US EPA ARCHIVE DOCUMENT

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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

DEC 1 6 2009

Ms. Leanne Tippett Mosby
Division of Environmental Quality
Missouri Department of Natural Resources
P. O. Box 176
Jefferson City, Missouri 65102

Dear Ms. Mosby:

The United States Environmental Protection Agency (EPA), Region 7, has completed its review of public comments regarding proposed changes made by EPA to Missouri's 2008 Clean Water Act (CWA) Section 303(d) list, as described in the August 6, 2009, decision letter to the Missouri Department of Natural Resources (MDNR).

EPA reviewed Missouri's 2008 303(d) list of impaired waters, and had determined that Missouri's list of water quality limited segments still requiring Total Maximum Daily Loads (TMDLs) did not include certain waters and pollutants required to be listed. EPA partially approved and partially disapproved Missouri's 303(d) list and provided its rationale for this action in its letter to MDNR dated August 6, 2009. EPA then issued a public notice on August 6, 2009, seeking written comments on EPA's decision to add/restore 17 water body/pollutant pairs to Missouri's 2008 303(d) list. The 60-day public comment period closed on October 5, 2009. Pursuant to Region 7's revised method for public noticing decisions on 303(d) lists (as described in the September 12, 2008 Federal Register Vol. 23, No. 178 p. 52928), EPA placed its public notice and the associated decision letter on the EPA-Region 7 website. The record supporting EPA's decision was available upon request. EPA's request for public comments was limited to decisions to add or restore specific water body/pollutant pairs to Missouri's 2008 303(d) list.

Based on EPA's review of the comments, Region 7 is amending its decision and removing four water body/pollutant pairs it had previously proposed to restore to Missouri's 303(d) list. EPA is approving the delisting of Dry Auglaize Creek (WBID 1145) for unknown pollutants and Little Beaver Creek (WBID 1529) for low dissolved oxygen because a permit in lieu of a TMDL has been approved and is expected to result in attainment with WQS. These two water body/pollutant pairs are appropriate for placement in Category 4B. EPA is also approving the delisting of Flat Creek (WBID 0865) for unknown pollutants based on additional data and clarification provided by MDNR subsequent to the submission of their 2008 303(d) list. EPA reviewed that data during the public comment period and is including its evaluation in this responsiveness summary. EPA is also approving the delisting of Village Creek (WBID 2863) for manganese. At this time, the data are not sufficient to support identifying manganese as a pollutant causing impairment in this segment of Village Creek. The enclosure to this letter

US EPA ARCHIVE DOCUMENT

RECYCLE
PAPER CONTAINS RECYCLED FIBERS

provides a detailed responsiveness summary to public comments the Agency received and includes a consolidated list summarizing EPA's decisions on Missouri's 2008 303(d) list.

EPA would like to discuss this decision further with MDNR as you prepare your 2010 303(d) list for submission. Please contact me at 913-551-7401, or John DeLashmit, Chief of the Water Quality Management Branch, at 913-551-7821.

Sincerely,

William A. Spratlin
Director
Water, Wetlands and Pesticides Division

Enclosure

cc: Missouri Department of Natural Resources:
Mr. Scott Totten
Mr. John Ford
Mr. John Hoke
Mr. Refaat Mefrakis

US EPA ARCHIVE DOCUMENT

US EPA ARCHIVE DOCUMENT

ENVIRONMENTAL PROTECTION AGENCY – REGION 7

PUBLIC NOTICE of the

PROPOSED DECISION on the

MISSOURI 2008 303(D) LIST –

SUMMARY OF PUBLIC COMMENTS AND EPA RESPONSES

Introduction

Section 303(d) of the Clean Water Act (CWA) requires each state to identify waters for which existing pollution controls are insufficient for the affected waters to attain state water quality standards (WQS). States must also establish a priority ranking for waters, taking into account the severity of the pollution and the uses to be made of such waters, and develop total maximum daily loads (TMDLs) for these waters. A TMDL specifies the maximum amount of a pollutant that a water body can receive and still meet WQS, and allocates pollutant loadings among point and nonpoint pollutant sources.

Missouri's 2008 submission included the 303(d) list of impaired waters, a description of the data and information the state considered, its *Methodology for the Development of the 2008 Section 303(d) List in Missouri* (listing methodology), public comments received by the Missouri Department of Natural Resources (MDNR) on the proposed list and the responses to those public comments. The Environmental Protection Agency (EPA) reviewed the state's submission to determine whether Missouri identified water bodies that should be included on the state's list and provided good cause for removing water bodies from the 303(d) list. As part of this review, EPA evaluated the existing and readily available data and information provided by MDNR and any additional information provided by the public during Missouri's public comment process to determine the adequacy of the state's response. EPA concluded that Missouri's 2008 CWA Section 303(d) list did not include certain waters and pollutants that are required to be listed. Consequently, EPA sent a letter to MDNR on August 6, 2009, informing them of EPA's decision to partially approve and partially disapprove Missouri's 2008 303(d) list.

At the same time, EPA identified additional water quality limited segments still requiring TMDLs in Missouri, as provided for in 40 CFR 130.7(d)(2). EPA issued a public notice on August 6, 2009, seeking written comments on EPA's proposed decisions to add waters and pollutants to Missouri's 2008 303(d) list. EPA's proposed action was placed on the EPA Region 7 website and the full administrative record was available upon request. The public notice provided 60 days for the public to review the proposed decision and submit written comments.

EPA's August 6, 2009, public notice requested written comment on EPA's proposed decision to restore 17 water body/pollutant pairs to Missouri's 2008 303(d) list. EPA received several comment letters. The types of comments received by EPA ranged from opinions to submissions of water quality-related data or information. This document contains the summaries of comments EPA received during the public comment period and EPA's responses to those comments. Because multiple individuals made similar comments, the responsiveness summary groups those comments accordingly and provides summary responses. Copies of the comments received by EPA are available as part of the administrative record supporting EPA's final decision.

Table 2 identifies those waters and/or pollutants of concern that EPA proposed restoring to Missouri's list, but are not being added to the final list based on information provided by MDNR and/or the public during EPA's public comment period. Table 3 is the complete 2008

US EPA ARCHIVE DOCUMENT

Section 303(d) list, which includes final revisions to Table 6 (Proposed 2008 Missouri 303(d) List) from EPA's August 6, 2009, decision letter to MDNR.

Acronyms

The following is a list of acronyms used in this review document:

303(d) list	Clean Water Act Section 303(d) list
CFR	Code of Federal Regulations
CWA	Clean Water Act
DO	Dissolved Oxygen
EDU	Ecological Drainage Unit
EPA	Environmental Protection Agency
IRG	Integrated Report Guidance
MDC	Missouri Department of Conservation
MDNR	Missouri Department of Natural Resources
mg/L	Milligrams per liter
MSCI	Macroinvertebrate Stream Condition Index
NVSS	Non-Volatile Suspended Solids
PEC	Probable effect concentration
TMDL	Total Maximum Daily Load
UAA	Use Attainability Analyses
USGS	United States Geological Survey
VSS	Volatile Suspended Solids
WBID	Water Body Identification
WQS	Water Quality Standards
WWTP	Wastewater Treatment Plant

US EPA ARCHIVE DOCUMENT

List of Commenters

Comments were received from the following individuals and entities:

1. Ronald E. Markland, P.E.
2. MDC, Karen Bataille
3. MDNR, Daniel R. Schuette
4. MDNR, David Michaelson
5. MDNR, John Ford
6. MDNR, John Hoke
7. MDNR, Leanne Tippett Mosby
8. MDNR, Phil Schroeder
9. MDNR, Randy Sarver
10. Missouri Coalition for the Environment, Dan Sherburne
11. Missouri Farm Bureau Federation, Charles Kruse
12. Newman, Comley & Ruth P.C., Robert Brundage
13. Sierra Club, Ken Midkiff
14. Southeast Missourian, Matt Sanders

US EPA ARCHIVE DOCUMENT

SUMMARY OF PUBLIC COMMENTS AND EPA RESPONSES

Public Notice

EPA received one comment regarding its public notice procedure. The commenter asserted that EPA's public notice is "legally defective" because it did not request comment on changes made by the Missouri Clean Water Commission to Missouri's 2008 303(d) list prior to submission to EPA. Instead, EPA requested comment only on its proposed changes to the state's submission. EPA respectfully disagrees with the commenter's legal analysis of EPA's public notice. Federal regulations at 130.7(d) describe EPA's requirement to review and act on the state's submission. There is no requirement for EPA to request public comment on changes made by the state prior to submission to EPA.

EPA received one comment letter that referenced comments that had previously been submitted to MDNR during the public notice(s) on its proposed 2008 303(d) list. As discussed in EPA's August 6, 2009, decision letter, EPA examined Missouri's public comment record during its review of the state's 2008 303(d) list submission package to determine if the state adequately responded to comments, and whether or not the state demonstrated good cause for not including on the list either water bodies or pollutants causing impairment. The conclusion of EPA's review of MDNR's public comment record was that the state had appropriately considered and responded to public comments. As such, EPA is not providing further response to these comments.

Classified Segment Listings

EPA received several comments expressing disagreement with EPA's decision to include the entire classified segment on the 2008 303(d) list. In accordance with CWA Section 303(d), states are required to submit to EPA a list of "water quality limited segments." A "water quality limited segment" is defined as "any segment where it is known that water quality does not meet applicable water quality standards, and/or is not expected to meet applicable water quality standards, even after the application of the technology-based effluent limitations required by Sections 301(b) and 306 of the Act" (40 CFR 131.3(h)). Federal regulations at 40 CFR part 131 describe the requirements for states in establishing WQS, which include the designation of beneficial uses. Designated uses are defined as "those uses specified in water quality standards for each water body or segment whether or not they are being attained" (40 CFR 131.3(f)). States then adopt criteria to protect those uses. It is the evaluation of water quality data against the criteria that results in identifying water quality limited segments for the purpose of the 303(d) list. As such, it is essential that the 303(d) listed segments be easily comparable to the state's WQS.

EPA's *Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d), 305(b) and 314 of the Clean Water Act,*[1] known as the Integrated Report

[1] EPA. 2005. Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Section 303(d), 305(b), and 314 of the Clean Water Act. EPA Office of Water. July 29, 2005.

US EPA ARCHIVE DOCUMENT

Guidance (IRG), discusses segmentation of waters for the purposes of assessment using the integrated report format. The guidance states:

> Use of the Integrated Report format and the use of the five-part categorization scheme envisions that each state provides a comprehensive description of the water quality standards attainment status of all segments within a state... Fundamental to this accounting is the use of a consistent and rational segmentation and geo-referencing approach for all segments including rivers, streams, lakes, wetlands, estuaries, and coastal waters. There is no single approach to the development of a segmentation scheme. However, it is important that the selected segmentation approach be consistent with the state's water quality standards and be capable of providing a spatial scale that is adequate to characterize the WQS attainment status of the segment.

In Missouri, water segments and the assigned designated uses are identified in the tables of classified lakes and streams in the state's EPA-approved WQS (10 CSR 20-7.031 Tables G and H). MDNR's *Final Guidelines for Water Body Classification* (March 2, 2005) provide guidance on selecting sites for determining stream classification. It specifies that "for all candidate streams, the portion of the evaluated segment…, should be representative of the entire segment with respect to stream morphometry, substrate and geology." This suggests that Missouri's classified waters are intended to be segments that display similar characteristics. It is these classified segments upon which the state relies for the implementation of other aspects of the WQS program, such as conducting use attainability analyses (UAAs) or developing draft site-specific criteria. In conducting a UAA or developing site-specific criteria, Missouri selects several sampling sites along the classified portion and uses the results of the sampling to evaluate the appropriate uses or criteria for the entire classified segment. The state assumes that those limited samples are representative of the entire classified segment. If sampling to evaluate the designated uses and criteria is extrapolated to the entire classified segment, then a consistent approach would be to also extrapolate sampling to assess attainment with those designated uses and criteria to the entire classified segment.

One commenter asserted that EPA's requirement for Missouri to list classified segments in a manner that is consistent with state WQS suggests that the state's listing of unclassified waters, which do not have defined segment descriptions, is inconsistent with Missouri's WQS. While EPA recognizes that an unclassified water body in Missouri does not have boundaries defined in regulations, they are not exempt from listing requirements. The state's WQS identify applicable narrative and numeric criteria, against which the state is required to assess for listing purposes (40 CFR 130.7(b)(3)).

EPA does not disagree with the concept of subsegmenting a classified segment for purposes of the 303(d) list. However, in EPA's oversight role, it is important to be able to easily track changes from one listing cycle to the next so that other programmatic activities (e.g., developing TMDLs, issuing permits, distributing funding for restoration projects, implementing watershed restoration plans) are not halted due to a prolonged review. Missouri's approach satisfied some of the conditions contained in EPA's IRG by including GPS coordinates identifying the endpoints of the impaired portion. However, neither these coordinates nor the

US EPA ARCHIVE DOCUMENT

water body identification number (WBID) appear in Missouri's WQS, making it extremely difficult and time-consuming to independently verify the designated uses and associated criteria for each water body. Missouri's approach is not comparable to the state's WQS and is not consistent from year to year, which prevents tracking of specific impaired subsegments from one listing cycle to the next and inhibits timely review. Until such time as MDNR develops a comprehensive system for better defining the extent to which data is to be extrapolated for the purpose of assessing attainment with water quality criteria, EPA is relying upon the classified waters as described in the state's WQS for identifying waters on the 303(d) list.

