UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

WW-16J

MAR 20 2007

MAR 14 2007

Brad Moore, Commissioner
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, MN 55155-4194

Dear Mr. Moore:

The United States Environmental Protection Agency (U.S. EPA) has reviewed the final Total Maximum Daily Loads (TMDL) for fecal coliform in Carver, Bevens, and Silver Creek Watersheds in Minnesota. The segments are listed in Table 1 of the enclosed decision document. The Minnesota Pollution Control Agency's (MPCA) TMDLs address the recreational use impairment in four segments of the Carver, Bevens, and Silver Creek Watersheds in Minnesota. Based on this review, U.S. EPA has determined that Minnesota's four TMDLs addressing four impairments meet the requirements of Section 303(d) of the Clean Water Act and U.S. EPA's implementing regulations at 40 C.F.R. Part 130. Therefore, U.S. EPA hereby approves four TMDLs in the Carver, Bevens, and Silver Creek Watersheds in Minnesota. The statutory and regulatory requirements, and U.S. EPA's review of Minnesota's compliance with each requirement, are described in the enclosed decision document.

We wish to acknowledge Minnesota's effort in submitting these TMDLs, and look forward to future TMDL submissions by the State of Minnesota. If you have any questions, please contact Mr. Kevin Pierard, Chief of the Watersheds and Wetlands Branch at 312-886-4448.

Sincerely yours,

Jo Lynn Traub
Director, Water Division

Enclosure

cc: Dave Johnson, MPCA
Roger Rathum, MPCA
Faye Sleeper, MPCA

wq-iw7-04g

TMDL: Carver, Bevens and Silver Creeks, Minnesota
Effective Date: MAR 14 2007

Decision Document for Approval of
Carver, Bevens and Silver Creeks TMDL Report

Section 303(d) of the Clean Water Act (CWA) and EPA's implementing regulations at 40 C.F.R. Part 130 describe the statutory and regulatory requirements for approvable TMDLs. Additional information is generally necessary for EPA to determine if a submitted TMDL fulfills the legal requirements for approval under Section 303(d) and EPA regulations, and should be included in the submittal package. Use of the verb "must" below denotes information that is required to be submitted because it relates to elements of the TMDL required by the CWA and by regulation. Use of the term "should" below denotes information that is generally necessary for EPA to determine if a submitted TMDL is approvable. These TMDL review guidelines are not themselves regulations. They are an attempt to summarize and provide guidance regarding currently effective statutory and regulatory requirements relating to TMDLs. Any differences between these guidelines and EPA's TMDL regulations should be resolved in favor of the regulations themselves.

1. Identification of Water body, Pollutant of Concern, Pollutant Sources, and Priority Ranking

The TMDL submittal should identify the water body as it appears on the State's/Tribe's 303(d) list. The water body should be identified/georeferenced using the National Hydrography Dataset (NHD), and the TMDL should clearly identify the pollutant for which the TMDL is being established. In addition, the TMDL should identify the priority ranking of the water body and specify the link between the pollutant of concern and the water quality standard (see section 2 below).

The TMDL submittal should include an identification of the point and nonpoint sources of the pollutant of concern, including location of the source(s) and the quantity of the loading, e.g., lbs/per day. The TMDL should provide the identification numbers of the NPDES permits within the water body. Where it is possible to separate natural background from nonpoint sources, the TMDL should include a description of the natural background. This information is necessary for EPA's review of the load and wasteload allocations, which are required by regulation.

The TMDL submittal should also contain a description of any important assumptions made in developing the TMDL, such as:

(1) the spatial extent of the watershed in which the impaired water body is located;
(2) the assumed distribution of land use in the watershed (e.g., urban, forested, agriculture);
(3) population characteristics, wildlife resources, and other relevant information affecting the characterization of the pollutant of concern and its allocation to sources;
(4) present and future growth trends, if taken into consideration in preparing the TMDL

(e.g., the TMDL could include the design capacity of a wastewater treatment facility); and (5) an explanation and analytical basis for expressing the TMDL through *surrogate measures*, if applicable. *Surrogate measures* are parameters such as percent fines and turbidity for sediment impairments; chlorophyl *a* and phosphorus loadings for excess algae; length of riparian buffer; or number of acres of best management practices.

