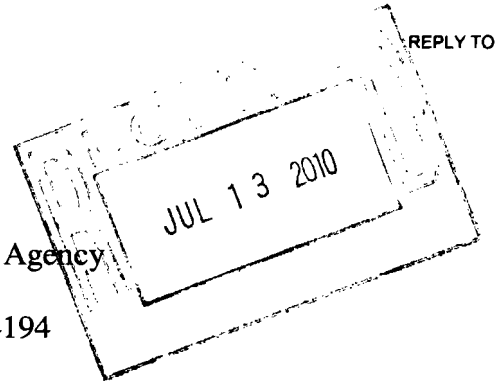
**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

JUL 2 2010

REPLY TO THE ATTENTION OF:
WW-16J




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

Dear Mr. Eger:

The U.S. Environmental Protection Agency has conducted a complete review of the final Total Maximum Daily Load (TMDL) for the Knife River, including supporting documentation and follow-up information. The Knife River, ID 04010102-504, is located in eastern Minnesota north of Duluth in the Lake Superior Basin. The TMDL was calculated for Total Suspended Solids (TSS). The TMDL addresses turbidity impairment of Class 2A waters for Aquatic Life and Recreation Use.

The TMDL meets the requirements of Section 303(d) of the Clean Water Act and EPA's implementing regulations at 40 C.F.R. Part 130. Therefore, EPA hereby approves Minnesota's TSS TMDL, addressing turbidity. The statutory and regulatory requirements, and 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 this TMDL and look forward to future TMDL submissions by the State of Minnesota. If you have any questions, please contact Peter Swenson, Chief of the Watersheds and Wetlands Branch, at 312-886-0236.

Sincerely,

Tinka G. Hyde
Director, Water Division

Enclosure

cc: Dave L. Johnson, MPCA
Gregory Johnson, MPCA

**TMDL:** Knife River, Minnesota
**Date:**

# DECISION DOCUMENT FOR THE APPROVAL OF KNIFE RIVER, MINNESOTA, TMDL

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 Waterbody, Pollutant of Concern, Pollutant Sources, and Priority Ranking

The TMDL submittal should identify the waterbody as it appears on the State's/Tribe's 303(d) list. The waterbody 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 waterbody 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 waterbody. 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 waterbody 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; chlorophyll *a* and phosphorus loadings for excess algae; length of riparian buffer; or number of acres of best management practices.

Comment:
Location Description/Spatial Extent: Section 3.0 of the TMDL states that the Knife River is located in northeastern Minnesota on the North Shore of Lake Superior and flows into Lake Superior 15 miles north of Duluth. The river flows along the St. Louis and Lake County border with its confluence into the lake at the Village of Knife River, the only residential area in this 86.3 square mile watershed; headwaters are 23.8 river miles from the confluence. Figures 3.1 and 3.2 in the TMDL show the location of the watershed.

Logging of pine forest was intensive from 1899 to 1919. The larger woody debris from mature trees in a riparian zone results in less scouring, more sediment retention, and energy reduction in the streams. Though logging is now more sustainable, the watershed was converted to aspen after the pine forests were harvested. There is, however, less stability and protection of the riparian zone because the aspen are targeted by beaver. The North Shore Highlands ecological subsection is described in Section 3.4 of the TMDL and states that annually precipitation is about 28-30 inches, 40% of which falls during the growing season. The amount of precipitation greatly affects stream flow and sediment.

Three soil types are described in Section 3.5 of the TMDL that greatly influence the amount of erosion that occurs in the watershed. Headwaters are in the Highland Moraine with hummocky topography and loamy soil over dense glacial till. Permeability in the loam is moderate and very slow in the dense till. The Highland Moraine also has loamy outwash soils over sand or gravel, and can be a groundwater recharge area. The second soil type is transitional and has a discontinuous mantle of eolian sediment over friable till underlain by dense till. The eolian sediments are very fine and if they are on steeper slopes have high potential to erode. The third soil type is the Superior Lobe Clay Plain in the lower quarter of the watershed. The clays are not very permeable and have the potential to shrink and swell; additionally, slumping is a problem. Some portions of the river do not add much sediment into the system because there are bedrock stream channels and walls that reduce loading. Figure 3.11 of the TMDL shows the three major geomorphic areas in the watershed.

