i).

Accordingly, EPA found that the additional factors used by the state in its prioritization

are consistent with EPA's guidance.

EPA reviewed the state's system to rank waters based on the factors above and found this system to be reasonable and within the allowable scope of discretion that states may exercise in prioritizing their TMDLs, consistent with the CWA, EPA's regulations, and the recommendations in EPA's guidance. The results of Montana's prioritization is provided in the waters targeted for TMDL development in the year 2006- 2008 biennium (See Appendix F).

G. Identification of Pollutants

EPA's TMDL regulation requires §303(d) lists to identify the pollutants that are causing or expected to cause violations of applicable water quality standards. (See 40 C.F.R. section 130.7(b)(4).)

Montana identified the pollutants (when known) that are causing or expected to cause exceedances of the applicable water quality standards, including those pollutants that have no corresponding numeric criteria in the state standards (*e.g.*, sediment.) The pollutants are identified in the columns entitled "Probable Causes of Impairment" in the waterbody descriptions in the Montana sub-basin reports section of Montana's submission. Montana identified these pollutants based on categories specified in EPA's 1997 section 305(b) guidance.

Pollutants and other stressors identified by the state on its §303(d) list include but are not limited to metals, flow alteration, habitat alterations, turbidity, pesticides, mercury, low dissolved oxygen, salinity, thermal modifications, nutrients, riparian degradation, selenium, pH, PCBs, noxious aquatic plants, unionized ammonia, siltation, bank erosion, and suspended solids.

V. Geographic Scope of Action

The geographic scope of Montana's list covers the entire state with the exception of those lands that are within Indian Country, as defined in 18 V.S.C. section 1151. EPA or eligible Indian Tribes, as appropriate, retain responsibilities under section 303(d) for waters within Indian Country

VI. Description of Species /Habitat Potentially Affected by Agency Action

The aquatic and aquatic-dependent species in Montana include the following endangered, threatened, and candidate species I . The aquatic or aquatic-dependent endangered species that may occur in the action area include whooping crane (*Grus americana*), least tern (*Sterna*

10 The ESA does not require evaluation of or consultation on any effects on candidate species. An evaluation is nevertheless provided as part of this biological evaluation for informational purposes and to prompt changes or alternatives to the action if it is found to have an adverse effect on the candidate species.

antillarum), pallid sturgeon (*Scaphirhynchus albus*), and the Kootenai River population of the white sturgeon (*Acipenser transmontanus*). The listed threatened aquatic or aquatic-dependent species include grizzly bear (*Ursus arctos horribilis*), bald eagle (*Haliaeetus leucocephalus*), piping plover (*Charadrius melodus*), bull trout (*Salvelinus confluentus*), Ute ladies'-tresses (*Spiranthes diluvialis*), and water howellia (*Howellia aquatilis*).

A couple of aquatic or aquatic-dependent candidate species also may occur in the action area. They are the Montana Arctic grayling (*Thymallus arcticus*) and Warm Spring zaizevian riffle beetle (*Zaitzevia therae*).

There are no aquatic or aquatic-dependent Droosed species in the action area.

A. Endangered Species

I. WhooDinsz Crane

In the wild, whooping cranes exist in three populations: the historic Aransas-Wood Buffalo population; an experimental population of released non-migratory birds in central Florida; and another experimental population of migratory birds which were led the fall of 2001 and subsequent years by ultralight aircraft from Necedah National Wildlife Refuge in Wisconsin to Chassahowitzka National Wildlife Refuge in Florida. As of September 30, 2006, there were 6 I adults and 25 young birds for a total of 86 birds in this latter experimental flock. The Aransas-Wood Buffalo population, as of September 30, 2006, numbered approximately 229 birds including 214 adults and IS young. The nonmigratory Florida flock as of September 30, 2006 numbered 55 birds (51 adults and 4 young). There also was an experimental cross-fostered Rocky Mountain population. The last bird of this flock has not been seen since the winter of 2001-2002 and therefore, the Rocky Mountain whooping crane population is now considered extinct.

The Aransas-Wood Buffalo flock follows a relatively narrow migration route across nine provinces of Canada and states including Alberta, Saskatchewan, northeast Montana, North Dakota, South Dakota, Nebraska, Kansas, Oklahoma, and Texas. The birds of this flock nest almost exclusively within the borders of Wood Buffalo National Park in Alberta, Canada, and winter within and near the Aransas National Wildlife Refuge in Texas. Most of the Montana sightings have been in the Medicine Lake National Wildlife Refuge area in Sheridan County. Over the past 30 years, nearly two-thirds of the 200 sightings in northeast Montana have occurred in the area of Medicine Lake National Wildlife Refuge.

