THE 1998 SOUTH DAKOTA

303(d) WATERBODY LIST

AND SUPPORTING DOCUMENTATION

Protecting South Dakota's Tomorrow ... Today

Prepared by the

SOUTH DAKOTA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
Nettie H. Myers, Secretary

July 21, 1998

Dear Customer:

The South Dakota Department of Environment and Natural Resources is pleased to present our final 1998 EPA-approved 303(d) Waterbody List. The department went the extra mile to get public involvement and input into the list, as EPA stated in its approval letter (see page iii): "We wish to acknowledge the thoroughness of South Dakota's effort to solicit data and information from a wide range of entities and to request public comment on the draft waterbody list." In its approval letter, EPA goes on to say: "The State of South Dakota has continued to provide a quality assessment of its waters. We appreciate the time and care your staff has taken in developing the 303(d) list of waters."

Now that we have another approved list, the real work of completing Total Maximum Daily Loads goes on. As we move forward, we will continue to rely on your help and the help of all your neighbors in each watershed. We will not lose sight of the fact that this work is being done to help improve the water quality of our lakes and streams for you and by you, the people of South Dakota.

If you have comments, questions, suggestions, or just want to talk about this document, please feel free to contact our two lead staff members who worked on this report. Lonnie Steinke was responsible for analyzing water quality data from rivers and streams, while Joan Bortnem was responsible for analyzing water quality data from lakes. Both can be reached either at the address above or phone number 1-800-438-3367.

Using this report as guidance, and with your help, we will continue to
"Protect South Dakota's Tomorrow . . Today".

Sincerely,

Nettie H. Myers
Secretary

July 15, 1998

Ref: 8EPR-EP

Nettie H. Myers, Secretary
Department of Environment and Natural Resources
Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181

Re: Section 303(d) Total Maximum Daily Load (TMDL) Waterbody List

Dear Ms. Myers:

Thank you for your submittal of South Dakota's 1998 Clean Water Act Section 303(d) waterbody list. EPA has conducted a complete review of this waterbody list dated March 31, 1998 with corrections dated April 7, 1998 as well as the supporting documentation and information. Based on this review, EPA has determined that South Dakota's 1998 list of water quality limited segments (WQLSs) still requiring TMDLs meets the requirements of Section 303(d) of the Clean Water Act ("CWA" or "the Act") and EPA's implementing regulations. Therefore, by this order, EPA hereby APPROVES South Dakota's Section 303(d) list. The statutory and regulatory requirements, and a summary of EPA's review of South Dakota's compliance with each requirement, are described in the enclosure.

EPA's approval of South Dakota's Section 303(d) list extends to all waterbodies on the list with the exception of those waters that are within Indian Country, as defined in 18 U.S.C. Section 1151. EPA is taking no action to approve or disapprove the State’s list with respect to those waters at this time. EPA, or eligible Indian Tribes, as appropriate, will retain responsibilities under Section 303(d) for those waters.

The State described its public participation process for development of the Section 303(d) waterbody list in its submittal. We wish to acknowledge the thoroughness of South Dakota's effort to solicit data and information from a wide range of entities and to request public comment on the draft waterbody list. The process to solicit public input included public notices, public meetings, mailings to interested parties, and the posting of the draft §303(d) waterbody list on South Dakota's Internet site.

EPA has also received South Dakota's long-term schedule for TMDL development for all waters on the 1998 list. EPA acknowledges and appreciates receipt of this schedule. The State's schedule provides for the development of TMDLs for all the pollutants of concern for all the waters on the 1998 waterbody list within 13 years. Further discussion of this schedule will be forthcoming in a separate letter to you in the near future.

The State of South Dakota has continued to provide a quality assessment of its waters. We appreciate the time and care your staff has taken in developing the §303(d) list of waters. In particular, we are especially thankful for the hard work from the members of your staff to put together a well organized and thorough document. We wish to continue our support in your efforts to develop TMDLs for the waters identified on the list.

Again, thank you for the efforts related to the excellent job of developing the §303(d) TMDL waterbody list for the 1998-2000 biennium. If you have questions on any of the above information, feel free to give me or Bruce Zander (303/312-6846) of my staff a call.

Sincerely,

Max H. Dodson
Assistant Regional Administrator
Office of Ecosystems Protection and
Remediation

March 31, 1998

William Yellowtail, Administrator
US Environmental Protection Agency
Region VIII, Suite 500
999 18th Street
Denver, CO 80202

Re: Final 1998 South Dakota 303(d) List

Dear Mr. Yellowtail:

I am pleased to submit to you the *1998 South Dakota 303(d) Waterbody List*, with supporting documentation, as required under Section 303(d) of the Clean Water Act.

This submittal represents a tremendous effort expended by this department as well as interested members of the public from across the state. The 1998 list represents one of the most comprehensive reviews of water quality data completed in South Dakota to date.

Also included is a schedule for developing Total Maximum Daily Loads for waters on the 1998 list. South Dakota will need help from EPA to meet this schedule.

We have provided your agency with an electronic copy of the list in addition to this submittal. It will also be available in the near future via our homepage at http://www.state.sd.us/denr/denr.html.

We look forward to your agency's approval of our 1998 303(d) Waterbody List. We also want to thank members of your staff, especially Bruce Zander, for their assistance and insights during the development process.

Sincerely,

Nettie H. Myers
Secretary

Enclosure

cc: Max Dodson, USEPA Region VIII
Bruce Zander, USEPA Region VIII
David Rathke, USEPA Region VIII
Bill Wuerthele, USPEA Region VIII

SOUTH DAKOTA
1998
TOTAL MAXIMUM DAILY LOAD
WATERBODIES

The 1998 List Identifying South Dakota Waterbodies for Total Maximum Daily Load Development pursuant to Section 303(d) of the Federal Clean Water Act

Prepared for the
United States Environmental Protection Agency

by the
South Dakota Department of
Environment and Natural Resources
Nettie H. Myers, Secretary

Pierre, South Dakota 57501

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INTRODUCTION AND EXECUTIVE SUMMARY

Objective

The objective of this report is to list waterbodies within South Dakota which need the development of Total Maximum Daily Loads (TMDLs). Included with this listing are basis for listings, prioritizations, and schedules for development. Supporting documentation such as methodologies used for listings, public participation procedures, and maps are also included.

Overview of TMDLs

TMDLs are an important tool for the management of water quality. The goal of TMDLs is to ensure that waters of the state attain water quality standards. EPA defines a TMDL as "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 surface water quality standards." In simple terms, a TMDL is the amount of pollution a water body can receive and still maintain water quality standards.

TMDLs must be developed for waters that do not meet water quality standards after technology-based requirements have been applied to point source dischargers. Each TMDL should address a specific waterbody or watershed, and specify quantifiable targets and associated actions that will enable a given waterbody to attain and maintain applicable water quality standards.

Section 303(d) of the federal Clean Water Act (CWA) requires states to develop and submit for approval, every even-number year, a list of waters targeted for TMDL development in the next two years. This is referred to as the 303(d) list. Items that must accompany this list include targeted pollutants; timeframes for TMDL development; and priority ranking for completion of TMDLs. This year, EPA is also requiring states to include a comprehensive list of all waters requiring TMDLs, and a schedule for developing TMDLs on those waters within 8-13 years.

Summary of Section 303(d) of the Federal Clean Water Act

Section 303(d) of the federal CWA requires states to identify waters that do not or are not expected to meet applicable water quality standards with technology-based controls alone. The Act also specifies that states must establish a priority ranking for these waters, taking into account the pollution severity and designated uses of the waters. States must submit to EPA the "waters identified and loads established" for review and approval. This report and list fulfills the first part of this requirement (identifying the waters).

Once identification and priority ranking of TMDL waters are completed, states are to develop TMDLs at a level necessary to achieve the applicable state water quality standards. TMDLs must allow for seasonal variations and a margin of safety that accounts for any lack of knowledge concerning the relationship between effluent limits and water quality.

Summary of 1998 303(d) TMDL Waterbody List

Using the methodologies, data, information, and public input described, DENR has developed a list of waterbodies for the 1998 303(d) list. This list, contained in subsequent pages of this report, includes waterbody names, pollutants of concern, basis for listing, prioritizations, and other information. A total of approximately 140 different waterbodies are listed. Each waterbody may contain several different pollutants and thereby may constitute several TMDLs for each waterbody. In addition, some streams are listed more than once due to TMDLs identified for different segments of the same stream (even for the same pollutant).

For planning, prioritizing, and scheduling TMDL development, as well as assessing what additional resources (if any) are necessary to complete the projected TMDLs, an effort was made to determine the total number of TMDLs implicated by the 1998 list.

The figure and table below summarize the projected number of TMDLs, grouped by basin. This summary represents a grouping of TMDLs. For example, if a specific waterbody required a TMDL for several different pollutants, all pollutants were grouped into one TMDL for that waterbody. In reality, it may not be possible to incorporate each pollutant into a single TMDL for each waterbody segment, but this assumption was made merely for planning purposes. There may be other cases where widespread support for water quality improvement, large single-entity landholders (federal lands, state lands, etc.), or other factors allow several waterbodies to be targeted for improvement under a single TMDL. Possible scenarios such as these make TMDL numbers difficult to project. Notwithstanding this fact, the implications of the list are that a tremendous work effort will be necessary to accomplish the number of TMDLs in the timeframe suggested by the list.

Summary of 40 CFR 130

Chapter 40 of the Code of Federal Regulations (CFR), Part 130, relates to water quality management and planning. This regulation, which is the implementing regulatory language for section 303(d) and other sections of the Clean Water Act, requires states to do the following:

1. Identify waterbodies requiring TMDLs;
2. Set priorities for developing these loads;
3. Submit lists of waterbodies identified to EPA for approval;
4. Establish these loads for waterbodies identified;
5. Implement the TMDLs through discharge permits, Water Quality Management Plans, 319 nonpoint source projects, and other means; and
6. Involve the public, dischargers, agencies, and local governments in the process.

Waters required to be listed are those where pollution control requirements (technology-based permit limits or other prohibitions required by state, local, or federal authorities) are not stringent enough to implement applicable water quality standards.

Specific requirements for content of the lists are as follows:

1. Priority ranking of all listed waters;
2. Pollutants causing or expected to cause violations of water quality standards; and
3. Identification of waters targeted for TMDLs over the next two years.

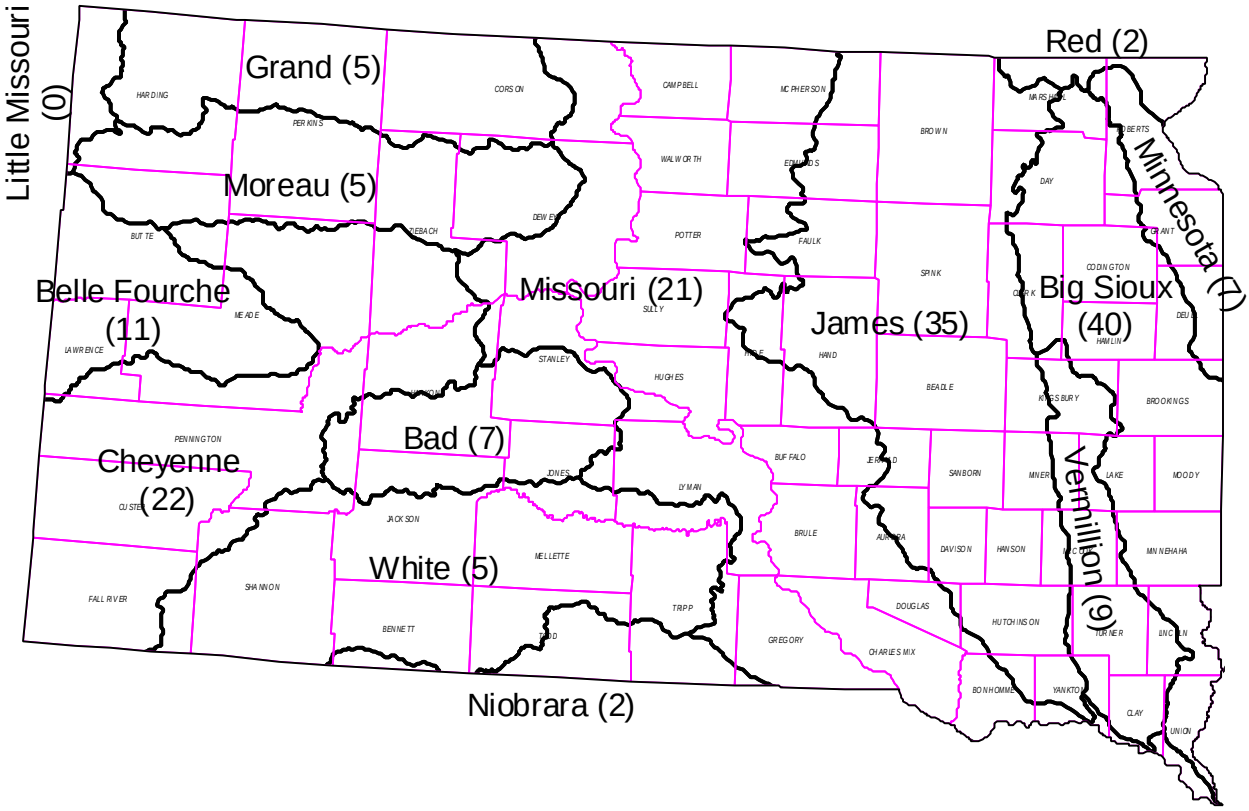
Additional items required by regulation or guidance include the following:

1. A schedule for the development of TMDLs for <u>all</u> waterbodies on the list;
2. A description of data and methodology used to develop the list;
3. Rationale for any decision not to use readily available data;
4. An identification of waters taken off the most recent list and a reason for de-listing;
5. Any request for "rolling over" certain targeted waters to the next biennium; and
6. A summary of comments received during the public review period.

Each state must "demonstrate good cause" for not listing a waterbody and justify the exclusion of any waterbody. All existing and readily available water quality data must be used to prepare the list. At a minimum, this includes:

1. Waters on the most recent 305(b) report identified as "partially meeting", "not meeting", or "threatened";
2. Waters for which modeling indicates nonattainment of water quality standards;
3. Waters for which water quality problems have been reported by local, state, or federal agencies; the general public; or academic institutions. These organizations should be actively solicited for information; and
4. Waters identified by the state as impaired or threatened in a nonpoint assessment submitted to EPA under section 319 of the federal CWA.

Map of Projected Number of TMDLs by Major River Basin



Summary of TMDLs by Basin

Basin	Projected Number of TMDLs required	Pollutants of Concern	Number of TMDLs Planned for 1998-2000 Biennium
Bad River Basin	7	Ammonia, dissolved oxygen, nutrients, accumulated sediment, total suspended solids	3
Belle Fourche River Basin	11	Ammonia, bacteria, metals, pH, accumulated sediment, temperature, total suspended solids	5
Big Sioux River Basin	40	Ammonia, bacteria, dissolved oxygen, nutrients, accumulated sediment, total suspended solids	17
Cheyenne River Basin	22	Ammonia, bacteria, nutrients, pH, accumulated sediment, total suspended solids	7
Grand River Basin	5	Bacteria, dissolved oxygen, nutrients, accumulated sediment, temperature, total suspended solids	1

Summary of TMDLs by Basin

Basin	Projected Number of TMDLs required	Pollutants of Concern	Number of TMDLs Planned for 1998-2000 Biennium
James River Basin	35	Ammonia, bacteria, dissolved oxygen, nutrients, accumulated sediment, total suspended solids	15
Little Missouri River Basin	0	-	0
Minnesota River Basin	7	Ammonia, bacteria, dissolved oxygen, nutrients, accumulated sediment	3
Missouri River Basin	21	Ammonia, bacteria, dissolved oxygen, nutrients, accumulated sediment	2
Moreau River Basin	5	Ammonia, bacteria, nutrients, accumulated sediment, total suspended solids	1
Niobrara River Basin	2	dissolved oxygen, nutrients, accumulated sediment, total suspended solids	0
Red River Basin	2	Dissolved oxygen, nutrients	0
Vermillion River Basin	9	Ammonia, bacteria, dissolved oxygen, nutrients, accumulated sediment, total suspended solids	3
White River Basin	5	Ammonia, bacteria, accumulated sediment, total suspended solids	1
Totals	**171**		**58**

Resource Implications from 1998 303(d) List

TMDL issues span a wide range of activities within DENR. Nonpoint source assessments, clean lakes assessments, discharge permitting, water quality monitoring, water quality standards, water rights, feedlot regulations, and other areas are involved in or effect TMDL development and implementation. Because of this fact, TMDLs fit well with other ongoing water quality management activities, such as:

- Past assessments under the Clean Lakes program (314 program) can qualify as TMDLs;
- 319 nonpoint source assessment projects can qualify as TMDLs; or
- Water quality-based effluent limits in National Pollutant Discharge Elimination System (referred to as Surface Water Discharge in South Dakota) permits are based on TMDLs developed by the State.

The development and implementation of TMDLs will likely rely on existing programs, resources, and activities. Effective TMDL development will only occur with strong coordination within all DENR water programs. In addition, the development and implementation of effective TMDLs that will result in improving the quality of South Dakota's waters must have the support, input, and coordination of affected government agencies, local groups, and citizens. As such, the TMDL effort will involve the coordination of many diverse groups and diverse interests with the common goal of improving water quality.

It is not possible to develop TMDLs for every listed waterbody within the next two years. The timeframe to develop TMDLs for each waterbody on this list is 13 years, in accordance with EPA guidelines.

Improvements in water quality may occur before the next list is due in the year 2000. Data assessed at that time may or may not indicate that a waterbody should be removed from the list before a TMDL is developed. In addition, it is likely that TMDLs will be developed for waters which are not on this list, whether in the next two years or beyond, due to local interest in water quality improvements, new data indicating water quality problems, new Surface Water Discharge permits, or other factors. New methods to assess data may be developed over the next two years that will necessitate a different perspective to the existing listing process. Also, as the federal and state TMDL regulations and policies evolve, the 1998 list may no longer reflect the most recent regulatory requirements. It is important to recognize that this list is merely a tool to guide DENR and other organizations and stakeholders in efforts towards improving water quality in South Dakota.

LISTING APPROACH AND METHODOLOGIES

Specific criteria were developed and used to determine which waterbodies should be placed on the 1998 list. These criteria were developed based on section 303(d) of the federal Clean Water Act, EPA guidance, departmental priorities and objectives, public input, and other important factors. A discussion of the approaches and methodologies used to develop the 1998 list is included below.

Types of Waters Listed

The following information and data sources were used to determine waterbodies that should be included on the list, based on the requirements of section 303(d) of the federal Clean Water Act:

- Waters on the most recent 305(b) report identified as “partially meeting”, “not meeting”, or “threatened”;
- Waters for which modeling indicates nonattainment of water quality standards;
- Waters for which water quality problems have been reported by local, state, or federal agencies; the general public; or academic institutions; and
- Waters identified as impaired or threatened in a nonpoint assessment submitted to EPA under section 319 of the CWA.

Impaired Waters

Waters that are considered impaired for meeting beneficial uses or water quality standards are required to be placed on the 303(d) list. This includes waters which are identified under the “not supporting,” “partially supporting,” or “threatened” beneficial use categories in the 1996 305(b) report prepared by department. Waters designated as such in the 305(b) report are included on the 303(d) list unless water quality improvements were documented since the report was completed or no credible evidence was available to support its listing. Not every water quality-limited segment identified in the 305(b) report has been included on the 303(d) list. In each case, an explanation has been provided as to why a particular segment was excluded from the 303(d) list.

Waters with Surface Water Discharge-Related Wasteload Allocations

In December 1993, the department was delegated authority to administer the National Pollutant Discharge Elimination System. At this time, EPA withheld program authorization within Indian Country. The department’s program is called the Surface Water Discharge System. Most Surface Water Discharge permits contain technology-based effluent limits, which are usually the best available technology that is economically achievable. In cases where technology-based limits are not sufficient to protect water quality standards, water quality-based effluent limits are incorporated into permits via wasteload allocations. In many cases, the development and implementation of water quality-based limits includes the development of a TMDL for the receiving water. The portion of the TMDL allocated to the point source discharger is the "wasteload allocation". The portion of the TMDL allocated to upstream, background sources is the "load allocation". In the instances where a TMDL is developed and used as a basis for the wasteload allocation (WLA) and water quality-based effluent limits, the TMDL and all its components are documented in the Surface Water Discharge permit and accompanying statement of basis. This permit and statement of basis are submitted to EPA for review and approval under Section 303(d). Thus, all waters which have Surface Water Discharge permits that are expiring between April 1,

1998, and March 31, 2000, and are expected to require wasteload allocations are being placed on the 1998 303(d) list. Also, those permits which were on the 1996 303(d) list that are still being written were placed on the 1998 list.

Waters with Surface Water Discharge-related TMDLs fall into the category of waters *"for which dilution calculations or predictive modeling indicate nonattainment of water quality standards."* This does not mean that the waterbody segment to which any particular Surface Water Discharge permittee discharges is impaired. It simply means that without water quality-based limits, predictive modeling would indicate probable impairment. Most segments for which Surface Water Discharge-related TMDLs are being developed are in fact **not impaired,** because the majority of these TMDLs are already in place, and are merely being updated during this biennium.

Waters reported by government agencies; members of the general public; or academic institutions

Through DENR's existing water quality programs and public participation, additional waters were considered for inclusion on the 303(d) list. DENR received comments on specific waterbodies that should be included on the list from organizations and citizens solicited during the public participation period. In addition, waters which are not listed as impaired in the 1996 305(b) report but for which DENR has internally collected data that shows impairment have been listed. In cases where water quality problems were reported or DENR had data that showed impairment, but the water was not listed, the basis for such exclusion is given.

Waters with current 319 Assessments

The department has been actively involved in watershed assessment and implementation activities since the late 1970's. Funded under several different sources and sections of the Clean Water Act, the department has worked diligently to improve the water quality of the state's lakes and streams for many years. The current major funding source for addressing nonpoint source pollution problems is Section 319. The department has been a leader in nonpoint source program development and implementation as proven by several successful nonpoint source improvement projects that have resulted in coordinated local involvement and water quality improvements.

Past 303(d) lists for nonpoint sources emphasized current priorities within the nonpoint source program. Waters listed were those that were already targeted for 319 projects. South Dakota has had an extremely effective 319 program by strongly emphasizing a grassroots method towards project development and local voluntary involvement with cost-share incentives. The department has not implemented 319 activities for waters where there has not been clear local support. As such, waters that may have been impaired from various nonpoint sources but were not of concern to the local community, were not pursued.

Nonpoint source pollution issues are best left at the grassroots level where water quality assessments are completed upon request of the local community. The technical ability to target water quality end points has been developed to the point now that the department is able to develop TMDLs during the project assessment.

The 1998 list includes all waters that have data to support that nonpoint source pollution problems exist, independent of current programmatic emphasis and resources. The department realizes that, while the successful types of projects developed over the last several years will still occur, the method of prioritizing 319 activities will change. This will not only affect the department's activities, priorities, and resources, but it will affect when and how local project sponsors receive grant funds for watershed assessments and implementation projects.

The department currently has completed five EPA-approved TMDLs for nonpoint source impaired waters.

Minimum Data Requirements

In order to ensure that each listing is defensible, the department established minimum requirements for the data to be used as a basis for listing. Information and data used to support an individual listing was based on the following criteria:

- Age of data was five years or less, unless adequate justification existed to use older data based on departmental consensus;
- Data met minimum sampling requirements as specified in the South Dakota Surface Water Quality Standards;
- Data collection and analyses followed established departmental Quality Assurance/ Quality Control as defined in Standard Operating Procedures for Field Samplers, South Dakota Department of Environment and Natural Resources, August, 1997 or met minimum QA/QC as defined by the responsible agency; or
- Problems reported by other agencies, institutions, and the public, were accompanied by data meeting the above requirements or confirmed DENR data.

Stream Methodologies

Beneficial Uses

Beneficial use classifications of surface waters of the state have established in the Administrative Rules of South Dakota, Chapter 74:51. The classifications designate the minimum water quality at which surface waters are to be maintained and protected. The following are the beneficial use classifications:

(1) Domestic water supply waters;
(2) Coldwater permanent fish life propagation waters;
(3) Coldwater marginal fish life propagation waters;
(4) Warmwater permanent fish life propagation waters;
(5) Warmwater semipermanent fish life propagation waters;
(6) Warmwater marginal fish life propagation waters;
(7) Immersion recreation waters;
(8) Limited contact recreation waters;
(9) Wildlife propagation and stock watering waters;
(10) Irrigation waters; and

(11) Commerce and industry waters.

Water Quality Standards

South Dakota's numeric water quality standards are summarized in the table below. These standards have been established for various beneficial uses as defined in the Administrative Rules of South Dakota, Chapter 74:51.

Summary of Numeric Surface Water Quality Standards

Parameters [3] (mg/L) except where noted	(1) Domestic water supply	(2) Coldwater permanent fish life propagation	(3) Coldwater marginal fish life propagation	(4) Warmwater permanent fish life propagation	(5) Warmwater semipermanent fish life propagation	(6) Warmwater marginal fish life propagation	(7) Immersion recreation	(8) Limited contact recreation	(9) Wildlife propagation & stock watering	(10) Irrigation	(11) Commerce & industry
Alkalinity ($CaCO_3$)									750[1]/ 1,313[2]		
Barium	1.0										
Chloride	250[1]/ 438[2]	100[1]/175[2]									
Chlorine, total residual		0.019 acute 0.011 chronic	0.019 acute 0.011 chronic	0.019 acute 0.011 chronic	0.019 acute 0.011 chronic	0.019 acute 0.011 chronic					
Coliform, total (per 100 mL)	5,000 (mean); 20,000 (single sample)										
Coliform, fecal (per 100 mL) May 1 - Sept. 30							200 (mean); 400 (single sample)	1,000 (mean); 2,000 (single sample)			
Conductivity (uohms/cm @ 25° C)									4,000[1]/ 7,000[2]	2,500[1]/ 4,375[2]	
Fluoride	4.0										
Hydrogen sulfide, undisassociated		0.002	0.002	0.002	0.002	0.002					
Nitrogen, unionized ammonia as N		0.02[1]/ 1.75X the criterion	0.02[1]/ 1.75X the criterion	0.04[1]/ 1.75X the criterion	0.04[1]/ 1.75X the criterion	0.05[1]/ 1.75X the criterion					
Nitrogen, nitrates as N	10.0								50[1]/ 88[2]		
Oxygen, dissolved		≥ 6.0; ≥ 7.0 (during spawning season)	≥ 5.0	≥ 5.0;	≥ 5.0	≥ 4.0	≥ 5.0	≥ 5.0			
pH (units)	6.5 - 9.0	6.6 - 8.6	6.5 - 8.8	6.5 - 9.0	6.5 - 9.0	6.0 - 9.0			6.0 – 9.5		6.0 - 9.5
Sodium adsorption ratio										10	
Solids, suspended		30[1]/ 53[2]	90[1]/ 158[2]	90[1]/ 158[2]	90[1]/ 158[2]	150[1]/ 263[2]					
Solids, total dissolved	1,000[1]/ 1,750[2]								2,500[1]/ 4,375[2]		2,000[1]/ 3,500[2]
Sulfate	500[1]/ 875[2]										
Temperature (°F)		65	75	80	90	90					
Total petroleum hydrocarbons	≤ 1.0								≤ 10		

Summary of Numeric Surface Water Quality Standards

Parameters [3] (mg/L) except where noted	(1) Domestic water supply	(2) Coldwater permanent fish life propagation	(3) Coldwater marginal fish life propagation	(4) Warmwater permanent fish life propagation	(5) Warmwater semipermanent fish life propagation	(6) Warmwater marginal fish life propagation	(7) Immersion recreation	(8) Limited contact recreation	(9) Wildlife propagation & stock watering	(10) Irrigation	(11) Commerce & industry
Oil and grease									$\leq$ 10		

[1] 30-day average [2] daily maximum [3] water quality standards for toxic pollutants are not included in this summary

In evaluating data against the water quality standards, consideration was made whether to compare to the daily maximum (acute) standard or 30-day average (chronic) standard, where they exist. The water quality standards define a 30-day average as "the arithmetic mean of 3 consecutive . . . samples taken in separate weeks in a 30-day period." Most of the water quality data was taken at such intervals that a computation of monthly averages was not possible. Therefore, most data was compared to the acute standard, except in cases where the chronic standard is required to be maintained at all times.