Land use: Section 3.1 of the TMDL shows the land use in the watershed is 70% forest, grassland is 15%, and wetlands is 9%. Approximately 50% of the watershed is owned by state and county government.

Problem Identification: The Executive Summary Section of the TMDL submittal states that the Assessment Unit ID 04010102-504 is on the 1998 303(d) list for turbidity. Section 1.0 states that the impaired designated use is Class 2A, which is for cold water fishery and aquatic recreation, to be further discussed later in this document. The history of development, agriculture, and forestry

all contribute to sediment issues in the area. Further, many of the soil types are very erodible. The river has a quick response to rain events and a very fast return to base flow, and in combination with the soil types, causes high turbidity. The clay and bedrock in the lower portion of the watershed add to the flashiness of the stream as water cannot effectively infiltrate into the soil.

Figure 3.7 illustrates the flashiness of the Knife River, taken from Section 3.3 of the TMDL. The figure shows a very "flashy" hydrology under moderate storm conditions, as shown by high peaks and rapid decline. MPCA cites that in the literature flashiness "reflects the frequency and rapidity of short term changes in stream flow." Figure 3.8, also taken from the TMDL, shows the Knife River in comparison to other streams in the area on the Richards-Baker Flashiness Index (R-B Index). The Index measures a quick versus slow response of a river to precipitation. The circle symbols represent the Knife River. A higher value plotted on the index (y-axis) indicates a flashier stream response. In all years (x-axis), a majority of points from the Knife River plot higher on the index than other streams in the area.

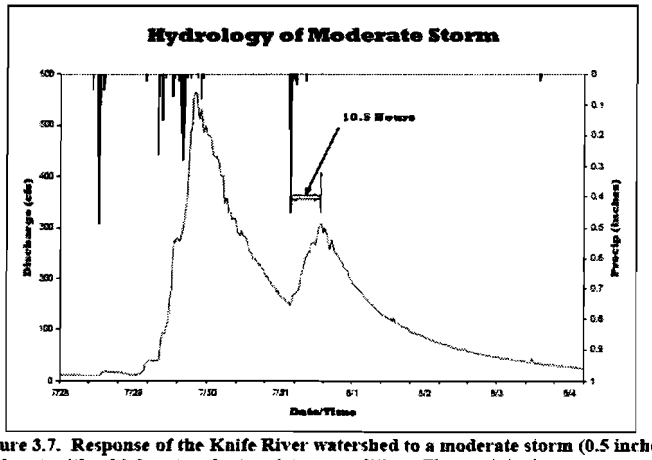



**Figure 3.7. Response of the Knife River watershed to a moderate storm (0.5 inches in 1 hour) with a high antecedent moisture condition.** The precipitation was measured in upper 1/3 of watershed and discharge was measured near the mouth.

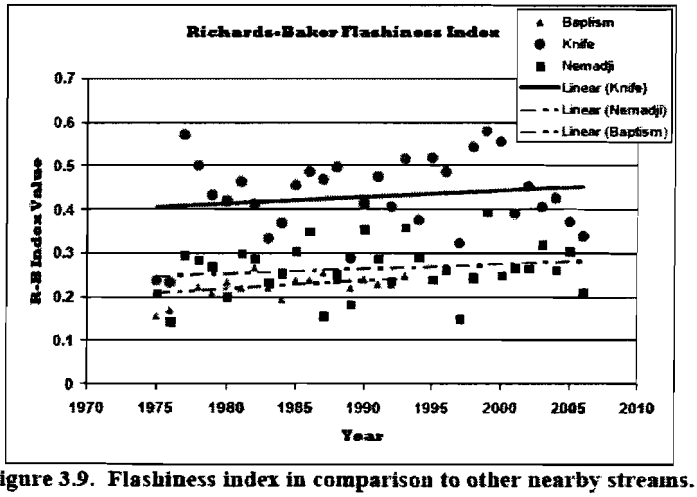



**Figure 3.9. Flashiness index in comparison to other nearby streams.**

Source Identification: Section 6.5 of the TMDL states that the dominant sources of the turbidity impairment are nonpoint sources of sediment occurring at high flows due to the observed total sediment load in the channel sediment originating from streambanks, bluff areas, and tributaries, respectively, with the greatest from streambanks at 59% and the least from tributaries at 12%.

