



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 7  
901 NORTH 5TH STREET  
KANSAS CITY, KANSAS 66101

JUL 15 2008

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WATER PROTECTION PROGRAM

Mr. Edward Galbraith, Director  
Water Protection Program  
Water Protection and Soil Conservation Division  
Missouri Department of Natural Resources  
P.O. Box 176  
Jefferson City, Missouri 65102

Re: Approval of Lake Creek and Mill Creek TMDLs

Dear Mr. Galbraith:

This letter responds to the Missouri Department of Natural Resources (MDNR) submission of Total Maximum Daily Load (TMDL) documents that were received by the U. S. Environmental Protection Agency (EPA) on May 14, 2008. MDNR submitted two TMDL documents for Lake Creek and Mill Creek, which were identified on the 2002 Missouri §303(d) list as impaired. This submission fulfills the Clean Water Act statutory requirement to develop TMDLs for impairments listed on a state's §303(d) list. The specific impairment (water body segments and pollutants) are:

<u>Water Body Name</u>	<u>WBID</u>	<u>Pollutant</u>
Lake Creek	MO-0875	sediment
Mill Creek	MO-0159	sediment

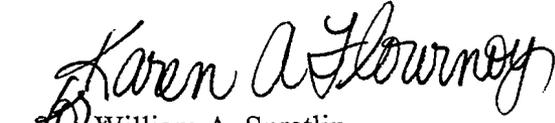
EPA has completed its review of the TMDL documents with supporting documentation and information. By this letter, EPA approves the submitted TMDLs. Enclosed with this letter are the EPA Region 7 TMDL Decision Documents summarizing the rationale for EPA's approval of these TMDLs. EPA believes the separate elements of the TMDLs described in the enclosed form adequately address the pollutant of concern, taking into consideration seasonal variation, and a margin of safety.

EPA is currently in consultation under Section 7 of the Endangered Species Act with the U.S. Fish and Wildlife Service regarding these TMDLs. While we are approving these TMDLs at the present time, we may decide that changes to the TMDLs are warranted based upon the results of the consultation when it is completed.



We appreciate the thoughtful effort that MDNR has put into these TMDLs. We will continue to cooperate with and assist, as appropriate, in future efforts by MDNR to develop remaining TMDLs.

Sincerely,

  
for William A. Spratlin  
Director  
Water, Wetlands, and Pesticides Division

Enclosures

cc: Mr. John Hoke  
Missouri Department of Natural Resources

Mr. Phil Schroeder  
Missouri Department of Natural Resources

Mr. Gerald Babao  
American Canoe Association

Mr. Paul Sanford  
American Canoe Association

Mr. Scott Dye  
Sierra Club

Mr. John Simpson  
KS Natural Resource Council



## EPA Region 7 TMDL Review

**TMDL ID:** MO-875  
**Document Name:** LAKE CREEK

**State:** MO

**Basin(s):** LAMINE  
**HUC(s):** 10300103  
**Water body(ies):** LAKE CR.  
**Tributary(ies):**

**Pollutant(s):** SEDIMENT, TOTAL SUSPENDED SOLIDS

**Submittal Date:** 5/14/2008

**Approved:** Yes

### Submittal Letter

*State submittal letter indicates final Total Maximum Daily Load(s) (TMDL) for specific pollutant(s)/water(s) were adopted by the state, and submitted to EPA for approval under section 303(d) of the Clean Water Act [40 CFR § 130.7(c)(1)]. Include date submitted letter was received by EPA, date of receipt of any revisions, and the date of original approval if submittal is a phase II TMDL.*

The TMDL for Lake Creek was formally submitted by the Missouri Department of Natural Resources (MDNR) in a letter received by U.S. Environmental Protection Agency (EPA), Region 7, on May 14, 2008. The revised version was submitted by email attachment on June 17, 2008.