DENR realizes there are some limitations in choosing to determine use support or impairment by comparing water quality data to the water quality standards. It is conceivable that a beneficial use could continue to be supported even though numeric standards are exceeded. It is also possible that a waterbody may not be supporting an assigned beneficial use, but numeric data shows standards are being maintained. There may be waterbodies that are providing a beneficial use that are not currently assigned the beneficial use in the regulations. Still in other cases, a waterbody may be assigned uses that do not exist, or may be classified for uses that the waterbody could never support. However, these issues are beyond the scope of this document. In light of these considerations, it is possible that some waters which are on the 1998 list will ultimately not receive TMDL development, but will be addressed through mechanisms such as water quality standards review, use attainability analyses, or other mechanisms.

Surface Water Quality Standards for Metals

South Dakota surface water quality standards for metals are based on the federal EPA criteria documents and EPA recommendations. Consistent with EPA guidance, the water quality standard for most of the metals is based on the measured hardness of the water. As the hardness increases, the toxicity of the metal in the water generally decreases. This is true except for mercury, arsenic, selenium, and hexavalent chromium. For these four metals, there is one criterion that is applicable at all times regardless of the hardness of the water.

Most of the water quality data for metals collected by the state are from streams located in the northern Black Hills. This area of South Dakota contains a majority of the permitted mining activities and has a very complex geology. Because of these two factors, the department has made it a priority to monitor these streams for metal concentrations.

Data on metal concentrations in the streams in the northern Black Hills over the last five years was primarily based on the "total" analysis laboratory method. Therefore, for purposes of developing the 303(d) list, this data was compared to the water quality standard regulations that existed during the time the data was collected. Based on EPA recommendations and current federal policy, the state revised the water quality standards in 1997 so that compliance with the water quality standards for metals is now based on the "dissolved" analysis laboratory method. Since June of 1997, the state has monitored these

streams using both the total and dissolved laboratory methods for measuring metal concentrations in water samples. Future 303(d) lists will use dissolved water quality data to determine compliance with water quality standards for metals.

Prior to July 1997, the water quality standard regulations specified that compliance with the chronic water quality standard was to be based on the results of a 24-hour composited sample. The numerical value of a parameter found in any one grab sample collected during the 24-hour period may not exceed 1.75 times the applicable criterion. Compliance for zinc is based on the chronic standard for either composite or grab samples. There is no chronic water quality standard for silver. The data available for comparison in developing the 303(d) list was primarily from grab samples.

Consistent with the water quality standards that existed prior to June 1997, the department compared the metals data to the chronic water quality standard for the metal multiplied times a factor of 1.75 (except for silver and zinc). If the collected data was higher than the allowable standard, that data point was counted as a violation. For zinc, the metals data was compared directly to the chronic water quality standard without the 1.75 factor. For silver, the collected metals data was compared to the acute water quality standard.

Sources of Data

Data was obtained from various stream monitoring sites maintained by DENR. A network of 96 water quality monitoring (WQM) sites has been established for many years. Periodic sampling of these sites is performed, with monthly, quarterly, and seasonal frequencies, depending on the site. Different parameters are sampled depending on the beneficial use assigned to the waterbody and programmatic needs. Evaluation of data from DENR's WQM sites was automated by the use of the STORET database. STORET is a federal database of surface water quality data collected by various state and federal agencies.

Additional data was received as a result of DENR's request for water quality data during the public input process. This data ranged from general comments regarding specific waterbodies that should be listed to actual sample results from specific waterbodies.

Data Evaluation

Specific criteria were developed in order to define how data would be evaluated to determine the status of a waterbody. In reviewing the data, the following criteria were utilized:

Criteria for Evaluating Water Quality Data (Streams)

Description	Criteria Used
Number of observations (samples) required to consider data representative of actual conditions	20 samples for any one parameter required at any site. If greater than 25% of samples exceed water quality standards, this threshold was reduced to 10 samples, since impairment is more likely.

Criteria for Evaluating Water Quality Data (Streams)

Description	Criteria Used
Required percentage of samples exceeding water quality standards in order to consider segment water quality-limited	>10% (>25% if less than 20 samples available). The 10% threshold is identical to that used to determine stream impairment in the 1996 305(b) report.
Data age	Data must be less than five years old (1992 and newer) unless there is justification that data is representative of current conditions. While a data age of two years matches the 303(d) listing cycle, it does not allow for enough samples to accurately portray variability.
Quality Assurance/Quality Control	There must be a consensus that the data meets QA/QC requirements similar to those outlined in DENR protocols. QA/QC data was encouraged to be submitted.

Deviations from the above criteria were allowed in specific cases, and are generally discussed in the tables listing the 1998 TMDL waterbodies.

Lake Methodologies

Water Quality Standards Applicable to Lakes

South Dakota's numeric water quality standards criteria (summarized in an earlier table), established for various beneficial uses, apply to lakes as well as streams. There are also several narrative water quality standards, listed below, that were considered as assessment methodologies were developed for lakes.

Narrative Water Quality Standards Applicable to Lakes

74:51:01:05. Materials causing pollutants to form in waters. Wastes discharged into surface waters of the state may not contain a parameter which violates the criterion for the waters' designated beneficial use or impairs the aquatic community as it naturally occurs. Where the interaction of materials in the wastes and the waters causes the existence of such a parameter, the material is considered a pollutant and the discharge of such pollutants may not cause the criterion for this parameter to be violated or cause impairment to the aquatic community.
74:51:01:06. Visible pollutants prohibited. Raw or treated sewage, garbage, rubble, unpermitted fill materials, municipal wastes, industrial wastes, or agricultural wastes which produce floating solids, scum, oil slicks, material discoloration, visible gassing, sludge deposits, sediments, slimes, algal blooms, fungus growths, or other offensive effects may not be discharged or cause to be discharged into surface waters of the state.
74:51:01:08. Taste- and odor- producing materials. Materials which will impart undesirable tastes or undesirable odors to the receiving waters may not be discharged into surface waters of the state in concentrations that impair a beneficial use.
74:51:01:09. Nuisance aquatic life. Materials which produce nuisance aquatic life may not be discharged or caused to be discharged into surface waters of the state in concentrations that impair a beneficial use or create a human health problem.
74:51:01:27. Lakes not allowed a zone of mixing. No zone of mixing is allowed for lakes. Discharges to lakes must meet the water quality standards at the point of discharge. No discharge of pollutants is allowed which reaches a lake classified for the beneficial use of fish life propagation or causes impairment of an assigned beneficial use.

Lake Assessment Methodology

The department has periodically monitored approximately 112 lakes since 1979. These lake assessments mainly focus on trophic state and its relationship to the support or nonsupport of beneficial uses. Lake monitoring may also include other physical and chemical measurements.

The basic qualifier used to assess whether or not the beneficial uses of a lake are impaired is the classification designation of trophic state of either hypereutrophy or eutrophy. Carlson's Trophic State Index (TSI) is used to combine measures of summer Secchi disk transparency and epilimnetic concentrations of chlorophyll-*a* and total phosphorous. A combined mean trophic state index greater than 55.5 indicates the cutoff point between eutrophic and mesotrophic states. Any lake having a mean TSI value above 55.5 indicates that the beneficial uses of recreation, fish propagation, and aesthetics have a greatly increased level of impairment.

The department also considered the historical trend in TSI values obtained during the lake assessments. If the overall TSI trend is increased eutrophication, this placed a greater proof of evidence that the level of nutrification is increasing and that these lakes needed to be placed at a higher priority for TMDL development.

Lake Definitions

Carlson's Trophic State Index (TSI)-a measure of eutrophication of a body of water using a combination of measures of water transparency (using Secchi Disk depth recordings), Chlorophyll-*a* concentrations, and total phosphorus levels. TSI measures range from a scale 20-100 and from Oligotrophic waters through Mesotrophic, Eutrophic, to Hypereutrophic waters. Also referred to as the Mean Trophic State Index.

Eutrophication -The process of enrichment of water bodies by nutrients. Degrees of eutrophication typically range from Oligotrophic (maximum transparency, minimum chlorophyll-a, minimum phosphorus) through Mesotrophic, Eutrophic, to Hypereutrophic (minimum transparency, maximum chlorophyll-a, maximum phosphorus). Eutrophication of a lake normally contributes to its slow evolution into a bog or marsh and ultimately to dry land. Eutrophication may be accelerated by human activities and thereby speed up the aging process. Eutrophic lakes are rich in nutrients and organic materials, therefore, highly productive for plant growth. These lakes are often shallow and seasonally deficient in oxygen.

Hypereutrophic-Pertaining to a body of water characterized by **excessive nutrient concentrations** such as nitrogen and phosphorous and resulting **high productivity**.

Eutrophic-Pertaining to a body of water characterized by **large nutrient concentrations** such as nitrogen and phosphorous and resulting **high productivity**.

Mesotrophic-Pertaining to a body of water characterized by **moderate nutrient concentrations** such as nitrogen and phosphorous and resulting **significant productivity**.

Slightly or moderately eutrophic water can be healthful and support a complex web of plant and animal life. However, such waters may be generally undesirable for a drinking water supply due to taste and odor problems and recreation due to poor aesthetics.

Oligotrophic-Pertaining to a body of water characterized by **extremely low nutrient concentrations** such as nitrogen and phosphorous and resulting **very moderate productivity**. Oligotrophic lakes are low in nutrients and consequently poor areas for the development of extensive aquatic floras and faunas. Such lakes are often deep, with sandy bottoms and very limited plant growth, but with high dissolved-oxygen levels. This represents the early stages in the life cycle of a lake.

The index ranges from 0 to 100 with higher values indicating more eutrophic conditions. The TSI values were calculated for each variable in using the following equations, then averaged for each lake:

$$TSI(TP) = 10\left(6 - \left(\frac{LN\left(\frac{48}{TP}\right)}{LN\,2}\right)\right)$$

$$TSI(SD) = 10\left(6 - \frac{LN\,SD}{LN\,2}\right)$$

$$TSI(CHL) = 10\left(6 - \frac{2.04 - (0.68\,x\,LN\,CHL)}{LN\,2}\right)$$

TP=Total Phosphorous in micrograms per Liter
SD=Secchi Disk in Meters
CHL=Chlorophyll *a* in milligrams per cubic

In addition to TSI data, the department has a limited database of data for several water quality constituents through lake assessments, annual beach monitoring, and reported fish kills. Waters were considered for listing if beach closures occurred due to high fecal coliform bacteria levels over the two-year reporting period and if recorded fish kills were attributable to pollution-related causes.

Another method for assessing the water quality impairment of lakes is currently under development. The incorporation of ecoregions and reference conditions into the assessment process may be a more representative and fair portrayal of water quality. The department has initiated plans to use georeferencing to identify reference lakes and streams over the next two years. The use of reference waters may eliminate bias that occurs by the current methodology of using TSI data on a statewide comparative scale. Comparing TSI data between lakes within the same ecoregion may lend a more accurate assessment of use impairment. If this methodology is adopted for the development of the year 2000 303(d) list, the new list may differ from the 1998 list. If this is the case, some waters listed on the 1998 list will require delisting, while waters not included on the 1998 list may be added.

Prioritization of TMDL Waters

Regulatory Requirements

Section 303(d) of the federal CWA requires that each *"state shall establish a priority ranking for such waters, taking into account the severity of the pollution and the uses to be made of such waters."* Little other guidance is offered for states to use in the prioritization process.

A system of prioritization has been developed by DENR based on several factors. Included in these factors are the required elements of *"the severity of the pollution and the uses to be made of such waters."* The methods developed are described below. These criteria are a guide. Other factors may have been considered when prioritizing waters. If a water met any one criteria in a priority category, that did not necessarily mean the water was prioritized as such, since many waters fit some criteria from all categories.

TMDL Prioritization Criteria

Priorities	Applicable Criteria
Priority 1 (High)	• Waters with 319 project(s) active or pending; • Waters with expiring TMDL-related Surface Water Discharge permits; • Imminent human health or aquatic health problem; • Waters with completed or nearly complete Diagnostic Feasibility Reports or Water Quality Assessment Reports indicating water quality impairment; • Waters where TMDL development is expected over the next two years; • Waters where impairments are believed to be largely human-induced; • Waters listed for four or more listing criteria; and • Waters with documented widespread local support for water quality improvement.
Priority 2 (Medium)	• Waters with an increasing trend towards eutrophy or enrichment, with consideration given to the rapidity of the declining water quality; • Waters listed for three listing criteria; and • Waters where local support for TMDL development is expected but not known.
Priority 3 (Low)	• Waters listed as partially supporting beneficial uses in the 1996 305(b); • Waters listed for two or less criterion; • Waters with no evident local support for water quality improvements; • Waters where impairments are believed to be due largely to natural causes; • Waters with recently completed 319 projects, awaiting evaluation of implementation strategies; and • Waters with limited water quality sample results indicating a potential problem but did not meet minimum sampling requirements as established in the Surface Water Quality Standards.
Priority 0 (Not Targeted)	• Waters with EPA-approved TMDLs; and • Waters that meet applicable water quality standards and support assigned beneficial uses.

Section 319-related Waters

As reflected in the table above, waters included in the 1998 list that have active 319 program activities are given the highest priority for TMDL development. Section 319 projects are developed based on water quality impairments, need, and local interest. These waters are given a high priority in the 1998 list

for TMDL development as resources have already been committed and water quality improvements are being targeted.

Surface Water Discharge-related Waters

By state and federal law, Surface Water Discharge permits cannot be issued with a permit life greater than five years. 180 days prior to permit expiration, a discharger must apply for a renewal of their permit. By law, permit renewals are prepared and public noticed by DENR in the same manner as a new application. Surface Water Discharge-related TMDLs are therefore considered a high priority in South Dakota.

The majority of parameters for which Surface Water Discharge-related TMDLs are developed include ammonia and dissolved oxygen. South Dakota's Surface Water Quality Standards do not allow discharges of pollutants to lakes classified for fishlife propagation. As can be seen from the proposed 1998 303(d) list, very few streams have impairments for ammonia and dissolved oxygen. The priorities for Surface Water Discharge-related TMDLs are therefore based very little on the severity of waterbody impairment or the uses to be made of the waters, and largely upon federal requirements to renew these discharge permits and the importance of maintaining the past water quality improvements made through the permits.

PUBLIC PARTICIPATION PROCESS

In order to fulfill the requirements of the federal Clean Water Act, as well as involve the affected community and stakeholders in the water quality improvement process, a public participation process was implemented. Summarized below are the procedures employed by the department to involve the public.

Process Description

First Public Review/Input Period
The first public comment period, which was from December 15, 1997 to January 31, 1998, provided the public and other federal, state, local and tribal agencies with an opportunity to submit supporting information for listing candidate waterbodies.

On or around December 15, 1997, a display ad was published in 11 daily newspapers and *Indian Country Today*, announcing the department was developing the 303(d) list and inviting public input into both the process and waterbodies which should be identified on the list. This announcement was also sent to approximately 120 individuals and organizations.

On December 22, 1997, approximately 117 individuals and organizations were sent letters in which the department requested data that could be used to assess waterbodies for consideration in the development of the list.

Second Public Review Process
Data received after the first public review period, as well as additional data gathered by the department, was reviewed, and a draft list was developed. The draft list was released for public review from February 19, 1998 – March 19, 1998. The availability of the draft list, and the announcement of a public meeting was again published in 11 daily newspapers and *Indian Country Today*. The draft list was also available on DENR's internet homepage at **http://www.state.sd.us/denr/denr.html.**

At this time, the list was provided to USEPA Region VIII for review. The department responded to inquiries and was available to meet with interested groups about the list and listing process.

A public meeting was held over the Rural Development Telecommunications Network on March 11, 1998, at 8 publicized sites. At this meeting, the department presented the list and its documentation, answered questions regarding the list and TMDLs in general, and received public comment. Over 100 people attended the 1-1/2 hour RDTN public meeting.

Copies of public participation documents, as well as responses to oral and written comments received through March 19, 1998 are included in Appendix B.

LISTING OF TMDL WATERS

This section of this report is the heart of the 1998 303(d) list. A listing of each waterbody that will be considered for a TMDL, including the basis for listing, priority, pollutants of concern, and other important information are compiled here. All other sections of this document are in support of this list, either to explain the rationale and decisions made to develop this list, or support its development in some way.

Listing Categories

For planning and management purposes, several categories of lists have been included, as follows:

- Waters listed as "not supporting," "partially supporting," or "threatened" in the 1996 305(b) report;
- Waters reported by local, state, or federal agencies; the general public; or academic institutions (this category has been combined with the previous category due to overlap);
- Surface Water Discharge-related waters;
- Active 319-related waters; and
- Waters that will be targeted for TMDLs over the 1998-2000 biennium (selected waters from each category).

An additional category has been included for those waters that could fit into one of the categories above, but are not being listed for various reasons. The basis for each exclusion is provided.

This method of listing TMDL waters (by category) is most appropriate, as it effectively shows that each category of data that must be considered when developing the list (as required in §303(d) of the CWA) was in fact considered.

Delisting Categories

For planning and management purposes, several categories that allow for the delisting of waters, in accordance with 303(d) regulations and departmental concerns, are as follows:

- EPA-approved TMDL(s) in place for all pollutants of concern;
- Water quality standards now being met because:
  - water quality standards have been changed
  - new monitoring data shows attainment or
  - new modeling results show no potential for exceedence of standards;
- Water was listed originally in error;
- Additional state effluent controls address water quality problems;
- Enforceable nonpoint source control program is adequate to assure standards will be attained and maintained; or
- Data assessment methodologies are improved.

Impaired 305(b) Waters and Waters Reported by Government, the Public, or Academic Institutions

Impairment-related TMDL Waters

Basin Name	Waterbody	Location	Beneficial Use ★	Parameter ★	Information to Support Listing ★	Priority ★
Bad River Basin	Bad River	Entire watershed	6-8-9-10	Accumulated sediment	319 project, data from WQM 29, '96 305(b) report	1
	Freeman Lake	Jackson County	4-7-8-9	TSI, Trend, nitrates, selenium	Lake assessments, '96 305(b), program files	1
	Hayes Lake	Stanley County	5-7-8-9	TSI, Trend	Lake assessments, '96 305(b) report	2
	Murdo Dam	Jones County	1-4-7-8-9	TSI, Trend	Lake assessments, '96 305(b) report	2
	Waggoner Lake	Haakon County	1-4-7-8-9	TSI, Trend	Lake assessments, '96 305(b) report	2
Belle Fourche River Basin	Bear Butte Creek	Headwaters to Lawrence County line	2-8-9-10	TSS, Cadmium, Copper, Zinc	Data from monitoring station SW-5, comments from GF&P[1]	2
	Belle Fourche River	Near Sturgis	4-7-8-9-10	TSS	'96 305(b) report, data from WQM 21	3
	Horse Creek	Headwaters to Indian Creek	6-8-9-10	TDS	'96 305(b) report, data from USGS monitoring site 06436760	3
	Strawberry Creek	Near Lead	2-8-9-10	TDS, TSS, pH, Cadmium, Zinc, Copper, Lead	'96 305(b) report, data from WQM 116, comments from GF&P[1]	1
	Whitewood Creek	Above Gold Run Creek	2-7-8-9-10	pH	Data from WQM 86	3
		Gold Run Creek to Crook City	3-7-8-9-10	Fecal Coliform	'96 305(b) report, data from WQM 85 and WQM 123	3
Big Sioux River Basin	Lake Albert	Kingsbury-Hamlin County	6-7-8-9	TSI	Lake assessments, '96 305(b) report, fish kill	3
	Lake Alvin	Lincoln County	4-7-8-9	TSI, Trend, Fecal Coliform	Lake assessments, '96 305(b) report, 96/97 beach monitoring (8)	1
	Big Sioux River	Near Brookings	1-5-8-9-10	TSS	'96 305(b) report, data from WQM 62 and WQM 2, comments from GF&P	2
		Near Dell Rapids	1-5-7-8-9-10	Fecal Coliform	'96 305(b) report, data from WQM 3, comments from GF&P	2

★ Priority for TMDL development was determined by considering the beneficial uses, parameters, and information to support listing categories. There may be limited instances where additional site-specific criteria were used to determine priority.

[1] Strawberry Creek and Bear Butte Creek are impacted due to historic mine workings and tailings that are or were present in the watershed, and possibly the natural geology of the area.

Basin Name	Waterbody	Location	Beneficial Use ★	Parameter ★	Information to Support Listing ★	Priority ★
		Near Sioux Falls and Brandon	1-5-7-8-9-10	TSS, Fecal Coliform	'96 305(b) report, data from BS23, BS29, WQM 117, and WQM 64, WQM 31, comments from GF&P	2
		Between Canton and Richland (Below Sioux Falls)	5-7-8-9-10	TSS, Fecal Coliform	'96 305(b) report, data from WQM 65, WQM 66, WQM 67, and WQM 32, comments from GF&P	2
	Blue Dog Lake	Day County	4-7-8-9	TSI, Trend, Fecal Coliform	Lake assessments, '96 305(b) report, 96/97 beach monitoring (2)	2
	Brant Lake	Lake County	5-7-8-9	TSI	319 project, Lake assessments, '96 305(b) report	1
	Bullhead Lake	Deuel County	5-7-8-9	TSI, Trend	Lake assessments, '96 305(b) report	2
	Lake Campbell	Brookings County	6-7-8-9	TSI, Trend	319 projects Lake assessments, '96 305(b) report	2
	Clear Lake	Deuel County	6-7-8-9	TSI, Trend	319, Lake assessments, '96 305(b) report	1
	Covell Lake	Minnehaha County	6-7-8-9	TSI, Trend	Lake assessments, '96 305(b) report	2
	East Oakwood Lake	Brookings County	6-7-8-9	TSI, Trend, pH	Lake assessments, '96 305(b) report, fish kill	2
	Lake Herman	Lake County	6-7-8-9	TSI	Lake assessments, '96 305(b) report	3
	Lake Madison	Lake County	5-7-8-9	TSI, Trend, Fish Kill	319, Lake assessments, '96 305(b) report	1
	Minnewasta Lake	Day County	5-7-8-9	TSI, Trend	Lake assessments, '96 305(b) report	2
	Nine Mile Lake	Marshall County	5-7-8-9	TSI, Trend	Lake assessments, '96 305(b) report, fish kill	2
	Lake Norden	Hamlin County	6-7-8-9	TSI, Trend	Lake assessments, '96 305(b) report	2
	School Lake	Deuel County	6-7-8-9	TSI	Lake assessments, '96 305(b) report, fish kill	3
	South Buffalo Lake	Marshall County	5-7-8-9	TSI, Trend, pH	Lake assessments, '96 305(b) report	2
	South Red Iron Lake	Marshall County	4-7-8-9	TSI, Trend	Lake assessments, '96 305(b) report	2
	Whitewood Lake	Kingsbury County	6-7-8-9	TSI	Lake assessments, '96 305(b) report	3
Cheyenne River Basin	Battle Creek	Near Hayward	2-8-9-10	pH, Temperature, Ammonia	'96 305(b) report, data from WQM 17, data from Black Hills National Forest	2
	Bismark Lake	Custer County	3-7-8-9	TSI, pH	Lake assessments, '96 305(b) report	3
	Box Elder Creek	Near New Underwood	4-8-9-10	TSS	'96 305(b) report, data from WQM 79	3
	Center Lake	Custer County	2-7-8-9	TSI, pH	Lake assessments, '96 305(b) report	3