Future Growth: Section 6.1 of the TMDL submittal states that there will be approximately an 18% increase in population over the next 28 years. This projection translates to NPDES construction stormwater increases of approximately 0.25% of the watershed acreage, so 1% was used for future construction estimates.

Surrogate measures: Turbidity is a dimensionless unit, so to use the turbidity for a load allocation, the relationship between turbidity in Nephelometric Turbidity Units (NTU) and Total Suspended Solids (TSS) had to be developed. Overall, the relationship is proportional, that is, greater NTU corresponds to greater TSS concentration. In this TMDL, the values were log-transformed and a regression technique was used to predict TSS based on turbidity. The TSS and NTU relationships vary from stream to stream, but it has been determined that 5mg/l TSS is the surrogate for the 10 NTU water quality standard for turbidity in the Knife River. Figure 5.14 below is taken from the TMDL. Calculations from monitoring sites in other streams in the watershed range from 4mg/l to 18 mg/l TSS as equivalent values to 10 NTU.

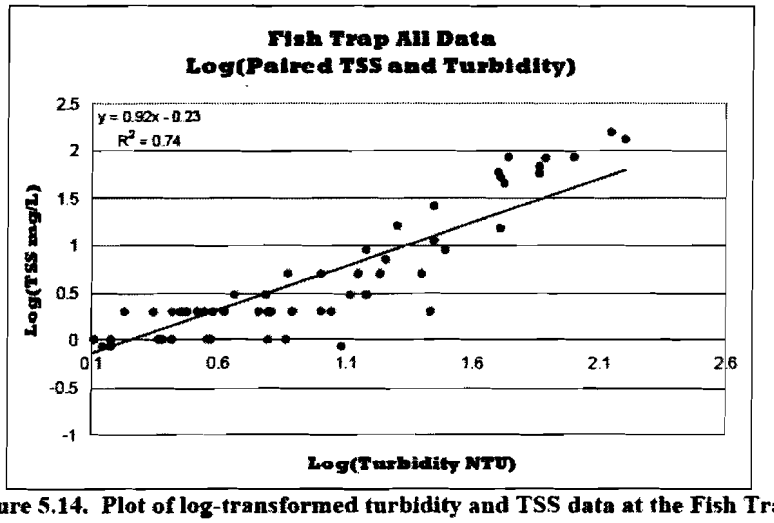



**Figure 5.14. Plot of log-transformed turbidity and TSS data at the Fish Trap monitoring site on the Knife River – 2004 – 2006.**

EPA finds that the TMDL document submitted by MPCA satisfies all requirements concerning 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 waterbody, 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 Uses: Section 2.0 of the TMDL states that the Knife River is a designated Class 2A cold water fishery and aquatic recreation use. "The quality of Class 2A surface waters shall be such as to permit the propagation and maintenance of a healthy community of cold water sport or commercial fish and associated aquatic life, and their habitats. These waters shall be suitable for aquatic recreation of all kinds, including bathing, for which the waters may be usable. This class of surface waters is also protected as a source of drinking water." (MN Rule 7050.0222 subp. 2.) MPCA has determined that turbidity levels are too high to support the aquatic life use.

Pollutant of Concern: The pollutant of concern is TSS.

Standards: The turbidity water quality standard is 10 NTU for the Knife River as stated in Minnesota Rules Chapter 7050.0222 for Class 2A waters.

Target: The target for TSS is 5 mg/l, equivalent to 10 NTU.