### Water Quality Standards Attainment

*The water body's loading capacity (LC) for the applicable pollutant is identified and the rationale for the method used to establish the cause-and-effect relationship between the numeric target and the identified pollutant sources is described. TMDL and associated allocations are set at levels adequate to result in attainment of applicable water quality standards (WQS) [40 CFR § 130.7(c)(1)]. A statement that WQS will be attained is made.*

When the WQS is expressed as a narrative value, a measurable indicator of the pollutant may be selected to express the narrative as a numeric value. There are many quantitative indicators of sediment, such as, total suspended solids (TSS), turbidity, and bedload sediment, which are appropriate to describe sediment in rivers and streams. TSS was selected as the numeric target for this TMDL because it enables the use of the highest quality data available, including permit conditions and monitoring data.

In cases where pollutant data for the impaired stream is not available a reference approach is used. The target for pollutant loading at the 25th percentile is calculated from all data available within the ecological drainage unit (EDU) in which the waterbody is located. From this synthetic record, a flow duration is developed from which to build a load duration curve (LDC) for the pollutant within the EDU. The LC is defined by a LDC set at the 25th percentile of current sediment loading in the EDU. The TMDL should result in WQS attainment.

In this TMDL, load allocation (LA) + waste load allocation (WLA) + margin of safety (MOS) (implicit) = TMDL. The load allocation (LC) will be based on the stream flow and the LA is set at 0.093 tons/day.

All available data for Lake Creek indicates the TMDL is being met. This is conservative evidence that the TMDL will be protective of the designated beneficial uses and therefore an implicit MOS is assigned to this TMDL.

### Numeric Target(s)

*Submittal describes applicable WQS, including beneficial uses, applicable numeric and/or narrative criteria. If*

*the TMDL is based on a target other than a numeric water quality criterion, then a numeric expression, site specific if possible, was developed from a narrative criterion and a description of the process used to derive the target is included in the submittal.*

The impairment of this waterbody is based on exceedance of the general, or narrative, criteria contained in Missouri's WQS, 10 CSR 20-7.031(3)(A), (C) and (G).

(A) Water shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;

(C) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;

(G) Waters shall be free from physical, chemical, or hydrologic changes that would impair the natural biological community.

Lake Creek has the following beneficial uses found at 10 CSR20-7.031(1)(C) and (F) and Table H: Livestock and Wildlife Watering, Protection of Warm Water Aquatic Life, Human Health associated with Fish Consumption, Whole Body Contact Recreation (Category B), and Cool Water Fishery.

The LC is defined by a LDC set at the 25th percentile of the current sediment loading in the EDU. In this TMDL,  $LA + WLA + MOS$  (implicit) = TMDL. The LA is set at 0.093 tons/day.

Since the 303(d) listing, MDNR has developed a sediment protocol to determine if sediment is actually the pollutant in the streams listed and to arrive at a standard way to measure sediment. The first step of that protocol is a biological assessment to see if the biological community is actually impaired. However, a biological assessment is not yet available for Lake Creek.

### **Pollutant(s) of concern**

*An explanation and analytical basis for expressing the TMDL through surrogate measures (e.g., parameters such as percent fines and turbidity for sediment impairments, or chlorophyll-a and phosphorus loadings for excess algae) is provided, if applicable. For each identified pollutant, the submittal describes analytical basis for conclusions, allocations and margin of safety (MOS) that do not exceed the LC. If submittal is a phase II TMDL there are refined relationships linking the load to WQS attainment. If there is an increase in the TMDL there is a refined relationship specified to validate the increase in TMDL (either load allocation (LA) or waste load allocation (WLA)). This section will compare and validate the change in targeted load between the versions.*

In cases where pollutant data for the impaired stream is not available a reference approach is used. A reference LDC was developed using the EDU to link daily loads with the narrative sediment criteria. The target for TSS is set at the 25th percentile calculated from all data available within the EDU in which the waterbody is located. Flow records were not available, so a synthetic flow was developed.