Whooping cranes require open exposed wetlands, prairie potholes, or freshwater marshes. They seek shallow lakes and lagoons containing small islands of cattails, bulrushes, and sedges. Their diet of insects, crustaceans, small mammals, frogs, and berries is often supplemented with roots and grains.

2. Least Tern (Interior Population)

A current range-wide census carried out during the 2005 breeding season recorded an interior least tern population of 17, 587 terns. Least terns were first documented in Montana at the Fort Peck Reservoir in 1987. Most of the terns in Montana have been found in three areas: the eastern end of Fort Peck Reservoir above Fort Peck Dam along the Big Dry Arm; the Missouri River below Fort Peck Dam; and the Yellowstone River below Miles City. In 1994, 8 nests were found at Fort Peck Reservoir, all on a small island within sight of Fort Peck Dam. The same year, a 126-mile stretch of the Missouri River below Fort Peck Dam also was surveyed, finding 23 least tern nests. Seventeen tern nests also were located on nine islands in a 98-mile stretch of the Yellowstone River between Miles City and Crane, Montana. Within the Missouri River system, 2,040 least terns were counted in year 2005 and an annual survey in Montana also in 2005 counted 50 adult terns.

Therefore, In Montana, the least tern is known to occur in Custer (Kinsey, Haugan's Island on Yellowstone River [1996]), Dawson (south of Glendive [1998], Yellowstone River at Glendive Bridge Island [1996] and southwest of Glendive near Cedar [1998]), Garfield, Lewis & Clark (Freezeout Lake [2002]), McCone, Phillips (Bowdoin NWR/Dry Lake [1996,1999], Nelson Reservoir [1997,1998]), Prairie, Richland (west of Bainville along Hwy 2 [2002], Culbertson [1999], Missouri River bridge se of Culbertson [1994], savage boat ramp to Mary's Island, Yellowstone River [1996]), Roosevelt (Missouri River upstream from Poplar [1995]), Rosebud (Castle Rock/Colstrip [1991]), Sheridan (near Westby [1997]), Valley, and Wibaux Counties.

This species nests and feeds on sand and gravel shorelines, river sandbars, and islands, primarily associated with the Missouri River in eastern Montana but could be found anywhere that suitable habitat occurs. The predominant reason for the decline of this species seems to be due to habitat destruction as a result of existing dams, water level fluctuations, increased predation (associated with loss of habitat), and human interference.

3. Pallid Sturgeon

The pallid sturgeon is a large fish known to occur only in the Missouri River, the Mississippi River downstream from the Missouri River, and the lower Yellowstone River. In 2005, a total of 31 pallid sturgeons were captured between the confluence of the Yellowstone River (River Mile 1582) through the headwaters of Lake Sakakawea (River Mile 1568). Of these 31 pallid sturgeons, 25 were considered originating from previous hatchery stocking while 6 were considered as wild fish. In Montana, the pallid sturgeon has been found as far west on the Missouri River as Fort Benton occurring between the Marias River and Fort Peck Reservoir as well as the lower 200 miles of the Yellowstone River from the Tongue River near Fallon, Montana downstream to the confluence with the Missouri River. According to FWS, the pallid sturgeon is found in Blaine, Chouteau, Custer, Dawson, Fergus, Garfield, McCone, Petroleum, Phillips, Prairie, Richland,

Roosevelt, Valley, and Wibaux Counties in Montana.

Pallid sturgeons require large, turbid, free-flowing riverine habitat with rocky or sandy substrate. They are well adapted to life on the bottom and inhabit areas of swifter water than does the related but smaller shovelnose sturgeon. The species has severely declined as a result of habitat modification and resultant apparent lack of reproduction. Habitat modification through river channelization, impoundment, and altered flow regimes has been a major factor in the decline of the species. These factors have adversely affected the fish by blocking movements of fish to spawning and/or feeding areas, destroying spawning areas, altering conditions or flows of potential remaining spawning areas, reducing food sources or the ability to obtain food, or altering remaining substrates and conditions necessary for the fish's survival.

The pallid sturgeon is an opportunistic feeder that feeds on aquatic insects, crustaceans, mollusks, annelids, eggs of other fish, and sometimes other fish. Being a bottom feeder, one would expect it to be exposed to any persistent pollutants susceptible to uptake in the food chain.

4. White Sturgeon (Kootenai River population)

The Kootenai River population of white sturgeon is one of 18 landlocked populations of white sturgeon known to occur in western North America. The Kootenai River population is restricted to approximately 168 river miles in the Kootenai River basin in Lincoln County, Montana, northeastern Idaho, and British Columbia, Canada. Fewer than 100 of the 168 miles occur in Montana. This reach extends from Kootenai Falls, Montana, located 31 river miles below Libby Dam, downstream through Montana and Idaho, and through Kootenay Lake to Cora Linn Dam at the outflow from Kootenai Lake, British Columbia.