Basin Name	Waterbody	Location	Beneficial Use ★	Parameter ★	Information to Support Listing ★	Priority ★
	Cheyenne River	Near Edgemont	5-8-9-10	TSS, TDS, Fecal Coliform, Conductivity	'96 305(b) report, data from WQM 14	2
		Near Plainview and Wasta	4-7-8-9-10	TSS, Fecal Coliform	'96 305(b) report, data from WQM 16 and WQM 15	2
	Horsethief Lake	Pennington County	2-7-8-9	TSI, Trend, pH	Lake assessments, '96 305(b) report	2
	Lakota Lake (Biltmore)	Custer County	3-7-8-9	TSI, Trend, Fecal Coliform, pH	Lake assessments, '96 305(b) report, 96/97 beach monitoring (1)	2
	Legion Lake	Custer County	3-7-8-9	TSI, Trend	Lake assessments, '96 305(b) report	2
	New Wall Lake	Pennington County	4-7-8-9	TSI, Trend	Lake assessments, '96 305(b) report	2
	Rapid Creek	Below Rapid City	5-7-8-9-10	Fecal Coliform	'96 305(b) report, data from WQM 92 and WQM 110	3
		Near Farmingdale	5-7-8-9-10	TSS, Fecal Coliform	'96 305(b) report, data from WQM 19	3
	Rapid Creek, N Fork	Above mouth	2-8-9-10	Temperature	Data collected by Black Hills National Forest	3
	Spring Creek	Near Sheridan Lake	3-7-8-9-10	Fecal Coliform	Data from WQM 54, data collected by Black Hills National Forest	3
	Sylvan Lake	Custer County	2-7-8-9	TSI	Lake assessments, '96 305(b) report	3
Grand River Basin	Flat Creek Lake	Perkins County	5-7-8-9	TSI, Trend	Lake assessments, '96 305(b) report	2
	Grand River	Near Shadehill	3-8-9-10	pH, Temperature	'96 305(b) report, data from WQM 40	3
		Near Little Eagle	4-8-9-10	TSS, Fecal Coliform	'96 305(b) report, data from WQM 25	3
	Grand River, S Fork	Near Bison	5-8-9-10	TSS	Data from WQM 78	1
	Lake Isabel	Dewey County	1-4-7-8-9	TSI, pH	Lake assessments, '96 305(b) report	3
James River Basin	Amsden Dam	Day County	3-7-8-9	TSI, Trend	Lake assessments, '96 305(b) report	2
	Beaver Lake	Yankton County	6-7-8-9	TSI	Lake assessments, '96 305(b) report	3
	Bierman Dam	Spink County	3-7-8-9	TSI, Trend	Lake assessments, '96 305(b) report	2
	Cottonwood Lake	Spink County	6-7-8-9	TSI, Trend, pH	Lake assessments, '96 305(b) report	2
	Cresbard Lake	Faulk County	5-7-8-9	TSI	Lake assessments, '96 305(b) report, fish kill	3
	Elm Lake	Brown County	1-4-7-8-9	TSI, Trend	Lake assessments, '96 305(b) report	2
	James River	North of Yankton	5-8-9-10	TSS	'96 305(b) report, data from WQM 8	3
		Brown County	5-8-9-10	DO	'96 305(b) report, data from WQM 33, WQM 6, and WQM 34	3
	Jones Lake	Hand County	5-7-8-9	TSI, Trend	Lake assessments, '96 305(b) report, fish kill	2
	Lake Byron	Beadle County	5-7-8-9-10	TSI, Trend	319, Lake assessments, '96 305(b) report, fish kill	1
	Lake Carthage	Miner County	4-7-8-9	TSI, Trend	Lake assessments, '96 305(b) report	2

Basin Name	Waterbody	Location	Beneficial Use ★	Parameter ★	Information to Support Listing ★	Priority ★
	Lake Faulkton	Faulk County	5-7-8-9	TSI	319, Lake assessments, '96 305(b) report, fish kill	1
	Lake Hanson	Hanson County	5-7-8-9	TSI	Lake assessments, '96 305(b) report	3
	Lake Henry	Bon Homme County	4-7-8-9	TSI, Trend	Lake assessments, '96 305(b) report	2
	Lake Louise	Hand County	5-7-8-9	TSI, Trend, Fecal Coliform, Accumulated sediment	Lake assessments, '96 305(b) report, 96/97 beach monitoring (2)	2
	Loyalton Dam	Edmunds County	5-7-8-9	TSI	Lake assessments, '96 305(b) report	3
	Mina Lake	Edmunds County	1-4-7-8-9	TSI, Trend	319, Lake assessments, '96 305(b) report	1
	Pierpont Lake	Day County	4-7-8-9	TSI	Lake assessments, '96 305(b) report, fish kill	3
	Ravine Lake	Beadle County	5-7-8-9	TSI, Trend, Fecal Coliform	319, Lake assessments, '96 305(b) report,96/97 beach monitoring (6)	1
	Redfield Lake	Spink County	6-7-8-9	TSI	319, Lake assessments, '96 305(b) report	1
	Richmond Lake	Brown County	4-7-8-9	TSI, Fecal Coliform	Lake assessments, '96 305(b) report, 96/97 beach monitoring (1)	3
	Rosehill Lake	Hand County	4-7-8-9	TSI, Trend	Lake assessments, '96 305(b) report	2
	Rosette Lake	Edmunds County	6-7-8-9	TSI	Lake assessments, '96 305(b) report	3
	Twin Lakes	Sanborn County	5-7-8-9	TSI, Trend	Lake assessments, '96 305(b) report	2
	Wilmarth Lake	Aurora County	4-7-8-9	TSI	Lake assessments, '96 305(b) report	3
	Wylie Pond	Brown County	9	Fecal Coliform	96/97 beach closure (4)	3
Minnesota River Basin	Lake Alice	Deuel County	6-7-8-9	TSI	Lake assessments, '96 305(b) report	3
	Lake Cochrane	Deuel County	4-7-8-9	Fecal Coliform	Lake assessments, '96 305(b) report, 96/97 beach monitoring (1)	1
	Fish Lake	Deuel County	6-7-8-9	TSI, Trend	Lake assessments, '96 305(b) report	2
	Lake Hendricks	Brookings County	6-7-8-9	TSI, Trend	319, Lake assessments, '96 305(b) report	1
	Lake Oliver	Deuel County	6-7-8-9	TSI	Lake assessments, '96 305(b) report	3
	Punished Woman Lake	Codington County	5-7-8-9	TSI, Trend	319, Lake assessments, '96 305(b) report	1
Missouri River Basin	Academy Lake	Charles Mix County	4-7-8-9	TSI, Trend	Lake assessments, '96 305(b) report	2
	Brakke Dam	Lyman County	4-7-8-9	TSI	Lake assessments, '96 305(b) report	3
	Burke Lake	Gregory County	5-7-8-9	TSI, Trend	Lake assessments, '96 305(b) report	2
	Corsica Lake	Douglas County	5-7-8-9	TSI, Trend	Lake assessments, '96 305(b) report	2
	Cottonwood Lake	Sully County	2-7-8-9	TSI, Trend	Lake assessments, '96 305(b) report	2
	Dante Lake	Charles Mix County	4-7-8-9	TSI, Trend	Lake assessments, '96 305(b) report	2
	Fate Dam	Lyman County	4-7-8-9	TSI, Trend	Lake assessments, '96 305(b) report	2
	Geddes Lake	Charles Mix County	5-7-8-9	TSI	Lake assessments, '96 305(b) report	3

Basin Name	Waterbody	Location	Beneficial Use ★	Parameter ★	Information to Support Listing ★	Priority ★
	Lake Andes	Charles Mix County	6-7-8-9-10	TSI, Trend, Accumulated sediment	Lake assessments, '96 305(b) report	2
	Lake Campbell	Campbell County	5-7-8-9	TSI, Trend	319, Lake assessments, '96 305(b) report	2
	Lake Eureka	McPherson County	4-7-8-9	TSI, Fecal Coliform	Lake assessments, '96 305(b) report, 96/97 beach monitoring (3), fish kill	2
	Lake Hiddenwood	Walworth County	5-7-8-9	TSI, Trend	Lake assessments, '96 305(b) report	2
	Lake Pocasse	Campbell County	4-7-8-9	TSI, Trend	Lake assessments, '96 305(b) report	2
	Lake Sharpe	Hughes County	1-4-7-8-9-10-11	Accumulated sediment	Listed due to relationship and close proximity to Bad River Project (319 project), comments received from GF&P	1
	Platte Lake	Charles Mix County	6-7-8-9	TSI	Lake assessments, '96 305(b) report	3
	Roosevelt Lake	Tripp County	4-7-8-9	TSI	Lake assessments, '96 305(b) report	3
	Sully Dam	Tripp County	5-7-8-9	TSI	Lake assessments, '96 305(b) report	3
	Sully Lake	Sully County	6-7-8-9	TSI, Trend, pH	Lake assessments, '96 305(b) report	2
Moreau River Basin	Coal Springs Reservoir	Perkins County	4-7-8-9	TSI, Trend	Lake assessments, '96 305(b) report	2
	Dewberry Dam	Dewey County	4-7-8-9	TSI, Trend	Lake assessments, '96 305(b) report	2
	Moreau River	Near Usta	5-8-9-10	TSS	'96 305(b) report, data from WQM 39	3
		Near Whitehorse	5-8-9-10	TSS, Fecal Coliform	'96 305(b) report, data from WQM 24	3
Niobrara River Basin	Keya Paha River	Near Wewela	1-5-8-9-10	TSS	'96 305(b) report, data from WQM 10	3
	Rahn Lake	Tripp County	4-7-8-9	TSI, Trend	Lake assessments, '96 305(b) report	2
Red River Basin	Lake Traverse	Roberts County	4-7-8-9-10	TSI	Lake assessments, '96 305(b) report	3
	White Lake	Marshall County	1-4-7-8-9	TSI, Trend	Lake assessments, '96 305(b) report	2
Vermillion River Basin	East Vermillion Lake	McCook County	4-7-8-9	TSI, Fecal Coliform, pH	Lake assessments, '96 305(b) report, 96/97 beach monitoring (3)	3
	Lake Preston	Kingsbury County	9	TSI	Lake assessments, '96 305(b) report	3
	Lake Thompson	Kingsbury County	4-7-8-9	TSI, Trend	Lake assessments, '96 305(b) report	2
	Marindahl Lake	Yankton County	4-7-8-9	TSI, Trend	Lake assessments, '96 305(b) report	2
	Silver Lake	Hutchinson County	6-7-8-9	TSI	Lake assessments, '96 305(b) report	3
	Swan Lake	Turner County	5-7-8-9	TSI, Trend	319, Lake assessments, '96 305(b) report	1
	Vermillion River	Near Vermillion and Wakonda	5-8-9-10	TSS, Fecal Coliform	'96 305(b) report, data from WQM 5 and WQM 4	3
White River Basin	Little White River	Near White River	5-8-9-10	TSS	'96 305(b) report, data from WQM 13	3
	White River	Near Kadoka	5-8-9-10	TSS, Fecal Coliform	'96 305(b) report, data from WQM 11	3
		Near Oacoma	5-8-9-10	TSS, Fecal Coliform	'96 305(b) report, data from WQM 12	3

Basin Name	Waterbody	Location	Beneficial Use ★	Parameter ★	Information to Support Listing ★	Priority ★
		Near Oglala	5-8-9-10	TSS	'96 305(b) report, data from WQM 42	3
	Total number of impaired segments		**122**			

Surface Water Discharge-Related Waters (including rollovers from 1996 list)

Surface Water Discharge-related TMDL Waters

Basin	Waterbody	Location	Project, Permittee, or other description	Permit Number	Exp. Date	Parameter	Priority	Note
Bad River Basin	Bad River	Near Midland	Midland	SD-0020630	6/30/98	Ammonia	1	Minor permit
		Near Philip	Philip	SD-0020303	6/30/98	Ammonia	1	Minor permit
Belle Fourche River Basin	Redwater River, Spring Creek	Near Spearfish	Spearfish	SD-0020044	6/30/98	Ammonia	1	Major permit
	Squaw Creek, Spearfish Creek	4 miles NW of Lead	LAC Minerals (USA) Inc.	SD-0026883	3/31/99	Metals	1	Major permit
	Whitewood Creek	Near Lead	Homestake Mining Co.	SD-0000043	9/30/96	Ammonia Metals	1	Major permit – Rollover from 1996 list
		In Whitewood	Hubbard Milling Co.	SD-0026166	12/31/96	Ammonia	1	Minor permit – Rollover from 1996 list
	Whitewood and Deadwood Creeks	Near Lead	Homestake Mining Co.	SD-0025933	9/30/99	Metals	1	Minor permit
Big Sioux River Basin	Beaver Creek	Near Valley Springs	Valley Springs	SD-0020923	3/31/97	Ammonia	1	Minor permit – Rollover from 1996 list
	Big Sioux River	Near Brandon	Brandon	SD-0022535	12/31/99	Ammonia	1	Minor permit
		Near Brookings	Brookings Volga	SD-0023388 SD-0021920	9/30/97 9/30/97	Ammonia, DO	1	Major and minor permits – Rollovers from 1996 list
		Near Canton	Canton	SD-0022489	6/30/99	Ammonia	1	Minor permit
		Near Dell Rapids	Dell Rapids	SD-0022101	12/31/99	Ammonia	1	Minor permit
		Near Egan	Egan	SD-0022462	12/31/99	Ammonia	1	Minor permit
		Near Sioux Falls	John Morrell Sioux Falls	SD-0000078 SD-0022128	12/31/99 3/31/99	Ammonia, DO	1	Major permits
		Near Trent	Trent	SD-0020265	9/30/97	Ammonia	1	Minor permit – Rollover from 1996 list
		Near Watertown	Watertown	SD-0023370	9/30/98	Ammonia, DO	1	Major permit[1]
	Six Mile Creek	Near White	White	SD-0021636	9/30/99	Ammonia	1	Minor permit
	Split Rock Creek	Near Corson	Corson Village Sanitary District	SD-0022217	12/31/99	Ammonia	1	Minor permit

[1] EPA may issue permit

Basin	Waterbody	Location	Project, Permittee, or other description	Permit Number	Exp. Date	Parameter	Priority	Note
	W Pipestone Creek	Near Sioux Falls	USGS – EROS Data Center	SD-0000299	9/30/98	Ammonia	1	Major permit
Cheyenne River Basin	Battle Creek	Near Keystone	Keystone	SD-0024007	3/31/96	Ammonia	1	Minor permit
	Black Hawk Creek	Near Black Hawk	Black Hawk Homeowners	SD-0025551	12/31/96	Ammonia	1	Minor permit – Rollover from 1996 list
	Elk Creek	Elk Creek	Elk Creek	SD-0027626	N/A	Ammonia	1	Minor permit – new facility
		Rapid City	Stagebarn Subd Homeowners	SD-0026930	12/31/98	Ammonia	1	Minor permit
	Fall River	In Hot Springs	Evans Plunge, Inc.	SD-0024767	12/31/95	Chlorine	1	Minor permit – Rollover from 1996 list
	French Creek	6-1/2 miles SE of Custer	SDGF&P - Blue Bell	SD-0024228	3/31/97	Ammonia	1	Minor permit – Rollover from 1996 list
	Rapid Creek	Near Rapid City	Rapid City	SD-0023574	12/31/99	Ammonia, DO	1	Major permit
James River Basin	Dawson Creek	Near Scotland	Scotland	SD-0022853	9/30/99	Ammonia	1	Minor permit
	James River	Near Columbia	Columbia	SD-0022926	3/31/00	Ammonia	1	Minor permit
		Near Frankfort	Frankfort	SD-0020869	3/31/99	Ammonia	1	Minor permit
		Near Mitchell	Mitchell	SD-0023361	9/30/99	Ammonia	1	Major permit
	Jim Creek	Near Artesian	Artesian	SD-0021733	12/31/99	Ammonia	1	Minor permit
	Maple River	Near Frederick	Frederick	SD-0022152	12/31/99	Ammonia	1	Minor permit
	Moccasin Creek	Near Warner	Warner Sanitary District	SD-0020389	3/31/00	Ammonia	1	Minor permit
	Wolf Creek	Near Bridgewater	Bridgewater	SD-0021512	9/30/97	Ammonia	1	Minor permit - Rollover from 1996 list
		Near Emery	Emery	SD-0021741	12/31/99	Ammonia	1	Minor permit
Minnesota River Basin	Whetstone River, S Fork	Near Milbank	Milbank	SD-0020371	9/30/97	Ammonia, DO	1	Major permit - Rollover from 1996 list
Missouri River Basin	Medicine Creek	Near Presho	Presho	SD-0020117	9/30/97	Ammonia	1	Minor permit - Rollover from 1996 list
	Platte Creek	Near Platte	Platte	SD-0020354	9/30/97	Ammonia	1	Minor permit - Rollover from 1996 list
Moreau River Basin	Thunder Butte Creek	Near Bison	Bison	SD-0022411	9/30/95	Ammonia	1	Minor permit - Rollover from 1996 list
Vermillion River Basin	Camp Creek	Near Chancellor	Chancellor	SD-0023639	3/31/99	Ammonia	1	Minor permit

Basin	Waterbody	Location	Project, Permittee, or other description	Permit Number	Exp. Date	Parameter	Priority	Note
	Vermillion River, W Fork	Near Parker	Parker	SD-0020940	9/30/97	Ammonia	1	Minor permit - Rollover from 1996 list
White River Basin	Little White River	Near White River	White River	SD-0022063	3/31/98	Ammonia	1	Minor permit [1]
Total Number of Surface Water Discharge-related TMDLs:				**42**				

[1] EPA may issue permit

319 Project TMDL Waters

319 Project-related TMDL Waters

Basin	Waterbody	Location	Project Name	Parameter	Priority
Bad River Basin	Bad River/Antelope Creek	Entire watershed	Upper/Lower Bad River	Accumulated sediment	1
Big Sioux River Basin	Bachelor Creek	Moody-Lake County	Bachelor Creek Assessment	Accumulated sediment, Nutrients	1
	Big Sioux River	Minnehaha County	East River Riparian Demonstration	Accumulated sediment, Nutrients	0
	Big Sioux River/Lake Kampeska/Pelican Lake	Codington-Grant-Marshall County	Upper Big Sioux River Watershed	Accumulated sediment, Nutrients	1
	Brandt Lake	Lake County	Brandt Lake	Nutrients	1
	Lake Campbell/Battle Creek	Brookings-Lake-Moody County	Lake Campbell Watershed Restoration	Accumulated sediment, Nutrients	1
	Clear Lake	Deuel County	Clear Lake Watershed	Nutrients, Accumulated sediment	1
	Lake Kampeska	Codington-Grant-Marshall County	Lake Kampeska Watershed	Accumulated sediment, Nutrients	0
	Lake Madison	Lake County	Lake Madison	Nutrients	1
	Lake Pelican	Codington County	Lake Pelican Watershed	Accumulated sediment, Nutrients	0
	Lake Poinsett	Brookings-Hamlin County	Lake Poinsett Watershed	Total phosphorus	0
Grand River Basin	Shadehill Reservoir/South Fork Grand/North Fork Grand	Perkins-Harding County	Shadehill Lake Protection	Nutrients, Accumulated sediment, sodium	1
James River Basin	Lake Byron/Foster Creek	Beadle-Spink-Clark County	Lake Byron Watershed	Accumulated sediment, Nutrients	1
	Lake Faulkton	Faulk County	Lake Faulkton Watershed	Accumulated sediment, Nutrients	1
	Lake Mitchell/Firesteel Creek	Davison County	Lake Mitchell, Firesteel Creek	Total phosphorus	0
	Lake Mitchell	Davison-Aurora-Jerauld County	Lake Mitchell Watershed	Accumulated sediment, Nutrients	1
	Lake Redfield/Turtle Creek	Spink-Hand-Hyde-Faulk-Beadle County	Lake Redfield Restoration	Accumulated sediment, Nutrients	1
	Mina Lake/Snake Creek	Brown-Edmunds-McPherson County	Mina Lake Water Quality	Accumulated sediment, Nutrients	1
	Ravine Lake	Beadle County	Ravine Lake Watershed	Nutrients	1

Basin	Waterbody	Location	Project Name	Parameter	Priority
Minnesota River Basin	Big Stone Lake/ Little Minnesota River	Roberts-Marshall County	Big Stone Lake/Little Minnesota River	Nutrients	0
	Lake Hendricks/Upper Deer Creek	Deuel-Brookings-Lincoln (MN) County	Lake Hendricks Watershed	Accumulated sediment, Nutrients	1
	Punished Woman Lake	Codington County	Punished Woman Lake Watershed	Accumulated sediments, Nutrients	1
Missouri River Basin	Foster Creek	Stanley County	Foster Creek Riparian Demonstration	Accumulated sediment	0
Vermillion River Basin	Swan Lake/Turkey Ridge Creek	Turner County	Swan Lake Restoration	Accumulated sediment, Nutrients	1
Total Number of Active 319-related TMDLs:			**24**		

1998-2000 Biennium Targeted TMDL Waters

1998-2000 Targeted TMDL Waters

Basin	Waterbody	Location	Project, Permittee, or other description	Permit Number	Exp. Date	Parameter	Priority	Note
Bad River Basin	Bad River	Near Midland	Midland	SD-0020630	6/30/98	Ammonia	1	Minor permit
		Near Philip	Philip	SD-0020303	6/30/98	Ammonia	1	Minor permit
	Bad River/ Antelope Creek	Entire watershed	Upper/Lower Bad River	N/A	N/A	Accumulated sediment	1	319 Project
Belle Fourche River Basin	Redwater River	Near Spearfish	Spearfish	SD-0020044	6/30/98	Ammonia	1	Major permit
	Squaw Creek, Spearfish Creek	4 miles NW of Lead	LAC Minerals (USA) Inc.	SD-0026883	3/31/99	Metals	1	Major permit
	Whitewood Creek	Near Lead	Homestake Mining Co.	SD-0000043	9/30/96	Ammonia	1	Major permit
		In Whitewood	Hubbard Milling Co.	SD-0026166	12/31/96	Ammonia	1	Minor permit
	Whitewood and Deadwood Creeks	Near Lead	Homestake Mining Co.	SD-0025933	9/30/99	Metals	1	Minor permit
Big Sioux River Basin	Bachelor Creek	Moody, Lake counties	Bachelor Creek Assessment	N/A	N/A	Accumulated sediment, Nutrients	1	319 Project
	Beaver Creek	Near Valley Springs	Valley Springs	SD-0020923	3/31/97	Ammonia	1	Minor permit
	Big Sioux River	Near Brandon	Brandon	SD-0022535	12/31/99	Ammonia	1	Minor permit
		Near Brookings	Brookings Volga	SD-0023388 SD-0021920	9/30/97 9/30/97	Ammonia, Dissolved Oxygen	1 1	Major permit Minor permit
		Near Canton	Canton	SD-0022489	6/30/99	Ammonia	1	Minor permit
		Near Dell Rapids	Dell Rapids	SD-0022101	12/31/99	Ammonia	1	Minor permit
		Near Egan	Egan	SD-0022462	12/31/99	Ammonia	1	Minor permit
		Near Sioux Falls	John Morrell Sioux Falls	SD-0000078 SD-0022128	12/31/99 3/31/99	Ammonia, Dissolved Oxygen	1 1	Major permits
		Near Trent	Trent	SD-0020265	9/30/97	Ammonia	1	Minor permit
		Near Watertown	Watertown	SD-0023370	9/30/98	Ammonia, Dissolved Oxygen	1	Major permit

Basin	Waterbody	Location	Project, Permittee, or other description	Permit Number	Exp. Date	Parameter	Priority	Note
	Big Sioux River/Lake Kampeska/ Pelican Lake	Codington, Grant, Marshall counties	Upper Big Sioux River Watershed	N/A	N/A	Accumulated sediment, Nutrients	1	319 Project
	Brant Lake	Lake County	Brant Lake	N/A	N/A	Nutrients	1	314 project
	Lake Campbell, Battle Creek	Brookings, Lake, Moody counties	Lake Campbell Watershed Restoration	N/A	N/A	Accumulated sediment, Nutrients	1	319 Project
	Clear Lake	Deuel County	Clear Lake Watershed	N/A	N/A	Nutrients, Accumulated sediment	1	319 Project
	Lake Madison	Lake County	Lake Madison	N/A	N/A	Nutrients	1	319 Project
	W Pipestone Creek	Near Sioux Falls	USGS – EROS Data Center	SD-0000299	9/30/98	Ammonia	1	Major permit
	Six Mile Creek	Near White	White	SD-0021636	9/30/99	Ammonia	1	Minor permit
Cheyenne River Basin	Battle Creek	Near Keystone	Keystone	SD-0024007	3/31/96	Ammonia	1	Minor permit
	Black Hawk Creek	Near Black Hawk	Black Hawk Homeowners	SD-0025551	12/31/96	Ammonia	1	Minor permit
	Elk Creek	Elk Creek	Elk Creek	SD-0027626	N/A	Ammonia	1	Minor permit
		Rapid City	Stagebarn Subd Homeowners	SD-0026930	12/31/98	Ammonia	1	Minor permit
	Fall River	In Hot Springs	Evans Plunge, Inc.	SD-0024767	12/31/95	Chlorine	1	Minor permit
	French Creek	6-1/2 miles SE of Custer	SDGF&P - Blue Bell	SD-0024228	3/31/97	Ammonia	1	Minor permit
	Rapid Creek	Near Rapid City	Rapid City	SD-0023574	12/31/99	Ammonia, Dissolved Oxygen	1	Major permit
Grand River Basin	Shadehill Reservoir/ Grand River, N Fork/Grand River, S Fork	Perkins-Harding County/	Shadehill Lake Protection	N/A	N/A	Accumulated sediment, Sodium, Total Phosphorous	1	319 Project
James River Basin	Dawson Creek	Near Scotland	Scotland	SD-0022853	9/30/99	Ammonia	1	Minor permit
	James River	Near Columbia	Columbia	SD-0022926	3/31/00	Ammonia	1	Minor permit
		Near Frankfort	Frankfort	SD-0020869	3/31/99	Ammonia	1	Minor permit
		Near Mitchell	Mitchell	SD-0023361	9/30/99	Ammonia	1	Major permit

Basin	Waterbody	Location	Project, Permittee, or other description	Permit Number	Exp. Date	Parameter	Priority	Note
	Jim Creek	Near Artesian	Artesian	SD-0021733	12/31/99	Ammonia	1	Minor permit
	Maple River	Near Frederick	Frederick	SD-0022152	12/31/99	Ammonia	1	Minor permit
	Moccasin Creek	Near Warner	Warner Sanitary District	SD-0020389	3/31/00	Ammonia	1	Minor permit
	Wolf Creek	Near Bridgewater	Bridgewater	SD-0021512	9/30/97	Ammonia	1	Minor permit
		Near Emery	Emery	SD-0021741	12/31/99	Ammonia	1	Minor permit
	Lake Byron/ Foster Creek	Beadle-Spink-Clark County	Lake Byron Watershed	N/A	N/A	Accumulated sediment, Nutrients	1	319 Project
	Lake Faulkton	Faulk County	Lake Faulkton Watershed	N/A	N/A	Accumulated sediment, Nutrients	1	319 Project
	Lake Mitchell/ Upper Deer Creek	Davison-Aurora-Jerauld County	Lake Mitchell Watershed	N/A	N/A	Nutrients, Accumulated sediment	1	319 Project
	Lake Redfield/ Turtle Creek	Spink-Hand-Hyde-Faulk-Beadle County	Lake Redfield Restoration	N/A	N/A	Accumulated sediment, Nutrients	1	319 Project
	Mina Lake/ Snake Creek	Brown-Edmunds-McPherson County	Mina Lake Water Quality	N/A	N/A	Accumulated sediment, Nutrients	1	319 Project
	Ravine Lake	Beadle County	Ravine Lake Watershed	N/A	N/A	Nutrients	1	319 Project
Minnesota River Basin	Lake Hendricks/ Upper Deer Creek/Deer Creek	Deuel, Brookings, Lincoln (MN) counties	Lake Hendricks Watershed	N/A	N/A	Accumulated sediment, Nutrients	1	319 Project
	Punished Woman Lake	Codington County	Punished Woman Lake	N/A	N/A	Accumulated sediment, Nutrients	1	319 Project
	Whetstone River, S Fork	Near Milbank	Milbank	SD-0020371	9/30/97	Ammonia, Dissolved Oxygen	1	Major permit
Missouri River Basin	Medicine Creek	Near Presho	Presho	SD-0020117	9/30/97	Ammonia	1	Minor permit
	Platte Creek	Near Platte	Platte	SD-0020354	9/30/97	Ammonia	1	Minor permit

Basin	Waterbody	Location	Project, Permittee, or other description	Permit Number	Exp. Date	Parameter	Priority	Note
Moreau River Basin	Thunder Butte Creek	Near Bison	Bison	SD-0022411	9/30/95	Ammonia	1	Minor permit
Vermillion River Basin	Camp Creek	Near Chancellor	Chancellor	SD-0023639	3/31/99	Ammonia	1	Minor permit
	Swan Lake/ Turkey Ridge Creek	Turner County	Swan Lake Restoration	N/A	N/A	Accumulated sediment, Nutrients	1	319 Project
	Vermillion River, W Fork	Near Parker	Parker	SD-0020940	9/30/97	Ammonia	1	Minor permit
White River Basin	Little White River	Near White River	White River	SD-0022063	3/31/98	Ammonia	1	Minor permit
Total number of water quality-limited segments targeted for TMDLs in 1998-2000 biennium:			**58**					

Waters Specifically Excluded from the 1998 TMDL Waters List

The following table is a list of waters for which DENR has limited data or information and chose not to target the waterbody for TMDL development at this time. The reasons for exclusion include conflicting differences between the 1996 305(b) report and the 1998 303(d) list; waters identified as having water-quality problems by local, state, or federal agencies, the general public or academic institutions that do not have hard monitoring data to support the alleged impairment status. Included with each waterbody is the basis for each decision not to list the water.