Comment:
Location/Description/Spatial Extent: Figure 1.1 of the TMDL identifies the three watersheds in this TMDL; Carver Creek, Bevens Creek and Silver Creek. Carver Creek is located entirely in Carver County. Silver and Bevens Creeks are in Carver and Sibley Counties, (approximately 30 percent of the watersheds lay in Sibley County.)

The Carver Creek watershed covers 54,220 acres and contains the cities of Cologne, Carver, and Waconia. There are 15 lakes and approximately 106 miles of stream within the watershed, with four active stream sampling stations.

In Carver County the Silver and Bevens Creek watersheds cover approximately 97 miles of stream with 12 lakes. There are 12 active stream sampling stations within the watersheds.

Problem Identification/Pollutant of Concern: This TMDL will address the recreational use impairment due to high levels of fecal coliform in each segment as identified in Table 2.1 of the TMDL.

As stated in the TMDL report the creeks were placed on the Section 303(d) list due to impairment of recreational uses as indicated by elevated levels of fecal coliform bacteria. Monitoring data collected documented exceedances of the Water Quality Standard (WQS) for fecal coliform during the recreational season (April 1 through October 31).

Source Identification: The Source Assessment Section of the TMDL submittal states that impairments in this watershed come from livestock and feed lots; manure applications; failing septic systems; municipal wastewater treatment facilities; industrial facilities; wildlife inputs; and urban stormwater runoff. Tables 6.8, 6.9, 6.10 inventory the fecal coilform sources in each of the watersheds.

There is one National Pollutant Discharge Elimination System (NPDES) permit for industrial discharge in Carver Creek watershed; Bongards' Creamery with two contact cooling water discharges and one wastewater pond discharge. Tables 6.1, 6.2, and 6.3 of the TMDL identify the current loads from the facility. There are two wastewater treatment plants (WWTP) which also discharge into the Carver Creek watershed; they are the Cologne WWTP and Carver WWTP. Bevens Creek watershed has two WWTPs as well; they are Norwood Young America WWTP, and Hamburg WWTP. There are no WWTPs in the Silver Creek watershed.

All three watersheds have failing septic systems. Table 6.4 of the TMDL identifies the number of estimated septics and failing septics in each stream.

Priority Ranking: Minnesota does not include separate priority rankings for its waters in the TMDL. MPCA prioritizes its waters during the development of the impaired waters list. The TMDLs for these four segments were scheduled to be developed in 2007 based on the 2006 approved listing of impaired waters.

EPA finds that the TMDL document submitted by MPCA satisfies all requirements of this first element.

2. Description of the Applicable Water Quality Standards and Numeric Water Quality Target

The TMDL submittal must include a description of the applicable State/Tribal water quality standard, including the designated use(s) of the water body, the applicable numeric or narrative water quality criterion, and the antidegradation policy. (40 C.F.R. §130.7(c)(1)). EPA needs this information to review the loading capacity determination, and load and wasteload allocations, which are required by regulation.

The TMDL submittal must identify a numeric water quality target(s) – a quantitative value used to measure whether or not the applicable water quality standard is attained. Generally, the pollutant of concern and the numeric water quality target are, respectively, the chemical causing the impairment and the numeric criteria for that chemical (e.g., chromium) contained in the water quality standard. The TMDL expresses the relationship between any necessary reduction of the pollutant of concern and the attainment of the numeric water quality target. Occasionally, the pollutant of concern is different from the pollutant that is the subject of the numeric water quality target (e.g., when the pollutant of concern is phosphorus and the numeric water quality target is expressed as Dissolved Oxygen (DO) criteria). In such cases, the TMDL submittal should explain the linkage between the pollutant of concern and the chosen numeric water quality target.

Comment:
Designated Use of Waterbody: Carver, Bevens, and Silver Creeks are classified as 2B waters. Class 2B refers to those State waters identified to support aquatic (warm and cool water fisheries and associated biota) and recreation (all water recreation activities including bathing).