Bacteria Listings

EPA received two comments in support of EPA's decision to restore several waters as impaired by bacteria to Missouri's 2008 303(d) list. EPA appreciates the support and stakeholders' interest in the 303(d) listing process.

MDNR also provided comment recommending EPA rely on the state's recently finalized revision to its WQS to adopt the *Escherichia coli (E. coli)* criterion of 206 colony forming units per 100 milliliters (cfu/100 mL) for the protection of waters designated for Whole Body Contact Recreation (WBCR) – Category B. When MDNR submitted the 2008 303(d) list on July 8, 2009, Missouri did not have an EPA-approved criterion for the protection of WBCR – Category B. Therefore, to determine whether waters designated for WBCR – Category B were protecting the recreational use, EPA relied on the approved criteria for WBCR – Category A (200 cfu/ 100 mL fecal coliform or 126 cfu/100 mL *E. coli*) in making its proposed decision to restore several waters as impaired by bacteria. EPA proposed restoring the Missouri River (WBID 1604), North Fork Cuivre River (WBID 0170), South Fabius River (WBID 0071), and Wilson Creek (WBID 2375) as impaired by bacteria.

On November 5, 2009, EPA received Missouri's new and revised WQS submission, which includes a revised criterion for the protection of WBCR – Category B (206 cfu/100 mL *E. coli*). Under federal regulations, EPA has 60 days to review and approve or 90 days to disapprove Missouri's WQS submission. Rather than delay action on Missouri's 2008 303(d) list in anticipation of making a decision on Missouri's WQS, EPA is relying on the existing WQS (200 cfu/100 mL fecal coliform or 126 cfu/100 mL *E. coli*) in finalizing its decision on the 303(d) list. As such, EPA is not revising its assessment of those waters it proposed to restore as impaired by bacteria. EPA believes that making this decision without delay will help ensure Missouri's future lists are prepared and submitted in a manner consistent with the regulatory deadline of April 1 of even-numbered years (40 CFR 130.7(d)). Missouri can make any necessary changes during its 2010 303(d) list development process subsequent to EPA's decision on Missouri's revised *E. coli* criterion for WBCR – Category B.

Dissolved Oxygen

EPA received one comment regarding dissolved oxygen (DO) impairments. The commenter did not cite a specific stream, but expressed general concern about potential springtime impairment in those waters that are designated for protection of cool- and cold-water aquatic life. Missouri's WQS establish DO criteria for the protection of warm-water, cool-water,

US EPA ARCHIVE DOCUMENT

and cold-water fisheries. The criterion for warm-water and cool-water fisheries is 5.0 milligrams per liter (mg/L). Cold-water fisheries are protected by a more stringent criterion of 6.0 mg/L. EPA expects Missouri to assess its DO data to identify waters in which the water quality is not supporting its designated use. Missouri has identified several waters as impaired for low DO on its 2008 303(d) list, and EPA expects Missouri to add waters to the list should additional data indicating impairment become available in the future. At this time, EPA is making no revisions to its decision in response to this comment.

Unclassified Waters

EPA received one comment expressing concern about the lack of unclassified waters included on Missouri's 303(d) list. The commenter stated that "we expect the artificial labels to disappear by 2010 and that ALL WATERS OF THE UNITED STATES be fully protected and water quality analyzed."

Federal regulations at 40 CFR 130.7(b) require states to identify water quality-limited segments still requiring TMDLs in accordance with the "applicable water quality standards." Under Missouri's WQS regulations (10 CSR 20-7.031), unclassified waters are protected by the general criteria (i.e., narrative criteria) and by the acute criteria values for substances listed in Tables A and B of the state's WQS. Missouri's 2008 303(d) list submission included several unclassified waters listed as impaired by ammonia, arsenic, cadmium, mercury, toxicity, zinc, and/or unknown pollutants. Missouri's list reflects the state's effort to assess readily available water quality-related data or information and list impairments in unclassified water bodies in accordance with its regulations. In addition, EPA is encouraged by the progress of MDNR's Water Classification stakeholder group, which is discussing draft revisions to the state's WQS to address unclassified waters. When Missouri finalizes and EPA approves those revisions, the state will be required to develop its impaired waters list in accordance with those new regulations. EPA appreciates the commenter's concern about this important issue, but is making no revisions to its decision in response to this comment.

Stream-Specific Comments and Responses

Buffalo Ditch (WBID 3118) & Dutro Carter Creek (WBID 3569)

Missouri listed Buffalo Ditch and Dutro Carter Creek as impaired by ammonia on the 2004/2006 list, citing exceedances of the chronic water quality criterion. In its 2008 assessment, MDNR reevaluated the datasets that were the basis for the 2006 listings and concluded Buffalo Ditch and Dutro Carter Creek are unimpaired. EPA agreed with MDNR's assessment, found the state had provided good cause for delisting, and approved the state's decision to remove Buffalo Ditch and Dutro Carter Creek from Category 5.

EPA received one comment expressing concern about the change in impairment status between the 2004/2006 and 2008 listing cycles, and requested these streams be retained in Category 5. While EPA's public notice did not request comment on those water body/pollutant pairs it approved for delisting, EPA would like to take this opportunity to clarify the change in the assessment. These water bodies were inappropriately listed as impaired by ammonia on the

US EPA ARCHIVE DOCUMENT

2004/2006 303(d) list. The data used to support the original listing were incorrectly assessed and MDNR came to the incorrect conclusion that these segments were impaired by ammonia. MDNR corrected their error in the 2008 list submission and provided the data to support their assessment of these waters as unimpaired. EPA approved this decision in its August 6, 2009, letter and is making no revisions to its decision in response to this comment.

Courtois Creek (WBID 1943) & Indian Creek (WBID 1946)

EPA approved Missouri's decision to revise the pollutants for Courtois and Indian Creeks from zinc to metals. EPA received one comment regarding this approval suggesting that it would be more appropriate to list the pollutant as "unknown." Given the available data and information, identifying the pollutant causing impairment as metals was a reasonable decision by Missouri, and EPA approved this revision to the list in its August 6, 2009, letter. EPA is not revising its decision in response to this comment.

Creve Coeur Creek (WBID 1705)

EPA received one stakeholder comment in support of its decision to restore Creve Coeur Creek as impaired by low DO to Missouri's 2008 303(d) list. MDNR also indicated its agreement with EPA's assessment of Creve Coeur Creek as impaired by low DO. EPA appreciates the support, and is restoring Creve Coeur Creek to Missouri's 2008 303(d) list.

Dry Auglaize Creek (WBID 1145)

MDNR clarified its assessment of Dry Auglaize Creek in their comments on EPA's proposed decision on the 2008 303(d) list. The inclusion of Dry Auglaize Creek on the 2008 303(d) list as impaired by unknown pollutants was an error. MDNR consulted their record and found that they intended for Dry Auglaize Creek to be placed in Category 4B, as EPA had previously approved a permit in lieu of a TMDL for the impairment. EPA agrees with MDNR's assessment of the record, and as a result, is no longer including Dry Auglaize Creek on the 2008 303(d) list.

East Fork Locust Creek (WBID 3706)

One commenter expressed concern with the resegmentation/renumbering of East Fork Locust Creek and related delisting of WBID 3706. While EPA's public notice did not request comment on those water body/pollutant pairs it approved for delisting, EPA would like to take the opportunity to clarify its decision in response to the comment. The resegmentation was a result of the use attainability analysis conducted in 2005 as a part of the triennial review of the state's WQS. MDNR resegmented a portion of the creek (WBID 608) into two smaller segments (WBIDs 608 and 3706). EPA approved this resegmentation of East Fork Locust Creek in its February 20, 2007, decision letter to MDNR. In their 2008 303(d) list submission, MDNR provided data supporting their decision to list WBID 608 as impaired and delist WBID 3706 as unimpaired. EPA approved MDNR's delisting of WBID 3706 of East Fork Locust Creek because the state provided data demonstrating that segment was unimpaired. EPA is making no changes to its decision as a result of this comment.

US EPA ARCHIVE DOCUMENT

Flat Creek (WBID 0865)

As described in Table 1.2 of MDNR's listing methodology, stream condition index scores are relied upon as a numeric threshold for assessing attainment with narrative criteria. MDNR's 2005 *Biological Assessment Report: Flat Creek, Pettis County*[2] rated five out of six samples on the upper portion of Flat Creek as only "partially supporting" the aquatic community. These macroinvertebrate data resulted in the listing of Flat Creek as impaired by unknown pollutants on the 2004/2006 303(d) list. In their 2008 submission, MDNR rescored the stream condition index for Flat Creek and concluded the data contained in the 2005 report no longer indicated impairment. As a result, MDNR delisted Flat Creek. EPA explained in its proposed decision to restore Flat Creek to the 2008 303(d) list that more information was needed to fully understand the rescoring process MDNR relied upon to reach its attainment decision.

MDNR provided several comments on Flat Creek to clarify its assessment of the biological information on Flat Creek. Primarily, the rescoring of the stream condition index is a result of additional information collected from reference sites in the Plains/Blackwater/Lamine Ecological Drainage Unit (EDU) in which Flat Creek resides. MDNR's August 25, 2009, comment letter explains the following:

> When the Flat Creek Biological Assessment Report was completed in December 2005, the criteria used to calculate the Macroinvertebrate Stream Condition Index (MSCI) scores were based on data collected from seven reference sites in two Ecological Drainage Units (EDU). At the time, reference data from the Plains/Missouri Tributaries between the Blue and Lamine Rivers EDU (which now is known as the Central Plains/Blackwater/Lamine EDU) were combined with the Ozark/Moreau/Loutre EDU to establish the biological criteria. These EDUs were combined because there were insufficient reference data to calculate a 25th percentile for metrics that constitute biological criteria in the Central Plains/Blackwater/Lamine EDU.
>
> Since that time, additional samples have been collected in reference streams in the Central Plains/Blackwater/Lamine EDU. These additional samples resulted in a sufficiently robust data set for a 25th percentile calculation for the Central Plains/Blackwater/Lamine EDU. Since there were adequate data for the Central Plains/Blackwater/Lamine EDU, we were able to calculate separate criteria for the two EDUs that had previously been combined in the 2005 report. As a result of this separation, the 25th percentile of the biological metrics that make up an MSCI score (Taxa Richness, EPT Taxa, Biotic Index, and Shannon Diversity Index) changed for each EDU. These updated biological criteria data resulted in different Fall 2004 MSCI scores at the upstream three Flat Creek stations than those reported in the 2005 Flat Creek report.

Following the receipt of the August 25, 2009, comment letter, EPA requested the related bench sheets identifying the macroinvertebrate organisms collected from the reference sites to which the Flat Creek data were compared. EPA reviewed the bench sheets and found the taxa

[2] MDNR. 2005. Biological Assessment Report: Flat Creek, Pettis County. December 14, 2005.

US EPA ARCHIVE DOCUMENT

identified in Flat Creek were similar to those in the EDU's reference sites for both the spring and fall seasons.

Based upon the additional explanation and data provided by MDNR, EPA approves MDNR's decision to remove Flat Creek from Category 5. MDNR's explanation of the rescoring process indicates that the 2004/2006 303(d) listing of Flat Creek was based on insufficient information in the Plains/Blackwater/Lamine EDU. The additional reference site information indicates the macroinvertebrate community in Flat Creek is similar to reference sites in the EDU. EPA is revising its decision and no longer including Flat Creek on the 2008 303(d) list. However, EPA recommends MDNR continue to monitor Flat Creek to detect any trends, or changes over time, to the aquatic community. In addition, EPA encourages MDNR to continue to work toward developing a biological conditions gradient and tiered aquatic life uses, which will enable the state to characterize the anticipated biological community with more sophisticated assessments.

EPA also received a comment that agreed with EPA's proposed decision to restore Flat Creek to the list. The commenter agreed with EPA's original conclusion that MDNR had not provided a sufficient rationale describing its rescoring method, and asserted that MDNR should gather new data to demonstrate the stream is no longer impaired. In the case of Flat Creek, MDNR was able to provide new data from the reference sites within the Plains/Blackwater/ Lamine EDU, which were the basis for the rescoring and attainment decision.

Flat River Creek (WBID 2168)

MDNR delisted this segment from the 2008 list as no longer impaired by cadmium, stating that the water quality data does not indicate impairment. After reviewing the available sediment chemistry data and water column data, EPA proposed restoring Flat River Creek to the 2008 303(d) list as impaired by cadmium.

MDNR commented that it disagreed with EPA's assessment of the sediment data, as the listing threshold was revised based on more recent scientific data. The state's listing methodology cites a probable effect concentration (PEC) of 4.98 milligrams per kilogram for cadmium.[3] EPA would like to take this opportunity to clarify its citation of the sediment data in this decision. EPA supports the state's use of current scientific information to derive screening values for assessment purposes. EPA would like to be clear that while we approve of the use of these screening values for assessment purposes, these values do not serve as numeric standards or as sole narrative translators for waters that may be impaired by metals. Assessments made with this screening value are only valid until an EPA approved numeric criterion is in place. Future IR assessments using approved narrative or numeric standards will have priority over any assessments made using this screening value. EPA will review and evaluate the scientific defensibility when MDNR adopts a numeric criterion as a separate review.