Waters not Targeted for TMDL Development

Basin	Waterbody	Location	Source suggesting listing	Parameter(s)	Basis for exclusion from 1998 list
Bad River Basin	Bad River	Midland to mouth	’96 305(b) report	Conductivity	Data from WQM 29 indicates full support for this parameter
Belle Fourche River Basin	Bear Butte Lake	Meade County	’96 305(b) report	Nutrients, Accumulated sediment, Noxious aquatic plants	305(b) assessment based on evaluative information – no credible evidence to warrant TMDL
	Belle Fourche River	Wyoming border to Whitewood Creek confluence	’96 305(b) report, comments from GF&P	Conductivity Temperature Flow	Data from WQM 83 and 81 indicate full support for these parameters, Bureau of Reclamation has a water right with a priority in the early 1900’s. Bureau is required to bypass 5 cfs at the diversion dam for downstream domestic use
		Whitewood Creek confluence to mouth	’96 305(b) report	Conductivity TDS Temperature	Data from WQM 21 indicates full support for these parameters
	Little Spearfish Creek	Lower reaches	Comments from GF&P	Flow	Water rights granted for diversion pursuant to state law

Basin	Waterbody	Location	Source suggesting listing	Parameter(s)	Basis for exclusion from 1998 list
	Redwater River	Wyoming Border to mouth	’96 305(b) report, comments from GF&P	Conductivity, Temperature, TSS, Flow	Data from WQM 23 indicates full support for these parameters, validated vested water rights exist with priority dates of 1870’s and 1880’s, gaging station near mouth indicates flow exceeds 19 cfs 90% of time
	Spearfish Creek	Headwaters to Redwater River	’96 305(b) report, comments from GF&P	pH, Temperature, TSS, Flow	See footnote[1]
	West Strawberry Creek	Headwaters to Whitewood Creek	’96 305(b) report	TSS	Data from WQM 75 indicates full support for TSS
	Whitetail Creek	Headwaters to confluence with Whitewood Creek	Data from WQM 118	Copper	See footnote[2]
	Whitewood Creek	Headwaters to Gold Run Creek	’96 305(b) report, comments from GF&P	TSS	Data from WQM 86 indicates full support for TSS
		Gold Run Creek to Crook City	’96 305(b) report, comments from GF&P	Ammonia, inorganics, temperature, TSS, pH	Data from WQM 85, WQM 84, WQM 122, and WQM 123 indicate full support for these parameters

[1] Data obtained from WQM 22, WQM 89, MN32, MN33, MN34, and MN35 indicates that Spearfish Creek is fully supporting for temperature and total suspended solids. In review of pH data for these sites, violations tend to occur in an average of 21% of samples. However, the average violation is approximately 0.1 pH units above the WQ standard of 8.6. Because of the slight magnitude of violations, and the probability that violations are due to natural limestone in the area, and additional data from the U.S. Forest Service that indicates pH attainment, this waterbody is not being targeted for TMDL development for pH. Data from MN34 indicates 14% zinc violations. However, since MN32, MN33, MN34, and MN35 are very close together, and all sites but MN34 indicate full support for zinc, this waterbody is not being targeted for TMDL development for zinc. SD Department of Game, Fish, & Parks submitted comments that suggest flow-related impairments. However, Spearfish Creek is not being listed for the following reasons: water rights granted pursuant to state law; diversions adjudicated by a 1918 court case presently under review by the Water Management Board; vested water rights with priority dates of the 1870’s and 1880’s; and data from gaging stations which indicated that flow exceeds 12 cfs 90% of the time.

[2] Data from WQM 118 shows 13 of 65 samples taken between 1992 and 1997 exceeded the chronic copper WQ standard. However, 12 of those violations occurred while Black Hills Power & Light – Kirk Station (a Surface Water Discharge discharger) was discharging a wastestream with metals concentrations. Since 1995, the discharge has been discontinued, and only 1 copper violation has occurred. In addition, data taken by the discharger immediately upstream of the former discharge indicates compliance with the copper WQ standard. Based on this information, it is reasonable to expect this segment to attain WQ standards during this biennium.

Basin	Waterbody	Location	Source suggesting listing	Parameter(s)	Basis for exclusion from 1998 list
		Crook City to mouth	’96 305(b) report, comments from GF&P	Ammonia, Fecal Coliform, TSS	Data from WQM 52, WQM 82, and WQM 84 indicate full support for these parameters
Big Sioux River Basin	Antelope Lake	Day County	’96 305(b) report	Nutrients, Accumulated sediment, Noxious aquatic plants	305(b) assessment based on evaluative information – no credible evidence to warrant TMDL
	Bailey Lake	Day County	’96 305(b) report	Nutrients, Accumulated sediment, Noxious aquatic plants	305(b) assessment based on evaluative information – no credible evidence to warrant TMDL
	Big Sioux River	Headwaters to Brookings	’96 305(b) report, comments from GF&P, ammonia data from WQM 1	TSS, DO, Ammonia	See footnote[1]
		Brookings to Dell Rapids	’96 305(b) report, comments from GF&P	TSS	Data from WQM 2 indicates full support for TSS
		Near Sioux Falls and Brandon	’96 305(b) report, comments from GF&P	Ammonia, Flow	Data from WQM 3, WQM 64, WQM 117, WQM 31, BS23. BS24, and BS29 indicate full support for ammonia. No data provided to determine flow impairment.
		Canton to mouth (below Sioux Falls)	’96 305(b) report	pH	Data from WQM 65, WQM 66, WQM 67, and WQM 32 indicate full support for pH
	Brule Creek	Headwaters to mouth	’96 305(b) report	Nutrients, TSS	305(b) assessment based on evaluative information – no credible evidence to warrant TMDL

[1] Data from WQM 1 indicates full support for all parameters except ammonia. Ammonia slightly exceeds the fully supporting/partially supporting cutoff criteria of 11% violations. In review of this data, all 7 of the ammonia violations were in 1992, except for one which occurred in 1995. This monitoring site is approximately 1 mile downstream of the Watertown wastewater treatment facility. In 1992 and 1993, the Watertown facility violated its effluent ammonia limits a total of 23 times. These violations were addressed by EPA. The facility has since regained compliance and began operating a new mechanical wastewater treatment facility in 1998. Based on this information, DENR believes that adequate controls are in place to implement the water quality standards for this segment of the Big Sioux River. However, the current EPA-approved TMDL for ammonia and dissolved oxygen for the Big Sioux River near Watertown is scheduled to be updated during the 1998-2000 biennium.

Basin	Waterbody	Location	Source suggesting listing	Parameter(s)	Basis for exclusion from 1998 list
	North Waubay Lake	Day County	’96 305(b) report	Nutrients, Accumulated sediment, Noxious aquatic plants	305(b) assessment based on evaluative information – no credible evidence to warrant TMDL
	Pipestone Creek	Headwaters to mouth	’96 305(b) report	Nutrients, TSS	305(b) assessment based on evaluative information – no credible evidence to warrant TMDL
	Round Lake	Deuel County	’96 305(b) report	Nutrients, Accumulated sediment, Noxious aquatic plants	305(b) assessment based on evaluative information – no credible evidence to warrant TMDL
	Skunk Creek	Headwaters to mouth	’96 305(b) report	TSS	Data from WQM 121 indicates full support for TSS
	Union Creek	Headwaters to mouth	’96 305(b) report	Nutrients, TSS	305(b) assessment based on evaluative information – no credible evidence to warrant TMDL
	Wall Lake	Minnehaha County	’96 305(b) report, 96/97 beach closure	Nutrients, Accumulated sediment, Fecal Coliform	319 project recently completed, waiting post monitoring to document improvements.
	West Oakwood Lake	Brookings County	’96 305(b) report	Nutrients, Accumulated sediment, Noxious aquatic plants	305(b) assessment based on evaluative information – no credible evidence to warrant TMDL
	Willow Lake	Clark County	’96 305(b) report	Nutrients, Accumulated sediment, Noxious aquatic plants	305(b) assessment based on evaluative information – no credible evidence to warrant TMDL
Cheyenne River Basin	Box Elder Creek	Headwaters to I-90	’96 305(b) report	TSS	Data from WQM 30 indicates full support for TSS
		I-90 to Owanka	’96 305(b) report	DO	Data from WQM 79 indicates full support for TSS
	Castle Creek	Headwaters to Deerfield Lake	Comments from GF&P	TSS	’96 305(b) report shows full support, warrants further study prior to targeting for TMDL

Basin	Waterbody	Location	Source suggesting listing	Parameter(s)	Basis for exclusion from 1998 list
	Castle Creek	Deerfield Lake to Mouth	’96 305(b) report	TSS, pH	Data from WQM 46 indicates full support for TSS and pH, as does data from US Forest Service
	Cherry Creek	Sulfur Creek to Hwy 73	’96 305(b) report	TSS, TDS	305(b) assessment based on evaluative information – no credible evidence to warrant TMDL
	Cheyenne River	Angustora Reservoir to confluence with Belle Fourche River	’96 305(b) report	TDS	Data from WQM 15 indicates full support for TDS
		From confluence with Belle Fourche River to mouth	’96 305(b) report	TDS	Data from WQM 16 indicates full support for TDS
	Fall River	Headwaters to mouth	’96 305(b) report	Temperature	305(b) assessment based on evaluative information – no credible evidence to warrant TMDL
	Flynn Creek	Headwaters to mouth	’96 305(b) report	pH	Data from WQM 111 indicates full support for pH
	Grace Coolidge Creek	Headwaters to Battle Creek	’96 305(b) report	Temperature, Flow	Data from WQM 50 indicates full support for temperature, flow diversions divert very little water due to low flows in the creek. There is a large sinkhole in the creek above these diversions.
	Hop Creek	Above Rapid Creek	Comments from GF&P	pH	Insufficient data supplied to support listing – warrants further study prior to targeting for TMDL
	New Underwood Dam	Pennington County	’96 305(b) report	Nutrients, Accumulated sediment, Noxious aquatic plants	305(b) assessment based on evaluative information – no credible evidence to warrant TMDL
	Rapid Creek	Headwaters to Pactola Reservoir	’96 305(b) report	TSS, pH, Ammonia	Data from WQM 47 indicate full support for these parameters
		Rapid City to mouth	’96 305(b) report, comments from GF&P	Ammonia, Flow	Data from WQM 110, WQM 92, and WQM 19 indicate full support for ammonia, diversions have validated vested water rights with priority dates of 1880’s

Basin	Waterbody	Location	Source suggesting listing	Parameter(s)	Basis for exclusion from 1998 list
	Sage Creek	Headwaters to Cheyenne River Confluence	’96 305(b) report	TSS, TDS	305(b) assessment based on evaluative information – no credible evidence to warrant TMDL
	Spring Creek	Below Sheridan Lake	Comments from GF&P	Flow	Flow below Sheridan Lake is dependent upon inflow and water levels in lake.
	Sulphur Creek	Headwaters to Cherry Creek Confluence	’96 305(b) report	TSS, TDS	305(b) assessment based on evaluative information – no credible evidence to warrant TMDL
Grand River Basin	Grand River	Corson County line to mouth	’96 305(b) report, comments from GF&P	Temperature, Flow	Data from WQM 25 indicates full support for temperature. River would have little flow even if the dam on Shadehill Reservoir did not exist, as there is often no flow into the reservoir.
	Grand River, N Fork	Headwaters to Shadehill Reservoir	’96 305(b) report	TDS, Conductivity	Data from WQM 77 indicates full support for TDS and conductivity
	Grand River, S Fork	Headwaters to Shadehill Reservoir	’96 305(b) report	Conductivity	Data from WQM 78 indicates full support for conductivity
James River Basin	Crow Creek	Headwaters to mouth	’96 305(b) report	Pesticides, Nutrients, Ammonia, Fecal Coliform, TSS	305(b) assessment based on evaluative information – no credible evidence to warrant TMDL
	Cain Creek	Headwaters to mouth	’96 305(b) report	Ammonia	305(b) assessment based on evaluative information – no credible evidence to warrant TMDL
	Dakotah Lake	Hand County	’96 305(b) report	Nutrients, Accumulated sediment, Noxious aquatic plants	305(b) assessment based on evaluative information – no credible evidence to warrant TMDL
	Firesteel Creek, Lake Mitchell	Near Mitchell	’96 305(b) report, Lake assessments	Nutrients	EPA-approved TMDL
	Foote Creek	Section 33 T124N R64W to Section 35 T125N R65W	’96 305(b) report	Nutrients, Fecal Coliform	305(b) assessment based on evaluative information – no credible evidence to warrant TMDL

Basin	Waterbody	Location	Source suggesting listing	Parameter(s)	Basis for exclusion from 1998 list
	Fordham Dam		’96 305(b) report	Nutrients, Accumulated sediment, Noxious aquatic plants	305(b) assessment based on evaluative information – no credible evidence to warrant TMDL
	James River	Sand Lake to diversion dam near Colony	’96 305(b) report	pH, Ammonia	Data from WQM 33 and WQM 34 indicates full support for these parameters
		Colony to Huron	’96 305(b) report	TDS, TSS, DO	Data from WQM 35 and WQM 36 indicates full support for these parameters
		Huron to mouth	’96 305(b) report, comments from GF&P	DO, Flow	Data from WQM 37 and WQM 7 indicates full support for DO, a 20 cfs bypass requirements exists for the James River at Huron. Irrigation diversions are suspended when flow drops below 20 cfs. During drought years, flow in the river becomes small without diversions.
	Moccasin Creek	Aberdeen to Warner	’96 305(b) report, comments from GF&P	Conductivity, TSS	Data from WQM 94 and 95 indicates full support for conductivity. No data available for TSS.
	Redstone Creek	Headwaters to mouth	’96 305(b) report	Nutrients, TSS	305(b) assessment based on evaluative information – no credible evidence to warrant TMDL
	Turtle Creek	Lake Redfield to mouth	’96 305(b) report	DO, TDS, TSS, Temperature, pH	305(b) assessment based on evaluative information – no credible evidence to warrant TMDL
	Twelve Mile Creek	Headwaters to mouth	’96 305(b) report	Ammonia	305(b) assessment based on evaluative information – no credible evidence to warrant TMDL
	Willow Creek Dam	Brown County	’96 305(b) report	Nutrients, Accumulated sediment, Noxious aquatic plants	305(b) assessment based on evaluative information – no credible evidence to warrant TMDL

Basin	Waterbody	Location	Source suggesting listing	Parameter(s)	Basis for exclusion from 1998 list
	Wolf Creek	Headwaters to mouth	’96 305(b) report	Nutrients	305(b) assessment based on evaluative information – no credible evidence to warrant TMDL
Little Missouri River Basin	Little Missouri River	MT border to ND border	’96 305(b) report	Conductivity	Data from USGS station 06334500 indicates full support for conductivity
Minnesota River Basin	Little Minnesota River	Headwaters to MN border	’96 305(b) report	TSS	Data from WQM 27 indicates full support for TSS
	Lone Tree Lake	Deuel County	’96 305(b) report	Nutrients, Accumulated sediment, TDS	305(b) assessment based on evaluative information – no credible evidence to warrant TMDL
	Yellow Bank River, N Fork	Headwaters to MN border	’96 305(b) report	TSS	Data from WQM 88 indicates full support for TSS
	Whetstone River	Headwaters to MN border	’96 305(b) report	TSS	Data from WQM 28 indicates full support for TSS
Missouri River Basin	American Creek	Brule County near Chamberlain	Preliminary AGNPS analysis of watershed	Nutrients, Accumulated sediment	AGNPS analysis still preliminary
	Bowdle-Hosmer Lake	Edmunds County	’96 305(b) report	Nutrients, Accumulated sediment	305(b) assessment based on evaluative information – no credible evidence to warrant TMDL
	Byre Lake	Lyman County	’96 305(b) report	Nutrients, Accumulated sediment, Noxious aquatic plants	305(b) assessment based on evaluative information – no credible evidence to warrant TMDL
	Crow Lake	Jerauld County	’96 305(b) report	Nutrients, Accumulated sediment, Noxious aquatic plants	305(b) assessment based on evaluative information – no credible evidence to warrant TMDL
	Oak Creek	Headwaters to confluence with Missouri River	’96 305(b) report	TSS, DO, Habitat	305(b) assessment based on evaluative information – no credible evidence to warrant TMDL
	McCook Lake	Union County	’96 305(b) report	Nutrients, Accumulated sediment	319 project recently completed, waiting post monitoring to document improvements

Basin	Waterbody	Location	Source suggesting listing	Parameter(s)	Basis for exclusion from 1998 list
	Spring Creek	Headwaters to Lake Pocasse	’96 305(b) report	Nutrients	305(b) assessment based on evaluative information – no credible evidence to warrant TMDL
	Swan Lake Creek	Headwaters to Swan Lake	’96 305(b) report	Ammonia	305(b) assessment based on evaluative information – no credible evidence to warrant TMDL
	Lake Wanalain	Brule County	’96 305(b) report	Nutrients	305(b) assessment based on evaluative information – no credible evidence to warrant TMDL
Moreau River Basin	Moreau River	Headwaters to west Dewey County line	’96 305(b) report	Conductivity, Fecal Coliform	Data from WQM 39 indicates full support for conductivity. Inadequate number of fecal coliform measurements to determine impairment
		West Dewey County line to mouth	’96 305(b) report	Conductivity, TDS	Data from WQM 24 indicates full support for these parameters
Red River Basin	Jim Creek	Headwaters to Lake Traverse	’96 305(b) report	Nutrients, TSS	305(b) assessment based on evaluative information – no credible evidence to warrant TMDL
	Mud Lake	NE Roberts County	’96 305(b) report	Accumulated sediment	305(b) assessment based on evaluative information – no credible evidence to warrant TMDL
Vermillion River Basin	Vermillion River	Headwaters to near Wakonda	’96 305(b) report	Fecal Coliform	Data from WQM 4 indicates full support for fecal coliform
		Wakonda to mouth	’96 305(b) report	Flow	No data provided to determine flow impairment.
White River Basin	Snow Dam	NE Tripp County	’96 305(b) report	Nutrients	305(b) assessment based on evaluative information – no credible evidence to warrant TMDL
	White River	Pine Ridge to Kadoka	’96 305(b) report	pH, TDS	Data from WQM 11 and WQM 42 indicates full support for these parameters
		Kadoka to mouth	’96 305(b) report	TDS	Data from WQM 12 indicates full support for TDS

1998 OVERALL TMDL DEVELOPMENT SCHEDULE

Recent EPA guidance directs states to submit a long-range development schedule for all waters listed on the 1998 303(d) list. Adherence to this schedule is based on the commitment and availability of resources necessary to carry out the mandates and is as follows:

Schedule and Rationale

The department plans to complete a higher percentage of TMDLs during the first few years by concentrating on re-issuing 44 expiring Surface Water Discharge permits containing water quality-based effluent limits based on wasteload allocations. As this level of effort represents "normal" planned program priorities, the work is expected to be completed within existing departmental resources.

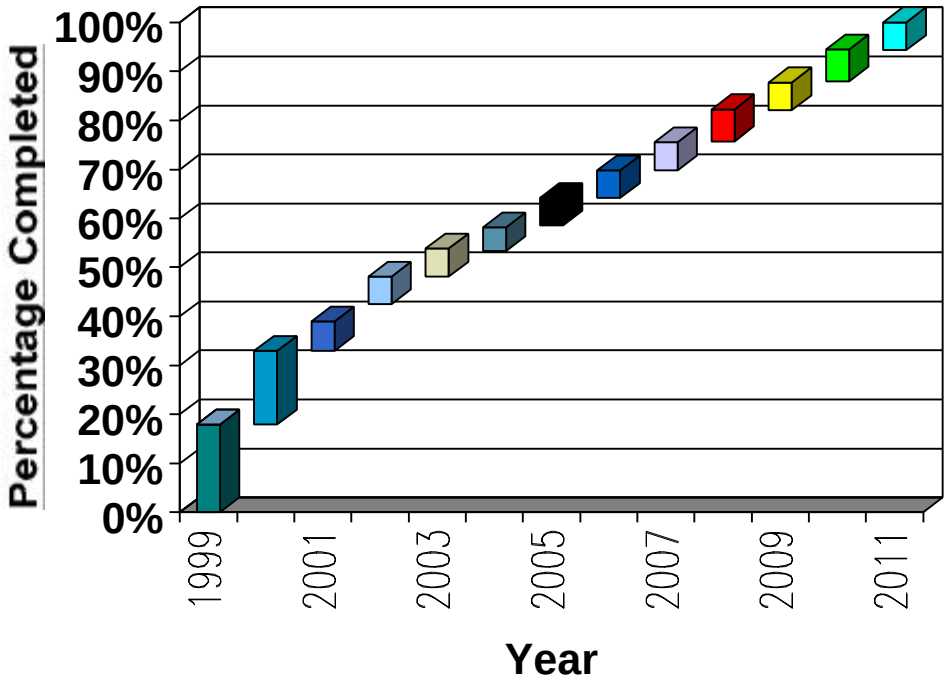
The department has completed several nonpoint source assessments and diagnostic/feasibility studies that have not, for one reason or another, met minimum EPA requirements for TMDL approval. The department plans to revisit these studies and determine what needs to be done to bring them up to approval status. Several of these completed projects may be appropriately revised with a comparative minimal level of effort, while others may require more effort as additional field sampling or modeling may be required.

The majority of current 319 projects may be completed within the next five years. Experience has shown that projects, assessment through implementation, can take as much as 8 years. During this time, the department will be revising existing resource commitments and priorities. More effort may be directed towards additional monitoring and TMDL development rather than actual 319 project planning and initiation. The overall goal will remain 319 project implementation, but department resources may not be as available as in the past to work with local sponsors on project development and implementation. The department will aggressively pursue watershed partnerships as the best way to ensure that the TMDL commitments arising from this list are accomplished.

Watershed partnerships, composed of local individuals, interest groups, and local, state, and federal government agencies are vital in the development and implementation of TMDLs. It is an effort and responsibility that extends far beyond the scope of just this department. Partnerships and cooperation will ensure that South Dakotans remain in the forefront of water quality protection and conservation efforts over our state's water resources. The more all interests join together in this common goal of responsible water quality management, the more independence this state will have in the decisions that affect the lives of all people in South Dakota.

The following figure and table summarize the overall TMDL development schedule for waters on the 1998 list. This schedule represents a 13-year timeframe, which is allowable under EPA guidance.

TMDL Development Schedule



Year	Percentage of TMDLs Completed
1999	18%
2000	33%
2001	39%
2002	45%
2003	51%
2004	56%
2005	62%
2006	68%
2007	74%
2008	81%
2009	87%
2010	94%
2011	100%

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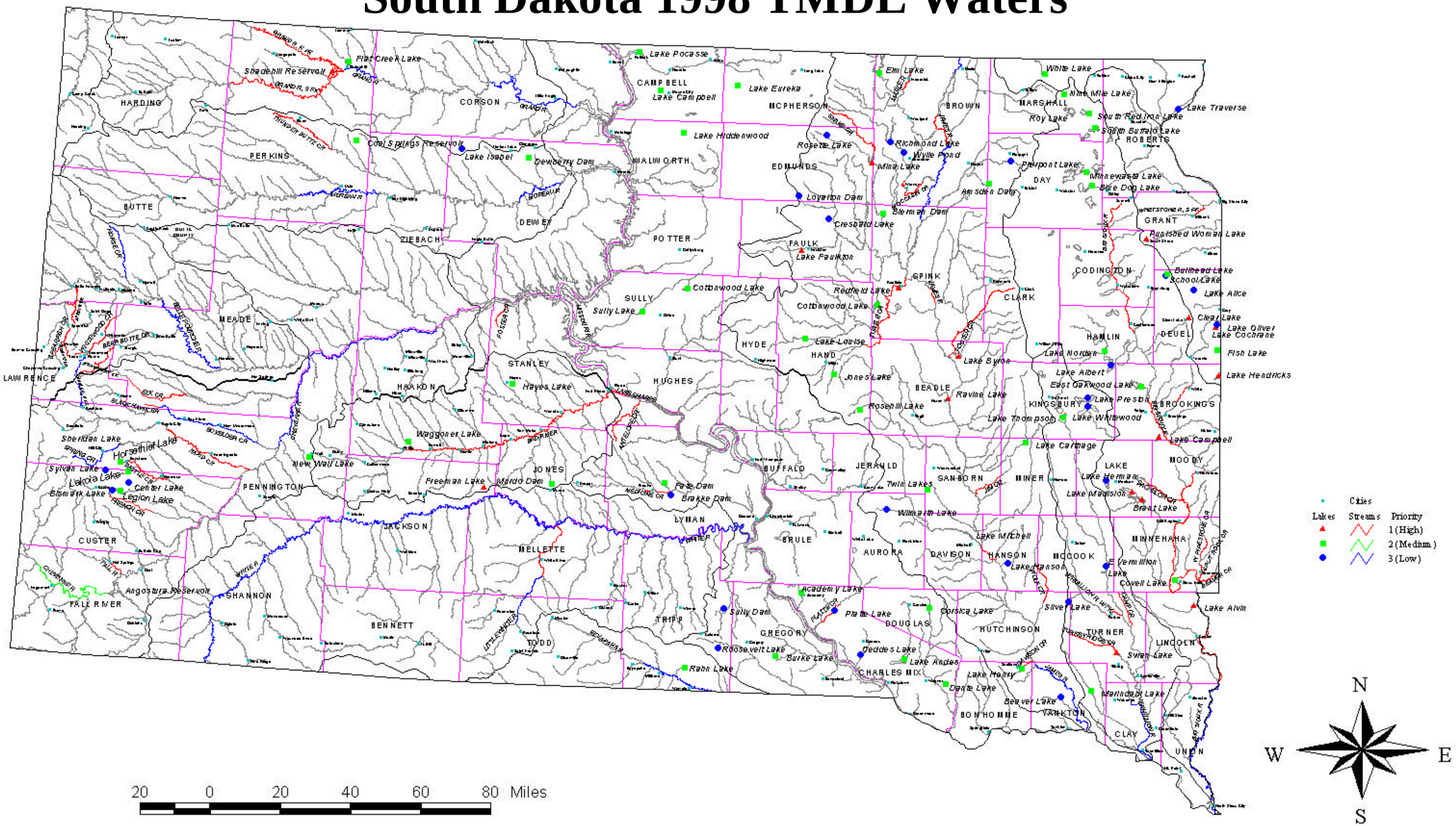
APPENDICES

Appendix A – Map of TMDL Waters

South Dakota 1998 TMDL Waters



Appendix B – Public Participation Displays and Response to Public Comments

Display Ad published in 11 daily newspapers and *Indian Country Today*, and sent to approximately 120 individuals and organizations around December 15, 1997

Public Notice

The Department of Environment and Natural Resources is developing a new list of impaired waterbodies pursuant to Section 303(d) of the Federal Clean Water Act.