Water Quality Standard: The applicable WQS is identified in Minn.R. ch. 7050.0222 subp. 4 and 5,

> "fecal coliform water quality standard for class 2B and 2C waters states that fecal coliform shall not exceed 200 organisms per 100 milliliters as a geometric mean of not less than five samples in any calendar month, nor shall more than ten percent of all samples taken during any calendar month individually exceed 2,000 cfu/100 milliliters. The standard applies only between April 1 and October 31."

Target: The target is the standard as stated above, for both the geometric mean portion and the daily maximum portion, which is applicable from April 1st through October 31st. However, the focus of this TMDL is on the "chronic" standard of 200 cfu/100ml. This results in the greatest reductions in the watersheds, and MPCA believes that the geometric mean is the more relevant

value in determining water quality. MPCA stated that while the TMDL will focus on the geometric mean portion of the WQS, compliance is required with both parts of the WQS.

EPA finds that the TMDL document submitted by MPCA satisfies all requirements of this second element.

3. Loading Capacity - Linking Water Quality and Pollutant Sources

A TMDL must identify the loading capacity of a water body for the applicable pollutant. EPA regulations define loading capacity as the greatest amount of a pollutant that a water can receive without violating water quality standards (40 C.F.R. §130.2(f)).

The pollutant loadings may be expressed as either mass-per-time, toxicity or other appropriate measure (40 C.F.R. §130.2(i)). If the TMDL is expressed in terms other than a daily load, e.g., an annual load, the submittal should explain why it is appropriate to express the TMDL in the unit of measurement chosen. The TMDL submittal should describe the method used to establish the cause-and-effect relationship between the numeric target and the identified pollutant sources. In many instances, this method will be a water quality model.

The TMDL submittal should contain documentation supporting the TMDL analysis, including the basis for any assumptions; a discussion of strengths and weaknesses in the analytical process; and results from any water quality modeling. EPA needs this information to review the loading capacity determination, and load and wasteload allocations, which are required by regulation.

TMDLs must take into account *critical conditions* for steam flow, loading, and water quality parameters as part of the analysis of loading capacity. (40 C.F.R. §130.7(c)(1)). TMDLs should define applicable *critical conditions* and describe their approach to estimating both point and nonpoint source loadings under such *critical conditions*. In particular, the TMDL should discuss the approach used to compute and allocate nonpoint source loadings, e.g., meteorological conditions and land use distribution.

Comment:
Loading Capacity: MPCA determined the loading capacities through the use of the Load Duration Curve (LDC) method (Section 8 and Appendix B of the TMDL submittal). Using this method, daily loads are developed based upon the flow in the waterbody. Loading capacities were determined for each segment and for multiple flow regimes. This allows the TMDL to be represented by an allowable daily load across all flow conditions. Table 1 below identifies the loading capacity for each waterbody and for each flow timeframe.

Table 1 Loading Capacity

Reach	Flow Condition	Wasteload Allocation 10^9 cfu/day	Load Allocation 10^9 cfu/day	MOS 10^9 cfu/day	Loading Capacity (TMDL 10^9 cfu/day)
Carver Creek	Spring	20	180	93	293
	Summer	20	147	78	245
	Fall	20	45	29	94
Bevens Creek, Silver Cr. to Minn. River	Spring	11	248	117	376
	Summer	11	225	106	342
	Fall	11	32	16	59
Bevens Creek, Headwaters (Washington Lake) to Silver Creek	Spring	11	248	117	376
	Summer	11	225	106	342
	Fall	11	32	16	59
Silver Creek	Spring	0	117	91	208
	Summer	0	110	86	196
	Fall	0	29	23	52

Note Spring flow is during the months of March – May, Summer flow is June – August, and Fall flow is September – November.

MPCA believes that geometric mean portion of the WQS provides the best overall characterization of the status of the watershed. The EPA agrees with this, as stated in the preamble of "The Water Quality Standards for Coastal and Great Lake Recreation Waters Final Rule" (69 FR 67218-67243, November 16, 2004) on pages 67224 "... the geometric mean is the more relevant value for ensuring that appropriate actions are taken to protect and improve water quality because it is a more reliable measure, being less subject to random variations, and more directly linked to the underlying studies on which the 1986 bacteria criteria were based." MPCA will be relying on the geometric mean portion of the WQS to track implementation activity and results.