### **Source Analysis**

*Important assumptions made in developing the TMDL, such as assumed distribution of land use in the watershed, population characteristics, wildlife resources, and other relevant information affecting the characterization of the pollutant of concern and its allocation to sources, are described. Point, nonpoint and background sources of pollutants of concern are described, including magnitude and location of the sources. Submittal demonstrates all significant sources have been considered. If this is a phase II TMDL any new sources or removed sources will be specified and explained.*

The major problems are excessive rates of sediment deposition due to stream bank erosion and sheet erosion from agricultural lands, loss of stream length and loss of stream channel heterogeneity due to channelization, and changes in basin hydrology that have increased flood flows and prolonged low flow conditions. The primary cause of the sediment impairment to Lake Creek has been identified as pollution caused by agricultural nonpoint sources.

Two concentrated animal feeding operations (CAFO)-permitted facilities are located within the watershed. All of these facilities are non-discharging, which do not contribute significantly to sediment loading in Lake Creek. Such systems are designed for the 25-year, 24-hour rainfall/runoff event. Total permitted animal units (AU) for each facility is approximately 996 AU. The actual number of AU on site is variable, but typically less than potential numbers.

Facility - CAFOs	Permit Number	County	Design Flow
Jantz, Gary	MO-G010046	Pettis	Non-discharging
Koehn, Victor & Audra	MO-G010246	Benton	Non-discharging

The submittal demonstrates that all known significant sources have been considered.

### Allocation - Loading Capacity

*Submittal identifies appropriate WLA for point, and load allocations for nonpoint sources. If no point sources are present the WLA is stated as zero. If no nonpoint sources are present, the LA is stated as zero [40 CFR § 130.2(i)]. If this is a phase II TMDL the change in LC will be documented in this section.*

The LC is defined by a LDC set at the 25th percentile of the sediment concentration in the EDU. All available data for Lake Creek indicates the TMDL is being met. This is conservative evidence that the TMDL will be protective of the designated beneficial uses.

### WLA Comment

*Submittal lists individual WLAs for each identified point source [40 CFR § 130.2(h)]. If a WLA is not assigned it must be shown that the discharge does not cause or contribute to WQS excursions, the source is contained in a general permit addressed by the TMDL, or extenuating circumstances exist which prevent assignment of individual WLAs. Any such exceptions must be explained to a satisfactory degree. If a WLA of zero is assigned to any facility it must be stated as such [40 CFR § 130.2(i)]. If this is a phase II TMDL any differences in phase I and phase II WLAs will be documented in this section.*

All CAFO-permitted livestock facilities in the Lake Creek watershed are non-discharging permits. The WLAs are set at zero. There are no other point sources or storm water sources located in the Lake Creek Watershed.

### LA Comment

*Includes all nonpoint sources loads, natural background, and potential for future growth. If no nonpoint sources are identified the LA must be given as zero [40 CFR § 130.2(g)]. If this is a phase II TMDL any differences in phase I and phase II LAs will be documented in this section.*

The modeling of Lake Creek shows no exceedance of the TMDL curve. The TMDL curve is set at an estimate of expected reference conditions over the range of flows. The LA for Lake Creek is the TMDL minus the WLA, over the range of flows. In this TMDL, load allocation (LA) + waste load allocation (WLA) + margin of safety (MOS) (implicit) = TMDL. The LA is set at 0.093 tons/day.

### Margin of Safety

*Submittal describes explicit and/or implicit MOS for each pollutant [40 CFR § 130.7(c)(1)]. If the MOS is implicit, the conservative assumptions in the analysis for the MOS are described. If the MOS is explicit, the loadings set aside for the MOS are identified and a rationale for selecting the value for the MOS is provided. If this is a phase II TMDL any differences in MOS will be documented in this section.*

All available data for Lake Creek indicates the TMDL is being met. This is conservative evidence that the TMDL will be protective of the designated beneficial uses and therefore an implicit MOS is assigned to this TMDL.