Section 303(d) of the Federal Clean Water Act requires each state to develop a list of impaired stream segments and waterbodies every two years, and a schedule to complete calculations called total maximum daily loads for those waterbodies.

DENR must submit the new list to the U.S. Environmental Protection Agency by April 1, 1998.

By this notice, DENR is providing public notice that it is starting work on the 1998 list and is seeking public input into both the process and waterbodies that should or should not be identified on the impaired waterbodies list.

If you have any interest, comments, or information, please call or write to Lonnie Steinke or Joan Bortnem before January 15, 1998 at:

Department of Environment and Natural Resources
Joe Foss Building
523 E. Capitol Ave.
Pierre, SD 57501
Phone: 605-773-3351

Nettie H. Myers
Secretary

Letter Sent to 117 academic institutions, agencies, tribes, and individuals around December 22, 1997

DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3181

December 22, 1997

«Fname» «Lname»
«Organization1»
«Organization2»
«Address1»
«Address2»
«City», «State» «Zip»

Re: Request for water quality data relating to impaired waterbodies

Dear «Salutation»:

Every two years, the South Dakota Department of Environment and Natural Resources (DENR) prepares a list of waterbodies within the state that are impaired, pursuant to section 303(d) of the federal Clean Water Act. Impaired waters are those which fail either to meet water quality standards or support their beneficial uses (e.g., drinking water, fishlife propagation, recreation).

In order to develop an accurate, defensible, and comprehensive list, DENR is soliciting any data or other information you may have to help determine the quality of South Dakota's waters. Chemical, sediment, biological, or habitat-related data will be considered. Data that representatively shows the condition of a specific waterbody, whether impaired or unimpaired, could be used to update the list. Data less than five years old is of the greatest value, but older data may also be considered. Specific water quality reports are also encouraged to be submitted.

DENR will target impaired waters for the development of total maximum daily loads. These loads are estimates of the amount of pollution a given waterbody can receive and still meet water quality standards or support beneficial uses. Once these loads are determined, local, state, and federal activities can be directed toward improving the quality of the impaired waters. DENR will not list any water as "impaired" without sound, defensible data to support such listing. With this in mind, please provide any quality assurance/quality control measures that were used in collecting the data you provide.

We would like to have all information for the 1998 list by January 31, 1998. If you have any questions, or valuable data for our list, please contact either Joan Bortnem or Lonnie Steinke of my staff at (605) 773-3151. Joan or Lonnie can provide any assistance necessary in obtaining this data from you. Thank you for your help in this matter.

Sincerely,

Nettie H. Myers
Secretary

Letter sent to approximately 670 academic institutions, agencies, tribes, wastewater dischargers, and individuals

DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3181

February 18, 1998

I am writing to inform you that on or before February 19, 1998, the enclosed public notice will appear in all South Dakota daily newspapers and Indian Country Today. The department is announcing the availability of the draft 1998 South Dakota 303(d) Waterbody List and the opportunity to comment on the draft list.

The 303(d) waterbody list describes South Dakota waters that will be targeted for total maximum daily load development. This list must be submitted to the U.S. Environmental Protection Agency on or before April 1 of every even-numbered year. A "total maximum daily load" or "TMDL" is a determination of the amount of pollution a water body can receive and still maintain water quality standards. TMDLs, when implemented, can affect effluent limits in surface water discharge permits, municipal storm water controls, agricultural practices, and other sources.

I have included an agenda for a public meeting that will be held to discuss the draft list. This meeting will be held using the Rural Development Telecommunications Network (RDTN) on March 11, 1998, from 2:00 p.m. to 4:00 PM (Central Standard Time). A listing of RDTN sites in your area is also included.

The department must receive written comments on the list by March 19, 1998. Comments will also be taken during the March 11, 1998, RDTN meeting. Copies of the draft list and other information regarding the public meeting may be obtained from Jaci Konop at the address and phone number listed below. If you have any questions regarding the draft list or the public meeting, please contact Lonnie Steinke or Joan Bortnem at the above address or by calling (605) 773-3351.

Sincerely,

Nettie H. Myers
Secretary

Enclosures

Display Ad published in 11 daily newspapers and *Indian Country Today* around February 18, 1998

DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3181

NOTICE OF THE 1998 SOUTH DAKOTA 303(d) WATERBODY LIST AND OPPORTUNITY FOR COMMENT

The Department of Environment and Natural Resources is announcing the availability of the draft 1998 South Dakota 303(d) Waterbody List and the opportunity for public comment on the draft list.

The 303(d) waterbody list describes South Dakota waters that will be targeted for total maximum daily load development. This list must be submitted to the U.S. Environmental Protection Agency on or before April 1 of every even-numbered year. A "total maximum daily load" or "TMDL" is a determination of the amount of pollution a water body can receive and still maintain water quality standards.

TMDLs must be developed for waters that will not meet water quality standards. TMDLs address specific waterbodies or watersheds, and specify quantifiable targets that will allow a given waterbody to maintain water quality standards.

The 1998 list contains the following information:

1. A priority ranking of all listed waters taking into account severity of pollution and the uses of the waters;
2. Pollutants causing or expected to cause violations of the applicable water quality standards; and
3. Specific identification of waters targeted for TMDL development.

The department is providing a public participation process in which the members of the general public, affected organizations, and interested parties can review and comment on the content of the draft 303(d) list. Any person desiring to comment on the list should submit written comments to the address below. The department must receive the comments by March 19, 1998.

A meeting will be held to explain the draft list, answer questions, and to receive comments regarding the draft list. The meeting will held from 2:00 pm to 4:00 pm (CST) on March 11, 1998. The meeting will be held over the Rural Development Telecommunications Network (RDTN). The RDTN sites are Pierre, Aberdeen, Brookings, Mitchell, Rapid City, Sioux Falls, Vermillion, and Watertown.

At the conclusion of the public comment period, the department will prepare a written response to each comment received prior to or at the March 11 public meeting and written comments received by March 19, 1998. The department will send a written response to each person that provided comments or requested a copy of the department's response.

The Secretary will finalize the draft 1998 303(d) waterbody list after consideration of the comments received during the public participation process. The final list will be sent to anyone who provided comments or requested a copy of the final list.

Copies of the draft 1998 303(d) waterbody list, a listing of RDTN sites and their addresses for the March 11, 1998 public meeting, and the public meeting agenda may be obtained from Jaci Konop by writing to the address below or calling 1-605-773-3351.

Department of Environment and Natural Resources
Surface Water Quality Program
523 East Capitol, Joe Foss Building
Pierre, SD 57501-3181

Agenda for Public Meeting held on March 11, 1998 over Interactive Satellite Communications Network

DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3181

Public Meeting Agenda
Draft 1998 South Dakota 303(d) Waterbody List

Sponsored by the
South Dakota Department of
Environment and Natural Resources

Rural Development Telecommunications Network
March 11, 1998
2:00 pm to 4:00 pm (CST)

2:00 to 2:30	Overview of total maximum daily loads and the draft 1998 303(d) list.
2:30 to 3:00	Question and answer period – All RDTN Sites. Questions from participants regarding the 1998 list will be answered by DENR staff.
3:00 to 4:00	Comment period – All RDTN Sites. Participants from all RDTN sites may provide comments to DENR. Comments should be restricted to the draft list, and be restricted to five minutes each to ensure everyone has a chance to speak. DENR staff will be available at each RDTN site immediately following the public meeting to record comments if there was not enough time during the scheduled public meeting.

List of Telecommunications Sites used for March 11, 1998 Public Meeting

PUBLIC MEETING ON THE DRAFT 1998 SOUTH DAKOTA 303(d) WATERBODY LIST

RDTN SITES

Wednesday, March 11, 1998
2:00 p.m. - 4:00 p.m. (CST)

Pierre - Host Site
State Capitol Building, Studio A
Site Coordinator: Nancy Cutshaw
500 East Capitol - Rm B12

Aberdeen
Northern State University
Site Coordinator: L.D. Carlsgaard
1200 South Jay Street
Beulah Williams Library - Rm 117

Sioux Falls
Southeast Technical Institute
Site Coordinator: David Neuberger
2301 Career Place
Mickelson Education Center - Rm 205

Vermillion
University of South Dakota
Site Coordinator: Jim Bacon
414 East Clark
Center for Continuing Ed. - Rm. 118

Brookings
South Dakota State University
Site Coordinator: Denise Peterson
8th & Medary
101 Pugsley Center - Rm 203

Mitchell
Mitchell Technical Institute
Site Coordinator: Tammy Hanson
821 North Capital
Main Building - Rm 131

Rapid City
School of Mines & Technology
Site Coordinator: James Bailey
501 East Saint Joseph Street
Classroom Building – Rm 109

Watertown
Lake Area Technical Institute
Site Coordinator: Dale Dobberpuhl
230 11th Street, NE
Main Building - Rm 125

Summary of Public Comments
Received on the
1998 Draft South Dakota
303(d) Waterbody List
and
DENR's Response to Comments

February 18, 1998
through
March 19, 1998

Comment: Bruce Zander, US Environmental Protection Agency, Denver, CO. Mr. Zander had the following comments:

1. Page 4 - Resource Implications from 1998 303(d) List. The third bullet in this section mentions that water quality-based effluent limits can qualify as TMDLs. The better way to state this is "Water quality-based effluent limits in National Pollutant Discharge Elimination System (referred to as Surface Water Discharge in South Dakota) permits are based on TMDLs developed by the State."
2. Page 6 - Waters with Surface Water Discharge-Related Wasteload Allocations. In the first paragraph of this section, on the 7th line, there is a sentence that begins "In many cases, "I would recommend changing the wording on the sentences in this part of the paragraph to read: "In many cases, the development and implementation of water quality-based limits includes the development of a TMDL for the receiving water. The portion of the TMDL allocated to the point source discharger is the "wasteload allocation". The portion of the TMDL allocated to upstream, background sources is the "load allocation". In instances where a TMDL is developed and used as a basis for the wasteload allocation (WLA) and water quality-based effluent limits, the TMDL and all its components are documented in the Surface Water Discharge permit and accompanying summary of rationale. This permit and rationale are submitted to EPA for review and approval under Section 303(d)."

Response to Comments*: DENR agrees with both of EPA's comments, and the suggested changes were incorporated.*

Comment: Jay Gilbertson, East Dakota Water Development District, 307 Sixth St, Brookings, and SD 57006. Mr. Gilbertson provided the following comments:

1. The watershed map used on page 3 of the draft list needs to be updated. New maps published by USGS indicate that the maps used for the draft list may not be accurate.

Response to Comment: *DENR acknowledges that the watershed's delineation may not be completely accurate as a number of sources were used in their development. However, due to a*

lack of other information, the boundaries will not be adjusted for the final report. Efforts will be made in the future to improve the maps. The watershed approach is merely a tool to aid in more effective overall TMDL education, development and implementation. As individual TMDLs are developed, the accuracy of the watershed delineation will become more important and defined. At this planning stage, however, minor discrepancies between maps should not greatly affect the process.

2. On page 15, under TMDL Prioritization Criteria, it is implied that a priority 0 waterbody requires no action, at least in reference to priorities 3 (high), 2, or 1. Two of the three criteria listed indicated that priority 0 waters already have approved TMDLs or that they do not meet the minimum listing requirements. Both support a do-nothing status. However, the third criterion that may result in a priority 0 is lack of adequate information to assess the waterbody. Mr. Gilbertson suggested that this factor does not indicate the need for no further action. Quite to the contrary, these would be waterbodies that require further investigation, so that a true priority could be assigned. An additional priority needs to be used for these waterbodies that more accurately reflects their status.

Response to Comment: *DENR agrees that waters about which little is known do not fit well with waters which are meeting water quality standards or waters for which TMDLs have been developed and approved. As such, DENR is removing the " Waters with limited data or information" criteria from the Priority 0 waters category. These waters will not be assigned a priority.*

3. The following minor errors were found in the tables:
   - Page 21 – Whitewood Lake is listed under the Big Sioux River basin; it should be in the Vermillion River Basin. Also, the name of this waterbody is Lake Whitewood.
   - Page 24 – Lake Pocasse (Missouri River basin) is not shown or labeled on the map in Appendix A.
   - Page 24 – Lake Sharpe (Missouri River basin) is not labeled on the Map in Appendix A.
   - Page 29 and 32 – Lake Hendricks/Upper Deer Creek/Deer Creek is listed under the Big Sioux River basin; it should be in the Minnesota River basin. In addition, Deer Creek is not part of this watershed. Deer Creek, according to the most recent USGS maps, is a tributary to the Big Sioux River.
   - Page 29 – Lake Mitchell/Upper Deer Creek is listed under the James River basin. There is no Upper Deer Creek associated with the Lake Mitchell watershed.
   - Page 29 and 33 - Punished Woman Lake is listed under the James River basin. It should be in the Minnesota River Basin, and should be called Punished Womans Lake.
   - Page 30 – Brandt Lake and Lake Madison are listed under the Vermillion River basin. They should both be in the Big Sioux River basin.
   - Page 37 – Bailey Lake (Big Sioux River basin) should be listed as Baileys Lake.

Response to Comments: *The suggested changes stated above were incorporated into the document.*

4. Mr. Gilbertson stated that he was generally satisfied that the list represented the best possible product that can be assembled with the existing information. He also stated that he hoped future

lists would be based on expanded information, and that a plan needs to be developed to collect additional data and information.

Response to Comment: *DENR appreciates Mr. Gilbertson's comments, and hopes to continue to work with other organizations to improve the collection of data and information in the future.*

Comment: Several members of the public submitted comments regarding Lake Cochrane, located in the Minnesota River Basin. As these comments are all similar in nature, the comments will be addressed as one comment. Comments were received from the following individuals:

Donna Magnus, Box 208, Elkton, SD 57026
Perry and Joan Heaton, Box 70, Gary, SD 57237
Ronald Clausen, Box 45, Elkton, SD 57026
Char Bauer, 302 W Sixth St, Elkton, SD 57026
Mr. and Mrs. Gordon Ellison, RR 1 Box 195E, Gary, SD 57237
Bill and Bobi Bredeson, RR 2, Box 2, Canby, MN 56220
Bob and Joyce Otkin, RR 1, Box 248, Gary, SD 57237
Betty Johnson, RR 1, Box 190, Gary, SD 57237
Clayton and Shirley Holt, RR 1, Box 230-6, Gary, SD 57237
In addition to the individuals listed above, over 80 people collectively submitted and signed a comment letter.

Summary of Lake Cochrane comments: All comments regarding Lake Cochrane generally allege that the draining of Lake Oliver into Lake Cochrane has rapidly degraded the water quality in Lake Cochrane. Commentors state that the natural drainage pattern of Lake Oliver was to the east. The construction of a drain in Lake Oliver directs the flow south to Lake Cochrane. In addition, commentors state that the raising of Lake Cochrane's outlet level has caused erosion, destroyed shorelines, and damaged property around the lake. Commentors suggest that Lake Cochrane should be made a high priority, and targeted for a TMDL to correct these problems.

Response to Comments: *Many claims were made as to the poor water quality of Lake Cochrane; however, no additional water quality data was submitted for use by the department to re-evaluate the status of Lake Cochrane. In preparation of the draft list, the department reviewed all available data in accordance with the established 303(d) listing criteria. As a result of this review, Lake Cochrane was included on the 303(d) list due to exceedences of the fecal coliform water quality standard. A TMDL for fecal coliform will need to be developed based on this impairment. If additional water quality data becomes available that substantiates failure of the lake to meet other water quality standards or support beneficial uses, it is possible to target TMDL development for additional parameters. Despite the lack of additional data, based on the high degree of public interest demonstrated DENR has agreed to make the TMDL for Lake Cochrane a priority one (high priority).*

Comment: Debra Eiland and Jay Tutchton, Earthlaw, University of Denver - Forbes House, Denver, Colorado 80220. Earthlaw offered the following comments:

1. On page 5 you indicate that, "[t]his year, EPA is also requiring states to include a comprehensive list of all waters requiring TMDLs . . . "Despite the wording of this sentence, EPA has not requested anything new from the states. Since its adoption in 1972, the Clean Water Act (CWA) Section 303(d) has always required that states submit a comprehensive water quality limited segments list to EPA. The Act mandates that states list "those waters within its boundaries for which [effluent limitations] are not stringent enough to implement any water quality standard applicable to such waters." 33 U.S.C. Section 1313(d)(1)(A). Obviously, the CWA has never allowed states to pick and choose which impaired waters they would list, but has always mandated that states list all waters that do not meet water quality standards.

***Response to Comments**: The department agrees with Earthlaw that the requirements of the Clean Water Act, specifically Section 303(d), have not changed. EPA approved South Dakota's 1996 303(d) list and commended DENR for its submittal. However, after a rash of lawsuits nationally, EPA has recently provided new comprehensive guidance to states for the development of the list. DENR believes it has complied with that EPA guidance in preparing the 1998 list.*

2. Of primary concern are polluted streams located in the northern Black Hills. Although you have designated most listed northern Black Hills streams priority "1" for TMDL development, Whitewood Creek above and below Gold Run Creek has been listed priority "3." Due to severe pollution, we request that Whitewood Creek above and below Gold Run Creek also be designated a priority "1" stream for TMDL development. All of Whitewood Creek has been severely polluted by mining activity. In as much as your rating criteria for priority "1" streams includes "waters where impairments are believed to be largely human-induced," we believe that this section of Whitewood Creek also qualifies.

   In addition, South Dakota's Draft 1998 303(d) Waterbody List does not meet the requirements of Section 303(d) because it does not include all waters in the state that do not meet water quality standards. In particular, DENR has failed to include False Bottom Creek and Annie Creek - also heavily polluted northern Black Hills streams. Neither of these streams currently meets water quality standards.

***Response to Comment:** Based on a review of available water quality data from 1992-1997, Whitewood Creek consistently met all applicable water quality standards other than pH and fecal coliform. Methodologies used to determine compliance with water quality standards for Whitewood Creek are described in the draft 303(d) document. Based on the criteria developed for listing and prioritizing impaired waterbodies, a priority "three" is appropriate for Whitewood Creek for pH and fecal coliform. However, as noted on page 25, Homestake Mining Company's Surface Water Discharge permit is up for renewal. Therefore, the department is adding metals to the list of parameters a TMDL will be developed for on Whitewood Creek, as per Earthlaw's comment. This revision will ensure that water quality standards will continue to be met. Whitewood Creek is listed as a priority "one" for all these parameters.*

In regard to False Bottom Creek and Annie Creek, a review of water quality data from 1992-1997 was also performed using the same listing criteria. This review indicated that these streams are

consistently meeting all applicable water quality standards. Because Earthlaw did not provide water quality information to verify their statements that these waters are not meeting water quality standards, the department cannot justify listing these streams.

3. DENR's definition of TMDL is of concern to us. Pursuant to EPA regulations, a TMDL consists of a wasteload allocation (WLA) applicable to point source discharges, and a load allocation (LA) applicable to non-point source discharges. 40 C.F.R. Section 130. Contrary to your statements on page 8, 319 non-point source assessment projects are not TMDLs, nor are water quality-based effluent limits in NPDES permits. First, the fact that a stream is not meeting water quality standards even though an NPDES permit is in place indicates that the standards under the NPDES permit are not stringent enough. Such is the point of a TMDL. A TMDL is a last resort mechanism to be used when permit requirements are inadequate to ensure adherence to water quality standards. TMDLs amend NPDES permits to make them more stringent. TMDLs are not created from existing NPDES permits. Second, both WLAs and LAs are necessary to form a TMDL. While non-point source assessment project data may be used to form a LA, which is part of a TMDL, such does not comprise a complete TMDL. Addressing non-point source pollution is one of the primary purposes of TMDL development. It is crucial that TMDLs address both point and non-point source pollution, or TMDL implementation will be completely ineffective.

***Response to Comment**: On page 1 of the draft list is the federal definition of a TMDL, which includes both wasteload allocation and load allocations. The department has consistently applied this definition to all TMDLs developed in South Dakota. For example, South Dakota completed a TMDL on Firesteel Creek/Lake Mitchell. This TMDL is for a 50% reduction in phosphorus loads to Lake Mitchell. The assessment and data collection for this TMDL targeted all sources of pollution, including point and nonpoint sources (i.e. municipal storm drains, feedlots, agricultural runoff, etc.) Also, when the department develops TMDLs that are implemented through NPDES permits, upstream sources of pollution are assessed and included, including nonpoint source loads and natural background concentrations (e.g. load allocation). Therefore, the department disagrees with Earthlaw's allegations that South Dakota TMDLs do not comply with the definition of TMDLs.*

Earthlaw also commented that TMDLs amend NPDES permits to make them more stringent, and that TMDLs are not created from existing NPDES permits. DENR agrees with these comments, and the appropriate sections of the draft list have been edited to remove any confusion on this issue (see EPA's comments above). However, DENR disagrees with Earthlaw's comment that TMDLs are a last resort mechanism to achieve water quality standards. Many TMDLs in South Dakota have been developed for waters and pollutants that currently meet water quality standards. These TMDLs (which included both load allocations and wasteload allocations) were necessary to ensure that the existing water quality was maintained.

4. On page 9 you indicate that "[NPDES] permits that have wasteload allocations associated with them are submitted to EPA for approval as TMDLs." You also state that "all waters which have [NPDES] permits that are expiring between April 1, 1998 and March 31, 2000, and are expected to require wasteload allocations, are being placed on the 1998 303(d) list. Also, those permits which were on the 1996 303(d) list that are still being written were placed on the 1998 list." As

already explained in number 3 above, NPDES permits are not TMDLs, nor do they qualify as TMDLs. If water quality standards are not being met for a particular stream, submitting as a TMDL the limitations of an existing permit will not correct the problem. Those permits that are still effective from April 1, 1998 through March 31, 2000 must be updated with stricter requirements if the Act's goal of attaining water quality standards is to be reached. It is not good enough to implement TMDLs for just those permits that are renewing or are being prepared for future approval.

***Response to Comments**: As mentioned earlier, DENR agrees with Earthlaw's comment that NPDES permits alone do not qualify as TMDLs. Changes have been made to the appropriate sections of the draft document to eliminate this confusion (see EPA's comments above). Also, as explained in the 303(d) list, the waters targeted for TMDLs because of permit renewals do not necessarily have water quality violations as alleged in Earthlaw's comments. On the contrary, the TMDL is necessary to develop appropriate limits to include in the NPDES permit to ensure water quality standards will continue to be met.*

5. On page 10 you indicate that "waters that may have been impaired from various non-point sources, but were not of concern to the local community, were not pursued." You go on to state that you will only develop non-point source TMDLs in connection with Section 319 assessments. The Act requires that full TMDLs be developed for all water quality limited segments, including LAs applicable to non-point sources. Section 319 is a tool that can be used to develop LAs, but the Act does not indicate that Section 319 must be implemented before LAs for TMDLs can be developed. For South Dakota to fully comply with the CWA, the state must implement complete TMDLs for each polluted water body, including WLAs applicable to point sources and LAs applicable to non-point sources. The requirements of Section 303(d) were mandated when the CWA became effective. It is not incumbent upon the public to propel the process of TMDL development.

***Response to Comments:** Earthlaw took this portion of the draft 303(d) document out of context. The department emphasized that nonpoint source assessment and implementation projects were not pursued "in the past" where local support did not exist. However, the draft document also stated that, even though this was an extremely effective and successful way of doing business, the department together with its many partners, is now going to have change approaches for 319 related activities. DENR understands that Congress has mandated that TMDLs be developed for 303(d) waters independent of local support. This will require that the state's approach to nonpoint source pollution activities more aggressively and strongly rely on partnerships with private landowners and federal, state, and local governmental units.*

Comment: Joe Stein, 16315 454th Ave, Watertown, SD 57201. Mr. Stein commented on Lake Kampeska and Lake Pelican as well as the upper Big Sioux watershed. It is Mr. Stein's belief that the key to quality water begins with protecting against pollution at the source. If DENR contacted farmers and ranchers in the watershed, they would find that almost all of them are willing to adopt conservation methods to protect the river. With all the federal grants and incentives available, all that is needed is someone who they trust to coordinate a program that can let them keep their land and not cost them a lot

of money. It is my hope that through your agency someone could come in and help us design a system that could provide cleaner water and water retention.

Response to Comment: *Mr. Stein's comment appears to be more directed toward TMDL implementation than the 303(d) list itself. However, Mr. Stein's interest and comments are appreciated and have been forwarded to appropriate officials currently working on the Upper Big Sioux Watershed 319 project. It is the department's goal when implementing TMDLs to work with agricultural producers to find reasonable and cost effective controls to protect the state's water quality.*

Comment: Clayton Holt, RR 1, Box 230-6, Gary, SD 57237. Mr. Holt commented that the department should include the rapidity of which water quality is changing when prioritizing waters for TMDL development. Mr. Holt also stated that the concentrated livestock operations have increased the nitrate contamination of surface waters that feed many of the aquifers. The department should also look at the concentrations of livestock operations occurring along streams.