In the case of Flat River Creek, the sediment data included numerous samples that exceeded the PEC. MDNR's assessment worksheet evaluates whether the average of all

[3] MacDonald, D.D., C.G. Ingersoll, and T.A. Berger. 2000. Development and Evaluation of Consensus-Based Sediment Quality Guidelines for Freshwater Ecosystems. Arch. Environ. Contam. Toxicol. 39, 20-31.

US EPA ARCHIVE DOCUMENT

sediment data was more than 150 percent of the PEC. Missouri's 2008 listing methodology does not provide an explanation to support the selection of this analytical method. Irrespective of the sediment chemistry data, there are water chemistry samples in violation of the chronic water quality criterion for cadmium. The state concurred with EPA's assessment of the water column data and agreed that the creek should remain on the 303(d) list for cadmium in the water column. EPA is not making revisions to its proposed decision, and is restoring Flat River Creek to the 303(d) list as impaired by cadmium.

Indian Camp Creek (WBID 0210)

Indian Camp Creek was listed in 1998 as impaired by sediment, the source of which was identified by MDNR as the JZ Landfill, a closed demolition waste landfill. In 2002, EPA approved the change in pollutant from sediment to non-volatile suspended solids (NVSS) for Indian Camp Creek, based on additional data provided by MDNR. During the 2004/2006 listing cycle, EPA restored Indian Camp Creek to the state's list as impaired, identifying the pollutant as inorganic sediment.[4] In the 2008 submission, MDNR delisted Indian Camp Creek, stating that the water quality data do not indicate impairment. No new data or information was provided to support its 2008 assessment. As such, EPA reviewed the information provided in the 2004/2006 list submission and concluded the state did not provide good cause for delisting Indian Camp Creek. MDNR commented on EPA's proposed decision to restore Indian Camp Creek to the state's 303(d) list, and asserted that it would be more appropriate for placement in Category 3.

Missouri's listing methodology states that for narrative criteria the decision rule for full attainment is that the "stream appearance [is] typical of reference streams in this region of the state." In general, to evaluate sediment impairments MDNR compares sediment deposition data to reference stream data. For Indian Camp Creek, MDNR's 2004 study, *Characterization of Sediment Deposition, Indian Camp Creek, Warren County*,[5] evaluates the impact of JZ Landfill on Indian Camp Creek by comparing the percent deposition between sites upstream and downstream of the landfill. The 2004 report identifies multiple permitted point sources in the watershed upstream of the landfill, which include several mobile home parks and subdivisions, a Missouri Department of Transportation rest area, a concrete plant, a paper products company, and an animal food facility. The 2004 report describes the upstream site as "represent[ing] impacts from [a] gravel mining area…" and as "flanked on both sides by row crops, with a riparian zone…" Given this description, it is difficult to interpret the upstream sites as representing a reference condition. Several point and nonpoint sources could be contributing sediment to Indian Camp Creek upstream of JZ Landfill. The 2004 study does not evaluate the impaired segment as a whole, but only looks at the influence of one suspected source.

In addition, MDNR has a draft TMDL for Indian Camp Creek available for public comment through December 12, 2009. The TMDL discusses the 2004 study and cites a 2005

[4] During the 2004/2006 listing cycle, Missouri chose to change the pollutant for those water bodies that were previously identified as impaired by NVSS to inorganic sediment. To be consistent with the state's method of describing this pollutant, EPA identified the pollutant as inorganic sediment on the 2004/2006 303(d) list.
[5] MDNR. 2004. Characterization of Sediment Deposition, Indian Camp Creek, Warren County. March 9, 2004 and March 22-23, 2004. MDNR Air and Land Protection Division, Environmental Services Program.

US EPA ARCHIVE DOCUMENT

department inspection report that "documents erosion concerns at the JZ Landfill area and notes the presence of a gully."[6]

MDNR has not provided good cause for delisting Indian Camp Creek, and, as such, EPA is restoring Indian Camp Creek to Missouri's list as impaired by inorganic sediment. While Indian Camp Creek may not be appropriate for delisting based on the 2004 study, MDNR can consider placing it in Category 4A after the TMDL is finalized and approved by EPA.

Indian Creek (WBID 0420)

Indian Creek was added to Missouri's 2004/2006 303(d) list by EPA as impaired by chloride. Missouri's listing methodology states a water body is considered to be impaired if the chronic criterion (230 mg/L) is exceeded more than once in a three year period. During its review of the 2004/2006 303(d) list, EPA found two exceedances of the chronic chloride criterion during the three most recent years for which data were available at the time (2004 – 2006) and added it to Missouri's 2004/2006 303(d) list.[7] In its 2008 list submission, MDNR submitted additional data from the 2007 sampling season, during which there was one exceedance of the chronic criterion. In evaluating the three most recent years for which data are available (2005-2007), EPA found two exceedances of the chronic chloride criterion (February 3, 2005, and February 8, 2007) and proposed restoring it to Category 5.

MDNR commented on EPA's proposed decision and submitted additional information about the stability of flow in Indian Creek. MDNR contends that the February 3, 2005, exceedance of the criterion is not representative of a chronic exposure period because the flow was unstable in the 48-hours prior to the sampling event. As such, MDNR argues, the sample should not be used for assessment purposes because it is unrepresentative. EPA agrees with the information presented by MDNR indicating the flow in Indian Creek was decreasing in the days prior to the February 3, 2005, sampling event. The variable flow is likely due to melting snowfall, as a precipitation event was recorded at the Kansas City International Airport on January 29, 2005. Under this snowmelt scenario, the peak chloride concentrations would be expected in the initial days after the snowfall when the chloride-containing road salts began to runoff, and then would diminish over time as the snowmelt decreased. The chloride concentration (457 mg/L) detected on February 3, 2005, at the 103rd Street sample site, was taken on the fourth day of the variation in stream discharge discussed in MDNR's comments, and is likely lower than what was present in the preceding days when the snowmelt began.

In addition, EPA found USGS data available during the time in question for Indian Creek at State Line Road in Leawood, Kansas (Site 06893400), which is at the upstream boundary of the classified segment and approximately one-half mile upstream of the 103rd Street sample site

[6] MDNR. 2009. Total Maximum Daily Load (TMDL) for Indian Camp Creek, Warren and St. Charles Counties, Missouri – DRAFT. MDNR Water Protection Program. Available online: http://www.dnr.mo.gov/env/wpp/tmdl/pn-indian-camp-ck.htm [Accessed November 20, 2009].

[7] For additional information about EPA's review of Indian Creek, refer to the January 16, 2009, Summary of Public Comments and Responses on Missouri's 2004/2006 303(d) list.

US EPA ARCHIVE DOCUMENT

(Table 1).[8] On January 31, 2005, three days prior to the 103rd Street sampling event, chloride concentrations at the State Line Road site measured 652 mg/L. Seven days after the 103rd Street sampling event (February 10, 2005) chloride measured 857 mg/L at this same site. EPA paired the flow information with the chloride concentrations available from both sampling sites in Figure 1. The additional data further suggests the elevated chloride concentration measured at 103rd Street on February 3, 2005, is indicative of a chronic condition. EPA is making no revisions to its proposed decision based on MDNR's comment, and is restoring Indian Creek to Category 5 as impaired by chloride.

Table 1. Chloride concentrations in Indian Creek (WBID 0420) from sampling sites at 103rd Street and State Line Road

Date	Chloride (mg/L) at 103rd Street, Kansas City, MO	Chloride (mg/L) at State Line Road, Leawood, KS
01/30/2005		652
02/03/2005	457	
02/10/2005		857

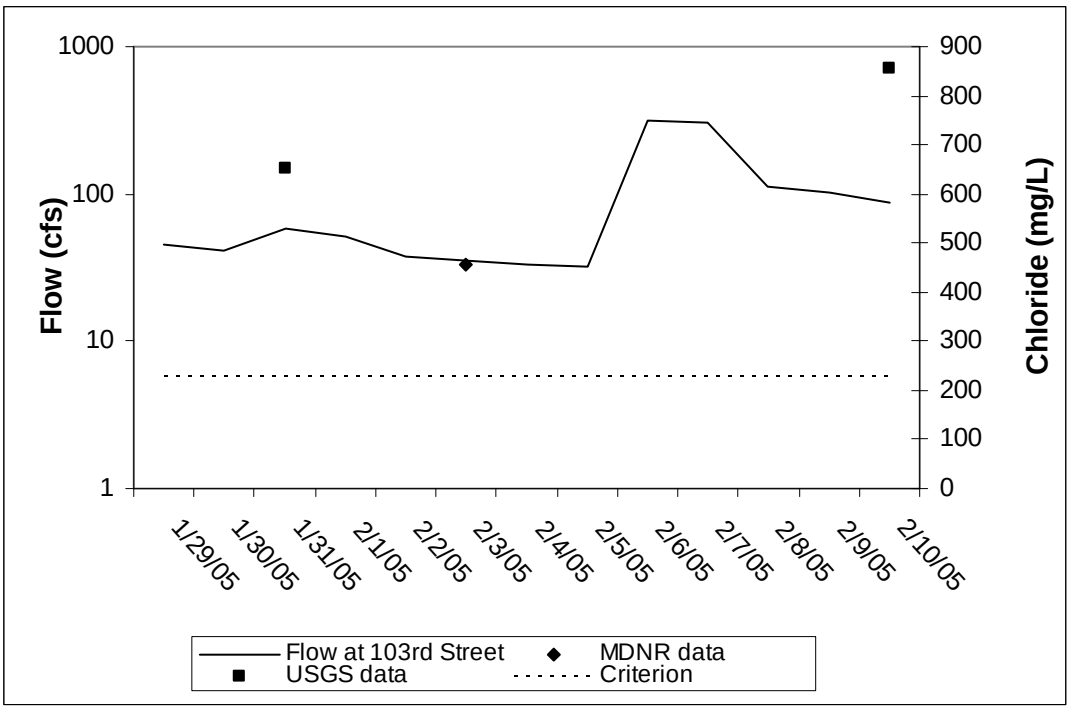

Figure 1. Chart showing flow data and chloride concentrations for two sampling sites on Indian Creek, 2005.

[8] USGS. Water Quality Samples for the Nation. USGS 06893390 Indian Creek at State Line Rd, Leawood, KS. Available online: http://nwis.waterdata.usgs.gov/usa/nwis/qwdata/?site_no=06893390. [Accessed November 3, 2009].

US EPA ARCHIVE DOCUMENT

Lewistown Lake (WBID 7020)

Lewistown Lake was listed as impaired by atrazine in 2002. During the development of the 2008 303(d) list, MDNR received a comment from Syngenta asserting that finished water samples were equivalent to raw water samples in the absence of treatment with activated carbon, and as such, were suitable for assessing compliance with WQS. MDNR revised its assessment in response to this comment and delisted Lewistown Lake. EPA proposed restoring Lewistown Lake to the 2008 list and requested additional information to support Syngenta's claim. EPA received one stakeholder comment supporting its decision to restore Lewistown Lake to the 2008 list of impaired waters. MDNR also commented on EPA's proposed decision and stated it was unable to assemble any additional information during the public comment. EPA is making no revisions to its decision in response to this comment.

Little Beaver Creek (WBID 1529)

MDNR conducted a water quality study on Little Beaver Creek in 2003. The results of that study indicated volatile suspended solids (VSS) from a wastewater treatment plant (WWTP) discharge impaired the stream and, as a result, it was included on the 2002 303(d) list. In 2005, MDNR issued a new permit to the facility with more stringent limits for biological oxygen demand and total suspended solids. EPA approved the permit in lieu of a TMDL for the VSS impairment and the water body/pollutant pair was delisted. The 2004/2006 and 2008 303(d) lists identified Little Beaver Creek as impaired for low DO, based on the same 2003 water quality study that resulted in the VSS listing. During the public comment period of EPA's proposed decision on the 2008 list, MDNR explained the more stringent limits in the 2005 permit should also resolve the low DO impairment indicated by the 2003 data. MDNR submitted information to support a permit in lieu of a TMDL for the Little Beaver Creek low DO listing. In response to MDNR's comments, EPA is no longer including Little Beaver Creek on the 2008 303(d) list as impaired by low DO. Little Beaver Creek is appropriate for inclusion in Category 4B because the pollution controls required by the permit are stringent enough to implement applicable WQS (see 40 CFR 130.7(b)(1)) within a reasonable period of time.

Lake of the Ozarks (WBID 7205)

MDNR proposed and EPA approved the placement of Lake of the Ozarks in Category 4C because fish kill reports by the Missouri Department of Conservation (MDC) determined the cause of impairment was physical trauma due to impingement and or entrainment rather than a specific pollutant. EPA received one comment disagreeing with the removal of Lake of the Ozarks from Category 5. The letter cited information from MDC indicating that the fish kills were a result of excessive nitrogen. Because the commenter did not submit any water quality data to support this claim, EPA contacted MDC directly to request additional documentation. MDC responded that they did not agree with the commenter's assertion regarding the fish kills. The data support MDNR's conclusion that the fish kills are a result of the dam, and not a specific pollutant. As such, EPA is making no revisions to its decision in response to this comment.

The commenter also noted the recent documented high levels of *E. coli* in parts of Lake of the Ozarks. EPA contacted MDNR regarding the new data and was assured that all readily

US EPA ARCHIVE DOCUMENT

available data was considered at the time the 2008 list was developed. In addition, MDNR confirmed that they will review and assess the additional sampling data that recently became available as a part of the 2010 list development process.