The LDC method is a cost-effective TMDL implementation approach, while still addressing the reductions necessary to meet WQS for fecal coliform bacteria. The approach also aids in sharing the responsibility for fecal coliform reduction among various municipalities in the TMDL watersheds, which encourages collective implementation efforts.

Method for cause and effect relationship: As mentioned earlier the LDC method was used for developing this TMDL submittal. A very simplified explanation is provided below.

1. Flow data- Flow data was collected at the outlets from Carver, Bevens, and Silver Creeks.

2. Water Quality data - The data set used for the development of the TMDL was collected between May of 1997 through September 2004. Figure 5.2 of the TMDL submittal presents the spatial extent of the exceedance across the three watersheds. Appendix C of the TMDL submittal lists the data collected during this time frame.

3. LDC – (Attachment B of the TMDL submittal) – These plots are derived from the flow data and water quality data described above. Existing monitored water pollutant loads are represented by either a triangle for fall (September – November), diamond for summer (June – August), or circle for spring (March – May). Existing loads are compared to the target loads (lower line). If the points are below the line no reduction is needed. Points above the line are exceeding the standard and reduction is needed.

MPCA's fecal coliform TMDL approach is based upon the premise that loads vary depending upon the flow, and different sources may contribute loads under different flow conditions. The LDC plots show under what flow conditions the water quality exceedance occurs. Those exceedences at the right side of the graph occur during low flow conditions, suspected to be septic systems malfunctions, point source discharge and illicit sewer connections; exceedance on the left side of the graph occur during higher flow events, such as storm runoff. MPCA has reviewed these load duration curves, and believes that fecal coliform sources attributed to both wet and dry-weather events.

Critical Condition: There is no one critical condition for this TMDL that will assure attainment of WQSs. WQS are not being met during both wet and dry weather conditions. During the wet weather conditions the fecal coliform contribution is attributed to the run off from the manure applications as well as the failing septic systems. During dry weather conditions contributions are attributed to the failing septics.

EPA finds that the TMDL document submitted by MPCA satisfies all requirements of this third element.

4. Load Allocations (LAs)

EPA regulations require that a TMDL include LAs, which identify the portion of the loading capacity attributed to existing and future non-point sources and to natural background. Load allocations may range from reasonably accurate estimates to gross allotments (40 C.F.R. §130.2(g). Where possible, load allocations should be described separately for natural background and non-point sources.

Comments:
Load Allocation: Load allocations were determined for each of the 4 segments (both segments of Bevens Creek were treated the same but given separate loads) in the three watersheds. Table 2 below gives the LAs, by segment and season. MPCA determined available LAs for source categories. They then used the combined loads as a gross allocation for all sources in determining the required load allocation for each segment and season. Tables 7.2, 7.3 and 7.4 of the TMDL submittal identify current available loads by source. MPCA will further refine non-point sources and impacts during and after implementation plan development. MPCA did not determine a natural background load; however, impacts from wildlife and domestic pets were considered as a source.

Table 2 Load Allocation

Reach	Flow Condition	Loading Allocation (TMDL 10^9 cfu/day)
Carver Creek	Spring	180
	Summer	147
	Fall	43
Bevens Creek, Silver Cr. to Minn. River	Spring	248
	Summer	225
	Fall	32
Bevens Creek, Headwaters (Washington Lake) to Silver Creek	Spring	248
	Summer	225
	Fall	32
Silver Creek	Spring	117
	Summer	110
	Fall	29

EPA finds that the TMDL document submitted by MPCA satisfies all requirements of this fourth element.

5. Wasteload Allocations (WLAs)

EPA regulations require that a TMDL include WLAs, which identify the portion of the loading capacity allocated to individual existing and future point source(s) (40 C.F.R. §130.2(h), 40 C.F.R. §130.2(i)). In some cases, WLAs may cover more than one discharger, e.g., if the source is contained within a general permit.