According to state, federal, and Kootenai Tribe of Idaho biologists, the Kootenai River sturgeon population declined from an estimated 1,194 fish in 1982 to less than 600 individuals by 2004. Based on a 9 percent annual attrition rate, researchers predict that all remaining wild adults will vanish by 2065. The population will be functionally extinct by 2035.

White sturgeon in the Kootenai River are opportunistic feeders feeding on a variety of prey items including chironomids, clams, snails, aquatic insects, and fish.

Except for 1974, white sturgeon recruitment has been declining since the mid-1960's. There has been an almost complete lack of recruitment of juveniles into the population since 1974, soon after Libby Dam in Montana began operations. The significant modifications to the natural hydrograph in the Kootenai River caused by flow regulation at Libby Dam is considered the primary reason for the Kootenai River white sturgeon's continuing lack of recruitment and declining numbers. The population also faces threats

from reduced biological productivity, and possibly poor water quality (e.g., lack of nutrients trapped by Libby Dam), and the effects of contaminants. It has been speculated that an increase in chemical pollutants (e.g., copper, zinc) in the river may have affected spawning success.

Critical habitat was designated for the white sturgeon in the September 8, 2001, Federal Register. It included a total of 11.2 river miles of the Kootenai River in Idaho. An additional 6.9 miles of the Kootenai River in Idaho was designated in an interim rule published in the February 8, 2006, Federal Register. No critical habitat for the white sturgeon has been designated in Montana.

B. Threatened Species

1. Grizzly Bear

As a result of habitat loss and human-caused mortality, the grizzly bear is found in only about 2 percent of its historic range in the lower 48 states. An estimated population of 1,200 to 1,400 grizzly bears remain in a few isolated populations in western Montana, northern and eastern Idaho, northwestern Wyoming, and north-central and northeastern Washington. Today, grizzly bear distribution is primarily within but not limited to the areas identified as Recovery Zones including--the Yellowstone area in northwest Wyoming, eastern Idaho, and southwest Montana (9,200 square miles (sq mi) at more than 580 bears; the Northern Continental Divide Ecosystem of north central Montana (9,600 sq mi) at more than 400 bears; the North Cascades area of north central Washington (9,500 sq mi) at less than 20 bears; the Selkirk Mountains area of northern Idaho, northeast Washington, and southeast British Columbia (2,200 sq mi) at approximately 40 to 50 bears; and the Cabinet Yaak area of northwest Montana and northern Idaho (2,600 sq mi) at approximately 30 to 40 bears. There is an additional Recovery Zone known as the Bitterroot Recovery Zone in the Bitterroot Mountains of east central Idaho and western Montana (5,600 sq mi) but this area does not contain any grizzly bears at this time. The San Juan Mountains of Colorado also were identified as an area of possible grizzly bear occurrence, but no evidence of grizzly bears has been found in the San Juan Mountains since a bear was killed there in 1979.

The Yellowstone Grizzly Bear Ecosystem includes Yellowstone and Grand Teton National Parks, significant contiguous portions of the Shoshone, Bridger-Teton, Targhee, Gallatin, Beaverhead, and Custer National Forests, Bureau of Land Management lands, and state and private lands in Montana, Wyoming, and Idaho. The Northern Continental Divide Ecosystem includes Glacier National Park, parts of the Flathead and Blackfoot Indian Reservations, and parts of five national forests (Flathead, Helena, Kootenai, Lewis and Clark, and Lolo), as well as state and private lands.

The primary components of grizzly bear habitat include food, cover, and denning habitat. They are successful omnivores and in some areas may be almost entirely herbivorous. .

Grizzly bears must have foods high in protein or carbohydrates to survive denning and post-denning periods. They are opportunistic feeders and will prey or scavenge on almost any available food including ground squirrels, ungulates (deer and elk), carrion, and garbage. In areas where animal matter is less available, roots, bulbs, tubers, fungi, and tree cambium may be important in meeting protein requirements. High quality foods such as berries, nuts, and fish also are important in some areas.

The search for food has a prime influence on grizzly bear movements. Upon emergence from the den they seek the lower elevations, drainage bottoms, avalanche chutes, and ungulate winter ranges where their food requirements can be met. Throughout late spring and early summer, they follow plant growth back to higher elevations. Grizzly bears also feed on spawning cutthroat trout on tributary streams of Yellowstone Lake in late spring and early summer. This source of food has been threatened by the introduction of lake trout into Yellowstone Lake, which threatens to reduce the cutthroat by 80 percent in 20 years. In late summer and fall, there is a transition to fruit and nut sources (e.g., huckleberries, white bark pine nuts), as well as herbaceous materials.