Muddy Creek (0557)

EPA added this water body to the 2002 list based on a visual/benthic low flow survey conducted by MDNR on August 3-4, 2000. For the 2004/2006 listing cycle, MDNR submitted *Biological Assessment and Habitat Study: Muddy Creek*[9] to support its decision to delist Muddy Creek. EPA disapproved MDNR's decision and restored Muddy Creek to the list as impaired. In its 2008 list submission, MDNR did not provide any new data or water quality-related information to support delisting Muddy Creek. EPA proposed restoring Muddy Creek to the 2008 303(d) list.

MDNR commented on EPA's proposed decision, stating EPA should give higher weight to data contained in the 2006/2007 biological assessment than to the information collected during the "screening level" visual/benthic low flow survey. In making its decision on the 2004/2006 and 2008 303(d) lists, EPA found that the data in the 2006/2007 biological assessment indicated the macroinvertebrate community was impacted by the discharge from Trenton's WWTP. The percentage of pollution tolerant species below the discharge was markedly different than the community at upstream sampling sites. This was one line of evidence EPA considered when it concluded that the new information did not support MDNR's decision to exclude Muddy Creek from Category 5 and restored the water body/pollutant pair to the 2004/2006 303(d) list.[10] MDNR did not provide any additional information in its 2008 list submission or in its comments on the proposed decision. EPA is making no revision to its decision in response to comments on Muddy Creek.

Mississippi River (WBID 1707)

EPA proposed restoring this segment of the Mississippi River as impaired by lead and zinc based on its assessment of sediment data collected near the Herculaneum smelter. MDNR provided comment on EPA's decision, expressing disagreement with the assessment based on the limited sampling information available. Data collected in 2001 below the Herculaneum smelter indicate the levels of metals found in sediments exceed the PEC for protecting against conditions that are toxic to aquatic life. EPA is not revising its decision in response to MDNR's comment and recommends MDNR collect additional data in close proximity to the Herculaneum smelter to better determine the extent of the impairment.

As discussed above, EPA would like to be clear that while we approve of the use of PECs as screening values for assessment purposes, these values do not serve as numeric standards or as sole narrative translators for waters that may be impaired by metals. Assessments made with this screening value are only valid until an EPA approved numeric criterion is in place. Future IR

[9] MDNR. 2007. Biological Assessment and Habitat Study Report, Muddy Creek, Grundy and Mercer Counties, Missouri. September 2006 - March 2007.
[10] For additional information regarding EPA's review of the biological assessment, refer to the administrative record supporting EPA's January 16, 2009, decision on Missouri's 2004/2006 303(d) list.

US EPA ARCHIVE DOCUMENT

assessments using approved narrative or numeric standards will have priority over any assessments made using this screening value. EPA will review and evaluate the scientific defensibility when MDNR adopts a numeric criterion as a separate review.

North Fork Spring River (WBID 3188)

EPA reviewed the available supporting data provided by MDNR in its 2008 submission and found there were two days where the acute ammonia criterion was violated. EPA proposed restoring North Fork Spring River to the 2008 list as impaired. MDNR provided comment that it agreed with EPA's assessment and supports the listing of this water body/pollutant pair. EPA is making no revision to its proposed decision, and is restoring North Fork Spring River to Category 5 as impaired by ammonia.

Osage River (WBID 1031)

EPA received one comment disagreeing with the decision to delist the Osage River. The commenter explained his objection to the placement of the river in Category 4B. In response to this comment, EPA would like to take the opportunity to further clarify the intent of Category 4B. Generally, Category 4 is described in EPA's IRG[11] as a category for waters where available data and/or information indicate that at least one designated use is not being supported (i.e., impaired), but a TMDL is not needed. The guidance further expands on the specific use of Category 4B with the following:

> EPA regulations recognize that alternative pollution control requirements may obviate the need for a TMDL. Segments are not required to be included on the section 303(d) list if…more stringent effluent limitations required by state, local or federal authority…are stringent enough to implement applicable water quality standards (see 40 CFR 130.7(b)(1)) within a reasonable period of time.

Category 4B is for waters that are impaired, but have requirements in place that are expected to result in attainment of the WQS. In the case of Osage River, the DO enhancement plan required under the Federal Energy Regulatory Commission license is the required set of controls expected to meet WQS within a reasonable period of time. EPA is making no changes to its proposed decision as a result of this comment.

Village Creek (WBID 2863)

MDNR listed this segment of Village Creek on the 2004/2006 303(d) list as impaired by manganese based on exceedances of a probable effect level (PEL). MDNR used the PEL as a numeric translator of its narrative criteria to protect aquatic life from toxic conditions. EPA approved Missouri's decision to list Village Creek. In its 2008 submission, MDNR delisted this water body/pollutant pair, stating that its listing methodology does not have sediment criteria for manganese. During the development of the 2004/2006 303(d) list, Missouri's 2006 listing methodology also did not contain sediment criteria for manganese, yet the available data was

[11] EPA. 2005. Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Section 303(d), 305(b), and 314 of the Clean Water Act. EPA Office of Water. July 29, 2005.

US EPA ARCHIVE DOCUMENT

used by MDNR to support the impairment decision. Missouri did not provide a justification explaining why data was no longer suitable for assessing attainment with WQS in 2008, and as such, EPA proposed restoring the water body/pollutant pair to the list.

In their comment letter to EPA, MDNR explained that the 2006 listing for manganese was based on a 1996 publication evaluating sediment toxicity.[12] The 2008 list relied on a later publication,[13] which did not include a toxicity threshold for manganese in sediment. MDNR contends that because the later publication does not include manganese there may be some uncertainty about the toxicity of manganese in sediment or about the sufficiency of the data to develop a criterion. MDNR argues that "it is inappropriate to list waters for sediment contamination by manganese in light of this uncertainty."

EPA reviewed the 1996 publication that was the basis for MDNR's 2004/2006 decision to list Village Creek for manganese. The research presented in the 1996 publication evaluates the predictive ability of sediment effect concentrations (SECs) in identifying toxic sediments. After testing the toxicity of various metals, polychlorinated biphenyls, and polycyclic aromatic hydrocarbons, the researchers calculated SECs for each compound. Using the SECs, they compared the predicted toxicity of sediment samples to the observed results. Rather than looking at frequency of SEC exceedances for a specific pollutant, like manganese, they predicted the toxicity of a sediment sample based on the sample exceeding the SECs for multiple pollutants. The result of this approach is the ability for scientists to identify sediments with toxic effects before proceeding with more detailed toxicity identification evaluation (TIE) studies to determine the specific constituent(s) causing toxicity. In their conclusion, the authors state the following:

> Our SECs were calculated from toxicity tests with field-collected samples. If a chemical concentration exceeds an SEC generated using data from these tests with field-collected samples, it does not necessarily mean the chemical *caused* the observed effect. Rather, the SEC is the concentration of a chemical that is *associated* with the effect. Field-collected sediments typically contain complex mixtures of contaminants. Additional information is needed to identify the specific contaminants that were actually responsible for the toxicity. Confirmation of sediment toxicity due to individual or groups of contaminants or the interactive effects of the sediment toxicants can be evaluated by using the TIE procedures…or by conducting toxicity tests with chemicals spiked in sediments… Once probable cause(s) of sediment toxicity has been identified, better decisions can be made regarding remediation options.

The explanation by the researchers suggests that while documented exceedances of the manganese SEC in Village Creek indicates a toxic condition, manganese may not be the *cause* of the toxicity. Without further testing to determine the exact sediment constituents causing the toxicity, it may be more appropriate to simply identify sediment as the pollutant causing impairment. In the case of Village Creek, Missouri has already identified it as impaired by

[12] Ingersoll, C.G., P.S. Haverland, E.L. Brunson, T.J. Canfield, F. James Dwyer, C.E. Henke, N.E. Kemble, D.R. Mount, and R.G. Fox. 1996. Calculation and Evaluation of Sediment Effect Concentrations for the Amphipod *Hyalella azteca* and the Midge *Chironomus riparius*. J. Great Lakes Res. 22(3):602-623.
[13] MacDonald, D.D., C.G. Ingeresoll, and T.A. Berger. 2000. Development and Evaluation of Consensus-Based Sediment Quality Guidelines for Freshwater Ecosystems. Arch. Environ. Contam. Toxicol. 39, 20-31.

US EPA ARCHIVE DOCUMENT

inorganic sediment. Based on its evaluation of the 1996 publication, which was the basis for the original listing, EPA concludes that manganese may have been inappropriately identified as the pollutant causing impairment. Without additional testing, the available water-quality related data is insufficient to conclusively identify manganese as the cause. Missouri's existing listing for inorganic sediment is a more appropriate description of the impairment. As such, EPA agrees with MDNR's decision to delist Village Creek as impaired by manganese, and is no longer proposing to add this water body/pollutant pair to Missouri's 2008 303(d) list.

MDNR also provided comment on Village Creek regarding the inorganic sediment listing. MDNR listed and EPA approved the inclusion of Village Creek as impaired by inorganic sediment on the 2008 303(d) list. In their comments to EPA, MDNR requested EPA approve Village Creek for delisting, citing the development of a TMDL to address inorganic sediment. At this time, the TMDL for Village Creek has not been finalized or approved by EPA, and, therefore, it would be inappropriate to delist the creek for this reason. As such, EPA is restoring Village Creek to Missouri's 2008 303(d) list as impaired by inorganic sediment.

Village Creek (WBID 2864)

This segment of Village Creek was listed in 1994 as impaired by sediment based on violations of the narrative criteria resulting from erosion of a mine tailings pile adjacent to the creek. MDNR delisted this segment of Village Creek in its 2008 list submission, but did not provide any additional data or information demonstrating this segment is no longer impaired and should be removed from Category 5. EPA disapproved MDNR's decision and proposed restoring the water body/pollutant pair to Missouri's 2008 303(d) list. In their comments on EPA's proposed decision, MDNR requested EPA approve Village Creek for delisting, citing the development of a TMDL to address inorganic sediment. At this time, the TMDL for Village Creek has not been finalized or approved by EPA, and, therefore, it would be inappropriate to delist the creek. As such, EPA is restoring Village Creek to Missouri's 2008 303(d) list as impaired by inorganic sediment.

Willow Branch (WBID 0654U)

EPA added this water body to the 2002 303(d) list based on a visual/benthic low flow survey conducted by MDNR on July 17, 2000. For the 2004/2006 listing cycle, MDNR submitted *Stressor Identification for Willow Branch, Putnam County, Missouri*[14] to support its decision to delist Willow Branch. EPA concluded that the information did not support MDNR's decision to exclude Willow Branch from Category 5 and restored the water body/pollutant pair to the 2004/2006 303(d) list. In its 2008 list submission, MDNR did not provide any new data or water quality-related information to support delisting Willow Branch. EPA proposed restoring this water body to Category 5 as impaired by unknown pollutants.

MDNR commented on EPA's proposed decision to restore Willow Branch to the 2008 303(d) list. The department asks EPA to place a higher weight on the more robust data gathered as part of a stressor identification study than on the July 17, 2000, "screening level"

[14] Roth, N., B. Morgan, and B. Franks. 2008. Prepared by Versar, Inc. for EPA – Region 7 as part of larger report, Stressor Identification for Willow Branch, Long Branch, Hickory Creek & Indian Creek, Missouri.

US EPA ARCHIVE DOCUMENT

visual/benthic survey. In making its decision on the 2004/2006 and 2008 303(d) lists, EPA considered the original reason for listing the stream as impaired, the data used to support the original listing, new data and/or information about the biological condition, water chemistry data, the appropriateness of the reference streams, and other observations taken in the field. For example, EPA observed that the percentage of pollution tolerant species found in Willow Branch was markedly different than those found in reference streams.[15] MDNR did not provide any additional information in its 2008 list submission or in its comments on the proposed decision. EPA is making no revision to its decision in response to comments on Willow Branch.

Summary

After reviewing all the comments received on EPA's proposed decision on Missouri's 2008 303(d) list, EPA is revising its decision on four water body/pollutant pairs. In each case, EPA reviewed the data and determined that MDNR provided good cause for delisting, or that the data was insufficient to support listing. Table 2 lists those waters that are no longer on the 303(d) list. Table 3 is the final 2008 303(d) list for Missouri. It is comprised of 285 water body/pollutant pairs.

[15] For additional information regarding EPA's review of the stressor identification study, refer to the administrative record supporting EPA's January 16, 2009, decision on Missouri's 2004/2006 303(d) list.

US EPA ARCHIVE DOCUMENT

US EPA ARCHIVE DOCUMENT

Table 2

Water body/pollutant pairs EPA approved for delisting in response to comments provided on EPA's proposed decision.