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

## 3. Loading Capacity - Linking Water Quality and Pollutant Sources

A TMDL must identify the loading capacity of a waterbody 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 stream 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:
TMDL = Loading Capacity (LC) = WLA + LA + MOS

The loading capacity (TMDL) is shown below in Table 6.1 taken directly from the TMDL submittal. Five flow regimes were used to determine the load under high, moist, mid-range, dry, and low flow conditions.

| Knife River Assimilative Capacity by Flow Zone | | | | | |
|---|---|---|---|---|---|
| All values in tons/day | | | | | |
| | High Flows | Moist Conditions | Mid-Range Flows | Dry Conditions | Low Flows |
| TMDL | 5.300 | 0.860 | 0.270 | 0.120 | 0.043 |
| WLA - Construction | 0.030 | 0.0004 | 0.002 | 0.001 | 0.001 |
| WLA – Duluth Township MS4 (Permit # MS400134) | 0.427 | 0.066 | 0.031 | 0.011 | 0.004 |
| LA | 2.243 | 0.344 | 0.165 | 0.058 | 0.021 |
| MOS | 2.600 | 0.450 | 0.072 | 0.050 | 0.017 |

**Table 6.1. TMDL (loading capacity), waste load allocation, load allocation, and margin of safety for each flow interval of the load duration curve for the Knife River turbidity TMDL.**

Method for cause and effect: Section 5.5 of the TMDL states that for estimating TSS as a surrogate for turbidity, loads were calculated using the FLUX (Version 5.1) model. Loads were calculated using concentration data from grab samples and continuous flow data. The information is loaded into the model and then there are options on how to analyze the data. Stratifying the data with flow boundaries is often used to get more accurate results; it was determined that two strata were needed to get statistically significant results for the Knife River.

Section 5.6 of the TMDL reviews the flow duration curve methodology that was used in this TMDL after the FLUX loads were estimated, taking the loads determined by FLUX as described above and then integrating TSS loads with flow data.

1. The flow monitoring data came from the Knife River near Two Harbors USGS gaging station (#4015330). The data reflect a range of natural occurrences from extremely high flows to extremely low flows. Monthly mean flow values were obtained from 1974 through 2006 and were multiplied by the target TSS concentration of 5mg/l. These values were sorted by volume and a flow duration curve was developed. See Figure 5.15 below taken directly from the TMDL.

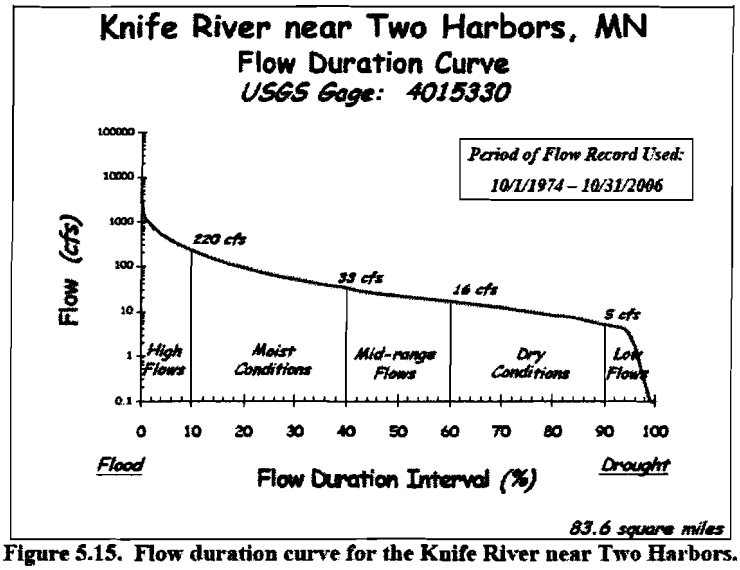



**Figure 5.15. Flow duration curve for the Knife River near Two Harbors.**

2. From flow and water quality data, loads were calculated for five flow regimes under high, moist, mid-range, dry, and low flow conditions. Sampled loads values are plotted with the target load shown by the solid curve. The plot indicates that there are many more sampled values (dots) in exceedence of the target at high flow and moist conditions at the left side of the plot, and the other sampled values in the remaining lower flow regimes; this suggests a predominance of precipitation runoff under high flow conditions.

3. The median flow value for each flow regime was used to calculate the loading for each zone. These values are shown in Table 6.1 above and the Figure 5.16 on the following page, and range from 5.3 to 0.04 tons/day TSS.