2. Bald Eagle

Bald eagles occur throughout Montana where there is suitable habitat, which usually entails rivers or lakes as well as trees for nesting and roosting. The bald eagle population is increasing in Montana. Between 1978 and 1995, the number of known breeding pairs increased from 12 to 166. A 1995 breeding survey found 196 viable nesting territories in Montana. In 1999, there were over 225 occupied nesting territories in Montana which increased to 316 pairs in 2005. Nests have been found throughout much of Montana between 1991 and 2003 including Beaverhead (Red Rocks NWR), Broadwater (Winston quad), Cascade (Great Falls to Cascade, south of Cascade), Flathead (Kalispell area, Rogers Lake, Smith Lake, Swan River NWR), Gallatin (Hebgen Dam quad, Mount Hebgen quad), Lake (National Bison Range, Polson area), Lewis & Clark (1-15 near Craig, Jefferson River 2 miles north of Twin Bridges, Missouri River, Little Prickly Pear Creek, Winterburn Ranch), Lincoln (Kootenai River near Libby, Libby Dam, Scenery Mountain quad), Madison (Valley Garden Ranch 4 miles north of Ennis), Missoula (Blackfoot River, Clearwater River, Holland Lake), Powder (Blackfoot River, Blackfoot WPA, Clark Fork River, Kleinschmidt Lake, Nevada Reservoir), Ravalli (Hamilton, Lake Como, Lee Metcalf NWR), Rosebud (area around Ingomar), and Sanders (near Noxon, Thompson Falls Reservoir) Counties.

This increase can be related to the banning of DDT and other related harmful chemicals in the U.S. in 1972 as well as other factors. Man-made reservoirs have provided winter habitat. In winter, bald eagles often congregate at wintering sites that are generally close to open water and offer good perch trees and night roosts. Night roosts typically offer isolation and thermal protection from winds. Fish are the primary food source but bald eagles also take a variety of birds, mammals, and turtles as well as carrion when fish are

not readily available.

3. Pining Plover

The piping plover is found in three distinct population segments in North America including: (1) the Atlantic coast population that breeds from Newfoundland, Canada to South Carolina, (2) the Great Lakes population with breeding grounds throughout the Great Lakes, and (3) the Northern Great Plains population that breeds along river systems and lakes of the Northern Great Plains from eastern Montana through southern Nebraska.

The piping plover has been known to nest in Garfield, Lewis & Clark (Freezeout Lake [2002]), McCone, Phillips (Bowdoin NWR, Dry Lake [1996, 1999], Nelson Reservoir [1997, 1998]), Richland, Roosevelt, Sheridan (Round Lake [1997], Upper Goose Lake [2001], near Westby [1994, 1997, 1999]), and Valley Counties in Montana. Eighty percent of the Montana nests occur at Medicine Lake National Wildlife Refuge while they also nest on the Missouri River below Fort Peck Reservoir, C. M. Russell and Bowdoin National Wildlife Refuge, and Alkali Lake on the Blackfeet Indian Reservation.

In 1995, 62 pairs of piping plovers were observed.

Critical habitat was designated for the piping plover in the September 11, 2002, Federal Register. In Montana, this includes approximately 19,222.9 acres of alkali lakes and wetlands including Medicine Lake in Sheridan County; 125.4 river miles (1586.6 to 1712.0) along the Missouri River in McCone, Richland, and Roosevelt Counties; 77,370 acres around Fort Peck Reservoir in Garfield, McCone, and Valley Counties; and 3,294.5 acres at Bowdoin National Wildlife Refuge in Phillips County.

Piping plovers breed in open, sparsely vegetated habitats. The Great Plains population nests along sand and gravel shores of rivers and lakes. They have been observed eating marine worms, fly larvae, beetles, crustaceans, mollusks, and other invertebrates. Piping plovers also have been observed eating grasshoppers and spiders in the grass near nest sites in Manitoba, Canada and Nebraska. They feed primarily on exposed beach substrates. Adults have been noted foraging within 16 feet of the water's edge.

4. Bull Trout

Historically, bull trout occurred throughout the Columbia River basin east to western Montana, south to northern Nevada, the Klamath basin in Oregon, and the McCloud River in northern California and north to Alberta, British Columbia, and possibly southeastern Alaska. They now inhabit only 6 percent of their formal range. Presently, bull trout are found primarily in upper tributary streams and several lake and reservoir systems. The main populations are located in Montana, Idaho, Oregon, and Washington with a small population in northern Nevada.