Response to Comments: *The department agrees that the rapidity of change in water quality is a good criterion to use in prioritizing waters for TMDL development. This language has been included in the criteria for prioritizing TMDL development.*

It is unclear whether Mr. Holt's comment on livestock operations is referring to contamination of aquifers, or the contamination of streams near these operations. The department is a strong advocate for the protection of all our water resources. However, the process established under Section 303(d) of the CWA applies directly to surface waters. The department acknowledges the relationship between ground water quality and surface water quality. However, the federal government is requiring states to develop mechanisms other than TMDLs to protect aquifers. One is the recently mandated Source Water Assessment Program. This assessment will target vulnerable aquifers and wells and collect information and data to identify pollution sources to those areas. The interaction of the Source Water Assessment program and the TMDL program should mesh together to address these types of concerns. In addition, the department has established a new general permit and inspection program for feedlots. The goal of the new permit and inspection regulations is to provide long-term protection to the state's surface water and ground water.

Comment: Dave German, South Dakota State University, Box 2120, Brookings, SD 57007. Mr. German commented on the method of prioritization. He stated that one of the criteria for prioritization is whether or not there is documented widespread local support for water quality improvement. There are waters in the state where nobody lives around the waterbody. The state of South Dakota should bear some responsibility in representing the water quality of those lakes that do not have an easily identifiable constituency. Mr. German also commented on the listing of waterbodies based on the Lake Assessment Reports. This report has trend lines drawn that are based on only two or three data points over a long period of time. The department may list a waterbody that has an appearance of a negative trend in water quality based on only two data points. This may simply be an artifact of the natural year-to-year fluctuation in that water body. If there were 20 data points, there may be a totally different trend. Mr.

German suggested that caution be exercised in listing waterbodies that are based on too few data points that show a declining trend.

Response to Comment: *Mr. German is correct in stating that the state bears responsibility for all waters, independent of local support issues. TMDLs will be developed for all waters that are included on the final 1998 303(d) list, whether or not there is local support. Local support and existing water quality improvement projects were just two criteria used to determine priority in developing the TMDLs.*

The department agrees with Mr. German that caution should be used in basing trends on too few data points. However, a declining trend in water quality alone was not cause for listing a waterbody, but only a criterion for prioritization.

Comment: Dennis Davis, South Dakota Rural Water Association, 5009 W 12th St Suite 5A Cedar Plaza, Sioux Falls, SD, 57106. Mr. Davis commented regarding the Safe Drinking Water Act and public water supplies. Mr. Davis stated there were a number of shallow wells adjacent to rivers and streams. The levels of nitrate in the well water may be something the department should investigate. Mr. Davis believed it was important recognize that the surface water supply has a direct effect on drinking water.

Response to Comment: *The department expects that the source water protection program mandated by the federal Safe Drinking Water Act will address this issue. However, the TMDL program will certainly be an integral part of the source water protection program.*

Comment: Cathy Wernke/Steve Auch. The commentors questioned why American Creek was not included on the 1998 list and felt that is should be targeted for a TMDL.

Response to Comment: *Mr. Auch called the department during the public comment period to inform us of data that had been gathered on American Creek for an Agricultural NonPoint Source model analysis. A preliminary report on American Creek has been drafted, but not yet reviewed. Due to the preliminary status of the conclusions of the study, the department proposes to include American Creek on the list of waters not targeted for TMDLs, but needing additional information or work. The department will complete the report and if the final report documents water quality impairment, American Creek may be included on future 303(d) lists.*

Comment: Dale Cockrell, Christensen, Moore, Cockrell & Cummings, PC, PO Box 7370, Kalispell, MT 59904, had the following comments:

1. Mr. Cockrell commented that he believed the surface water quality standards that apply to coldwater permanent fishlife propagation waters were mistakenly applied to a portion of Whitewood Creek that is actually classified for coldwater marginal fishlife propagation.

Response to Comment: *In review of this information, DENR determined Mr. Cockrell to be correct. Whitewood Creek, from below Gold Run Creek to Interstate 90, is classified for coldwater*

marginal fishlife propagation. In comparison to the applicable water quality standards, this portion of Whitewood Creek appears to be fully supporting for all parameters except fecal coliform. The parameters temperature, total suspended solids, and pH were therefore removed for Whitewood Creek in the table on page 20 of the draft list, and have instead been included on the " Waters not targeted for TMDLs" table. The maps were updated accordingly. This portion of Whitewood Creek is still listed for fecal coliform impairments.

2. Mr. Cockrell commented that Homestake Mining Company has collected data on Whitewood Creek. Homestake's data indicates only 10% exceedences of the upper pH standard of 8.6 units. This data suggests that Whitewood Creek does not meet the criteria (>10% exceedences) for impairment, and should not be targeted for a TMDL for pH. If additional pH data older than five years is considered, the percentage of exceedences decreases even more.

Response to Comment: *Data on Whitewood Creek received from Homestake Mining Company was collected very near the department's WQM station 86. Data from WQM 86 indicates 20% exceedences (4 of 20 samples) of the upper pH standard of 8.6 units. In review of data submitted by Mr. Cockrell, it appears that pH standards were exceeded 11.6% of the time (8 of 69 samples) rather than the 10% stated by Mr. Cockrell. This data would suggest this section of Whitewood Creek remain on the 303(d) list. However, in reviewing the Homestake data, the average magnitude of pH exceedence was only 0.10 units. In consideration of this information, Whitewood Creek (above Gold Run Creek) will remain on the list, as a priority three (low priority).*

Comment: Michael Schmidt, South Dakota Cattlemen's Association, PO Box 314, Kennebec, SD 57544. Mr. Schmidt, on behalf of the South Dakota Cattlemen's Association, was concerned that the 303(d) list may cause agriculture to be singled out as a "villain" of water quality impairment. Mr. Schmidt discussed how the association has been an active participant in a large array of projects to better manage the vast amount of farm and rangelands in South Dakota. The association has come forward with a proposal to partner in an extensive research project to address, understand, and define the issue of manure management for phosphorus in the northern plains. The goal of the research is to find a way to better utilize a naturally occurring nutrient source and protect water quality.

Response to Comment: *Mr. Schmidt's comments are directed more toward TMDL implementation and nutrient management than the content of the draft 303(d) list. The 1998 303(d) list is not intended to, and does not, identify sources of water pollution. However, the department remains committed to working with everyone in the TMDL process to find reasonable, cost effective controls to protect the state's water quality. Mr. Schmidt's comments are appreciated.*

Comment: Harlan Hartman, Prairie Partners. Mr. Hartman commented on an apparent inconsistency in terminology. According to Mr. Hartman, TMDLs are defined as "parametric values", but the department portrays TMDLs as sites or locations (as on maps, etc.).

Response to Comment: *Mr. Hartman is correct in his statement that TMDLs are "parametric values." TMDLs are not locations. However, by " mapping TMDLs" the department is merely trying to identify the locations of the waterbodies for which TMDLs will be developed, for the benefit of the public.*

Comment: Jack Cole, Citizens to Restore Terry Peak Mountain, PO Box 352, Spearfish, SD, 57783. Mr. Cole's comments were received on March 23, 1998, four days after the end of the official comment period. However, the department considered and provides the following responses to Mr. Cole's comments.

1) The list does not take into consideration the impacts of heavy metals on stream sediments, fish kills, and threats to water quality in several major streams at or near Terry Peak, i.e.:
    a) Squaw Creek (with tributaries and headwaters)
    b) Rubicon Gulch and overload of selenium in Bridal Veil Falls
    c) False Bottom Creek
    d) Annie Creek including problems of drinking water wells
    e) Deadwood Creek
    f) Spearfish Creek

    Mr. Cole believes these waters are probably the most threatened waters in the State and should be included on the 1998 list.

Response to Comments: *The department's review of water quality data collected from these streams indicates that these streams do not meet the criteria for listing in the 1998 303(d) list. Isolated incidents of spills or releases of mine process water are addressed by the department through various enforcement activities. The department remains committed to enforcing against violations of the surface water quality standards from a regulated source. Because no additional information was submitted to substantiate the claims made in this comment, no changes have been made.*

The 303(d) list only addresses waters that do not, or are not expected to meet water quality standards. "Threatened" waters are also required to be listed. EPA defines a threatened water as a waterbody that "presently meets an applicable water quality standard, but is expected to exceed the standard before the next list submission deadline, i.e., April 2000." A review of data for the streams mentioned by Mr. Cole did not indicate that the waters were threatened.

Neither EPA nor the department has regulations that establish numeric standards for heavy metal concentrations in sediment. The Clean Water Act specifically requires states to develop TMDLs for waters that do not or will not meet <u>surface water quality standards</u> after the application of technology-based requirements for point sources.

2) I understand that some "headwaters" of impacted streams have not been included in the state's list of concerns. Your responsibility, under the Clean Water Act is to include "all fishable and swimmable waters" in your official lists.

***Response to Comments**: The department agrees it is responsible for including all "fishable and swimmable waters" on the 303(d) list as long as there is evidence that indicates these uses are being impaired. No data has been presented to the department that indicates that the designated beneficial uses of these headwater streams are not being attained. The data available to the department shows that these streams are meeting their assigned beneficial uses.*

3) Shouldn't the past, present, and future altering of stream flows be factored in some way into your responsibilities under the Clean Water Act? (Large scale surface mining often alters stream flows). Obviously, if these alterations reduce traditional flows of surface water, the problems of concentrations of pollutants in the remaining stream become greater.

***Response to Comments:** The alteration of streamflow does not, in itself, constitute an impairment. Regardless of whether or not streamflow alteration increases pollutant concentrations, the department conducted a review of water quality data from the past five years. In reviewing the water quality data, DENR believes that streamflow alteration was factored into the water quality data review. Regardless of the effect of streamflow alteration on pollutant levels, comparing the water quality data to surface water quality standards will show whether or not the water quality standards are being attained.*

4) Your comments on page 16 as to EPA "recommendations" to revise water quality laboratory method from the "total" to the "dissolved" system could be misunderstood. A more accurate portrayal would be "at DENR's insistence, the Board approved the change in methodology and EPA reluctantly allowed it." In our view, this change could alter the accuracy and reliability of the measurement on certain heavy metals by as much as 10 – 90%.

***Response to Comments**: A 1993 memo from EPA Office of Water offers EPA's interpretation and implementation of aquatic life criteria for the management of metals. In that memo, EPA stated that it was their policy that "the use of dissolved metal to set and measure compliance with water quality standards is the recommended approach, because dissolved metal more closely approximates the bioavailable fraction of metal in the water column than does total recoverable metal. This conclusion regarding metal bioavailability is supported by a majority of the scientific community within and outside the Agency." Based on this and other statements made by EPA in the memo, as well as EPA's approval of the change in South Dakota's surface water quality standards, Mr. Cole's suggested language change is an inaccurate portrayal of the facts.*

5) Our major concern is the absence of the metal parameters and adequate measurement and subsequent inclusion of their effect on water quality of the streams in the Northern Black Hills. In the absence of the list of 126 "priority pollutants," (including metals) and how these have been used in making your decisions, it is most difficult for us to understand how you arrived at your conclusions.

***Response to Comments:** A review of water quality data taken over the past five years was performed (including metals). Specific methodologies are outlined in the supporting documentation to the 303(d) list. This documentation in the 303(d) list clear outlines how DENR arrived at its conclusions.*

6) We note where you "write off" your responsibility in certain cases, (i.e. Little Spearfish Creek) because of "certain water rights." Does the Clean Water Act allow this? A water right to divert stream flow for hydropower, for example, shouldn't lessen the state's responsibilities. I don't think that Homestake's right to use some of the public's water for generation of hydropower gives them or anyone else the "right" to pollute the water.

Response to Comments: *Homestake has legally operated this diversion under state law for many years. The right to divert the water does not give Homestake the right to pollute the stream. Homestake has obtained an instream flow right of 20 cubic feet per second for this portion of the stream. The department has supported the issuance of this instream flow water right so that flows in Little Spearfish and Spearfish Creeks would be restored and protected. The department encourages Mr. Cole to work with Homestake in developing this water right.*

7) In the Strawberry Creek, Bear Butte, Boulder and Two Bit Creek watersheds, there is, as you may know, major mine pollution threats approaching "federal Superfund site" classifications. We understand that the present water treatment system at the Brohm mine in the area will cost about $72,000 per month and will probably be required to operate into perpetuity. We also understand that the owners of the Brohm mine have serious financial problems. Please include these streams mentioned above on your urgent TMDL list with special attention to the mineral parameters.

Response to Comments: *Available water quality data on these streams was reviewed, and those streams that consistently violated water quality standards have been placed on the 303(d) list. Brohm's financial problems alone are not cause to list a waterbody for TMDL development.*

8) There is a large area of likely heavy metals contaminate "run-off" from the Golden Reward mine on Terry Peak Mountain. The Golden Reward mine is another of the potential "Judgement Proof" foreign-owned heap leach mines in the West that is at or nearing bankruptcy. It may be well for you to identify the waterbodies that this large disturbance will likely impact someday (Fantail Creek, and perhaps Whitetail Creek).

Response to Comments: *As mentioned earlier, the 303(d) list only addresses waters that do not or are not expected to meet water quality standards. The presence of the Golden Reward Mine does not, in itself, justify listing Fantail or Whitetail Creek.*

9) Our information is that many of the streams in the Black Hills consistently violate water quality standards for metals, and should therefore be on your 303(d) list and targeted promptly for TMDL actions.

Response to Comments: *As stated above, the department reviewed water quality data for Black Hills streams, and those streams that consistently violated water quality standards for metals (as well as other parameters) have been listed.*

In addition to comments and changes described above, typographical errors, omissions, corrections and other changes were made to the draft document. Changes from the draft report that the department believes to be significant are discussed below:

Beach Monitoring Data:
Fecal coliform monitoring data for 18 lakes was reviewed for consistency with the Surface Water Quality Standards. As a result, seven lakes were deleted from the draft list, as the data did not meet the minimum listing criteria of 10% exceedence over the daily maximum water quality standard of 400 colonies/100 mL. The other listed lakes were corrected to represent the actual number of samples not meeting the applicable standard

Stream data from Black Hills National Forest:
A review of data submitted to the department by the US Forest Service indicates that additional streams should be added to the 303(d) list. Data for the North Fork of Rapid Creek (Belle Fourche River Basin) indicates that the creek may be impaired due to exceedences of the water quality standard for temperature. As such, the North Fork of Rapid Creek has been added to the list of waters targeted for TMDLs.

Forest Service data for Battle Creek (Cheyenne River Basin) further supports the listing of Battle Creek in the draft list as having temperature impairments, and also indicates that ammonia impairments may exist. Battle Creek has been added to the impairment list for ammonia, and further justification is included for temperature impairments.

Appendix C – 303(d) Regulations

FEDERAL WATER POLLUTION CONTROL ACT
Section 303(d)

(1)(A) Each State shall identify those waters within its boundaries for which the effluent limitations required by section 301(b)(1)(A) and section 301(b)(1)(B) of this title are not stringent enough to implement any water quality standard applicable to such waters. The State shall establish a priority ranking for such waters, taking intoaccount the severity of the pollution and the uses to be made of such waters.

(B) Each State shall identify those waters or parts thereof within its boundaries for which controls on thermal discharges under section 301 of this title are not stringent enough to assure protection and propagation of a balanced indigenous population of shellfish, fish, and wildlife.

(C) Each State shall establish for the waters identified in paragraph (1)(A) of this subsection, and in accordance with the priority ranking, the total maximum daily load, for those pollutants which the Administrator identifies under section 304(a)(2) of this title as suitable for such calculation. Such load shall be established at a level necessary to implement the applicable water quality standards with seasonal variations and a margin of safety which takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality.

(D) Each State shall estimate for the waters identified in paragraph (1)(B) of this subsection the total maximum daily thermal load required to assure protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife. Such estimates shall take into account the normal water temperatures, flow rates, seasonal variations, existing sources of heat input, and the dissipative capacity of the identified waters or parts thereof. Such estimates shall include a calculation of the maximum heat input that can be made into each such part and shall include a margin of safety which takes into account any lack of knowledge concerning the development of thermal water quality criteria for such protection and propagation in the identified waters or parts thereof.

(2) Each State shall submit to the Administrator from time to time, with the first such submission not later than one hundred and eighty days after the date of publication of the first identification of pollutants under section 304(a)(2)(D) of this title, for his approval the waters identified and the loads established under paragraphs (1)(A), (1)(B), (1)(C), and (1)(D) of this subsection. The Administrator shall either approve or disapprove such identification and load not later than thirty days after the date of submission. If the Administrator approves such identification and load, such State shall incorporate them into its current plan under subsection (e) of this section. If the Administrator disapproves such identification and load, he shall not later than thirty days after the date of such disapproval identify such waters in such State and establish such loads for such waters as he determines necessary to implement the water quality standards applicable to such waters and upon such identification and establishment the State shall incorporate them into its current plan under subsection (e) of this section.

(3) For the specific purpose of developing information, each State shall identify all waters within its boundaries which it has not identified under paragraph (1)(A) and (1)(B) of this subsection and estimate for such waters the total maximum daily load with seasonal variations and margins of safety, for those pollutants which the Administrator identifies under section 304(a)(2) of this title as suitable for such calculation and for thermal discharges, at a level that would assure protection and propagation of a balanced indigenous population of fish, shellfish, and wildlife.

(4) LIMITATIONS ON REVISION OF CERTAIN EFFLUENT LIMITATIONS—

(A) STANDARD NOT ATTAINED.--For waters identified under paragraph (1)(A) where the applicable water quality standard has not yet been attained, any effluent limitation based on a total maximum daily load or other waste load allocation established under this section may be revised only if (i) the cumulative effect of all such revised effluent limitations based on such total maximum daily load or waste load allocation will assure the attainment of such water quality standard, or (ii) the designated use which is not being attained is removed in accordance with regulations established under this section.

(B) STANDARD ATTAINED.--For waters identified under paragraph (1)(A) where the quality of such waters equals or exceeds levels necessary to protect the designated use for such waters or otherwise required by applicable water quality standards, any effluent limitation based on a total maximum daily load or other waste load allocation established under this section, or any water quality standard established under this section, or any other permitting standard may be revised only if such revision is subject to and consistent with the antidegradation policy established under this section.

PART 130—WATER QUALITY PLANNING AND MANAGEMENT

Sec.
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AUTHORITY: 33 U.S.C. 1251 *et seq.*

SOURCE: 50 FR 1779, Jan. 11, 1985, unless otherwise noted.

§ 130.0 Program summary and purpose.

(a) This subpart establishes policies and program requirements for water quality planning, management and implementation under sections 106, 205(j), non-construction management 205(g), 208, 303 and 305 of the Clean Water Act. The Water Quality Management (WQM) process described in the Act and in this regulation provides the authority for a consistent national approach for maintaining, improving and protecting water quality while allowing States to implement the most effective individual programs. The process is implemented jointly by EPA, the States, interstate agencies, and areawide, local and regional planning organizations. This regulation explains the requirements of the Act, describes the relationships between the several components of the WQM process and outlines the roles of the major participants in the process. The components of the WQM process are discussed below.

(b) Water quality standards (WQS) are the State's goals for individual water bodies and provide the legal basis for control decisions under the Act. Water quality monitoring activities provide the chemical, physical and biological data needed to determine the present quality of a State's waters and to identify the sources of pollutants in those waters. The primary assessment of the quality of a State's water is contained in its biennial Report to Congress required by section 305(b) of the Act.

(c) This report and other assessments of water quality are used in the State's WQM plans to identify priority water quality problems. These plans also contain the results of the State's analyses and management decisions which are necessary to control specific sources of pollution. The plans recommend control measures and designated management agencies (DMAs) to attain the goals established in the State's water quality standards.

(d) These control measures are implemented by issuing permits, building publicly-owned treatment works (POTWs), instituting best management practices for nonpoint sources of pollution and other means. After control measures are in place, the State evaluates the extent of the resulting improvements in water quality, conducts additional data gathering and planning to determine needed modifications in control measures and again institutes control measures.

(e) This process is a dynamic one, in which requirements and emphases vary over time. At present, States have completed WQM plans which are generally comprehensive in geographic and programmatic scope. Technology based controls are being implemented for most point sources of pollution. However, WQS have not been attained in many water bodies and are threatened in others.

(f) Present continuing planning requirements serve to identify these critical water bodies, develop plans for achieving higher levels of abatement and specify additional control measures. Consequently, this regulation reflects a programmatic emphasis on concentrating planning and abatement activities on priority water quality issues and geographic areas. EPA will focus its grant funds on activities designed to address these priorities. Annual work programs negotiated between EPA and State and interstate agencies will reflect this emphasis.

§ 130.1 Applicability.

(a) This subpart applies to all State, eligible Indian Tribe, interstate, areawide and regional and local CWA water quality planning and management activities undertaken on or after February 11, 1985 including all updates and continuing certifications for approved Water Quality Management (WQM) plans developed under sections 208 and 303 of the Act.

(b) Planning and management activities undertaken prior to February 11, 1985 are governed by the requirements of the regulations in effect at the time of the last grant award.

[50 FR 1779, Jan. 11, 1985, as amended at 54 FR 14359, Apr. 11, 1989; 59 FR 13817, Mar. 23, 1994]

§ 130.2 Definitions.

(a) *The Act.* The Clean Water Act, as amended, 33 U.S.C. 1251 *et seq.*

(b) *Indian Tribe.* Any Indian Tribe, band, group, or community recognized by the Secretary of the Interior and exercising governmental authority over a Federal Indian reservation.

(c) *Pollution.* The man-made or man-induced alteration of the chemical, physical, biological, and radiological integrity of water.

(d) *Water quality standards (WQS).* Provisions of State or Federal law which consist of a designated use or uses for the waters of the United States and water quality criteria for such waters based upon such uses. Water quality standards are to protect the public health or welfare, enhance the quality of water and serve the purposes of the Act.

(e) *Load or loading.* An amount of matter or thermal energy that is introduced into a receiving water; to introduce matter or thermal energy into a receiving water. Loading may be either man-caused (pollutant loading) or natural (natural background loading).

(f) *Loading capacity.* The greatest amount of loading that a water can receive without violating water quality standards.

(g) *Load allocation (LA).* The portion of a receiving water's loading capacity that is attributed either to one of its existing or future nonpoint sources of pollution or to natural background sources. Load allocations are best estimates of the loading, which may range from reasonably accurate estimates to gross allotments, depending on the availability of data and appropriate techniques for predicting the loading. Wherever possible, natural and nonpoint source loads should be distinguished.

(h) *Wasteload allocation (WLA).* The portion of a receiving water's loading capacity that is allocated to one of its existing or future point sources of pollution. WLAs constitute a type of water quality-based effluent limitation.

(i) *Total maximum daily load (TMDL).* The sum of the individual WLAs for point sources and LAs for nonpoint sources and natural background. If a receiving water has only one point source discharger, the TMDL is the sum of that point source WLA plus the LAs for any nonpoint sources of pollution and natural background sources, tributaries, or adjacent segments. TMDLs can be expressed in terms of either mass per time, toxicity, or other appropriate measure. If Best Management Practices (BMPs) or other nonpoint source pollution controls make more stringent load allocations practicable, then wasteload allocations can be made less stringent. Thus, the TMDL process provides for nonpoint source control tradeoffs.

(j) *Water quality limited segment.* Any segment where it is known that water quality does not meet applicable water quality standards, and/or is not expected to meet applicable water quality standards, even after the application of the technology-based effluent limitations required by sections 301(b) and 306 of the Act.

(k) *Water quality management (WQM) plan.* A State or areawide waste treatment management plan developed and updated in accordance with the provisions of sections 205(j), 208 and 303 of the Act and this regulation.

(l) *Areawide agency.* An agency designated under section 208 of the Act, which has responsibilities for WQM planning within a specified area of a State.

(m) *Best Management Practice (BMP).* Methods, measures or practices selected by an agency to meet its nonpoint source control needs. BMPs include but are not limited to structural and nonstructural controls and operation and maintenance procedures. BMPs can be applied before, during and after pollution-producing activities to reduce or eliminate the introduction of pollutants into receiving waters.

(n) *Designated management agency (DMA).* An agency identified by a WQM plan and designated by the Governor to implement specific control recommendations.

[50 FR 1779, Jan. 11, 1985, as amended at 54 FR 14359, Apr. 11, 1989]

§ 130.3 Water quality standards.

A water quality standard (WQS) defines the water quality goals of a water body, or portion thereof, by designating the use or uses to be made of the water and by setting criteria necessary to protect the uses. States and EPA adopt WQS to protect public health or welfare, enhance the quality of water and serve the purposes of the Clean Water Act (CWA). *Serve the purposes of Act* (as defined in sections 101(a)(2) and 303(c) of the Act) means that WQS should, wherever attainable, provide water quality for the protection and propagation of fish, shellfish and wildlife and for recreation in and on the water and take into consideration their use and value for public water supplies, propagation of fish, shellfish, wildlife, recreation in and on the water, and agricultural, industrial and other purposes including navigation.

Such standards serve the dual purposes of establishing the water quality goals for a specific water body and serving as the regulatory basis for establishment of water quality-based treatment controls and strategies beyond the technology-based level of treatment required by sections 301(b) and 306 of the Act. States shall review and revise WQS in accordance with applicable regulations and, as appropriate, update their Water Quality Management (WQM) plans to reflect such revisions. Specific WQS requirements are found in 40 CFR part 131.

§ 130.4 Water quality monitoring.

(a) In accordance with section 106(e)(1), States must establish appropriate monitoring methods and procedures (including biological monitoring) necessary to compile and analyze data on the quality

of waters of the United States and, to the extent practicable, ground-waters. This requirement need not be met by Indian Tribes. However, any monitoring and/or analysis activities undertaken by a Tribe must be performed in accordance with EPA's quality assurance/quality control guidance.

(b) The State's water monitoring program shall include collection and analysis of physical, chemical and biological data and quality assurance and control programs to assure scientifically valid data. The uses of these data include determining abatement and control priorities; developing and reviewing water quality standards, total maximum daily loads, wasteload allocations and load allocations; assessing compliance with National Pollutant Discharge Elimination System (NPDES) permits by dischargers; reporting information to the public through the section 305(b) report and reviewing site-specific monitoring efforts.

[50 FR 1779, Jan. 11, 1985, as amended at 54 FR 14359, Apr. 11, 1989]

§ 130.5 Continuing planning process.

(a) *General.* Each State shall establish and maintain a continuing planning process (CPP) as described under section 303(e)(3)(A)—(H) of the Act. Each State is responsible for managing its water quality program to implement the processes specified in the continuing planning process. EPA is responsible for periodically reviewing the adequacy of the State's CPP.