The individual WLAs may take the form of uniform percentage reductions or individual mass based limitations for dischargers where it can be shown that this solution meets WQSs and does not result in localized impairments. These individual WLAs may be adjusted during the NPDES permitting process. If the WLAs are adjusted, the individual effluent limits for each permit issued to a discharger on the impaired water must be consistent with the assumptions and requirements of the adjusted WLAs in the TMDL. If the WLAs are not adjusted, effluent limits contained in the permit must be consistent with the individual WLAs specified in the TMDL. If a draft permit provides for a higher load for a discharger than the corresponding individual WLA in the TMDL, the State/Tribe must demonstrate that the total WLA in the TMDL will be achieved through reductions in the remaining individual WLAs and that localized impairments will not result. All permittees should be notified of any deviations from the initial individual WLAs contained in the TMDL. EPA does not require the establishment of a new TMDL to reflect these revised allocations as long as the total WLA, as expressed in the TMDL, remains the same or decreases, and there is no reallocation between the total WLA and the total LA.

Comments:
The WLAs are discussed in Section 6 of the TMDL submittal. The WLA for all wastewater treatment plants (WWTPs) were determined by multiplying the average flows by the permitted

discharge limit (200 cfu/100ml). The average flow is less than the design flow.

The TMDL submittal indicates there are four permitted WWTPs and one industrial discharger in the three watersheds as listed in tables 3 and 4 below. Silver Creek has no permitted dischargers.

Table 3 Wasteload Allocation by Facility check

WWTP Permit # / Industrial Permit #	Discharge Creek	Wasteload allocation (CFU/day x 10^9)
Cologne WWTP/ MN0023108-SD001	Carver	2.46
Carver WWTP/ MN005347-SD001 &SD002	Carver	2.73
Norwood Young America WWTP/ MN0024392-SD001 & SD002	Bevens	6.87
Hamburg WWTP[1]/ MN0025585-SD001	Bevens	4.11
Bongards Creamery[2]/ MN002135-SD001 &SD002, &SD003	Carver	15.1

1 Permitted to only discharge from the holding pond between April 1st to June 15th and September 15th to December 15th. The facility may discharge allowing no more than 6 inches per day height level of the pond to be discharged. The facility can discharge as many days as needed during discharge period and as long as the permitted limits are met and the volume does not exceed the 6 inch height restriction.

2 Bongards Creamery has two cooling water discharges (SD001, and SD003) and one treatment system outfall (SD002). SD001 also had a roof lead attached to the cooling tower outfall which was being contaminated from bird use. This is being changed through an order by MPCA.

Table 4 Wasteload Allocation by Creek

Facility	Carver Creek	Bevens Creek
Bongards Creamery	15.1 CFU/day x 10^9	
Cologne WWTP	2.46 CFU/day x 10^9	
Carver WWTP	2.73 CFU/day x 10^9	
Norwood Young America WWTP		6.87 CFU/day x 10^9
Hamburg WWTP		4.11 CFU/day x 10^9
Total	20 CFU/day x 10^9	11 CFU/day x 10^9

The City of Waconia is the only municipality currently designated for a NPDES phase II MS4 permit. At this time no WLA has been given. The amount from the stormwater discharge is considered in the LA since these are not currently under NPDES permits. Additionally, the Carver County Water Resource Management Rules, which regulate stormwater management and soil erosion on construction sites, apply throughout Carver County. The Carver County Rules are currently under revision to parallel the NPDES Phase II construction permit, which applies to construction sites over one acres or less than an acre if part of a larger plan of development.

Silver Creek has no NPDES discharges. Therefore, for Silver Creek the WLA is zero.

There are no NPDES permitted concentrated animal feeding lots in the three watersheds.

EPA finds that the TMDL document submitted by MPCA satisfies all requirements of this fifth element.

6. Margin of Safety (MOS)

The statute and regulations require that a TMDL include a margin of safety (MOS) to account for any lack of knowledge concerning the relationship between load and wasteload allocations and water quality (CWA §303(d)(1)(C), 40 C.F.R. §130.7(c)(1)). EPA's 1991 TMDL Guidance explains that the MOS may be implicit, i.e., incorporated into the TMDL through conservative assumptions in the analysis, or explicit, i.e., expressed in the TMDL as loadings set aside for the MOS. If the MOS is implicit, the conservative assumptions in the analysis that account for the MOS must be described. If the MOS is explicit, the loading set aside for the MOS must be identified.