The Columbia River population segment includes several river basins in Montana including the Kootenai River, Flathead River, South Fork of the Flathead River, Swan River, Clark's Fork River, Bitterroot River, and Blackfoot River. An additional population segment in Montana is the St. Mary-Belly River. This population segment includes four bull trout subpopulations including the upper St. Mary River, Swiftcurrent River, lower St. Mary River, and Belly River. For the St. Mary-Belly River population segment, about two-thirds of the habitat occurs on federal lands (Glacier National Park) and about a third on Tribal lands of the Blackfoot Indian Nation. Thus, according to FWS, the bull trout is found in Flathead, Granite, Lake, Lewis and Clark, Lincoln, Mineral, Missoula, Powell, Ravalli, Sanders, and Silver Bow Counties in Montana.

Critical habitat for the bull trout was designated in the September 26, 2005, Federal Register in many of the above river basins. This included 1,058 stream/shoreline miles and 31,916 acres in Montana in the Clarks Fork River basin, Kootenai River basin, and St. Mary-Belly River basin. They included Deer Lodge, Flathead, Glacier, Granite, Lake, Lewis and Clark, Lincoln, Mineral Missoula, Powell, Ravalli, and Sanders Counties in Montana. .

Small bull trout feed on terrestrial and aquatic insects but shift to preying on other fish as they grow larger. Large bull trout are primarily fish predators feeding on whitefish, sculpins, and other trout species. Some may live near areas where they were hatched and others migrate. The bull trout in Flathead Lake have been known to migrate up to 155 miles to spawn.

Bull trout are more sensitive to increased water temperatures, poor water quality, and low flow conditions than many other trout species. Past and continuing land management activities have degraded stream habitat to the point where bull trout can no longer survive or reproduce successfully. In many watersheds, remaining bull trout are small, resident fish isolated in headwater streams. Bull trout hybridize with other trout species. Dams and other in-stream structures also affect bull trout by blocking migration routes, altering water temperatures, and killing fish as they pass through and over dams or are trapped in irrigation and other diversion structures. Logging and road building may cause stream sedimentation which fills in spawning areas and smothers eggs. Mining poisons prime waters with toxic mine tailings and cyanide. Improper cattle grazing reduces streamside vegetation leading to higher stream temperatures and increased sedimentation.

5. Ute Ladies' -tresses

The Ute ladies' -tresses is an orchid that occurs in relatively low elevation riparian, spring, and lakeside wetland meadows in 3 general areas of the interior western United States: (1) near the base of the eastern slope of the Rocky Mountains in southeastern and central Wyoming, north-central and central Colorado, and Montana; (2) in the upper Colorado River basin, particularly in the Uinta Basin; and (3) along the Wasatch Front and

westward in the eastern Great Basin in north-central and western Utah and extreme eastern Nevada. As of 2004, there were a total of 61 populations in Colorado, Idaho, Montana, Nebraska, Nevada, Utah, Washington, and Wyoming and an estimated 85,316 plants.

One population of approximately 71 flowering individuals was discovered in an old meander scar of the Jefferson River in the Missouri River drainage in Jefferson County, Montana. Since then, the species also has been found in Broadwater, Beaver, Gallatin, and Madison Counties. Through 2004, there were an estimated total of 11 populations and 1,588 plants in Montana.

6. Water Howellia

The current range of water howellia includes northwest Montana, northern Idaho, and western Washington. In Montana, it occurs in the drainage of Swan River in Lake and Missoula Counties. The majority of occupied habitat includes 119 acres in the Swan Valley.

In 1986, only 13 total populations were documented in Montana. One year later, an additional 39 occurrences were located. In 1995, an additional 43 ponds were found to contain populations, bringing the total known occurrences to 101 in the state. Since 1995, populations have been discovered in an additional 37 ponds bringing a total number of documented occurrences to 138 in the Swan Valley. However, 45 of the populations have not been visited for more than five years and 27 occurrences have been visited only once. Most of the populations in Montana occur on national forest lands (Flathead National Forest) or a mixture of forest service land, private lands, or Plum Creek Timber Company.

It is highly restricted and typically occurs in forests where it is limited to small pothole ponds of quiet water and shallow, abandoned oxbows. These are generally filled by snowmelt run-off and spring rains, and dry out by late summer or early fall. The species is threatened by loss of wetland habitat and habitat changes as a result of timber harvesting, livestock grazing, residential development, and competition by introduced plant species.

C. Candidate Species

1. Fluvial Arctic Grayling!!

Called both the Montana Arctic grayling and the fluvial Arctic grayling, this candidate species is found in only the upper Big Hole River in Beaverhead, Deer Lodge, Gallatin, Lewis and Clark, Madison, Silver Bow, and Teton Counties. The U.S. Fish & Wildlife Service settled a lawsuit over the legal status of the grayling on August 9, 2005, and

agreed to make a final listing determination by April 16, 2007.