(b) *Content.* The State may determine the format of its CPP as long as the mininum requirements of the CWA and this regulation are met. The following processes must be described in each State CPP, and the State may include other processes at its discretion.

(1) The process for developing effluent limitations and schedules of compliance at least as stringent as those required by sections 301(b) (1) and (2), 306 and 307, and at least stringent as any requirements contained in applicable water quality standards in effect under authority of section 303 of the Act.

(2) The process for incorporating elements of any applicable areawide waste treatment plans under section 208, and applicable basin plans under section 209 of the Act.

(3) The process for developing total maximum daily loads (TMDLs) and individual water quality based effluent limitations for pollutants in accordance with section 303(d) of the Act and § 130.7(a) of this regulation.

(4) The process for updating and maintaining Water Quality Management (WQM) plans, including schedules for revision.

(5) The process for assuring adequate authority for intergovernmental cooperation in the implementation of the State WQM program.

(6) The process for establishing and assuring adequate implementation of new or revised water quality standards, including schedules of compliance, under section 303(c) of the Act.

(7) The process for assuring adequate controls over the disposition of all residual waste from any water treatment processing.

(8) The process for developing an inventory and ranking, in order of priority of needs for construction of waste treatment works required to meet the applicable requirements of sections 301 and 302 of the Act.

(9) The process for determining the priority of permit issuance.

(c) *Regional Administrator review.* The Regional Administrator shall review approved State CPPs from time to time to ensure that the planning processes are consistent with the Act and this regulation. The Regional Administrator shall not approve any permit program under Title IV of the Act for any State which does not have an approved continuing planning process.

§ 130.6 Water quality management plans.

(a) *Water quality management (WQM) plans.* WQM plans consist of initial plans produced in accordance with sections 208 and 303(e) of the Act and certified and approved updates to those plans. Continuing water quality planning shall be based upon WQM plans and water quality problems identified in the latest 305(b) reports. State water quality planning should focus annually on priority issues and geographic areas and on the development of water quality controls leading to implementation measures. Water quality planning directed at the removal of conditions placed on previously certified and approved WQM plans should focus on removal of conditions which will lead to control decisions.

(b) *Use of WQM plans.* WQM plans are used to direct implementation. WQM plans draw upon the water quality assessments to identify priority point and nonpoint water quality problems, consider alternative solutions and recommend control measures, including the financial and institutional measures necessary for implementing recommended solutions. State annual work programs shall be based upon the priority issues identified in the State WQM plan.

(c) *WQM plan elements.* Sections 205(j), 208 and 303 of the Act specify water quality planning requirements. The following plan elements shall be included in the WQM plan or referenced as part of the WQM plan if contained in separate documents when they are needed to address water quality problems.

(1) *Total maximum daily loads.* TMDLs in accordance with sections 303(d) and (e)(3)(C) of the Act and § 130.7 of this part.

(2) *Effluent limitations.* Effluent limitations including water quality based effluent limitations and schedules of compliance in accordance with section 303(e)(3)(A) of the Act and § 130.5 of this part.

(3) *Municipal and industrial waste treatment.* Identification of anticipated municipal and industrial waste treatment works, including facilities for treatment of stormwater-induced combined sewer overflows; programs to provide necessary financial arrangements for such works; establishment of construction priorities and schedules for initiation and completion of such treatment works including an identification of open space and recreation opportunities from improved water quality in accordance with section 208(b)(2) (A) and (B) of the Act.

(4) *Nonpoint source management and control.* (i) The plan shall describe the regulatory and non-regulatory programs, activities and Best Management Practices (BMPs) which the agency has selected as the means to control nonpoint source pollution where necessary to protect or achieve approved water uses. Economic, institutional, and technical factors shall be considered in a continuing process of identifying control needs and evaluating and modifying the BMPs as necessary to achieve water quality goals.

(ii) Regulatory programs shall be identified where they are determined to be necessary by the State to attain or maintain an approved water use or where non-regulatory approaches are inappropriate in accomplishing that objective.

(iii) BMPs shall be identified for the nonpoint sources identified in section 208(b)(2)(F)–(K) of the Act and other nonpoint sources as follows:

(A) *Residual waste.* Identification of a process to control the disposition of all residual waste in the area which could affect water quality in accordance with section 208(b)(2)(J) of the Act.

(B) *Land disposal.* Identification of a process to control the disposal of pollutants on land or in subsurface excavations to protect ground and surface water quality in accordance with section 208(b)(2)(K) of the Act.

(C) *Agricultural and silvicultural.* Identification of procedures to control agricultural and silvicultural sources of pollution in accordance with section 208(b)(2)(F) of the Act.

(D) *Mines.* Identification of procedures to control mine-related sources of pollution in accordance with section 208(b)(2)(G) of the Act.

(E) *Construction.* Identification of procedures to control construction related sources of pollution in accordance with section 208(b)(2)(H) of the Act.

(F) *Saltwater intrusion.* Identification of procedures to control saltwater intrusion in accordance with section 208(b)(2)(I) of the Act.

(G) *Urban stormwater.* Identification of BMPs for urban stormwater control to achieve water quality goals and fiscal analysis of the necessary capital and operations and maintenance expenditures in accordance with section 208(b)(2)(A) of the Act.

(iv) The nonpoint source plan elements outlined in § 130.6(c) (4)(iii)(A)(G) of this regulation shall be the basis of water quality activities implemented through agreements or memoranda of understanding between EPA and other departments, agencies or instrumentalities of the United States in accordance with section 304(k) of the Act.

(5) *Management agencies.* Identification of agencies necessary to carry out the plan and provision for adequate authority for intergovernmental cooperation in accordance with sections 208(b)(2)(D) and 303(e)(3)(E) of the Act. Management agencies must demonstrate the legal, institutional, managerial and financial capability and specific activities necessary to carry out their responsibilities in accordance with section 208(c)(2)(A) through (I) of the Act.

(6) *Implementation measures.* Identification of implementation measures necessary to carry out the plan, including financing, the time needed to carry out the plan, and the economic, social and environmental impact of carrying out the plan in accordance with section 208(b)(2)(E).

(7) *Dredge or fill program.* Identification and development of programs for the control of dredge or fill material in accordance with section 208(b)(4)(B) of the Act.

(8) *Basin plans.* Identification of any relationship to applicable basin plans developed under section 209 of the Act.

(9) *Ground water.* Identification and development of programs for control of ground-water pollution including the provisions of section 208(b)(2)(K) of the Act. States are not required to develop ground-water WQM plan elements beyond the requirements of section 208(b)(2)(K) of the Act, but may develop a ground-water plan element if they determine it is necessary to address a ground-water quality problem. If a State chooses to develop a ground-water plan element, it should describe the essentials of a State program and should include, but is not limited to:

(i) Overall goals, policies and legislative authorities for protection of ground-water.

(ii) Monitoring and resource assessment programs in accordance with section 106(e)(1) of the Act.

(iii) Programs to control sources of contamination of ground-water including Federal programs

delegated to the State and additional programs authorized in State statutes.

(iv) Procedures for coordination of ground-water protection programs among State agencies and with local and Federal agencies.

(v) Procedures for program management and administration including provision of program financing, training and technical assistance, public participation, and emergency management.

(d) *Indian Tribes.* An Indian Tribe is eligible for the purposes of this rule and the Clean Water Act assistance programs under 40 CFR part 35, subparts A and H if:

(1) The Indian Tribe has a governing body carrying out substantial governmental duties and powers;

(2) The functions to be exercised by the Indian Tribe pertain to the management and protection of water resources which are held by an Indian Tribe, held by the United States in trust for Indians, held by a member of an Indian Tribe if such property interest is subject to a trust restriction on alienation, or otherwise within the borders of an Indian reservation; and

(3) The Indian Tribe is reasonably expected to be capable, in the Regional Administrator's judgment, of carrying out the functions to be exercised in a manner consistent with the terms and purposes of the Clean Water Act and applicable regulations.

(e) *Update and certification.* State and/or areawide agency WQM plans shall be updated as needed to reflect changing water quality conditions, results of implementation actions, new requirements or to remove conditions in prior conditional or partial plan approvals. Regional Administrators may require that State WQM plans be updated as needed. State Continuing Planning Processes (CPPs) shall specify the process and schedule used to revise WQM plans. The State shall ensure that State and areawide WQM plans together include all necessary plan elements and that such plans are consistent with one another. The Governor or the Governor's designee shall certify by letter to the Regional Administrator for EPA approval that WQM plan updates are consistent with all other parts of the plan. The certification may be contained in the annual State work program.

(f) *Consistency.* Construction grant and permit decisions must be made in accordance with certified and approved WQM plans as described in §§ 130.12(a) and 130.12(b).

[50 FR 1779, Jan. 11, 1985, as amended at 54 FR 14360, Apr. 11, 1989; 59 FR 13818, Mar. 23, 1994]

§ 130.7 Total maximum daily loads (TMDL) and individual water quality-based effluent limitations.

(a) *General.* The process for identifying water quality limited segments still requiring wasteload allocations, load allocations and total maximum daily loads (WLAs/LAs and TMDLs), setting priorities for developing these loads; establishing these loads for segments identified, including water quality monitoring, modeling, data analysis, calculation methods, and list of pollutants to be regulated; submitting the State's list of segments identified, priority ranking, and loads established (WLAs/LAs/TMDLs) to EPA for approval; incorporating the approved loads into the State's WQM plans and NPDES permits; and involving the public, affected dischargers, designated areawide agencies, and local governments in this process shall be clearly described in the State Continuing Planning Process (CPP).

(b) Identification and priority setting for water quality-limited segments still requiring TMDLs.

(1) Each State shall identify those water quality-limited segments still requiring TMDLs within its boundaries for which:

(i) Technology-based effluent limitations required by sections 301(b), 306, 307, or other sections of the Act;

(ii) More stringent effluent limitations (including prohibitions) required by either State or local authority preserved by section 510 of the Act, or Federal authority (law, regulation, or treaty); and

(iii) Other pollution control requirements (e.g., best management practices) required by local, State, or Federal authority are not stringent enough to implement any water quality standards (WQS) applicable to such waters.

(2) Each State shall also identify on the same list developed under paragraph (b)(1) of this section those water quality-limited segments still requiring TMDLs or parts thereof within its boundaries for which controls on thermal discharges under section 301 or State or local requirements are not stringent enough to assure protection and propagation of a balanced indigenous population of shellfish, fish and wildlife.

(3) For the purposes of listing waters under § 130.7(b), the term ''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, including numeric criteria, narrative criteria, waterbody uses, and antidegradation requirements.

(4) The list required under §§ 130.7(b)(1) and 130.7(b)(2) of this section shall include a priority ranking for all listed water quality-limited segments still requiring TMDLs, taking into account

the severity of the pollution and the uses to be made of such waters and shall identify the pollutants causing or expected to cause violations of the applicable water quality standards. The priority ranking shall specifically include the identification of waters targeted for TMDL development in the next two years.

(5) Each State shall assemble and evaluate all existing and readily available water quality-related data and information to develop the list required by §§ 130.7(b)(1) and 130.7(b)(2). At a minimum ''all existing and readily available water quality-related data and information'' includes but is not limited to all of the existing and readily available data and information about the following categories of waters:

(i) Waters identified by the State in its most recent section 305(b) report as ''partially meeting'' or ''not meeting'' designated uses or as ''threatened'';

(ii) Waters for which dilution calculations or predictive models indicate nonattainment of applicable water quality standards;

(iii) Waters for which water quality problems have been reported by local, state, or federal agencies; members of the public; or academic institutions. These organizations and groups should be actively solicited for research they may be conducting or reporting. For example, university researchers, the United States Department of Agriculture, the National Oceanic and Atmospheric Administration, the United States Geological Survey, and the United States Fish and Wildlife Service are good sources of field data; and

(iv) Waters identified by the State as impaired or threatened in a nonpoint assessment submitted to EPA under section 319 of the CWA or in any updates of the assessment.

(6) Each State shall provide documentation to the Regional Administrator to support the State's determination to list or not to list its waters as required by §§ 130.7(b)(1) and 130.7(b)(2). This documentation shall be submitted to the Regional Administrator together with the list required by §§ 130.7(b)(1) and 130.7(b)(2) and shall include at a minimum:

(i) A description of the methodology used to develop the list; and

(ii) A description of the data and information used to identify waters, including a description of the data and information used by the State as required by § 130.7(b)(5); and

(iii) A rationale for any decision to not use any existing and readily available data and information for any one of the categories of waters as described in § 130.7(b)(5); and

(iv) Any other reasonable information requested by the Regional Administrator. Upon request by the Regional Administrator, each State must demonstrate good cause for not including a water or waters on the list. Good cause includes, but is not limited to, more recent or accurate data; more sophisticated water quality modeling; flaws in the original analysis that led to the water being listed in the categories in § 130.7(b)(5); or changes in conditions, e.g., new control equipment, or elimination of discharges.

(c) Development of TMDLs and individual water quality based effluent limitations.

(1) Each State shall establish TMDLs for the water quality limited segments identified in paragraph (b)(1) of this section, and in accordance with the priority ranking. For pollutants other than heat, TMDLs shall be established at levels necessary to attain and maintain the applicable narrative and numerical WQS with seasonal variations and a margin of safety which takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality. Determinations of TMDLs shall take into account critical conditions for stream flow, loading, and water quality parameters.

(i) TMDLs may be established using a pollutant-by-pollutant or biomonitoring approach. In many cases both techniques may be needed. Site-specific information should be used wherever possible.

(ii) TMDLs shall be established for all pollutants preventing or expected to prevent attainment of water quality standards as identified pursuant to paragraph (b)(1) of this section. Calculations to establish TMDLs shall be subject to public review as defined in the State CPP.

(2) Each State shall estimate for the water quality limited segments still requiring TMDLs identified in paragraph (b)(2) of this section, the total maximum daily thermal load which cannot be exceeded in order to assure protection and propagation of a balanced, indigenous population of shellfish, fish and wildlife. Such estimates shall take into account the normal water temperatures, flow rates, seasonal variations, existing sources of heat input, and the dissipative capacity of the identified waters or parts thereof. Such estimates shall include a calculation of the maximum heat input that can be made into each such part and shall include a margin of safety which takes into account any lack of knowledge concerning the development of thermal water quality criteria for protection and propagation of a balanced, indigenous population of shellfish, fish and wildlife in the identified waters or parts thereof.

(d) *Submission and EPA approval.* (1) Each State shall submit biennially to the Regional Administrator beginning in 1992 the list of waters, pollutants causing impairment, and the priority ranking including waters targeted for TMDL development within the next two years as required

under paragraph (b) of this section. For the 1992 biennial submission, these lists are due no later than October 22, 1992. Thereafter, each State shall submit to EPA lists required under paragraph (b) of this section on April 1 of every even-numbered year. The list of waters may be submitted as part of the State's biennial water quality report required by § 130.8 of this part and section 305(b) of the CWA or submitted under separate cover. All WLAs/LAs and TMDLs established under paragraph (c) for water quality limited segments shall continue to be submitted to EPA for review and approval. Schedules for submission of TMDLs shall be determined by the Regional Administrator and the State.

(2) The Regional Administrator shall either approve or disapprove such listing and loadings not later than 30 days after the date of submission. The Regional Administrator shall approve a list developed under § 130.7(b) that is submitted after the effective date of this rule only if it meets the requirements of § 130.7(b). If the Regional Administrator approves such listing and loadings, the State shall incorporate them into its current WQM plan. If the Regional Administrator disapproves such listing and loadings, he shall, not later than 30 days after the date of such disapproval, identify such waters in such State and establish such loads for such waters as determined necessary to implement applicable WQS. The Regional Administrator shall promptly issue a public notice seeking comment on such listing and loadings. After considering public comment and making any revisions he deems appropriate, the Regional Administrator shall transmit the listing and loads to the State, which shall incorporate them into its current WQM plan.

(e) For the specific purpose of developing information and as resources allow, each State shall identify all segments within its boundaries which it has not identified under paragraph (b) of this section and estimate for such waters the TMDLs with seasonal variations and margins of safety, for those pollutants which the Regional Administrator identifies under section 304(a)(2) as suitable for such calculation and for thermal discharges, at a level that would assure protection and propagation of a balanced indigenous population of fish, shellfish and wildlife. However, there is no requirement for such loads to be submitted to EPA for approval, and establishing TMDLs for those waters identified in paragraph (b) of this section shall be given higher priority.

[50 FR 1779, Jan. 11, 1985, as amended at 57 FR 33049, July 24, 1992]

§ 130.8 Water quality report.

(a) Each State shall prepare and submit biennially to the Regional Administrator a water quality report in accordance with section 305(b) of the Act. The water quality report serves as the primary assessment of State water quality. Based upon the water quality data and problems identified in the 305(b) report, States develop water quality management (WQM) plan elements to help direct all subsequent control activities. Water quality problems identified in the 305(b) report should be analyzed through water quality management planning leading to the development of alternative controls and procedures for problems identified in the latest 305(b) report. States may also use the 305(b) report to describe ground-water quality and to guide development of ground-water plans and programs. Water quality problems identified in the 305(b) report should be emphasized and reflected in the State's WQM plan and annual work program under sections 106 and 205(j) of the Clean Water Act.

(b) Each such report shall include but is not limited to the following:

(1) A description of the water quality of all waters of the United States and the extent to which the quality of waters provides for the protection and propagation of a balanced population of shellfish, fish, and wildlife and allows recreational activities in and on the water.

(2) An estimate of the extent to which CWA control programs have improved water quality or will improve water quality for the purposes of paragraph (b)(1) of this section, and recommendations for future actions necessary and identifications of waters needing action.

(3) An estimate of the environmental, economic and social costs and benefits needed to achieve the objectives of the CWA and an estimate of the date of such achievement.

(4) A description of the nature and extent of nonpoint source pollution and recommendations of programs needed to control each category of nonpoint sources, including an estimate of implementation costs.

(5) An assessment of the water quality of all publicly owned lakes, including the status and trends of such water quality as specified in section 314(a)(1) of the Clean Water Act.

(c) States may include a description of the nature and extent of ground-water pollution and recommendations of State plans or programs needed to maintain or improve ground-water quality.

(d) In the years in which it is prepared the biennial section 305(b) report satisfies the requirement for the annual water quality report under section 205(j). In years when the 305(b) report is not required, the State may satisfy the annual section 205(j) report requirement by certifying that the most recently submitted section 305(b) report is current or by supplying an update of the sections

of the most recently submitted section 305(b) report which require updating.

[50 FR 1779, Jan.11, 1985, as amended at 57 FR 33050, July 24, 1992]

§ 130.9 Designation and de-designation.

(a) *Designation.* Areawide planning agencies may be designated by the Governor in accordance with section 208(a) (2) and (3) of the Act or may self-designate in accordance with section 208(a)(4) of the Act. Such designations shall subject to EPA approval in accordance with section 208(a)(7) of the Act.

(b) *De-designation.* The Governor may modify or withdraw the planning designation of a designated planning agency other than an Indian tribal organization self-designated § 130.6(c)(2) if:

(1) The areawide agency requests such cancellation; or

(2) The areawide agency fails to meet its planning requirements as specified in grant agreements, contracts or memoranda of understanding; or

(3) The areawide agency no longer has the resources or the commitment to continue water quality planning activities within the designated boundaries.

(c) *Impact of de-designation.* Once an areawide planning agency's designation has been withdrawn the State agency shall assume direct responsibility for continued water quality planning and oversight of implementation within the area.

(d) *Designated management agencies (DMA).* In accordance with section 208(c)(1) of the Act, management agencies shall be designated by the Governor in consultation with the designated planning agency. EPA shall approve such designations unless the DMA lacks the legal, financial and managerial authority required under section 208(c)(2) of the Act. Designated management agencies shall carry out responsibilities specified in Water Quality Management (WQM) plans. Areawide planning agencies shall monitor DMA activities in their area and recommend necessary plan changes during the WQM plan update. Where there is no designated areawide planning agency, States shall monitor DMA activities and make any necessary changes during the WQM plan update.

§ 130.10 State submittals to EPA.

(a) The following must be submitted regularly by the States to EPA:

(1) The section 305(b) report, in FY 84 and every two years thereafter, and the annual section 205(j) certification or update of the 305(b) water quality report; (Approved by OMB under the control number 2040–0071)

(2) The annual State work program(s) under sections 106 and 205(j) of the Act; and (Approved by OMB under the control number 2010–0004)

(3) Revisions or additions to water quality standards (WQS) (303(c)). (Approved by OMB under 2040–0049)

(b) The Act also requires that each State initially submit to EPA and revise as necessary the following:

(1) Continuing planning process (CPP) (303(e));

(2) Identification of water quality-limited waters still requiring TMDLs (section 303(d)), pollutants, and the priority ranking including waters targeted for TMDL development within the next two years as required under § 130.7(b) in accordance with the schedule set for in § 130.7(d)(1). (Approved by the Office of Management and Budget under control number 2040–0071)

(3) Total maximum daily loads (TMDLs) (303(d)); and

(4) Water quality management (WQM) plan and certified and approved WQM plan updates (208, 303(e)). (Paragraph (b)(1), (4) approved by OMB under the control number 2010–0004).

(c) The form and content of required State submittals to EPA may be tailored to reflect the organization and needs of the State, as long as the requirements and purposes of the Act, this part and, where applicable, 40 CFR parts 29, 30, 33 and 35, subparts A and J are met. The need for revision and schedule of submittals shall be agreed to annually with EPA as the States annual work program is developed.

(d) Not later than February 4, 1989, each State shall submit to EPA for review, approval, and implementation—

(1) A list of those waters within the State which after the application of effluent limitations required under section 301(b)(2) of the CWA cannot reasonably be anticipated to attain or maintain (i) water quality standards for such waters reviewed, revised, or adopted in accordance with section 303(c)(2)(B) of the CWA, due to toxic pollutants, or (ii) that water quality which shall assure protection of public health, public water supplies, agricultural and industrial uses, and the protection and propagation of a balanced population of shellfish, fish and wildlife, and allow recreational activities in and on the water;

(2) A list of all navigable waters in such State for which the State does not expect the applicable standard under section 303 of the CWA will be achieved after the requirements of sections 301(b), 306, and 307(b) are met, due entirely or substantially to discharges from point sources of any toxic pollutants listed pursuant to section 307(a);

(3) For each segment of navigable waters included on such lists, a determination of the specific point source discharging any such toxic pol-

lutant which is believed to be preventing or impairing such water quality and the amount of each such toxic pollutant discharged by each such source. (Approved by the Office of Management and Budget under control number 2040-0152)

(4) For the purposes of listing waters under § 130.10(d)(2), *applicable standard* means a numeric criterion for a priority pollutant promulgated as part of a state water quality standard. Where a state numeric criterion for a priority pollutant is not promulgated as part of a state water quality standard, for the purposes of listing waters ''applicable standard'' means the state narrative water quality criterion to control a priority pollutant (e.g., no toxics in toxic amounts) interpreted on a chemical-by-chemical basis by applying a proposed state cirterion, an explicit state policy or regulation, or an EPA national water quality criterion, supplemented with other relevant information.

(5) If a water meets either of the two conditions listed below the water must be listed under § 130.10(d)(2) on the grounds that the applicable standard is not achieved or expected to be achieved due entirely or substantially to discharges from point sources.

(i) Existing or additional water quality-based limits on one or more point sources would result in the achievement of an applicable water quality standard for a toxic pollutant; or

(ii) The discharge of a toxic pollutant from one or more point sources, regardless of any nonpoint source contribution of the same pollutant, is sufficient to cause or is expected to cause an excursion above the applicable water quality standard for the toxic pollutant.

(6) Each state shall assemble and evaluate all existing and readily available water quality-related data and information and each state shall develop the lists required by paragraphs (d)(1), (2), and (3) of this section based upon this data and information. At a minimum, all existing and readily available water quality-related data and information includes, but is not limited to, all of the existing and readily available data about the following categories of waters in the state:

(i) Waters where fishing or shellfish bans and/or advisories are currently in effect or are anticipated.

(ii) Waters where there have been repeated fishkills or where abnormalities (cancers, lesions, tumors, etc.) have been observed in fish or other aquatic life during the last ten years.

(iii) Waters where there are restrictions on water sports or recreational contact.

(iv) Waters identified by the state in its most recent state section 305(b) report as either ''partially achieving'' or ''not achieving'' designated uses.

(v) Waters identified by the states under section 303(d) of the CWA as waters needing water quality-based controls.

(vi) Waters identified by the state as priority waterbodies. (State Water Quality Management plans often include priority waterbody lists which are those waters that most need water pollution control decisions to achieve water quality standards or goals.)

(vii) Waters where ambient data indicate potential or actual exceedances of water quality criteria due to toxic pollutants from an industry classified as a primary industry in appendix A of 40 CFR part 122.

(viii) Waters for which effluent toxicity test results indicate possible or actual exceedances of state water quality standards, including narrative ''free from'' water quality criteria or EPA water quality criteria where state criteria are not available.

(ix) Waters with primary industrial major dischargers where dilution analyses indicate exceedances of state narrative or numeric water quality criteria (or EPA water quality criteria where state standards are not available) for toxic pollutants, ammonia, or chlorine. These dilution analyses must be based on estimates of discharge levels derived from effluent guidelines development documents, NPDES permits or permit application data (e.g., Form 2C), Discharge Monitoring Reports (DMRs), or other available information.

(x) Waters with POTW dischargers requiring local pretreatment programs where dilution analyses indicate exceedances of state water quality criteria (or EPA water quality criteria where state water quality criteria are not available) for toxic pollutants, ammonia, or chlorine. These dilution analyses must be based upon data from NPDES permits or permit applications (e.g., Form 2C), Discharge Monitoring Reports (DMRs), or other available information.

(xi) Waters with facilities not included in the previous two categories such as major POTWs, and industrial minor dischargers where dilution analyses indicate exceedances of numeric or narrative state water quality criteria (or EPA water quality criteria where state water quality criteria are not available) for toxic pollutants, ammonia, or chlorine. These dilution analyses must be based upon estimates of discharge levels derived from effluent guideline development documents, NPDES permits or permit application data, Discharge Monitoring Reports (DMRs), or other available information.

(xii) Waters classified for uses that will not support the ''fishable/swimmable'' goals of the Clean Water Act.

(xiii) Waters where ambient toxicity or adverse water quality conditions have been reported by

local, state, EPA or other Federal Agencies, the private sector, public interest groups, or universities. These organizations and groups should be actively solicited for research they may be conducting or reporting. For example, university researchers, the United States Department of Agriculture, the National Oceanic and Atmospheric Administration, the United States Geological Survey, and the United States Fish and Wildlife Service are good sources of field data and research.

(xiv) Waters identified by the state as impaired in its most recent Clean Lake Assessments conducted under section 314 of the Clean Water Act.