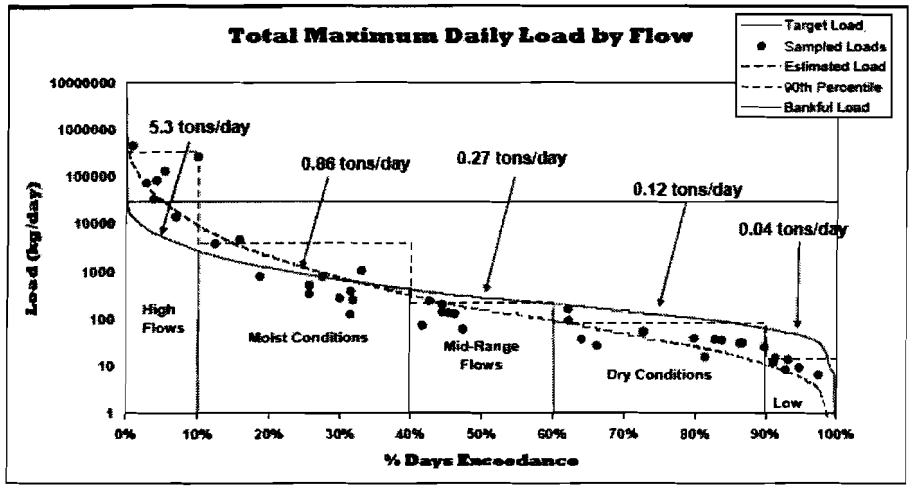



**Figure 5.16. TMDL as determined by load duration curve.**

4. Wasteload Allocations were determined by using the flow multiplied by the permitted TSS values for the various facilities. The WLAs for treatment facilities were calculated by multiplying the wet weather design flows of the facility by the permitted discharge limit.

5. Load allocation was determined by the TMDL minus the WLA and MOS, the remaining allocation was assigned to the LA.

Critical Conditions: Section 6.4 of the TMDL states that the turbidity levels are worst following storm events during the spring and summer months (high flow conditions) and were addressed in the methodology. Further, there was a significant amount of new grab samples that captured wet weather events as stated in Section 5.2 of the TMDL, in each of the 2004, 2005, and 2006 sampling seasons. Some of the samples were collected in the upper 10% of the mean daily flows.

EPA finds that the TMDL document submitted by MPCA satisfies all requirements concerning 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 nonpoint 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 nonpoint sources.

Comment:
Load Allocation TSS: The LA is the remaining load after the WLA and MOS have been subtracted from the TMDL. The LA has been calculated in five flow regimes previously shown in Table 6.1 above.

EPA finds that the TMDL document submitted by MPCA satisfies all requirements concerning 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 permitees 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.

Comment:
WLA for TSS: Individual WLAs are shown above in Table 6.1 taken from the TMDL for general construction permits and a MS4 permit with discharge limits for TSS.

EPA finds that the TMDL document submitted by MPCA satisfies all requirements concerning 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.

Comment:

The MOS is shown in Table 6.1 above in the previous section for each flow regime. Section 6.3 of the TMDL submittal states that each MOS flow category is calculated as the difference between the median flow duration interval and minimum flow duration interval in each zone except the low flow zone, where the dry flow zone MOS is used. For example, the MOS for the high flow zone is the 95th percentile flow value subtracted from the 100th percentile flow value (the entire flow zone is from 100$^{th}$ percentile to the 90$^{th}$). The resulting value was converted to a load and used as the MOS. This methodology, taking the difference between the median flow and minimum flow per zone, was repeated in each of the remaining four flow zones.
EPA finds that the TMDL document submitted by MPCA contains an appropriate MOS satisfying all requirements concerning 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) ).

Comment:
Seasonal variation was considered in this TMDL as described in Section 6.4 of the TMDL submittal. There are five distinct flow regimes that were used for the development of the allocations, from near drought to near flood conditions. Reductions vary, based on these flow regimes that occur at all times of the year. The stream conditions in all seasons were used for the flow duration and load duration curve development.

EPA finds that the TMDL document submitted by MPCA satisfies all requirements concerning 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.