Comments:
The Margin of Safety Section of the TMDL submittal (Section 8.4) states that there is an explicit margin of safety calculated for each of the seasons and for each of the segments. MPCA states that there is uncertainty associated with the estimate of the true geometric mean. This uncertainty can be quantified through the calculation of a confidence interval around the geometric mean. The 95% confidence interval identifies the upper and lower bounds around the geometric mean. The MOS in the TMDL is the ratio of the geomean of all data to the upper confidence interval of the geomean of all data. Table 5 below identifies the MOS for each segment.

Table 5 MOS

Reach	Flow Condition	MOS 10^9 cfu/day
Carver Creek	Spring	93
	Summer	78
	Fall	29
Bevens Creek, Silver Cr. to Minn. River	Spring	117
	Summer	106
	Fall	16
Bevens Creek, Headwaters (Washington Lake) to Silver Creek	Spring	117
	Summer	106
	Fall	16
Silver Creek	Spring	91
	Summer	86
	Fall	23

EPA finds that the TMDL document submitted by MPCA satisfies all requirements of this sixth element.

7. Seasonal Variation

The statute and regulations require that a TMDL be established with consideration of seasonal variations. The TMDL must describe the method chosen for including seasonal variations. (CWA §303(d)(1)(C), 40 C.F.R. §130.7(c)(1)).

Comments:
Seasonal variation was addressed in both the accounting of fecal coliform sources and in the analysis of stream concentration data. Fecal coliform sources potentially available for runoff were varied seasonally to reflect the seasonality of practices in manure applications and handling. Load and Wasteload allocations were varied seasonally to reflect changes in stream loads and concentrations among seasons. The winter season is not included because the standard only applies from April 1st through October 31st.

EPA finds that the TMDL document submitted by MPCA satisfies all requirements of this seventh element.

8. Reasonable Assurances

When a TMDL is developed for waters impaired by point sources only, the issuance of a National Pollutant Discharge Elimination System (NPDES) permit(s) provides the reasonable assurance that the wasteload allocations contained in the TMDL will be achieved. This is because 40 C.F.R. 122.44(d)(1)(vii)(B) requires that effluent limits in permits be consistent with "the assumptions and requirements of any available wasteload allocation" in an approved TMDL.

When a TMDL is developed for waters impaired by both point and nonpoint sources, and the WLA is based on an assumption that nonpoint source load reductions will occur, EPA's 1991 TMDL Guidance states that the TMDL should provide reasonable assurances that nonpoint source control measures will achieve expected load reductions in order for the TMDL to be approvable. This information is necessary for EPA to determine that the TMDL, including the load and wasteload allocations, has been established at a level necessary to implement water quality standards.

EPA's August 1997 TMDL Guidance also directs Regions to work with States to achieve TMDL load allocations in waters impaired only by nonpoint sources. However, EPA cannot disapprove a TMDL for nonpoint source-only impaired waters, which do not have a demonstration of reasonable assurance that LAs will be achieved, because such a showing is not required by current regulations.

Comments:
The TMDL submittal identifies agricultural inputs, failing septic systems, and wildlife inputs, as the primary fecal coliform sources in Carver, Bevens and Silver Creeks. The Reasonable Assurance Activities Section of the TMDL submittal (Section 10) discusses some mechanisms that give reasonable assurance that the TMDL can be met. Below is a summary of a few of these assurances. Section 10 of the TMDL submittal has a more detailed discussion on reasonable assurance.

Carver County is the water management authority for Carver Creek and portions of Bevens, and Silver Creek. Through the County's zoning and land powers, the County is able to implement corrective actions. The County has funding for water management and will continue a baseline-monitoring program.

The Carver County Board of Commissioners (County Board), acting as the water management authority for the former Bevens Creek (including Silver Creek), Carver Creek, Chaska Creek, Hazeletine-Bavaria Creek, and South Fork Crow River watersheds management organizations areas, has established the "Carver County Water Resources Management Area" (CCWRMA). The purpose of the CCWRMA is to fulfill the County's water management responsibilities under Minnesota Statute and Rule. The complete water management rules are contained in the Carver County Code, Section 153.

The Carver County Feedlot Management Program includes the feedlot permitting process. The permit process requires the feedlot meets State pollution control standards and local standards. The County adopted a Feedlot Ordinance in 1996.