### Seasonal Variation and Critical Conditions

*Submittal describes the method for accounting for seasonal variation and critical conditions in the TMDL(s) [40 CFR § 130.7(c)(1)]. Critical conditions are factors such as flow or temperature which may lead to the excursion of WQS. If this is a phase II TMDL any differences in conditions will be documented in this section.*

The TMDL curve represents flow under all seasonal conditions. The LA and TMDL are applicable to all flow conditions, hence all seasons. The advantage of the LDC approach is to avoid the constraints associated with

using a single-flow critical condition during the development of a TMDL. Therefore, all flow conditions are taken into account for TMDL calculations.

## **Public Participation**

*Submittal describes required public notice and public comment opportunity, and explains how the public comments were considered in the final TMDL(s) [40 CFR § 130.7(c)(1)(ii)].*

EPA regulations require that TMDLs be subject to public review (40 CFR 130.7). As stated earlier, this water quality limited segment of Lake Creek in Pettis, Morgan and Benton counties is included on the EPA approved 1998 and 2002 303(d) lists for Missouri. EPA and the MDNR's Water Protection Program developed this TMDL. The public notice period was from March 26 to April 25, 2008. Groups that received the public notice announcement included the Missouri Clean Water Commission, the Missouri Water Quality Coordinating Committee, the affected facilities, 18 Stream Team Volunteers in the area, and the three state legislators representing Pettis, Morgan, and Benton counties. MDNR posted the notice, the Sediment TMDL Information Sheet and this document on the department Web site, making them available to anyone with access to the Web. No comments were received.

## **Monitoring Plan for TMDL(s) Under Phased Approach**

*The TMDL identifies a monitoring plan that describes the additional data to be collected to determine if the load reductions required by the TMDL lead to attainment of WQS, and a schedule for considering revisions to the TMDL(s) (where phased approach is used) [40 CFR § 130.7].*

Although the available data show no exceedances of the TMDL curve, a bioassessment study of Lake Creek is scheduled for 2008. This will demonstrate whether the biological community is impaired or not. In addition, the department will routinely examine physical habitat, water quality, invertebrate community and fish community data collected by the Missouri Department of Conservation under its Resource Assessment and Monitoring (RAM) Program. This program randomly samples streams across Missouri on a five to six year rotating schedule.

## **Reasonable Assurance**

*Reasonable assurance only applies when less stringent WLAs are assigned based on the assumption of nonpoint source reductions in the LA will be met [40 CFR § 130.2(i)]. This section can also contain statements made by the state concerning the state's authority to control pollutant loads.*

Reasonable assurances are not required. There are no point sources for this TMDL and the WLA is set at zero.



## EPA Region 7 TMDL Review

**TMDL ID:** MO\_0159  
**Document Name:** MILL CREEK

**State:** MO

**Basin(s):** CUIVRE  
**HUC(s):** 07110008  
**Water body(ies):** MILL CR., MILL CREEK  
**Tributary(ies):**  
**Pollutant(s):** SEDIMENT, TOTAL SUSPENDED SOLIDS

**Submittal Date:** 5/14/2008

**Approved:** Yes

### Submittal Letter

*State submittal letter indicates final Total Maximum Daily Load(s) (TMDL) for specific pollutant(s)/water(s) were adopted by the state, and submitted to EPA for approval under section 303(d) of the Clean Water Act [40 CFR § 130.7(c)(1)]. Include date submitted letter was received by EPA, date of receipt of any revisions, and the date of original approval if submittal is a phase II TMDL.*

The TMDL for Mill Creek (159) was formally submitted by the Missouri Department of Natural Resources (MDNR) in a letter received by the United States Environmental Protection Agency (EPA) on May 14, 2008. A revised version was submitted by e-mail attachment on June 18, 2008.