At the end of the 19th century the Arctic grayling were intermittently distributed throughout the upper Missouri River drainage above Great Falls. It is now restricted to about 4 percent of its historic range in the Big Hole River. In the fall of 2002, the remnant grayling population in the Big Hole River apparently had declined to such a low level that not enough fish were captured to estimate population density. Biologists also found increased population numbers in the lower, cooler reaches of tributaries to the mainstem Big Hole River in 2002 and 2003. The majority of the current known range in the Big Hole River is on or adjacent to private lands.

Restoration efforts have also been underway to establish or reestablish populations of the Arctic grayling in Montana. This effort has included the Upper Ruby River since 1997, and in the North and South Fork of the Sun River, lower Beaverhead River, and Missouri River headwaters (Madison and Gallatin Rivers).

Factors potentially threatening survival of Arctic grayling in the Big Hole River include water quality and quantity, competition with introduced species, predation, habitat degradation, and impacts of angling. Water quantity issues include drought and recruitment limitation as a result of sudden runoff events. Sudden increases in stream flows during hatching and emergence of larval grayling may decrease survival and limit recruitment in the Big Hole River. Conversely, extremely low flows during severe drought decrease survival as a result of high water temperatures, increased susceptibility to predation, and diminished habitat. Diversions of water for agriculture have exacerbated persistent drought conditions. During drought years, water temperatures have surpassed lethal limits for Arctic grayling.

Rainbow and brown trout increase in abundance below Dickie Bridge where Arctic grayling are found in low densities. This suggests that the grayling is displaced by non-native trout. Predation on juvenile Arctic grayling by all non-native species also is a potential limiting factor. Another factor potentially limiting grayling in the Big Hole River is habitat degradation. Degradation of riparian vegetation and stream banks by cattle grazing, mass willow removal, and dewatering the river for agricultural uses have negatively impacted fish habitat. High levels of fine sediments, high mid-summer water temperatures, and loss of suitable habitat volume have all impacted the grayling in the Big Hole River.

2. Warm Springs Zaizevian Riffle Beetle

This species of aquatic beetle is found only in Bridge Creek Warm Springs near Bozeman, Gallatin County in southwestern Montana. This spring is on U.S. Fish and Wildlife Service property (Fish Technology Center). The surface area of the springs is approximately 35 square meters. These flightless beetles feed on algae on the gravel bottom and among the vegetation and require flowing water to breathe. Water

temperature is likely the most influential factor in the species' biology.

The available habitat has been reduced to less than 5 square meters. Additional habitat was accidentally destroyed in 1993 but that habitat was restored and the riffle beetles appear to be thriving. Because of the restricted habitat of this species of riffle beetle, any contamination or hazardous substances running into Bridge Creek could impact the spring and therefore the beetle.

C. Proposed Species

There are no proposed aquatic or aquatic dependent species in the project area.

VII. Analysis of Effects

EPA's approval of Montana's 20.06 §303(d) list does not involve the direct commitment of resources and will not have any direct effect on listed species. EPA's approval of the list does not authorize any activities affecting listed species. Nor does such approval alter any applicable requirements under the CWA for protection of water quality in Montana. For example, all permits issued under the National Pollutant Discharge Elimination System ("NPDES") must include limits as stringent as necessary to meet water quality standards. (This requirement applies irrespective of whether listed species may be affected.) Rather, the state's year 2006 list is best viewed as a planning tool for the state to help prioritize its efforts to improve water quality. To the extent this tool helps the state utilize its resources more effectively, such indirect effects of EPA's approval should improve the quality of waters relied upon by all species in Montana.

EPA's analysis includes the effects of its action on the species or habitat that will be added to the environmental baseline. EPA concluded that this process of identifying impaired and threatened waters on a §303(d) list is generally positive for the species and habitat, adding to the environmental baseline in a beneficial manner. Identification of waters on a §303(d) list highlights the waters that need pollutant controls to meet applicable water quality standards.

Montana's section 303(d) list identifies waterbodies within the state that are in need of TMDLs and as such, EPA concludes that the effect of its approval of Montana's list, if any, is

II The environmental baseline includes the past and present impacts of all federal, state, or private actions and other human activities, the anticipated impacts of all proposed federal projects that have already undergone formal or early section 7 consultation, and the impact of state or private actions which are contemporaneous with the consultation (40 C.F.R. Part 404.02).

limited to aquatic or aquatic-dependent species or their habitat. As a result, EPA's approval of the Montana 2006 list will have no direct or indirect effect on species that are not aquatic or aquatic-dependent including non-aquatic or non-aquatic-dependent species associated with activities that are interrelated or interdependent with this action.