Caver County has established a source of funding through a watershed levy. The levy allows for funding for staff, monitoring, and engineering costs. The County has obtained grant funding from local state and federal sources. Sibley County, as received several state and federal grants as well.

Within one year of the approval by EPA of the bacterial TMDL, a final Implementation Plan will be released. This plan will identify the action Carver County will take to incorporate the TMDL

results into local management activities as well as the Carver County Water Management Plan. The goal of the Implementation Plan is to achieve the identified load reduction in Carver, Bevens, and Silver Creeks needed to reach the State Water Quality Standards for fecal coliform.

EPA finds that the TMDL document submitted by MPCA adequately addresses this eighth element.

9. Monitoring Plan to Track TMDL Effectiveness

EPA's 1991 document, *Guidance for Water Quality-Based Decisions: The TMDL Process* (EPA 440/4-91-001), recommends a monitoring plan to track the effectiveness of a TMDL, particularly when a TMDL involves both point and nonpoint sources, and the WLA is based on an assumption that nonpoint source load reductions will occur. Such a TMDL should provide assurances that nonpoint source controls will achieve expected load reductions and, such TMDL should include a monitoring plan that describes the additional data to be collected to determine if the load reductions provided for in the TMDL are occurring and leading to attainment of water quality standards.

Comments:
Section 10.5 of the TMDL submittal, Efficiency of Best Management Practices – Follow up Monitoring, states that Carver, Bevens and Silver Creeks, fecal coliform sampling will be on-going and similar to that of the 2004 monitoring season. Fecal coliform samples along with field duplicates and blanks, will be measured bi-weekly from April 1 to October 31. The exact sites and schedule will be determined upon implementation of BMPs. Annual results will be included in the Carver County Annual Water Quality Report.

EPA finds that the TMDL document submitted by MPCA adequately addresses this ninth element.

10. Implementation

EPA policy encourages Regions to work in partnership with States/Tribes to achieve nonpoint source load allocations established for 303(d)-listed waters impaired by nonpoint sources. Regions may assist States/Tribes in developing implementation plans that include reasonable assurances that nonpoint source LAs established in TMDLs for waters impaired solely or primarily by nonpoint sources will in fact be achieved. In addition, EPA policy recognizes that other relevant watershed management processes may be used in the TMDL process. EPA is not required to and does not approve TMDL implementation plans.

Comment:
This TMDL does not contain a formal implementation plan. It does contain an implementation section (Section 11 of the TMDL submittal). MPCA has worked with the County to develop a formal implementation plan. EPA is not required to and does not approve TMDL implementation plans.

EPA finds that the TMDL document submitted by MPCA adequately addresses this tenth element.

11. Public Participation

EPA policy is that there should be full and meaningful public participation in the TMDL development process. The TMDL regulations require that each State/Tribe must subject calculations to establish TMDLs to public review consistent with its own continuing planning process (40 C.F.R. §130.7(c)(1)(ii)). In guidance, EPA has explained that final TMDLs submitted to EPA for review and approval should describe the State's/Tribe's public participation process, including a summary of significant comments and the State's/Tribe's responses to those comments. When EPA establishes a TMDL, EPA regulations require EPA to publish a notice seeking public comment (40 C.F.R. §130.7(d)(2)).

Provision of inadequate public participation may be a basis for disapproving a TMDL. If EPA determines that a State/Tribe has not provided adequate public participation, EPA may defer its approval action until adequate public participation has been provided for, either by the State/Tribe or by EPA.

Comments:
Carver County has established the Water, Environment, & Natural Resources Committee (WENR). The WENR works with staff to make recommendations to the Carver County Board on matters relating to watershed planning. The make up of the board is located in Section 9.2 of the TMDL submittal. As part of the WENR committee, two sub-committees are in place and have held specific discussion on the fecal TMDL. Sub-committee review meetings were held on November 10, 2004, December 15, 2004, and January 12, 2005.

Sibley County has established the Sibley County Water and Resources Advisory Committee. The Advisory Committee is made up of county commissioners, citizens and natural resources agency staff. Carver County Staff presented the background of the TMDL to the Sibley County Water and Resources Advisory Committee on November 24, 2004. The committee expressed interest in proposed allocation procedures.