### Water Quality Standards Attainment

*The water body's loading capacity (LC) for the applicable pollutant is identified and the rationale for the method used to establish the cause-and-effect relationship between the numeric target and the identified pollutant sources is described. TMDL and associated allocations are set at levels adequate to result in attainment of applicable water quality standards (WQS) [40 CFR § 130.7(c)(1)]. A statement that WQS will be attained is made.*

The WQS expressed for this waterbody is a narrative value, a measurable indicator of the pollutant may be selected to express the narrative WQS as a numeric value. There are many quantitative indicators of sediment including total suspended solids (TSS), turbidity, and bedload sediment, which are appropriate to describe sediment in rivers and streams. TSS was selected as the numeric target for this TMDL because it enables the use of the highest quality data available, including permit requirements and monitoring data. The LC is defined as a load duration curve (LDC) of TSS over the range of flows for Mill Creek. A reference approach was used to model the LDC for TSS loading as the target of the 25th percentile of the current ecological drainage unit (EDU) condition calculated from all data available within the EDU. This results in a LC of 0.19 tons per day and load allocation (LA) of 0.17 tons per day at the 50th percentile of flow (median flow).

EPA agrees that the LC and associated allocations are set at levels that are adequate for attainment of WQS.

### Numeric Target(s)

*Submittal describes applicable WQS, including beneficial uses, applicable numeric and/or narrative criteria. If the TMDL is based on a target other than a numeric water quality criterion, then a numeric expression, site specific if possible, was developed from a narrative criterion and a description of the process used to derive the target is included in the submittal.*

#### Beneficial Uses:

- Livestock and Wildlife Watering

- Protection of Warm Water Aquatic Life
- Protection of Human Health (Fish Consumption)
- Whole Body Contact Recreation - Category B

**Listing years:**

1998 303(d) list under WBID 2124 and 2002 303(d) list under WBID 0159

The waterbody was mistakenly listed in 1998 as WBID 2124. WBID 0159 is the correct waterbody identification for the Mill Creek addressed by this TMDL.

**Length of Impaired Segment:** 4 miles

**Location of Impaired Segments (downstream to upstream):**

Section 7, T50N, R1W (mouth) to Survey 1710, T51N, R1W

**Use that is impaired:**

Protection of Warm Water Aquatic Life

**Standards that apply:**

Missouri's WQS at 10 CSR 20-7.031(3) state:

- (A) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;...
- (C) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;...
- (G) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;...

Since this 303(d) listing, MDNR developed a sediment protocol to determine if sediment is actually the pollutant in the streams listed and to arrive at a standard way to measure sediment. The first step of that protocol is a biological assessment to see if the biological community is actually impaired. However, a biological assessment is not yet available for Mill Creek. For this TMDL, sediment targets were derived using generalized information from the ecological drainage unit (EDU). The TMDL targets the 25th percentile of TSS loads in the EDU over the range of flows for Mill Creek. A description of the process used to derive the target is included in the TMDL.

**Pollutant(s) of concern**

*An explanation and analytical basis for expressing the TMDL through surrogate measures (e.g., parameters such as percent fines and turbidity for sediment impairments, or chlorophyll-a and phosphorus loadings for excess algae) is provided, if applicable. For each identified pollutant, the submittal describes analytical basis for conclusions, allocations and margin of safety (MOS) that do not exceed the LC. If submittal is a phase II TMDL there are refined relationships linking the load to WQS attainment. If there is an increase in the TMDL there is a refined relationship specified to validate the increase in TMDL (either load allocation (LA) or waste load allocation (WLA)). This section will compare and validate the change in targeted load between the versions.*

In cases where pollutant data for the impaired stream is not available a reference approach is used. In this approach, the target for pollutant loading is the 25th percentile of the current EDU condition calculated from all data available within the EDU in which the waterbody is located. Therefore, the 25th percentile is targeted as the TMDL LDC. TSS measurements taken by MDNR during the summer of 2007 were used to estimate TSS concentrations using relationships developed by Doisey and Rabeni (2004). An established link between TSS and sediment was used to define this TMDL as a numeric value. The WLA, LA, and MOS are set to not exceed the LC.