The following provides an effects analysis on the parts of Montana's §303(d) list that were approved by EPA. The analysis extends to all aquatic and aquatic-dependent species and their habitat as listed above. The parts of Montana's §303(d) list that were approved by EPA are the 1) waterbodies on the list, 2) the pollutants causing impairment associated with those waters, 3) the prioritization of waters for TMDL development, and 4) the waters identified for TMDL development over next two years.

A. Approval of Water bodies Identified on Montana's List

As discussed above, EPA concluded that the state made a reasonable decision to include the waters it did on its year 2006 list, given the existing and readily available data and information. There is a wide range of listed species and associated habitats in the waters on the state's year 2006 list.

EPA's approval of the list is also an indication that it was reasonable for the state to exclude all other waters in the state. As discussed above, EPA concluded that other waters were excluded from the list because there was adequate information to conclude that these waters were not impaired or threatened or there was lack of sufficient credible data to warrant the inclusion of these waters on the list. See Table 14 of the state's year 2006 list submission for a table of water bodies excluded from the list because there is information to show they are fully supporting all applicable beneficial uses. See Appendix A for a list of waterbodies excluded from the list because they lack sufficient credible data to indicate its impairment status. The waters identified on Appendix E will be scheduled for field monitoring by the state to determine their impairment status.

The state of Montana received comments on its proposed §303(d) list that suggested all waters that currently have or have had species that are listed as threatened or endangered under the Endangered Species Act ("T&E species") should be included on Montana's section 303(d) list. Montana did not decide to list waters solely due to the presence or absence of T & E species. EPA agrees with Montana's decision. As mentioned above, section 303(d)(1)(A) of the CWA requires only that states identify those waters for which limitations in sections 301(b)(1)(A) and (b)(1)(B) of the CWA are not stringent enough to implement any applicable water quality standards. In and of itself, the presence or absence of T & E species gives no indication of whether such effluent limits are or are not sufficient to implement these standards. Further, the cause of the impairment of any particular waterbody must be evaluated in light of the Clean Water Act, which requires states to list only those waters for which the impairment is the result of pollutants.

The cause for the demise or extirpation of any given T &E species is frequently linked to factors that go beyond pollutants. For example, competition between an aquatic T &E species and other more abundant aquatic species is sometimes cited as a reason for the decline of the T &E species. Competition between these species, in and of itself, would not constitute a reason for listing a water on a §303(d) list. (poor water quality could give a competitive advantage to non-listed species if they are more tolerant to the poor water quality, thus making water quality a reason, in combination with competition, for the demise of species.) On the other hand, poor water quality due to pollutants is often cited as a cause for the decline of T &E species and is also a reason for listing waters on a §303(d) list. Where the state of Montana had information on factors such as water quality degradation due to pollutants in certain waters, those waters are considered for inclusion on the list.

Factors that contribute to the demise or extirpation of a given T &E species can be found in determinations of the U.S. Fish and Wildlife Service. For example, the numbers of threatened bull trout have declined in the Columbia River basin because of habitat isolation, loss of migratory corridors, poor water quality, and the introduction of non-native species. (See 63 Fed. Reg. at 31947; June 10, 1998 Federal Register Notice from US Fish and Wildlife Service regarding the determination of Threatened Status for the Klamath River and Columbia River Distinct Population Segments of Bull Trout.) Further, factors affecting bull trout populations include competition and hybridization with other species, fragmentation and isolation of bull trout from habitat changes caused by human activities, and extirpations due to naturally occurring events such as droughts and floods. (See 63 Fed. Reg. at 31668.) In its §303(d) list, Montana identified waterbodies where factors such as habitat, flow, and water quality contribute to impairment of aquatic life, including bull trout and other T &E species. The state did not list a waterbody where there was no sufficient credible information showing that aquatic life uses (including T&E species uses) were impaired for the specific waterbody, including impairments caused by habitat, flow, and water quality. Factors such as hybridization, species competition, and loss of migratory corridors are not seen as a basis to list waters on a Clean Water Act §303(d) waterbody list.

To the extent that the state's identification of §303(d) waters in need of TMDLs impacts the environmental baseline, this action adds a framework for corrective action on impaired and threatened waters insofar as listing waters indicates that the state will eventually calculate TMDLs for those waters. Because the many listed aquatic or aquatic-dependent species will benefit from improvements in water quality, EPA concludes that approval of these waters on the State's list is not likely to adversely affect listed species or their habitat because any effects of the action will be beneficial to the species.