On January 25, 2005 a WENR committee held a public meeting and presented the draft TMDL to the public in the form of a power point presentation. On February 2, 2005, Carver and Sibley Counties held a joint public meeting to discuss the TMDL. Individual invitations to key stakeholders along with news releases in several local papers announced the date, time, and content of the open house. The notice was also placed on the County and Extension Service web site. Thirty six landowners attended this meeting. The County also received two phone calls concerning the meeting and two landowners visited the County office to receive information on the TMDL.

On November 6, 2006 MPCA public noticed, on the state website, the draft Fecal Coliform TMDL for Carver, Bevens and Silver Creeks along with a fact sheet. The public notice was also placed in the State Register. A press release was prepared and submitted to local papers. The public comment period was from November 6, 2006 to December 6, 2006.

MPCA received eight comment letters and e-mails concerning the TMDL. Comment letters and e-mails along with the individual responses were submitted with the TMDL package.

One commenter requested a hearing. MPCA responded that an open house had been held in February 2005. After further discussions with between EPA and MPCA, MPCA indicated that the issues raised were more related to implementation than to the TMDL and that the public would have input during the implementation process. The commenter who requested the open meeting was concerned with a feedlot outside of the watershed, and the implementation related issue of bringing needed farmers up to code. He did have a concern regarding the significance of septic systems to the Bevens Creek watershed. However he did admit that he did not read the full TMDL.

MPCA did respond that the implementation plan has been finalized and public meetings will be held to discuss this plan and how it will be implemented. MPCA also requested that Carver County place all those who commented on the TMDL on Carver County's public notice list for the implementation plan meetings. Carver County agreed. (See phone notes between Donna Keclik and Roger Rathum February 21, 2007).

EPA finds that the TMDL document submitted by MPCA satisfies all requirements of this eleventh element.

12. Submittal Letter

A submittal letter should be included with the TMDL submittal, and should specify whether the TMDL is being submitted for a *technical review* or *final review and approval.* Each final TMDL submitted to EPA should be accompanied by a submittal letter that explicitly states that the submittal is a final TMDL submitted under Section 303(d) of the Clean Water Act for EPA review and approval. This clearly establishes the State's/Tribe's intent to submit, and EPA's duty to review, the TMDL under the statute. The submittal letter, whether for technical review or final review and approval, should contain such identifying information as the name and location of the water body, and the pollutant(s) of concern.

Comment:
The transmittal letter was dated January 29, 2007 from Brad Moore, Commissioner, MPCA, to Jo Lynn Traub, Director, Water Division, Region 5 EPA. The letter stated that this was a final TMDL submittal under Section 303(d) of the CWA. The letter also contains the name of the watersheds as they appear on the Michigan 303(d) list, and the pollutant of concern.

After submittal of the TMDL, MPCA determined that the flow duration curves were labeled incorrectly and a typographical error had been made in Table 7.2. A revised copy of the final TMDL was updated and submitted to EPA on the February 27, 2007 (see e-mails between Karen Barenz, MPCA and Donna Keclik, EPA).

EPA finds that the TMDL document submitted by MPCA satisfies all requirements of this twelfth element.

13. Conclusion

After a full and complete review, EPA finds that the TMDL for Carver, Bevens, and Silver Creeks, satisfies all of the elements of an approvable TMDL. This approval document is for four water body segments impaired by fecal coliform for a total of four TMDL addressing four impairments from the 2006 Minnesota 303(d) list. EPA's approval of this document does not extend to 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 TMDLs for those waters at this time. EPA or eligible Indian Tribes as appropriate will retain responsibilities under CWA Section 303(d) for those waters.

Waterbody	HUC (AU)	Pollutant	Impairments
Carver Creek	07020012-516	Fecal coliform	Aquatic recreation
Bevens Creek- Headwaters (Washington Lake) to Silver Creek	07020012-515	Fecal coliform	Aquatic recreation
Bevens Creek- Silver Creek to MN River	07020012-514	Fecal coliform	Aquatic recreation
Silver Creek	07020012-523	Fecal coliform	Aquatic recreation