No.	Water Body Name	WBID	Class	Pollutant	Source	Year WB/PP Listed	Classified Segment Size	From	To	County	Final Action
1	Dry Auglaize Creek	1145	P	Unknown	Unknown	2002	7.0	8,35N,15W	2,34N,16W	Laclede	Appropriate for Category 4B, approve delisting
2	Flat Creek	865	C	Unknown	Unknown	2006	21.8	13,45N,21W	02,43N,23W	Pettis	Approve delisting
3	Little Beaver Creek	1529	C	Low D.O.	Rolla SW WWTP	2006	4.0	Mouth	8,37N,8W	Phelps	Appropriate for Category 4B, approve delisting
4	Village Creek	2863	P	Manganese	Mine La Motte AML	2006	1.5	Mouth	5,33N,7E	Madison	Approve delisting

US EPA ARCHIVE DOCUMENT

Table 3
Final Consolidated 2008 Missouri 303(d) List

This table is a summary of the waters approved for listing in the August 6, 2009, decision and today's action. The "Year WB/PP Listed" column identifies the first year a water body/pollutant pair was included on the 303(d) list. The "Source" provided here was identified by MDNR in their 2008 list submission as the source of the impairment. The "Segment Size" (miles/acres) is the segment identified by MDNR in their submission. The "Classified Segment Size" (miles/acres) listed in this table reflect the classified segment length according to Missouri's WQS 10 CSR 20-7.031 Tables G and H. The "Listing Appr." column identifies those water body/pollutant pairs that were approved by EPA without changes. The "Appr. Pollt. Change" column identifies those pollutant changes that were approved by EPA. "Restored by EPA" identifies those water body/pollutant pairs that were disapproved for delisting and EPA restored to the list. The "Impaired Uses" and "Unimpaired Uses" columns were provided by MDNR in their submission.

							MDNR Proposed Segment*					Impaired Classified Segment*								
No.	Water Body Name	WBID	Class	Pollutant	Source	Year WB/PP Listed	Segment Size	Upstream Latitude	Upstream Longitude	Down-stream Latitude	Down-stream Longitude	Classified Segment Size	From	To	County(ies)	Listing Approved	Approved Pollutant Change	Delisting Disapproved, Restored by EPA	Impaired Uses	Unimpaired Uses
1	Bear Creek	0115U-01	U	Unknown	Unknown	2002	2	40.1585	-92.5644	40.1436	-92.5374	n/a	near Kirksville		Adair	X			1G	
2	Bee Fork	2760	C	Lead	Fletcher Mine	2006	8.5	37.4426	-91.0915	37.4598	-90.9851	8.5	Mouth	30,32N,1W	Reynolds	X			1	2,4
3	Bee Fork	2760	C	Toxicity	Fletcher Mine	2008	0.9	37.4426	-91.0915	37.4438	-91.0758	8.5	Mouth	30,32N,1W	Reynolds	X			1G	2,4
4	Bee Fork	2760U-01	U	Toxicity	Fletcher Mine	2008	0.3	37.4415	-91.0942	37.4426	-91.0915	n/a	n/a		Reynolds	X			1G	
5	Belcher Branch Lake	7365	L3	Mercury (T)	Atmospheric deposition	2006	55.0	39.5895	-94.7344	39.5828	-94.7318	55.0	08/17,55N,34W		Buchanan	X			1G	2,4,5
6	Big Bottom Creek	1746	C	Ammonia	Lake Forest WWTP	2008	0.5	37.9561	-90.2084	37.9615	-90.2087	1.9	Mouth	Lake Anne	Ste. Genevieve	X			1	4
7	Big Bottom Creek	1746	C	Low D.O.	Lake Forest WWTP	1998	1.7	37.9561	-90.2084	37.9746	-90.1993	1.9	Mouth	Lake Anne	Ste. Genevieve	X			1	4
8	Big Bottom Creek	1746	C	Organic Sediment	Lake Forest WWTP	1998	0.5	37.9561	-90.2084	37.9615	-90.2087	1.9	Mouth	Lake Anne	Ste. Genevieve	X			1	4
9	Big Creek	0444	P	Ammonia	Bethany WWTP	2006	1.0	40.2554	-94.0618	40.2464	-94.0694	22	Mouth	9,63N,28W	Harrison	X			1	2,3,4
10	Big Creek	0444	P	Low D.O.	Bethany WWTP	2006	6.0	40.2554	-94.0618	40.2057	-94.0774	22	Mouth	9,63N,28W	Harrison	X			1	2,3,4
11	Big Otter Creek, Tributary to	1225	C	Low D.O.		2006	1.0	38.2054	-93.7188	38.2148	-93.7279	1.0	Mouth	32,40N,25W	Henry	X			1	2,4
12	Big River	2074	P	Lead	Mill tailings (Aban.)	1998	53.0	38.1599	-90.7052	38.4717	-90.6181	53.0	Mouth	Sur 3166,40N,3D	Jefferson	X			1	2,4,5,6.7
13	Big River	2080	P	Cadmium (S)	Mill tailings (Aban.)	2006	18.6	37.8722	-90.5885	37.9676	-90.5339	68	Sur 3166,40N,3D	12,35N,1E	St. Francois	X			1G	2,4,7
14	Big River	2080	P	Inorganic Sediment	Mill tailings (Aban.)	1994	55.0	37.8726	-90.5886	38.1601	-90.7046	68	Sur 3166,40N,3D	12,35N,1E	St. Fran./ Jefferson	X			1G	2,4,7

US EPA ARCHIVE DOCUMENT

							MDNR Proposed Segment*					Impaired Classified Segment*								
No.	Water Body Name	WBID	Class	Pollutant	Source	Year WB/PP Listed	Segment Size	Upstream Latitude	Upstream Longitude	Down-stream Latitude	Down-stream Longitude	Classified Segment Size	From	To	County(ies)	Listing Approved	Approved Pollutant Change	Delisting Disapproved, Restored by EPA	Impaired Uses	Unimpaired Uses
15-a	Big River	2080	P	Lead (S)	Mill tailings (Aban.)	1994	44.1	37.8722	-90.5885	38.1000	-90.6806	68	Sur 3166,40N,3D	12,35N,1E	St. Fran./ Jefferson	X			1G	2,4,7
15-b	Big River	2080	P	Lead (T)	Mill tailings (Aban.)	1994	48.7	37.8752	-90.5505	38.1599	-90.7053	68	Sur 3166,40N,3D	12,35N,1E	St. Fran./ Jefferson	X			1G	2,4,7
16	Big River	2080	P	Zinc (S)	Mill tailings (Aban.)	2006	18.6	37.8722	-90.5885	37.9676	-90.5339	68	Sur 3166,40N,3D	12,35N,1E	St. Francois	X			1G	2,4,7
17	Black River	2784	P	Mercury (T)	Atmospheric deposition	2008	35.0	37.1353	-90.7720	36.8256	-90.4224	35.0	16,25N,6E	Clearwater Dam	Wayne/ Butler	X			1G	2,3,4,5,6
18	Blackberry Creek	3184	C	Chloride	Asbury Power Plant	2008	3.5	37.3279	-94.5707	37.2877	-94.5618	6.5	Mouth	28,30N,33W	Jasper	X			1	2,4
19	Blackberry Creek	3184	C	Sulfate Chloride	Asbury Power Plant	2006	3.5	37.3279	-94.5707	37.2877	-94.5618	6.5	Mouth	28,30N,33W	Jasper	X			1	2,4
20	Blue River	0417	P	Bacteria	Urban NPS	2006	4.0	39.1007	-94.4896	39.1304	-94.4694	4.0	Mouth	Guinotte Dam	Jackson	X			2	1,4,5,7
21	Blue River	0418	P	Bacteria	Urban NPS	2006	9.0	39.0158	-94.5200	39.1007	-94.4896	9.0	Guinotte Dam	59th St.	Jackson	X			2	1,4,5,7
22	Blue River	0419	P	Bacteria	Urban NPS	2006	9.0	38.9571	-94.5592	39.0158	-94.5200	9.0	59th St.	Bannister Rd.	Jackson	X			2	1,4,5
23	Blue River	0421	C	Bacteria	Urban NPS	2006	11.0	38.8504	-94.6080	38.9571	-94.5592	11.0	Bannister Rd	State Line	Jackson	X			2	1,4,5
24	Bobs Creek	0035	C	Low D.O.	Lincoln Co. WWTF	2006	3.5	38.9861	-90.8701	38.9761	-90.8208	12.5	34,49N,2E	27,50,1E	Lincoln	X			1	2,4
25	Bonne Femme Creek	0750	P	Bacteria	Urban/Rural NPS	2006	7	38.8357	-92.3048	38.7915	-92.3799	7	Mouth	20,47N,12W	Boone	X			2	1,4
26	Bourbeuse River	2034	P	Mercury (T)	Atmospheric deposition	2002	132.0	38.1322	-91.5983	38.3991	-90.8990	132.0	Mouth	4,39N,6W	Phelps/ Franklin	X			1G	2,3,4,5,6
27	Brush Creek	1371	P	Low D.O.	Humansville WWTP	2002	4.0	37.7874	-93.5831	37.8316	-93.6276	4.0	31,36N,24W	16,35N,24W	Polk/ St. Clair	X			1	2,4
28	Brush Creek	1371	P	Organic Sediment	Humansville WWTP	2002	4.0	37.7874	-93.5831	37.8316	-93.6276	4.0	31,36N,24W	16,35N,24W	Polk/ St. Clair	X			1	2,4
29	Buffalo Ditch	3118	P	Low D.O.	Kennett WWTP	1994	3.0	36.2001	-90.0614	36.1609	-90.0826	18.0	State Line	11,18N,9E	Dunklin	X			1	2,4
30	Burgher Branch	1865	C	Low D.O.		2006	2.0	37.9434	-91.7457	37.9320	-91.7262	2.0	Mouth	07,37N,07W	Phelps	X			1	4
31	Busch W.A. #35	7057	L3	Mercury (T)	Atmospheric deposition	2006	51.0	38.7132	-90.7318	38.7199	-90.7235	51.0	NE NE30,46N,03E		St. Charles	X			1G	4.5
32	Capps Creek	3234	P	Bacteria	Rural NPS	2006	4.0	36.8835	-94.0261	36.8884	-94.0935	4.0	Mouth	17, 25N,28W	Barry	X			2	1,3,4,5,6
33	Cave Spring Branch	3245U-01	U	Nutrients	Simmons Ind.	1998	0.2	36.5478	-94.6142	36.5477	-94.6178	n/a	n/a		McDonald	X			G	
34	Cedar Creek	0737	C	Unknown	Unknown	2008	7.0	39.0265	-92.1391	38.9524	-92.1517	33.0	21,46N,11W	3,49N,11W	Callaway	X			1G	2,4
35	Cedar Creek	1344	P	Unknown	Unknown	2008	10.0	37.6741	-93.9082	37.7572	-93.8754	27.0	Mouth	20,34N,27W	Cedar	X			1G	2,4,5,6
36	Cedar Creek	1357	C	Unknown	Unknown	2008	16.5	37.5312	-93.9866	37.6741	-93.9082	16.5	20,34N,27W	10,32N,28W	Cedar	X			1G	2,4
37	Cedar Creek, Tributary to	0743	C	Low D.O.		2006	1.5	39.0263	-92.1113	39.0218	-92.1310	1.5	Mouth	14,49N,11W	Callaway	X			1	2,4
38-a	Center Creek	3203	P	Cadmium (S)	Mill tailings (Aban.)	2006	12.8	37.1755	-94.4549	37.1508	-94.6172	26.0	14,28N,34W	34,28N,31	Jasper	X			1G	2,4,5,6,7