(xv) Waters identified as impaired by nonpoint sources in the *America's Clean Water: The States' Nonpoint Source Assessments* 1985 (Association of State and Interstate Water Pollution Control Administrators (ASIWPCA)) or waters identified as impaired or threatened in a nonpoint source assessment submitted by the state to EPA under section 319 of the Clean Water Act.

(xvi) Surface waters impaired by pollutants from hazardous waste sites on the National Priority List prepared under section 105(8)(A) of CERCLA.

(7) Each state shall provide documentation to the Regional Administrator to support the state's determination to list or not to list waters as required by paragraphs (d)(1), (d)(2) and (d)(3) of this section. This documentation shall be submitted to the Regional Administrator together with the lists required by paragraphs (d)(1), (d)(2), and (d)(3) of this section and shall include as a minimum:

(i) A description of the methodology used to develop each list;

(ii) A description of the data and information used to identify waters and sources including a description of the data and information used by the state as required by paragraph (d)(6) of this section;

(iii) A rationale for any decision not to use any one of the categories of existing and readily available data required by paragraph (d)(6) of this section; and

(iv) Any other information requested by the Regional Administrator that is reasonable or necessary to determine the adequacy of a state's lists. Upon request by the Regional Administrator, each state must demonstrate good cause for not including a water or waters on one or more lists. Good cause includes, but is not limited to, more recent or accurate data; more accurate water quality modeling; flaws in the original analysis that led to the water being identified in a category in § 130.10(d)(6); or changes in conditions, e.g., new control equipment, or elimination of discharges.

(8) The Regional Administrator shall approve or disapprove each list required by paragraphs (d)(1), (d)(2), and (d)(3) of this section no later than June 4, 1989. The Regional Administrator shall approve each list required under paragraphs (d)(1), (d)(2), and (d)(3) of this section only if it meets the regulatory requirements for listing under paragraphs (d)(1), (d)(2), and (d)(3) of this section and if the state has met all the requirements of paragraphs (d)(6) and (d)(7) of this section.

(9) If a state fails to submit lists in accordance with paragraph (d) of this section or the Regional Administrator does not approve the lists submitted by such state in accordance with this paragraph, then not later than June 4, 1990, the Regional Administrator, in cooperation with such state, shall implement the requirements of CWA section 304(l) (1) and (2) in such state.

(10) If the Regional Administrator disapproves a state's decision with respect to one or more of the waters required under paragraph (d) (1), (2), or (3) of this section, or one or more of the individual control strategies required pursuant to section 304(l)(1)(D), then not later than June 4, 1989, the Regional Administrator shall distribute the notice of approval or disapproval given under this paragraph to the appropriate state Director. The Regional Administrator shall also publish a notice of availability, in a daily or weekly newspaper with state-wide circulation or in the FEDERAL REGISTER, for the notice of approval or disapproval. The Regional Administrator shall also provide written notice to each discharger identified under section 304(l)(1)(C), that EPA has listed the discharger under section 304(l)(1)(C). The notice of approval and disapproval shall include the following:

(i) The name and address of the EPA office that reviews the state's submittals.

(ii) A brief description of the section 304(l) process.

(iii) A list of waters, point sources and pollutants disapproved under this paragraph.

(iv) If the Regional Administrator determines that a state did not provide adequate public notice and an opportunity to comment on the lists prepared under this section, or if the Regional Administrator chooses to exercise his or her discretion, a list of waters, point sources, or pollutants approved under this paragraph.

(v) The name, address, and telephone number of the person at the Regional Office from whom interested persons may obtain more information.

(vi) Notice that written petitions or comments are due within 120 days.

(11) As soon as practicable, but not later than June 4, 1990, the Regional Office shall issue a response to petitions or comments received under paragraph (d)(10) of this section. Notice shall be given in the same manner as notice described in paragraph (d)(10) of this section, except for the

following changes to the notice of approvals and disapprovals:

(i) The lists of waters, point sources and pollutants must reflect any changes made pursuant to comments or petitions received.

(ii) A brief description of the subsequent steps in the section 304(l) process shall be included.

[50 FR 1779, Jan. 11, 1985, as amended at 54 FR 258, Jan. 4, 1989; 54 FR 23897, June 2, 1989; 57 FR 33050, July 24, 1992]

§ 130.11 Program management.

(a) State agencies may apply for grants under sections 106, 205(j) and 205(g) to carry out water quality planning and management activities. Interstate agencies may apply for grants under section 106 to carry out water quality planning and management activities. Local or regional planning organizations may request 106 and 205(j) funds from a State for planning and management activities. Grant administrative requirements for these funds appear in 40 CFR parts 25, 29, 30, 33 and 35, subparts A and J.

(b) Grants under section 106 may be used to fund a wide range of activities, including but not limited to assessments of water quality, revision of water quality standards (WQS), development of alternative approaches to control pollution, implementation and enforcement of control measures and development or implementation of ground water programs. Grants under section 205(j) may be used to fund water quality management (WQM) planning activities but may not be used to fund implementation of control measures (see part 35, subpart A). Section 205(g) funds are used primarily to manage the wastewater treatment works construction grants program pursuant to the provisions of 40 CFR part 35, subpart J. A State may also use part of the 205(g) funds to administer approved permit programs under sections 402 and 404, to administer a statewide waste treatment management program under section 208(b)(4) and to manage waste treatment construction grants for small communities.

(c) Grant work programs for water quality planning and management shall describe geographic and functional priorities for use of grant funds in a manner which will facilitate EPA review of the grant application and subsequent evaluation of work accomplished with the grant funds. A State's 305(b) Report, WQM plan and other water quality assessments shall identify the State's priority water quality problems and areas. The WQM plan shall contain an analysis of alternative control measures and recommendations to control specific problems. Work programs shall specify the activities to be carried out during the period of the grant; the cost of specific activities; the outputs, for example, permits issued, intensive surveys, wasteload allocations, to be produced by each activity; and where applicable, schedules indicating when activities are to be completed.

(d) State work programs under sections 106, 205(j) and 205(g) shall be coordinated in a manner which indicates the funding from these grants dedicated to major functions, such as permitting, enforcement, monitoring, planning and standards, nonpoint source implementation, management of construction grants, operation and maintenance of treatment works, ground-water, emergency response and program management. States shall also describe how the activities funded by these grants are used in a coordinated manner to address the priority water quality problems identified in the State's water quality assessment under section 305(b).

(e) EPA, States, areawide agencies, interstate agencies, local and Regional governments, and designated management agencies (DMAs) are joint participants in the water pollution control program. States may enter into contractual arrangements or intergovernmental agreements with other agencies concerning the performance of water quality planning and management tasks. Such arrangements shall reflect the capabilities of the respective agencies and shall efficiently utilize available funds and funding eligibilities to meet Federal requirements commensurate with State and local priorities. State work programs under section 205(j) shall be developed jointly with local, Regional and other comprehensive planning organizations.

§ 130.12 Coordination with other programs.

(a) Relationship to the National Pollutant Discharge Elimination System (NPDES) program. In accordance with section 208(e) of the Act, no NPDES permit may be issued which is in conflict with an approved Water Quality Management (WQM) plan. Where a State has assumed responsibility for the administration of the permit program under section 402, it shall assure consistency with the WQM plan.

(b) Relationship to the municipal construction grants program. In accordance with sections 205(j), 216 and 303(e)(3)(H) of the Act, each State shall develop a system for setting priorities for funding construction of municipal wastewater treatment facilities under section 201 of the Act. The State, or the agency to which the State has delegated WQM planning functions, shall review each facility plan in its area for consistency with the approved WQM plan. Under section 208(d) of the Act, after a waste treatment management agency has been designated and a WQM plan approved, section 201 construction grant funds may be awarded only to those agencies for construction

of treatment works in conformity with the approved WQM plan.

(c) Relationship to Federal activities—Each department, agency or instrumentality of the executive, legislative and judicial branches of the Federal Government having jurisdiction over any property or facility or engaged in any activity resulting, or which may result, in the discharge or runoff of pollutants shall comply with all Federal, State, interstate and local requirements, administrative authority, and process and sanctions respecting the control and abatement of water pollution in the same manner and extent as any non-governmental entity in accordance with section 313 of the CWA.

§ 130.15 Processing application for Indian tribes.

The Regional Administrator shall process an application of an Indian Tribe submitted under § 130.6(d) in a timely manner. He shall promptly notify the Indian Tribe of receipt of the application.

[54 FR 14360, Apr. 11, 1989, as amended at 59 FR 13818, Mar. 23, 1994]

Appendix D – 1996 303(d) Waterbody List and Status

The following tables summarize the status of TMDL waters listed on the 1996 303(d) list. Waters for which "rollover" to the 1998 list is requested have been included on the 1998 list.

1996 303(d) Point Source List

PERMITTEE NAME	RECEIVING WATER	STATUS OF TMDL
Agar (SD0022241)	~~Missouri River~~ Okobojo Creek	Completed – delist
Air Products & Chemicals (SD0000086)	Rapid Creek	No-discharge permit – delist
Akaska (SD0022250)	Swan Creek	Completed – delist
Alcester (SD0021695)	Brule Creek	Completed – delist
Alpena (SD0025887)	Sand Creek	Completed – delist
Ashton (SD0022276)	James River	Completed – delist
Aurora (SD0021661)	Medary Creek	Completed – delist
Avon (SD0022730)	Dry Choteau Creek	Technology and or WQ-based limits implemented to ensure WQ standards are maintained – delist
Baltic (SD0022284)	Big Sioux River	Completed – delist
Bath Sanitary District (SD0025828)	James River	No-discharge permit – delist
Benchmark Foam, Inc. (SD0025895)	Willow Creek	Technology and or WQ-based limits implemented to ensure WQ standards are maintained – delist
BHP&L Kirk (SD0000159)	Whitetail Creek	Permit terminated – delist
Bison (SD0022411)	Thunder Butte Creek	In progress – rollover
Black Hawk Homeowners (SD0025551)	Black Hawk Creek	In progress – rollover
Bridgewater (SD0021612)	Wolf Creek	In progress – rollover
Broin Enterprises, Inc. (SD0026735)	Lake Dawson	Technology and or WQ-based limits implemented to ensure WQ standards are maintained – delist
Brookings (SD0023388)	Big Sioux River	In progress – rollover
Buffalo (SD0023400)	South Fork Grand River	Completed – delist
Camp Crook (SD0024759)	Little Missouri River	Completed – delist
Canton (SD0022489)	Big Sioux River	Completed – however, placed on 1998 list due to permit renewal in 1999

PERMITTEE NAME	RECEIVING WATER	STATUS OF TMDL
Centerville (SD0022527)	Vermillion River	Completed – delist
Chamberlain (SD0000370)	Lake Francis Case	Technology and or WQ-based limits implemented to ensure WQ standards are maintained – however, placed on 1998 list due to permit renewal in 1999
Chancellor (SD0023639)	Vermillion River	Completed – however, placed on 1998 list due to permit renewal in 1999
Chester Sanitary Dist. (SD0020338)	Skunk Creek	Completed – delist
Claremont (SD0022314)	James River	Technology and or WQ-based limits implemented to ensure WQ standards are maintained – delist
Clear Lake (SD0020699)	Hidewood Creek	In progress – rollover
Cold Spring Granite Co. (SD0026646)	N. Fork Yellow Bank River	Permit terminated – delist
Colton (SD0022322)	Skunk Creek	Technology and or WQ-based limits implemented to ensure WQ standards are maintained – delist
Concrete Materials (SD0000302)	Big Sioux River	Technology and or WQ-based limits implemented to ensure WQ standards are maintained – delist
Corson Village Water Assoc. (SD0022217)	Split Rock Creek	Not completed – Permit issued, insufficient data to complete, rollover
Custer (SD0023281)	Flynn Creek	Technology and or WQ-based limits implemented to ensure WQ standards are maintained – delist
Dakota Granite Company (SD0026280)	N. Fork Yellow Bank River	Permit terminated – delist
Dale Electronics, Inc. (SD0025917)	Missouri River	Technology and or WQ-based limits implemented to ensure WQ standards are maintained – delist
Edgemont (SD0023701)	Cheyenne River	Completed – delist
Egan (SD0022462)	Big Sioux River	Completed – however, placed on 1998 list due to permit renewal in 1999
Elkton (SD0020788)	Spring Creek	Completed – delist
Estelline (SD0022144)	Big Sioux River	Completed – delist
Evans Plunge, Inc. (SD0024767)	Fall River	Not completed - rollover
Faulkton (SD0021971)	South Fork of Snake Creek	Completed - delist
Fischer Sand & Gravel Co. (SD0026760)	James River	Technology and or WQ-based limits implemented to ensure WQ standards are maintained – delist
Flandreau (SD0021831)	Big Sioux River	Completed - delist
Freeman (SD0022110)	James River	Technology and or WQ-based limits implemented to ensure WQ standards are maintained – delist
Ft. Pierre (SD0023582)	Bad River	Completed – delist

PERMITTEE NAME	RECEIVING WATER	STATUS OF TMDL
Garretson (SD0022560)	Split Rock Creek	Not completed - Permit issued, insufficient data to complete, delist until next permit renewal
Glenham (SD0020877)	Oahe Reservoir	Technology and or WQ-based limits implemented to ensure WQ standards are maintained – delist
Golden Reward Mining Co. (SD0026905)	Whitetail Creek	Technology and or WQ-based limits implemented to ensure WQ standards are maintained – delist
Haakon School District (SD00255690)	Bad River	Technology and or WQ-based limits implemented to ensure WQ standards are maintained – delist
Harrisburg (SD0023728)	Nine Mile Creek	Technology and or WQ-based limits implemented to ensure WQ standards are maintained – delist
Hartford (SD0021750)	Skunk Creek	Completed - delist
Hermosa (SD0022349)	Battle Creek	Completed - delist
Herried (SD0022900)	Spring Creek	Completed – delist
Hill City (SD0020855)	Spring Creek	No-discharge permit – delist
Homestake Mining Co. (SD0000043)	Whitewood Creek	In progress – rollover
Homestake Mining Co. (SD0025933)	Gold Run Creek Bobtail Gulch Deadwood Creek	Completed – however, placed on 1998 list due to permit renewal in 1999
Homestake Mining Co. (SD0027197)	Gold Run Creek	Permit terminated – delist
Homestake Mining Co. (SD0027197)	Whitewood Creek	Permit terminated – delist
Hubbard Milling Co. (SD0026116)	Whitewood Creek	In progress – rollover
Hudson (SD0022471)	Big Sioux River	No-discharge permit – delist
Hurley (SD0021997)	Vermillion River	Completed – delist
Huron (SD0023434)	James River	Completed – delist
Irene (SD0022454)	Turkey Creek	No-discharge permit – delist
Kennebec (SD0022861)	Medicine Creek	Completed – delist
Kranzburg (SD0024724)	Stray Horse Creek	Not Completed - Permit issued, insufficient data to complete, delist until next permit renewal
Lead-Deadwood San. Dist. (SD0020796)	Whitewood Creek	Completed – delist
Lein - Pete and Sons (SD0000094)	Grays Pond	Technology and or WQ-based limits implemented to ensure WQ standards are maintained – delist

PERMITTEE NAME	RECEIVING WATER	STATUS OF TMDL
Marion (SD0020311)	West Fork of Vermillion River	Completed – delist
Menno (SD0020087)	James River	Completed – delist
Meridian (SD0025861)	Bull Creek	Technology and or WQ-based limits implemented to ensure WQ standards are maintained – delist
Mid-American Dairymen, Inc. (SD0025810)	Lake Pocasse	Technology and or WQ-based limits implemented to ensure WQ standards are maintained – delist
Milbank (SD0020371)	Whetstone River	In progress – rollover
Mina Lake (SD0026344)	Snake Creek	Completed - delist
Mobridge (SD0020028)	Missouri River	Technology and or WQ-based limits implemented to ensure WQ standards are maintained – delist
Monroe (SD0023752)	Vermillion River	No-discharge permit – delist
Nisland (SD0020109)	Belle Fourche River	Completed – delist
NSP – Pathfinder (SD0000264)	Big Sioux River	Completed – delist
Parker (SD0020940)	Vermillion River	In progress – rollover
Pierre (SD0020176)	Missouri River	Technology and or WQ-based limits implemented to ensure WQ standards are maintained – delist
Plankinton (SD0020958)	West Firesteel Creek	Technology and or WQ-based limits implemented to ensure WQ standards are maintained – delist
Platte (SD0020354)	Platte Creek	In progress – rollover
Presho (SD0020117)	Medicine Creek	In progress – rollover
Reliance (SD0020231)	Missouri River	Technology and or WQ-based limits implemented to ensure WQ standards are maintained – delist
Richmond Hill (SD0026883)	Squaw Creek	Technology and or WQ-based limits implemented to ensure WQ standards are maintained – delist
Salem (SD0020966)	Vermillion River, W Fork	Completed – delist
SD DGF&P – Cleghorn (SD0000060)	Rapid Creek	Technology and or WQ-based limits implemented to ensure WQ standards are maintained – delist
SD DGF&P - McNenny Hatchery (SD0000191)	Crow Creek	Technology and or WQ-based limits implemented to ensure WQ standards are maintained – delist
SD GF&P - Blue Bell Lodge (SD0024228)	French Creek	In progress – rollover
South Dakota Air National Guard (SD0026395)	Big Sioux River	Technology and or WQ-based limits implemented to ensure WQ standards are maintained – delist
South Dakota Cement Plant (SD0000027)	Grays Pond and Rapid Creek	Technology and or WQ-based limits implemented to ensure WQ standards are maintained – delist
South Dakota Redfield Hospital (SD0021300)	Turtle Creek	No-discharge permit – delist

PERMITTEE NAME	RECEIVING WATER	STATUS OF TMDL
South Dakota State University (SD0026832)	Big Sioux River	Technology and or WQ-based limits implemented to ensure WQ standards are maintained – delist
Spencer (SD0020397)	Wolf Creek	No-discharge permit – delist
Spencer Quarries, Inc. (SD0026433)	Wolf Creek	Permit terminated – delist
Springfield (SD0022047)	Missouri River	Technology and or WQ-based limits implemented to ensure WQ standards are maintained – delist
St. Joseph's Indian School (SD0025798)	Missouri River	Not completed - rollover
St. Mary's Hospital (SD0025445)	Missouri River	Technology and or WQ-based limits implemented to ensure WQ standards are maintained – delist
St. Onge Sewer & Water (SD0022594)	False Bottom Creek	Completed – delist
Stillson Oil Company (SD0026565)	Little Minnesota River	Technology and or WQ-based limits implemented to ensure WQ standards are maintained – delist
T & R Electric (SD0025437)	Bachelor Creek	Technology and or WQ-based limits implemented to ensure WQ standards are maintained – delist
Trent (SD0020265)	Big Sioux River	In progress – rollover
Trout Haven Ranch (SD0023779)	Beaver Creek	Technology and or WQ-based limits implemented to ensure WQ standards are maintained – delist
USCOE - Big Bend, Ft. Thompson (SD0026361)	Missouri River	Not expected to cause or contribute to WQS impairments – delist
USCOE - Ft. Randall Dam (SD0020648)	Missouri River	Technology and or WQ-based limits implemented to ensure WQ standards are maintained – delist
USCOE - Oahe Dam (SD0026794)	Missouri River	Technology and or WQ-based limits implemented to ensure WQ standards are maintained – delist
USDA - Box Elder CCC (SD0020834)	Box Elder Creek	In progress – rollover
USDOI - Nat'l Bio. Survey (SD0026310)	Missouri River	No-discharge permit – delist
USFWS - Gavins Point NFH (SD0000213)	Missouri River	Technology and or WQ-based limits implemented to ensure WQ standards are maintained – delist
USNPS - Mt. Rushmore (SD0021610)	Battle Creek	Completed – delist
Vale Sanitary Dist. (SD0021008)	Belle Fourche River	No-discharge permit – delist
Valley Springs (SD0020923)	Beaver Creek	In progress – rollover
Vermillion (SD0020061)	Vermillion River	Completed – delist
Viborg (SD0020541)	Turkey Ridge Creek	Completed – delist
Volga (SD0021920)	Big Sioux River	In progress – rollover

PERMITTEE NAME	RECEIVING WATER	STATUS OF TMDL
Volin (SD0020907)	Clay Creek	No-discharge permit – delist
Wakonda (SD0020257)	Vermillion River	Technology and or WQ-based limits implemented to ensure WQ standards are maintained – delist
Warner (SD0020389)	Moccasin Creek	Completed - however, placed on 1998 list due to permit renewal in 1999
Wharf Resources (SD0025852)	Squaw Creek	Technology and or WQ-based limits implemented to ensure WQ standards are maintained – delist
White (SD0021636)	Six Mile Creek	Completed - however, placed on 1998 list due to permit renewal in 1999
Whitewood (SD0021466)	Whitewood Creek	Completed – delist
Williams Pipe Line Company (SD0000981)	Big Sioux River	Technology and or WQ-based limits implemented to ensure WQ standards are maintained – delist
Williams Pipeline Co. (SD0026875)	Big Sioux River	Technology and or WQ-based limits implemented to ensure WQ standards are maintained – delist

1996 303(d) Nonpoint Source List

WATERBODY	STATUS OF TMDL
Bad River	In progress – rollover
Foster Creek, Stanley County	In progress – rollover
Lake Byron	In progress – rollover
Lake Campbell	In progress – rollover
Lake Cochrane (threatened)	In progress – rollover
Lake Hendricks	In progress – rollover
Lake Hiddenwood	In progress – rollover
Lake Kampeska	Completed – TMDL EPA approved for nutrients and accumulated sediment – delist
Lake Redfield	In progress – rollover
McCook Lake	In progress – rollover
Mina Lake	In progress – rollover
Pickerel Lake (threatened)	In progress – rollover
Punished Woman's Lake	In progress – rollover
Shadehill Lake (threatened)	In progress – rollover
Swan Lake	In progress – rollover

Appendix E - South Dakota EPA-approved TMDLs

South Dakota EPA-Approved TMDLs

Basin Name	Waterbody	Permit or Project	Parameter/ Pollutant	TMDL	Sponsor	Approval Date[1]	Reference Document
Big Sioux River Basin	Big Sioux River	Baltic (SD0022284)	Ammonia	Water quality-based effluent limits	N/A	11/8/97	Surface Water Discharge Permit, Statement of Basis, and TMDL for Baltic
		Flandreau (SD0021831)	Ammonia	Water quality-based effluent limits	N/A	8/27/97	Surface Water Discharge Permit, Statement of Basis, and TMDL for Flandreau
		Watertown (SD0023370)	Ammonia, Dissolved Oxygen	Water quality-based effluent limits	N/A	11/12/96	Surface Water Discharge Permit, Statement of Basis, and TMDL for Watertown
	East Brule Creek	Alcester (SD0021695)	Ammonia	Water quality-based effluent limits	N/A	8/27/97	Surface Water Discharge Permit, Statement of Basis, and TMDL for Alcester
	Lake Kampeska	Lake Kampeska	Total nutrients Accumulated sediment	35% reduction in nutrient loadings 25% reduction in sediment loadings	Izaak Walton League	12/26/96	Upper Big Sioux River Restoration Project (Section 319) Project Implementation Plan (SDDENR; June 1996) and Lake Kampeska Watershed Project (Section 319) (DENR; 1994)
	Lake Poinsett	Lake Poinsett	Total phosphorus	40% reduction in total phosphorus	Lake Poinsett Water Project District	12/26/96	Phase I Diagnostic Feasibility Study; Final Report; Lake Poinsett; Hamlin County, South Dakota (SDDENR; 1996)
	Pelican Lake	Pelican Lake	Total nutrients Accumulated sediment	55% reduction in nutrient loadings 65% reduction in sediment loading	Pelican Lake Water Project District	12/26/96	Upper Big Sioux River Watershed Project (Section 319) Project Implementation Plan (SDDENR: June 1996) and Lake Assessment Project; Pelican Lake; Codington County, South Dakota (SDDENR; 1995)

[1] EPA began formally approving TMDLs in mid-1996. Prior to that data, EPA reviewed submitted TMDLs, but did not have a formal approval process.

Basin Name	Waterbody	Permit or Project	Parameter/ Pollutant	TMDL	Sponsor	Approval Date[1]	Reference Document
	Spring Creek	Elkton (SD0020788)	Ammonia	Water quality-based effluent limits	N/A	11/24/97	Surface Water Discharge Permit, Statement of Basis, and TMDL for Elkton
	Tributary to Skunk Creek	Hartford (SD0021750)	Ammonia	Water quality-based effluent limits	N/A	1/31/97	Surface Water Discharge Permit, Statement of Basis, and TMDL for Hartford
Cheyenne River Basin	Whitewood Creek	Lead-Deadwood San. Dist. (SD0020796)	Ammonia, Dissolved Oxygen	Water quality-based effluent limits	N/A	12/17/96	Surface Water Discharge Permit, Statement of Basis, and TMDL for Lead-Deadwood Sanitary Dist.
Grand River Basin	South Fork Grand River	Buffalo (SD0023400)	Ammonia	Water quality-based effluent limits	N/A	11/24/97	Surface Water Discharge Permit, Statement of Basis, and TMDL for Buffalo
James River Basin	Firesteel Creek & Lake Mitchell	Firesteel Creek	Total phosphorus	50% reduction in total phosphorus	City of Mitchell	4/22/97	Phase I Diagnostic Feasibility Study; Final Report; Lake Mitchell/Firesteel Creek; Davison County, South Dakota (SDDENR; 1997)
	James River	Ashton (SD0022276)	Ammonia	Water quality-based effluent limits	N/A	12/11/96	Surface Water Discharge Permit, Statement of Basis, and TMDL for Ashton
	Sand Creek	Alpena (SD0025887)	Ammonia	Water quality-based effluent limits	N/A	11/24/97	Surface Water Discharge Permit, Statement of Basis, and TMDL for Alpena
Minnesota River Basin	Big Stone Lake	Big Stone Lake	Total nitrogen Total phosphorus	40 % reduction on total phosphorus & total nitrogen	Roberts Conservation District	12/26/96	*Restoration of Big Stone Lake; Evaluation of the Effectiveness of Lake Management Measures; EPA Clean Lakes Phase II Final Report* (HDR Engineering)
Vermillion River Basin	Turkey Ridge Creek	Viborg (SD0020541)	Ammonia	Water quality-based effluent limits	N/A	1/31/97	Surface Water Discharge Permit, Statement of Basis, and TMDL for Viborg
White River Basin	White River	USNPS - Badlands NP (SD0024376)	Ammonia	Water quality-based effluent limits	N/A	12/11/96	Surface Water Discharge Permit, Statement of Basis, and TMDL for USNPS
Total Number of EPA-approved TMDLs (as of 3/1/98):				17			

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