Comment:
There are many plans and funding that indicate a reasonable assurance that the state may utilize for a reasonable assurance that the TMDL will be implemented. Section 6.7 of the TMDL submittal states that there are water management plans by the St. Louis and Lake County SWCDs regarding erosion control activities. The monitoring of implementation and funding for research will also contribute to better understanding the effects of the activities.

EPA finds that this criterion has been adequately addressed.

## 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.

Comment:
Section 7.0 of the TMDL submittal states that partners in the future monitoring will include: citizen stream monitors, the MPCA, the South St. Louis SWCD, the MN DNR, and the USGS. Suggestions and plans include: maintaining the USGS flow monitoring station on the Knife River; reestablishing water quality monitoring at the Fish Trap site or the USGS gage site; traction implementation activities on a database such as BWSR E-link; promote citizen monitoring; coordinate research on soil erosion, sediment delivery processes, and BMP effectiveness; and, keep the records no less than 10 years.

EPA finds that this criterion has been adequately addressed.

## 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:
Section 8.0 of the TMDL states that a strategy has been drafted by the Knife River Forest Stewardship Committee and the South St. Louis SWCD, assisted by the Laurentian RC&D and the Minnesota Environmental Partnership. Storm events and spring melt are the two primary contributors to the high flow and the high and moist flow regimes will be the focus of the implementation. The plan includes streambank and channel restoration, gully stabilization, ditch maintenance practices, construction of stormwater BMPs, tree planting and other open land management, riparian buffer management, residential BMPs, water storage practices, and forest management BMPs.

EPA finds that this criterion has been adequately addressed.

## 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.

Comment:
Public outreach activities are detailed in Section 9.0 of the TMDL submittal, and the watershed has a history of public participation. The State's efforts are shown in the table on the following page. The TMDL was public noticed from October 12 to November 11, 2009 and then again from April 12 to May 12, 2010. There were seven comments received in the first public notice, and there was a resulting revision of the TMDL due to addition of a MS4 for Duluth Township added to the TMDL process. No public comments resulted from the second comment period. Copies of the draft TMDL were made available upon request and on the Internet web site: http://www.pca.state.mn.us/index.php/water/water-types-and-programs/minnesota-s-impaired-waters-and-tmdls/tmdl-projects/lake-superior-basin-tmdl-projects/draft-tmdl-knife-river-turbidity-and-ph.html. The comments were adequately addressed by MPCA and are included in the Administrative record. MPCA also adequately addressed U.S. EPA comments within the document. Minnesota also plans for public outreach in the future as the

| Date | Meeting |
|---|---|
| 1/23/06 | Laurentian Resource Conservation & Development board meeting (Virginia, MN) |
| 2/22/06 | Knife River Forest Stewardship Committee meeting (Duluth, MN) |
| 8/30/06 | Brief TMDL update at Regional Stormwater Protection Team meeting (Duluth, MN) |
| 12/19/06 | Update for Lake County Water Planners (Two Harbors, MN) |
| 1/8/07 | Update for Lake Superior Steelhead Association (Duluth, MN) |
| 2/21/07 | Update for SWCD board (Duluth, MN) |
| 6/10/09 | Public Information Meeting (Knife River, MN) |
| 6/17/09 | Update for SWCD board (Duluth, MN) |
| 6/24/09 | Natural Resource Managers Meeting (Duluth, MN) |

EPA finds that the TMDL document submitted by MPCA satisfies all requirements concerning 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 waterbody, and the pollutant(s) of concern.

Comment:
The EPA received the final Knife River Watershed TMDL on June 16, 2010, accompanied by a submittal letter dated June 4, 2010. In the submittal letter, MPCA stated the submission includes the final TMDL for turbidity for the Knife River Watershed. The Knife River Watershed is impaired for fish, other aquatic life, and bathing, boating and other recreational uses by turbidity.

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

## 13. Conclusion

**After a full and complete review, EPA finds that the TMDL for the Knife River Watershed satisfies all of the elements of an approvable TMDL. This approval addresses 1 segment for turbidity in Assessment Unit ID 04010102-504.**

EPA's approval of this TMDL 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 the CWA Section 303(d) for those waters.