US EPA ARCHIVE DOCUMENT

							MDNR Proposed Segment*					Impaired Classified Segment*								
No.	**Water Body Name**	**WBID**	**Class**	**Pollutant**	**Source**	**Year WB/PP Listed**	**Segment Size**	**Upstream Latitude**	**Upstream Longitude**	**Down-stream Latitude**	**Down-stream Longitude**	**Classified Segment Size**	**From**	**To**	**County(ies)**	**Listing Approved**	**Approved Pollutant Change**	**Delisting Disapproved, Restored by EPA**	**Impaired Uses**	**Unimpaired Uses**
38-b	Center Creek	3203	P	Cadmium (W)	Mill Tailings (Aban.)	2006	12.8	37.1755	-94.4549	37.1508	-94.6172	26.0	14,28N,34W	34,28N,31	Jasper	X			1	2,4,5,6,7
39	Center Creek	3203	P	Lead (S)	Mill tailings (Aban.)	2006	12.8	37.1755	-94.4549	37.1508	-94.6172	26.0	14,28N,34W	34,28N,31	Jasper	X			1G	2,4,5,6,7
40	Center Creek	3203	P	Zinc (S)	Mill tailings (Aban.)	1994	12.8	37.1755	-94.4549	37.1508	-94.6172	26.0	14,28N,34W	34,28N,31W	Jasper	X			1G	2,4,5,6,7
41	Center Creek	3210	P	Bacteria	Rural NPS	2008	22.0	37.0370	-94.0753	37.1053	-94.3090	22.0	34,28N,31W	23,27N,29W	Newton/ Jasper	X			2	1,4,5,6,7
42	Chariton River	0640	P	Bacteria	Rural NPS	2006	40.0	39.8014	-92.6802	39.3130	-92.9580	110	Mouth	State Line	Macon/ Chariton	X			2	1,4,5,6
43	Clear Creek	1333	P	Low D.O.		2006	15.5	37.8228	-94.1102	37.9953	-93.6520	15.5	7,37N,27W	10,35N,29W	Vernon/ St.Clair	X			1	2,4
44	Clear Creek	1336	C	Low D.O.		2006	15.0	37.6960	-94.2263	37.8228	-94.1102	15.0	10,35N,29W	16,34N,30W	Vernon	X			1	2,4
45	Clear Creek	3238	P	Bacteria		2006	9.0	36.9422	-93.9997	36.9354	-94.1495	9.0	Mouth	28,26N,28W	Barry/ Newton	X			2	1,4
46	Clear Creek	3239	C	Low D.O.	Monett WWTP	2006	2.0	36.9204	-93.9490	36.9422	-93.9997	2.0	28,26N,28W	36,26N,28W	Barry/ Newton	X			1	2,4
47	Clear Creek	3239	C	Nutrients	Monett WWTP	2002	2.0	36.9204	-93.9490	36.9422	-93.9997	2.0	28,26N,28W	36,26N,28W	Barry/ Newton	X			G	2,4
48	Clear Fork	0935	P	Low D.O.	Knob Noster WWTP	2006	3.0	38.7702	-93.5928	38.7906	-93.5914	24.5	Mouth	35,45N,25W	Johnson	X			1	2,4
49	Clearwater Lake	7326	L2	Mercury (T)	Atmospheric deposition	2002	1650.0	37.1921	-90.7786	37.1353	-90.7721	1650.0	NW NE06,28N,03E		Reynolds/ Wayne	X			1G	2,4,5
50	Coldwater Creek	1706	C	Bacteria	Urban NPS	2008	5.5	38.8135	-90.2908	38.8321	-90.2192	5.5	Mouth	Hwy. 67	St. Louis	X			2	1,4
51	Coldwater Creek	1706	C	Chloride	Urban NPS	2006	5.5	38.8135	-90.2908	38.8321	-90.2192	5.5	Mouth	Hwy. 67	St. Louis	X			1	2,4
52	Coldwater Creek	1706	C	Low D.O.		2006	4.0	38.8135	-90.2908	38.8129	-90.2369	5.5	Mouth	Hwy. 67	St. Louis	X			1	2,4
53	Courtois Creek	1943	P	Lead (W)	Viburnum 29 Mine	2006	2.6	37.7647	-91.0711	37.7931	-91.0588	30	Mouth	17,35N,1W	Washington	X			1	2,4,5
54	Courtois Creek	1943	P	Metals*** (W)	Viburnum 29 Mine	2006	2.6	37.7647	-91.0711	37.7931	-91.0588	30	Mouth	17,35N,1W	Washington	X	X		1G	2,4,5
55	Creve Coeur Creek	1703	C	Bacteria	Urban NPS	2006	2.0	38.6702	-90.4921	38.7091	-90.4878	2.0	Creve Coeur Lk	1mi. S. of Hwy. 340	St. Louis	X			2	1,4
56	Creve Coeur Creek	1703	C	Chloride	Urban NPS	2006	2.0	38.6702	-90.4921	38.7091	-90.4878	2.0	Creve Coeur Lk	1mi. S. of Hwy. 341	St. Louis	X			1	2,4
57	Creve Coeur Creek	1703	C	Low DO		2006	--	--	--	--	--	2.0	Creve Coeur Lk	1mi. S. of Hwy. 340	St. Louis			X		
58-a	Crooked Creek	1928	P	Cadmium (S)	Buick Smelter	2006	3.5	37.6987	-91.1599	37.7142	-91.2049	3.5	Mouth	33,35N,2W	Dent/ Crawford	X			1G	2,4
58-b	Crooked Creek	1928	P	Cadmium (W)	Buick Smelter	2006	3.5	37.6987	-91.1599	37.7142	-91.2049	3.5	Mouth	33,35N,2W	Dent/ Crawford	X			1	2,4
59	Crooked Creek	1928	P	Lead (S)	Buick Smelter	2006	3.5	37.6987	-91.1599	37.7142	-91.2049	3.5	Mouth	33,35N,2W	Dent/ Crawford	X			1G	2,4
60	Crooked Creek	1928U-01	U	Cadmium (W)	Buick Smelter	2008	5.2	37.6492	-91.1341	37.6987	-91.1599	n/a	n/a		Iron/ Dent	X			1G	

US EPA ARCHIVE DOCUMENT

							MDNR Proposed Segment*					Impaired Classified Segment*								
No.	**Water Body Name**	**WBID**	**Class**	**Pollutant**	**Source**	**Year WB/PP Listed**	**Segment Size**	**Upstream Latitude**	**Upstream Longitude**	**Down-stream Latitude**	**Down-stream Longitude**	**Classified Segment Size**	**From**	**To**	**County(ies)**	**Listing Approved**	**Approved Pollutant Change**	**Delisting Disapproved, Restored by EPA**	**Impaired Uses**	**Unimpaired Uses**
61	Current River	2636	P	Mercury (T)	Atmospheric deposition	2006	118.0	37.3766	-91.5471	36.4988	-90.8023	118.0	State Line	24,31N,6W	Shannon/ Ripley	X			1G	2,4,5,6
62	Dardenne Creek	0219	P1	Low D.O.		2006	7.0	38.8261	-90.6032	38.8612	-90.5367	7.0	Mouth	Sur 1704,47N,4E	St. Charles	X			1	2,4,5
63	Dardenne Creek	0221	P	Inorganic Sediment	Unknown	2006	1.5	38.7361	-90.7857	38.7387	-90.7665	15.0	Sur 1704,47N,4E	22,46N,2E	St. Charles	X			1G	2,4,5
64	Dardenne Creek	0221	P	Unknown		2002	15.0	38.7361	-90.7857	38.8270	-90.6024	15.0	Sur 1704,47N,4E	22,46N,2E	St. Charles	X			1G	2,4,5
65	Dardenne Creek	0222	C	Inorganic Sediment	Unknown	2006	4.5	38.7448	-90.8342	38.7361	-90.7857	6.0	22,46N,2E	22,46N,1E	St. Charles	X			1G	2,4
66	Dardenne Creek	0222	C	Low D.O.		2006	6.0	38.7289	-90.8919	38.7362	-90.7857	6.0	22,46N,2E	22,46N,1E	St. Charles	X			1	2,4
67	Dark Creek	0690	C	Low D.O.		2006	8	39.5158	-92.5855	39.4399	-92.6302	8	Mouth	34,55N,15W	Randolph	X			1	2,4
68	Deer Ridge Community Lake	7015	L3	Mercury (T)	Atmospheric deposition	2002	48.0	40.1747	-91.8276	40.1807	-91.8276	48.0	18,62N,08W		Lewis	X			1G	2,4,5
69	Des Moines River	0036	P	Bacteria	Multiple Point & NPS	2008	29	40.6138	-91.7283	40.3809	-91.4226	29	Mouth	State Line	Clark	X			2	1,4,5
70	Ditch #36	3109	P	Low D.O.		2006	7	36.2730	-89.9928	36.1729	-90.0220	7	Mouth	21,19N,10E	Dunklin	X			1	2,4
71	Ditch to Buffalo Ditch	3120	P	Low D.O.		2006	12	36.2320	-90.0649	36.0987	-90.1595	12	Mouth	2,18N,9E	Dunklin	X			1	2,4
72	Douger Branch	3168	C	Cadmium (W)	Baldwin Park mine	2006	1.0	36.9755	-93.7145	36.9783	-93.7315	4.5	Mouth	7,26N,25W	Lawrence	X			1	2,4
73	Douger Branch	3168	C	Lead (S)	Mill Tailings (Aban.)	2006	1.0	36.9755	-93.7145	36.9783	-93.7315	4.5	Mouth	7,26N,25W	Lawrence	X			1G	2,4
74	Douger Branch	3168	C	Zinc (S)	Mill Tailings (Aban.)	1996	1.0	36.9755	-93.7145	36.9783	-93.7315	4.5	Mouth	7,26N,25W	Lawrence	X			1G	2,4
75	Dousinbury Creek	1180	P	Bacteria	Rural NPS	2006	3.5	37.5745	-92.9317	37.5958	-92.9801	3.5	Mouth	17,33N,18W	Dallas	X			2	1,4
76	Dry Branch	3189	C	Bacteria	Rural NPS	2008	9.0	37.2514	-94.2221	37.2929	-94.3591	9.0	Mouth	8,29N,30W	Jasper	X			2	1,4
77-a	Dutro Carter Creek	3569	P	Low D.O.	Rolla SE WWTP	2006	0.6	37.9321	-91.7260	37.9318	-91.7170	1.5	Mouth	Hwy 72	Phelps	X			1	2,4
77-b	Dutro Carter Creek	3569	P	Low D.O.	Unknown	2006	0.9	37.9306	-91.7403	37.9321	-91.7260	1.5	Mouth	Hwy 72	Phelps	X			1	2,4
78	East Fork Black River	2737	P	Hydromodification	Impoundment	2008	0.2	37.4950	-90.8371	37.4935	-90.8402	17.0	Mouth	29,34N,3E	Reynolds	X			1G	2,3,4
79	East Fork Chariton River	0682	P	Sulfate	Multiple AMLs	2006	48.5	39.7530	-92.5186	39.3406	-92.8451	48.5	Mouth	Long Br. Dam	Randolph	X			3	1,2,4,6
80	East Fork Grand River	0457	P	Bacteria	Rural NPS	2006	25.0	40.4943	-94.3120	40.1973	-94.3602	25.0	Mouth	29,66N,30W	Worth/ Gentry	X			2	1,3,4,5,6
81	East Fork Locust Creek	0608	P	Bacteria	Multiple Point & NPS	2008	13.0	40.1662	-93.1193	40.0440	-93.1735	13.0	Mouth	23,62N,20W	Sullivan	X			2	1,4
82	East Fork Locust Creek	0610	C	Bacteria	Rural NPS	2008	12.6	40.3632	-93.0867	40.2172	-93.1066	13.0	Hwy. 6	12,64N,20W	Sullivan	X			2	1,4

US EPA ARCHIVE DOCUMENT

							MDNR Proposed Segment*					Impaired Classified Segment*								
No.	**Water Body Name**	**WBID**	**Class**	**Pollutant**	**Source**	**Year WB/PP Listed**	**Segment Size**	**Upstream Latitude**	**Upstream Longitude**	**Down-stream Latitude**	**Down-stream Longitude**	**Classified Segment Size**	**From**	**To**	**County(ies)**	**Listing Approved**	**Approved Pollutant Change**	**Delisting Disapproved, Restored by EPA**	**Impaired Uses**	**Unimpaired Uses**
83	East Fork Locust Creek	0610	C	Bacteria	Point & NPS	2008	0.4	40.2172	-93.1066	40.2120	-93.1062	13.0	Hwy. 6	12,64N,20W	Sullivan	X			2	1,4
84	East Fork Locust Creek	0610	C	Low D.O.	Rural NPS	2008	12.6	40.3632	-93.0867	40.2172	-93.1065	13.0	Hwy. 6	12,64N,20W	Sullivan	X			2	1,4
85	East Fork Medicine Creek	0619	P	Bacteria	Rural NPS	2006	36.0	40.5804	-93.3340	40.1021	-93.3755	36.0	9,61N,22W	State Line	Putnam/ Grundy	X			2	1,4
86	East Fork Tebo Creek	1282	C	Low D.O.	Windsor SW WWTP	2006	1.0	38.5142	-93.5346	38.5005	-93.5297	12.0	31,43N,24W	45,44N,24W	Henry	X			1	2,4
87-a	Eaton Branch	2166	C	Cadmium (S)	Mill tailings (Aban.)	2006	0.9	37.8676	-90.6055	37.8711	-90.5919	3**	Mouth	9,36N,4E	St. Francois	X			1G	2,4
87-b	Eaton Branch	2166	C	Cadmium (W)	Mill tailings (Aban.)	2006	0.9	37.8676	-90.6055	37.8711	-90.5919	3**	Mouth	9,36N,4E	St. Francois	X			1	2,4
88	Eaton Branch	2166	C	Lead (S)	Mill tailings (Aban.)	2006	0.9	37.8676	-90.6055	37.8711	-90.5919	3**	Mouth	9,36N,4E	St. Francois	X			1G	2,4
89-a	Eaton Branch	2166	C	Zinc (S)	Mill tailings (Aban.)	2006	0.9	37.8676	-90.6055	37.8711	-90.5919	3**	Mouth	9,36N,4E	St. Francois	X			1G	2,4
89-b	Eaton Branch	2166	C	Zinc (W)	Mill tailings (Aban.)	2006	0.9	37.8676	-90.6055	37.8711	-90.5919	3**	Mouth	9,36N,4E	St. Francois	X			1	2,4
90	Eleven Point River	2597	P	Mercury (T)	Atmospheric deposition	2006	10	36.7983	-91.3384	36.7393	-91.2209	10	18,24N,2W	36,25N,4W	Oregon	X			1G	2,4,5
91	Eleven Point River	2601	P	Mercury (T)	Atmospheric deposition	2008	19.0	36.8274	-91.5855	36.7984	-91.3386	19.0	36,25N,4W	23,25N,6W	Oregon	X			1G	2,4,5
92	Elm Branch	1283	C	Low D.O.		2006	3.0	38.5165	-93.5126	38.5006	-93.5294	3.0	Mouth	12,43N,24W	Henry	X			1	2,4
93	Fishpot Creek	2186	P	Bacteria	Urban NPS	2008	2.0	38.5592	-90.5255	38.5470	-90.4976	2.0	Mouth	13,44N,05E	St. Louis	X			2	1,4
94	Fishpot Creek	2186	P	Low D.O.		2006	2.0	38.5592	-90.5255	38.5470	-90.4976	2.0	Mouth	13,44N,05E	St. Louis	X			1	2,4
95	Flat River Creek	2168	C	Cadmium	Old Lead Belt AML	2006	--	--	--	--	--	9.0	Mouth	21,36N,4E	St. Francois			X		
96	Flat River Creek	2168	C	Inorganic Sediment	Mill tailings (Aban.)	1994	4.0	37.8477	-90.5173	37.8920	-90.4999	9.0	Mouth	21,36N,4E	St. Francois	X			1G	2,4
97-a	Flat River Creek	2168	C	Lead (S)	Mill tailings (Aban.)	1994	6.0	37.8235	-90.5439	37.8920	-90.4999	9.0	Mouth	21,36N,4E	St. Francois	X			1G	2,4
97-b	Flat River Creek	2168	C	Lead (T)	Mill tailings (Aban.)	1994	6.0	37.8235	-90.5439	37.8920	-90.4999	9.0	Mouth	21,36N,4E	St. Francois	X			1G	2,4
97-c	Flat River Creek	2168	C	Lead (W)	Mill tailings (Aban.)	1994	5.0	37.8395	-90.5267	37.8920	-90.4999	9.0	Mouth	21,36N,4E	St. Francois	X			1	2,4
98	Flat River Creek	2168	C	Zinc (W)	Mill tailings (Aban.)	1994	5.0	37.8395	-90.5267	37.8920	-90.4999	9.0	Mouth	21,36N,4E	St. Francois	X			1	2,4
99	Flat River Creek, Trib	2168U-01	U	Zinc (W)	Mill tailings (Aban.)	2008	0.3	37.8418	-90.5321	37.8395	-90.5267	n/a	n/a		St. Francois	X			1	
100	Foster Creek	0747U-01	U	Ammonia	Ashland WWTP	2008	0.5	38.7634	-92.2550	38.7574	-92.2501	n/a	n/a		Boone	X			1	
101	Fowler Creek	0747	C	Low D.O.		2006	6	38.7684	-92.2210	38.7133	-92.2171	6	Mouth	13,46N,12W	Boone	X			1	2,4
102	Fox River	0038	P	Bacteria	Rural NPS	2008	27.0	40.6070	-91.9161	40.3714	-91.5884	27.0	Spur 136	State Line	Clark	X			2	1,4,5