**Source Analysis**

*Important assumptions made in developing the TMDL, such as assumed distribution of land use in the watershed, population characteristics, wildlife resources, and other relevant information affecting the characterization of the pollutant of concern and its allocation to sources, are described. Point, nonpoint and background sources of pollutants of concern are described, including magnitude and location of the sources. Submittal demonstrates all significant sources have been considered. If this is a phase II TMDL any new sources or removed sources will be specified and explained.*

The major problems are excessive rates of sediment deposition due to streambank erosion and sheet erosion from

agricultural lands, loss of stream length and loss of stream channel heterogeneity due to channelization, and changes in basin hydrology that have increased flood flows and prolonged low flow conditions. A certain level of sediment enters streams through normal processes. Sediment becomes suspended during high flow events as bank soil is eroded and bottom sediment is resuspended. However, human impacts have greatly increased erosion.

The primary cause of sediment impairment has been identified as pollution caused by agricultural nonpoint sources. The majority of the watershed is deciduous forest (39%), cropland (31%), or grassland (23%) where cropland that is next to and drains into Mill Creek could contribute sediment loading. There are no permitted concentrated animal feeding operations (CAFO) in the watershed, there are other livestock that could contribute to sediment loading. This includes Beef cattle (10,880 Animal Units (AU)), Dairy cattle (936 AU), Cow/calf (25,691 AU), Hogs/ Pigs (22,929 AU), Sheep/ Lambs (2,369), and Poultry (Layers not disclosed, Broilers (159 AU)).

Two National Pollutant Discharge Elimination System (NPDES) permitted facilities are located within the watershed, and either have the potential to discharge TSS. Silex Wastewater Treatment Facility (WWTF) discharges with a design flow of 0.03 MGD.

Facility	Permit Number	County	Design Flow (MGD)
Silex WWTF	MO-0108243	Lincoln	0.03
HWR, Tucker Pit	MO-G840023	Lincoln	stormwater

Low intensity urban land use is also calculated to be less than 1% of the land use in the Mill Creek Watershed. It is unlikely that construction activities significantly contribute to the sediment impairment. The submittal demonstrates that all significant sources have been considered.

### Allocation - Loading Capacity

*Submittal identifies appropriate WLA for point, and load allocations for nonpoint sources. If no point sources are present the WLA is stated as zero. If no nonpoint sources are present, the LA is stated as zero [40 CFR § 130.2 (i)]. If this is a phase II TMDL the change in LC will be documented in this section.*

The LC is defined by a LDC set at the 25th percentile of the sediment concentration in the EDU. The LA is set at 90% of the TMDL leaving 10% of the TMDL as a MOS.

### WLA Comment

*Submittal lists individual WLAs for each identified point source [40 CFR § 130.2(h)]. If a WLA is not assigned it must be shown that the discharge does not cause or contribute to WQS excursions, the source is contained in a general permit addressed by the TMDL, or extenuating circumstances exist which prevent assignment of individual WLAs. Any such exceptions must be explained to a satisfactory degree. If a WLA of zero is assigned to any facility it must be stated as such [40 CFR § 130.2(i)]. If this is a phase II TMDL any differences in phase I and phase II WLAs will be documented in this section.*

The WLA for Silex WWTF is set at 0.009 tons/day. The general permit for HWR, Tucker Pit, requires sediment and erosion control sufficient to prevent pollution to waters of the state and to comply with the effluent limitations and other permit conditions. This may require the construction of properly designed sediment basins or other treatment structures or to obtain a site-specific permit. The WLA for HWR, Tucker Pit, is set at current permit conditions plus inclusion of site-specific best management practices (BMP).

Facility	Permit Number	County	WLA
Silex WWTF	MO-0108243	Lincoln	0.009 tons/day
HWR, Tucker Pit	MO-G840023	Lincoln	current permit conditions plus site-specific BMPs.