B. Approval of Pollutants Causing Impairment

Montana's §303(d) list identifies the pollutant causing or expected to cause violation of applicable water quality standard for each of the waterbodies on the list. The State's list identifies a range of pollutants including metals, organic enrichment, nutrients, siltation, ammonia, temperature, and other toxics. Poor water quality, in general, has been identified as

one of the stressors contributing to the demise of certain listed species. TMDLs are pollutant specific, with the state required to develop TMDLs for each of the waterbody/pollutant combinations found on its §303(d) list.

As mentioned above, EPA concluded that the state's methodology, including the part of the methodology that identifies pollutants, was reasonable and consistent with provisions found in statute, regulations, and guidance. The state included pollutants on its list only where there was adequate information to conclude that the pollutant was causing or expected to cause a standards violation.

To the extent that the state's identification of pollutants causing threats and impairments to Montana's waters impacts the environmental baseline, this action highlights the cause of water quality problems and adds a framework for corrective action on impaired and threatened waters insofar as the list of waters indicates that the state will eventually calculate TMDLs for those waters. Because the many listed aquatic or aquatic-dependent species will benefit from improvements in water quality, EPA concludes that approval of this identification of pollutants is not likely to adversely affect listed species or their habitat because any effects of the action will be beneficial to the species.

C. Approval of Prioritization of Waters for TMDL Development

As discussed above, EPA concluded that the factors used by the state in determining priorities for the listed waters as well as the ranking system used by the state in applying those factors were reasonable and consistent with the CWA, EPA's regulations, and EPA's guidance. Further, the state included the presence of listed species (*i.e.*, native fish restoration) as one of the ranking factors used for prioritization. The prioritization of listed waters into the high, medium, and low categories provides the general sequence in which TMDLs will be done. In conjunction with its prioritization of water bodies, the state has established a schedule for TMDL development that covers all the waters on the list. It is this schedule that provides a more detailed indication of when TMDLs will be done on a basin-by-basin basis. The overall schedule for TMDL development is currently being adjusted to reflect the court-approved extension of time for development of TMDLs for waters associated with the 1996 §303(d) list to December 2012.

A large portion of the waters on the state's 2006 §303(d) list have threatened or endangered species associated with them (primarily due to the wide distribution of the listed bald eagle). Further, the state's TMDL development schedule reflects a relatively even distribution through the years of TMDLs for waters where there are listed species. In other words, for each year of the state's schedule, TMDLs will be done for waters where there are aquatic or aquatic-dependent species.

The prioritization and schedule established by the state provides a plan to complete all necessary TMDLs. To the extent that this prioritization and schedule impacts the environmental baseline, this action helps provide a framework for improving the quality of Montana's waters. EPA concludes that approval of the state's prioritization of waters on its §303(d) list will not likely adversely affect aquatic or aquatic-dependent species or their habitat because any effects of

this action will be beneficial to the species.

D. Approval of Waters Identified for TMDL Development Over Next Two Years

In its approval of Montana's §303(d) list, EPA approved the state's identification of TMDLs targeted for development over the next biennium. EPA's rationale for reaching this conclusion is the same as the conclusion for the state's overall schedule for TMDL development discussed above. Likewise, the conclusion of effect on listed species is the same.

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VIII. Summary Conclusions

After review of its actions pertaining to the approval of Montana's year 2006 section 303(d) waterbody list, the Agency concludes the following:

- EPA's approval of the Montana 2006 list will have no direct or indirect effect on any listed or candidate species that are not aquatic or aquatic-dependent including non-aquatic or non-aquatic-dependent species associated with any activities that are interrelated or interdependent with the approval and
- EP A's approval of the Montana 2006 list will not likely adversely affect any listed or candidate aquatic or aquatic-dependent species or their habitat because any effects of the action will be beneficial to the species.

IX. References

EP A used the following documents directly or indirectly as a basis for its review of the state's §303(d) waterbody list. This list is not meant to be an exhaustive list of all records reviewed, but it includes the primary documents upon which EP A relied.

40 C.F.R. Part 130 - *Water Quality Planning and Management*.

40 C.F.R. Part 131 - *Water Quality Standards*.

December 28, 1978 Federal Register Notice, *Total Maximum Daily Loads Under Clean Water Act*. 43 Fed. Reg. 60662.

January 11,1985 Federal Register Notice, *40 C.F.R. Parts 35 and 130; Water Quality Planning and Management; Final Rule*, 50 Fed. Reg.1774.

April 1991, "Guidance for Water Quality-Based Decisions: The TMDL Process," EPA 440/491-001.

July 2003 memorandum nom Diane Regas, Director, Office of Wetlands, Oceans, and Watersheds EP A Headquarters, to Water Quality Branch Chiefs, and TMDL Coordinators (US EP A Regions I - X), regarding Guidance for 2004 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d) and 305(b) of the Clean Water Act; TMDL-OI-03.