US EPA ARCHIVE DOCUMENT

							MDNR Proposed Segment*					Impaired Classified Segment*								
No.	**Water Body Name**	**WBID**	**Class**	**Pollutant**	**Source**	**Year WB/PP Listed**	**Segment Size**	**Upstream Latitude**	**Upstream Longitude**	**Down-stream Latitude**	**Down-stream Longitude**	**Classified Segment Size**	**From**	**To**	**County(ies)**	**Listing Approved**	**Approved Pollutant Change**	**Delisting Disapproved, Restored by EPA**	**Impaired Uses**	**Unimpaired Uses**
103	Gasconade River	1455	P	Mercury (T)	Atmospheric deposition	2002	249.0	38.6745	-91.5484	37.2120	-92.5182	249.0	Mouth	6,29N,14W	Gascon./ Wright	X			1G	2,3,4,5
104	Grand Glaize Creek	2184	C	Bacteria	Urban NPS	2008	4.0	38.5713	-90.4696	38.5528	-90.4634	4.0	Mouth	9,44N,5E	St. Louis	X			2	1,4
105	Grand Glaize Creek	2184	C	Chloride	Urban NPS	2006	4.0	38.5713	-90.4696	38.5528	-90.4634	4.0	Mouth	9,44N,5E	St. Louis	X			1	2,4
106	Grand Glaize Creek	2184	C	Mercury (T)	Atmospheric deposition	2002	4.0	38.5713	-90.4696	38.5528	-90.4634	4.0	Mouth	9,44N,5E	St. Louis	X			1G	2,4
107	Grand River	0593	P	Bacteria	Rural NPS	2006	60.0	39.7406	-93.5322	39.3855	-93.1075	60.0	Mouth	Shoal Cr.	Livin./ Chariton	X			2	1,3,4,5,6
108	Gravois Creek	1712	P	Bacteria	Urban NPS	2006	2.0	38.5408	-90.2990	38.5481	-90.2719	2.0	Mouth	24,44N,6E	St. Louis	X			2	1,4
109	Gravois Creek	1712	P	Chloride	Urban NPS	2008	2.0	38.5408	-90.2990	38.5481	-90.2719	2.0	Mouth	24,44N,6E	St. Louis	X			1	2,4
110	Gravois Creek	1713	C	Bacteria	Urban NPS	2006	4.0	38.5472	-90.3482	38.5408	-90.2990	4.0	24,44N,6E	Hwy. 30	St. Louis	X			2	1,4
111	Gravois Creek	1713	C	Chloride	Urban NPS	2006	4.0	38.5472	-90.3482	38.5408	-90.2990	4.0	24,44N,6E	Hwy. 30	St. Louis	X			1	2,4
112	Gravois Creek	1713	C	Low D.O.	Urban NPS	2006	4.0	38.5472	-90.3482	38.5408	-90.2990	4.0	24,44N,6E	Hwy. 30	St. Louis	X			1	2,4
113	Grindstone Creek	1009	C	Bacteria	Unknown	2006	1.5	38.9287	-92.2930	38.9277	-92.3220	1.5	Mouth	20,48N,12W	Boone	X			2	1,4
114	Hazel Creek Lake	7152	L1	Mercury (T)	Atmospheric deposition	2008	151.0	40.2747	-92.6325	40.2996	-92.6291	151.0	SW SW31,64N,15W		Adair	X			1G	2,3,4
115	Heaths Creek	0848	P	Low D.O.	Unknown	2008	13.0	38.9055	-93.2155	38.9218	-93.0189	13.0	Mouth	27,48N,22W	Pettis	X			1	2,4
116	Hickory Creek	0442	C	Unknown		2002	1.5	40.0291	-94.0130	40.0210	-94.0450	1.5	Mouth	11,60N,28W	Daviess	X			1G	2,4
117	Hickory Creek	3226	P	Bacteria	Unknown	2006	4.5	36.8524	-94.3260	36.8938	-94.3707	4.5	Mouth	28,25N,31W	Newton	X			2	1,4
118	Hickory Creek, Tributary to	0589	C	Unknown		2002	1.0	40.0226	-93.7125	40.0162	-93.7073	1.0	Mouth	9,60N,25W	Grundy	X			1G	2,4
119	Hinkson Creek	1007	P	Unknown	Urban Runoff	1998	6.0	38.9285	-92.3398	38.9220	-92.4140	6.0	Mouth	Hwy 163	Boone	X			1G	2,4,5
120	Hinkson Creek	1008	C	Bacteria		2006	18.0	39.0709	-92.2170	38.9285	-92.3398	18.0	Hwy 163	36,50N,12W	Boone	X			2	1,4
121	Hinkson Creek	1008	C	Unknown	Urban NPS	1998	6.3	38.9630	-92.2953	38.9285	-92.3398	18.0	Hwy 163	36,50N,12W	Boone	X			1G	2,4
122	Horse Creek	1348	P	Unknown	Unknown	2008	24.5	37.6442	-94.0779	37.7657	-93.8840	24.5	Mouth	35,34N,29W	Cedar	X			1G	2,4,6
123	Hough Park Lake	7388	L3	Mercury (T)	Atmospheric deposition	2002	7.0	38.5425	-92.1831	38.5403	-92.1831	7.0	19,44N,11W		Cole	X			1G	2,4
124	Indian Camp Creek	212	C	Inorganic sediment	JZ Landfill	1998	--	--	--	--	--	5.0	6,47N,1E	4,47N,1W	St. Charles, Warren			X		
125	Indian Creek	0420	C	Bacteria	Multiple Point & NPS	2002	3.0	38.9385	-94.6082	38.9525	-94.5627	3.0	Mouth	State Line	Jackson	X			2	1,4,7
126	Indian Creek	0420	C	Chloride		2006	--	--	--	--	--	3.0	Mouth	State Line	Jackson			X		
127	Indian Creek	1946	C	Lead (W)	Viburnum 29 Mine	2006	1.5	37.7419	-91.0843	37.7649	-91.0711	1.5	Mouth	17,35N,1E	Washington	X			1	2,4
128	Indian Creek	1946	C	Metals*** (W)	Viburnum 29 Mine	2002	1.5	37.7419	-91.0843	37.7649	-91.0711	1.5	Mouth	17,35N,1E	Washington	X	X		1G	2,4
129	Indian Creek	3256	P	Bacteria	Rural NPS	2006	5.0	36.7947	-94.2318	36.7593	-94.2721	26.0	Mouth	24,24N,31W	Newton	X			2	1,4,5,6

US EPA ARCHIVE DOCUMENT

							MDNR Proposed Segment*					Impaired Classified Segment*								
No.	**Water Body Name**	**WBID**	**Class**	**Pollutant**	**Source**	**Year WB/PP Listed**	**Segment Size**	**Upstream Latitude**	**Upstream Longitude**	**Down-stream Latitude**	**Down-stream Longitude**	**Classified Segment Size**	**From**	**To**	**County(ies)**	**Listing Approved**	**Approved Pollutant Change**	**Delisting Disapproved, Restored by EPA**	**Impaired Uses**	**Unimpaired Uses**
130	Indian Creek Lake	7389	L3	Mercury (T)	Atmospheric deposition	2008	192.0	39.9173	-93.6996	39.8968	-93.6955	192.0	15/27,59N,25W		Livingston	X			1G	2,4,5
131	Indian Creek, Tributary to	3663	C	Lead (W)	Viburnum 29 Mine	2006	0.3	37.7590	-91.0798	37.7596	-91.0751	0.3	Mouth	7,35N,1W	Washington	X			1	2,4
132	Indian Creek, Tributary to	3663	C	Zinc (W)	Viburnum 29 Mine	2006	0.3	37.7590	-91.0798	37.7596	-91.0751	0.3	Mouth	7,35N,1W	Washington	X			1	2,4
133	Jordan Creek	3374	P	Low D.O.		2006	3.8	37.2193	-93.3098	37.1968	-93.3520	3.8	29,29N,22W	13,29N,22W	Greene	X			1	2,4
134	Jordan Creek	3374	P	Unknown	Urban NPS	2008	3.8	37.2193	-93.3098	37.1968	-93.3520	3.8	29,29N,22W	13,29N,22W	Greene	X			1G	2,4
135	Knob Noster State Park Lakes (Lake Buteo)	7196	L3	Mercury (T)	Atmospheric deposition	2002	10.0	38.7464	-93.5791	38.7491	-93.5822	24.0	29/30/46N,24W		Johnson	X			1G	2,4
136	Lake of the Woods	7436	L3	Mercury (T)	Atmospheric deposition	2002	3.0			38.9696	-92.2393	3.0	NE,02,48N,12W		Boone	X			1G	2,4
137	Lake of the Woods	0419U-01	U	Mercury (T)	Atmospheric deposition	2008	7.0	38.9942	-94.5172	38.9959	-94.5206	7.0	n/a		Jackson	X			1G	
138	Lake Ste. Louise	7055	L3	Bacteria	Urban NPS	2002	87.0			38.8000	-90.7908	87.0	SW SW27,47N,02E		St. Charles	X			2	1,4
139	Lake Taneycomo	7314	L2	Low D.O.	Table Rock Dam	1994	1730	36.5954	-93.3092	36.6582	-93.1239	1730	SW NE8,23N,20W		Taney	X			1	2,3,4,5
140	Lamine River	0847	P	Bacteria	Unknown	2006	54.0	38.6684	-92.9535	38.9805	-92.8499	54.0	Mouth	13,45N,19W	Morgan/ Cooper	X			2	1,4,5,6
141	Lateral #2 Main Ditch	3105	P	Temperature	Channelization	2008	11.5	36.7878	-89.9260	36.6288	-89.9399	11.5	24,23N,10E	25,25N,10E	Stoddard	X			1	2,4
142	Lateral #2 Main Ditch	3105	P	Low D.O.		2006	11.5	36.7878	-89.9260	36.6288	-89.9399	11.5	24,23N,10E	25,25N,10E	Stoddard	X			1	2,4
143	Lewistown Lake	7020	L1	Atrazine	Crop production	2002	--	--	--	--	--	29	NW SW8,61N,8W		Lewis			X		
144	Little Beaver Creek	1529	C	Inorganic Sediment	Smith S&G	2008	3.3	37.9362	-91.8349	37.9046	-91.8593	4.0	36,26N,18W	17,26N,17W	Phelps	X			1G	2,4
145	Little Dry Fork	1863	P	Low D.O.	Rolla SE WWTP	2006	1.0	37.9387	-91.7112	37.9446	-91.6983	5.0	Mouth	8,37N,7W	Phelps	X			1	2,4
146-a	Little Dry Fork	1864	C	Low D.O.	Rolla SE WWTP	2006	0.6	37.9318	-91.7170	37.9387	-91.7112	4.5	8,37N,7W	5,36N,7W	Phelps	X			1	4
146-b	Little Dry Fork	1864	C	Low D.O.		2006	3.9	37.876	-91.7153	37.9318	-91.7170	4.5	8,37N,7W	5,36N,7W	Phelps	X			1	4
147	Little Drywood Creek	1325	P	Low D.O.		2006	17.0	37.6977	-94.3943	37.8628	-94.4016	17.0	Mouth	13,34N,32W	Vernon	X			1	2,4
148	Little Muddy Creek, Tributary to	3490	C	Chloride	Tyson Foods	2006	0.4	38.7669	-93.3037	38.7732	-93.2912	0.4	Mouth	14,46N,22W	Pettis	X			1	2,4
149	Little Muddy Creek, Tributary to	3490	C	Color	Tyson Foods	2006	0.4	38.7669	-93.3037	38.7732	-93.2912	0.4	Mouth	14,46N,22W	Pettis	X			G	1,2,4