### LA Comment

*Includes all nonpoint sources loads, natural background, and potential for future growth. If no nonpoint sources are identified the LA must be given as zero [40 CFR § 130.2(g)]. If this is a phase II TMDL any differences in phase I and phase II LAs will be documented in this section.*

The LA is set at 90% of the TMDL leaving 10% of the TMDL as a MOS. For example, at the 50th percentile of flow (median flow) the LC is 0.19 tons/day for this TMDL. Therefore, the LA would be 0.17 tons/day and the MOS is 0.019 tons/day.

### **Margin of Safety**

*Submittal describes explicit and/or implicit MOS for each pollutant [40 CFR § 130.7(c)(1)]. If the MOS is implicit, the conservative assumptions in the analysis for the MOS are described. If the MOS is explicit, the loadings set aside for the MOS are identified and a rationale for selecting the value for the MOS is provided. If this is a phase II TMDL any differences in MOS will be documented in this section.*

The MOS is explicit and is set at 10% of the TMDL. For example, at the 50th percentile of flow (median flow) the LC is 0.19 tons/day for this TMDL. Therefore, the LA would be 0.17 tons/day and the MOS is 0.019 tons/day.

### **Seasonal Variation and Critical Conditions**

*Submittal describes the method for accounting for seasonal variation and critical conditions in the TMDL(s) [40 CFR § 130.7(c)(1)]. Critical conditions are factors such as flow or temperature which may lead to the excursion of WQS. If this is a phase II TMDL any differences in conditions will be documented in this section.*

The TMDL curve represents flow under all seasonal conditions. The LA and TMDL are applicable at all flow conditions, hence all seasons. The advantage of a load duration curve approach is to avoid the constraints associated with using a single-flow critical condition during the development of a TMDL. Therefore, all flow conditions including seasonal variation are taken into account for TMDL calculations.

### **Public Participation**

*Submittal describes required public notice and public comment opportunity, and explains how the public comments were considered in the final TMDL(s) [40 CFR § 130.7(c)(1)(ii)].*

EPA regulations require that TMDLs be subject to public review (40 CFR 130.7). As stated earlier, this water quality limited segment of Mill Creek in Lincoln County is included on the EPA approved 1998 and 2002 303 (d) lists for Missouri. EPA and MDNR's Water Protection Program developed this TMDL. The public notice period was from March 26, 2008 thru April 25, 2008. Groups that received the public notice announcement included the Missouri Clean Water Commission, Missouri Water Quality Coordinating Committee, the affected facilities, 22 Stream Team volunteers in the county, and the two state legislators representing Lincoln County. MDNR also posted the public notice, Sediment TMDL Information Sheet, and TMDL on the MDNR web-site making them available to anyone with access to the Web. No comments were received.

### **Monitoring Plan for TMDL(s) Under Phased Approach**

*The TMDL identifies a monitoring plan that describes the additional data to be collected to determine if the load reductions required by the TMDL lead to attainment of WQS, and a schedule for considering revisions to the TMDL(s) (where phased approach is used) [40 CFR § 130.7].*

MDNR has scheduled a bioassessment for Mill Creek in fiscal year 2008. MDNR will also routinely examine physical habitat, water quality, invertebrate community, and fish community data collected by the Missouri Department of Conservation (MDC) under its Resource Assessment and Monitoring (RAM) Program. This program randomly samples streams across Missouri on a five to six year rotating schedule.

### **Reasonable Assurance**

*Reasonable assurance only applies when less stringent WLAs are assigned based on the assumption of nonpoint source reductions in the LA will be met [40 CFR § 130.2(i)]. This section can also contain statements made by the state concerning the state's authority to control pollutant loads.*

Reasonable assurances are not required because there is no required reduction in LA to account for a reduced

WLA. All discharging point sources within the watershed have a WLA sufficient to meet WQS.