US EPA ARCHIVE DOCUMENT

							MDNR Proposed Segment*					Impaired Classified Segment*								
No.	**Water Body Name**	**WBID**	**Class**	**Pollutant**	**Source**	**Year WB/PP Listed**	**Segment Size**	**Upstream Latitude**	**Upstream Longitude**	**Down-stream Latitude**	**Down-stream Longitude**	**Classified Segment Size**	**From**	**To**	**County(ies)**	**Listing Approved**	**Approved Pollutant Change**	**Delisting Disapproved, Restored by EPA**	**Impaired Uses**	**Unimpaired Uses**
150	Little Niangua River	1189	P	Low D.O.		2006	43.0	37.8406	-93.0014	38.0616	-92.9031	43.0	Mouth	26,36N,19W	Dallas/ Camden	X			1	2,4,5
151	Little Osage River	3652	C	Bacteria	Rural NPS	2008	16.0	37.9918	-94.6140	37.9844	-94.3884	16.0	18,37N,31W	18,37N,33W	Vernon	X			2	1,4
152	Little Osage River	3652	C	Low D.O.		1998	16.0	37.9918	-94.6140	37.9844	-94.3884	16.0	18,37N,31W	18,37N,33W	Vernon	X			2	1,4
153	Locust Creek	0606	P	Bacteria	Rural NPS	2006	36.4	40.5831	-93.1409	40.2074	-93.1653	84.0	Mouth	State Line	Putnam/ Sullivan	X			2	1,3,4,5
154	Long Branch	0857	C	Unknown		2002	4.5	38.7028	-93.5619	38.7152	-93.5005	4.5	06,45N,23W	09,45N,24W	Johnson/ Pettis	X			1G	2,4
155	Long Branch Creek	0696	C	Low D.O.	Atlanta WWTP	2006	2.0	39.8980	-92.4932	39.8764	-92.4900	13.0	5,58N,14W	19,60N,14W	Macon	X			1	2,4
156	Longview Lake	7097	L2	Mercury (T)	Atmospheric deposition	2002	930.0	38.8804	-94.4899	38.9229	-94.4684	930.0	04,47N,32W		Jackson	X			1G	2,4,5
157	Lost Creek	3278	P	Bacteria	Rural NPS	2006	8.5	36.8913	-94.5067	36.8397	-94.6180	8.5	State Line	14,25N,33W	Newton	X			2	1,4,5
158	Main Ditch	2814	C	Ammonia	Poplar Bluff WWTP	2006	1.0	36.7297	-90.3960	36.7160	-90.3960	14.0	18,22N,6E	10,24N,6E	Butler	X			1	2,4,6
159	Main Ditch	2814	C	pH	Poplar Bluff WWTP	2006	1.0	36.7297	-90.3960	36.7160	-90.3960	14.0	18,22N,6E	10,24N,6E	Butler	X			1	2,4,6
160	Main Ditch	2814	C	Temperature	Channelization	2006	10.0	36.7297	-90.3960	36.5900	-90.4207	14.0	18,22N,6E	10,24N,6E	Butler	X			1	2,4,6
161	Maline Creek	1709	C	Chloride	Urban NPS	2006	1.0	38.7366	-90.2265	38.7269	-90.2146	1.0	Mouth	Bellefontaine Rd	St. Louis	X			1	4
162	Mark Twain Lake	7033	L2	Mercury (T)	Atmospheric deposition	2002	18600	39.4801	-91.9393	39.5244	-91.6440	18600	26,55N,07W		Monroe/ Ralls	X			1G	2,3,4,5
163-a	Marmaton River	1308	P	Low D.O.	Ft. Scott WWTP	2002	2.0	37.8517	-94.6162	37.8597	-94.5896	49.5	19,38N,29W	State Line	Vernon	X			1	2,4,6
163-b	Marmaton River	1308	P	Low D.O.		2002	47.5	37.8597	-94.5896	37.9995	-94.3181	49.5	19,38N,29W	State Line	Vernon	X			1	2,4,6
164	McKay Park Lake (Sunset Lake)	7399	L3	Mercury (T)	Atmospheric deposition	2006	6.0	38.5588	-92.1955	38.5614	-92.1977	6.0	13,44N,12W		Cole	X			1G	2,4
165	McKenzie Creek	2786	P	Low D.O.	Piedmont WWTP	2002	2.5	37.1388	-90.7069	37.1094	-90.7173	6.0	Mouth	23,29N,3E	Wayne	X			1	2,4
166	Meramec River	1841	P	Mercury (T)	Atmospheric deposition	2006	37.0	38.2073	-91.0949	38.4726	-90.6188	37.0	Big R.	Meramec State Pk.	Franklin/ Jefferson	X			1G	2,3,4,5
167	Meramec River	2183	P	Lead (S)	Mill tailings (Aban.)	2008	22.0	38.5463	-90.4956	38.3888	-90.3429	22.0	Mouth	Hwy. 141	St. Louis	X			1G	2,3,4,5,7
168	Meramec River	2185	P	Lead (S)	Mill tailings (Aban.)	2008	15.7	38.4718	-90.6177	38.5463	-90.4956	26.0	Hwy. 141	Big R.	St. Louis	X			1G	2,3,4,5,7
169	Miami Creek	1299	P	Low D.O.		2006	18	38.2950	-94.4513	38.1452	-94.3354	18	Mouth	10,40N,32W	Bates	X			1	2,4
170	Middle Fork Grand River	0468	P	Bacteria	Rural NPS	2006	25.0	40.5402	-94.3511	40.2144	-94.3893	25.0	Mouth	12,66N,31W	Worth/ Gentry	X			2	1,4,5,6
171	Middle Indian Creek	3263	P	Bacteria	Rural NPS	2008	2.5	36.8062	-94.1721	36.8182	-94.2036	2.5	Mouth	16,24N,30W	Newton	X			2	1,4

US EPA ARCHIVE DOCUMENT

							MDNR Proposed Segment*					Impaired Classified Segment*								
No.	Water Body Name	WBID	Class	Pollutant	Source	Year WB/PP Listed	Segment Size	Upstream Latitude	Upstream Longitude	Down-stream Latitude	Down-stream Longitude	Classified Segment Size	From	To	County(ies)	Listing Approved	Approved Pollutant Change	Delisting Disapproved, Restored by EPA	Impaired Uses	Unimpaired Uses
172	Mississippi River	1707	P	Lead	Herculaneum smelter	1998	--	--	--	--	--	195.5	Ohio R.	Dam #27	Mississippi, St. Louis			X		
173	Mississippi River	1707	P	Zinc	Herculaneum smelter	1998	--	--	--	--	--	195.5	Ohio R.	Dam #27	Mississippi, St. Louis			X		
174	Mississippi River	3152	P	Mercury (T)	Atmospheric deposition	2006	124.5	36.9822	-89.1337	35.9999	-89.7126	124.5	State Line	Ohio R.	Miss/ Pemiscot	X			1G	2,3,4,5,6,7
175	Missouri River	1604	P	Bacteria		2006	--	--	--	--	--	100.0	Mouth	Gasconade R.	St. Louis, Gasconade			X		
176	Mound Branch	1300	C	Low D.O.	Unknown	1998	10.0	38.2645	-94.3037	38.1958	-94.3657	10.0	Mouth	13,40N,31W	Bates	X			1	2,4
177	Muddy Creek	557	P	Unknown		2002	--	--	--	--	--	36.5	Mouth	22,66N,23W	Grundy, Mercer			X		
178	Muddy Creek	0853	P	Chloride	Mult Point Sources	2006	39.0	38.7521	-93.2772	38.8464	-93.0563	55.0	Mouth	17,45N,23W	Pettis	X			1	2,4
179	Muddy Creek	0853	P	Color	Tyson Foods	2006	1.0	38.7718	-93.2745	38.7677	-93.2573	55.0	Mouth	17,45N,23W	Pettis	X			G	1,2,4
180	Muddy Creek	0853	P	Unknown	Unknown	2008	55.0	38.6837	-93.4803	38.8464	-93.0563	55.0	Mouth	17,45N,23W	Pettis	X			1G	2,4
181	Mussel Fork Creek	0674	C	Bacteria	Rural NPS	2006	29.0	40.2071	-92.8880	39.8450	-92.8382	29.0	18,58N,17W	2,62N,18W	Sullivan/ Macon	X			2	1,3,4
182	Niangua River	1170	P	Bacteria	Rural NPS	2006	51	37.4462	-92.9196	37.7340	-92.8614	51	Bennett Spr Cr.	33,32N,18W	Dallas	X			2	1,4,5
183	No Creek	0550	P	Bacteria	Rural NPS	2006	22.5	40.1772	-93.4470	39.8875	-93.5700	22.5	Mouth	14,62N,23W	Grundy/ Livin.	X			2	1,4
184	Noblett Lake	7316	L3	Mercury (T)	Atmospheric deposition	2002	26.0	36.9119	-92.0929	36.9080	-92.1032	26.0	25,26N,11W		Douglas	X			1G	2,4
185	North Fork Cuivre River	170	C	Bacteria		2006	--	--	--	--	--	8	24,51N,3W	28,52N,3W	Pike			X		
186	North Fork Cuivre River	0170	C	Low D.O.		2006	8	39.2434	-91.2423	39.1689	-91.1854	8	24,51N,3W	28,52N,3W	Pike	X			1	2,4
187	North Fork Spring River	3186	P	Bacteria	Rural NPS	2008	14.5	37.2881	-94.3703	37.2684	-94.5352	14.5	Mouth	1,29N,32W	Barton	X			2	1,4,5
188	North Fork Spring River	3188	C	Ammonia	Lamar WWTP	2006	--	--	--	--	--	51.5	1,29N,32W	20,30N,28W	Barton			X		
189	North Fork Spring River	3188	C	Bacteria	Rural NPS	2008	51.5	37.3257	-94.0304	37.2879	-94.3703	51.5	1,29N,32W	20,30N,28W	Dade/ Jasper	X			2	1,4
190	North Fork Spring River	3188	C	Low D.O.	Lamar WWTP & NPS	2006	26.5	37.4937	-94.2928	37.2879	-94.3703	51.5	1,29N,32W	20,30N,28W	Barton/ Jasper	X			1	2,4
191	North Fork Spring River	3188	C	Unknown	Unknown	2006	51.5	37.3257	-94.0304	37.2879	-94.3703	51.5	1,29N,32W	20,30N,28W	Dade/ Jasper	X			1G	2,4
192	North Indian Creek	3260	P	Bacteria	Rural NPS	2008	5.0	36.8380	-94.1720	36.7949	-94.2320	5.0	24,24N,31W	36,25N,30W	Newton	X			2	1,4
193	Panther Creek	1373	C	Low D.O.		2006	7.8	37.7949	-93.5259	37.8342	-93.6332	7.8	Mouth	13,35N,24W	St.Clair/ Polk	X			1	2,4
194	Pearson Creek	2373	P	Bacteria	Multiple Point & NPS	2006	2.0	37.1871	-93.2009	37.1635	-93.1965	8.0	Mouth	5,29N,20W	Greene	X			2	1,4
195	Pearson Creek	2373	P	Unknown	Unknown	1998	2.0	37.1871	-93.2009	37.1635	-93.1965	8.0	Mouth	5,29N,20W	Greene	X	X		1G	2,4

US EPA ARCHIVE DOCUMENT

							MDNR Proposed Segment*					Impaired Classified Segment*								
No.	**Water Body Name**	**WBID**	**Class**	**Pollutant**	**Source**	**Year WB/PP Listed**	**Segment Size**	**Upstream Latitude**	**Upstream Longitude**	**Down-stream Latitude**	**Down-stream Longitude**	**Classified Segment Size**	**From**	**To**	**County(ies)**	**Listing Approved**	**Approved Pollutant Change**	**Delisting Disapproved, Restored by EPA**	**Impaired Uses**	**Unimpaired Uses**
196	Peruque Creek	0217	P	Inorganic Sediment	Urban/Rural NPS	2002	4	38.7979	-90.8601	38.7867	-90.8037	4	Hwy. 40/61	25,47N,1E	St. Charles	X			1G	2,4
197	Peruque Creek	0218	C	Inorganic Sediment	Urban/Rural NPS	2002	8.5	38.8133	-90.9925	38.7979	-90.8601	8.5	25,47N,1E	23,47N,1W	St. Charles	X			1G	2,4
198	Phillips Lake	1003U-01	U	Mercury (T)	Atmospheric deposition	2008	32.0	38.9006	-92.2899	38.8970	-92.2938	32.0	n/a		Boone	X			1G	
199	Pickle Creek	1755	P	pH	Atmospheric deposition	2006	7.0	37.8083	-90.2914	37.8371	-90.2036	7.0	Mouth	19,36N,7E	Ste. Genevieve	X			1	2,4
200	Pike Creek	2815	C	Temperature	Channelization	2008	1.3	36.7350	-90.4130	36.7296	-90.3961	6.0	15,24N,6E	30,25N,6E	Butler	X			1	2,4,6
201	Piper Creek (Town Branch)	1444	P	Organic Sediment	Bolivar WWTP, Unknown	1998	1.0	37.6166	-93.3901	37.6299	-93.3833	7.5	Mouth	Hwy 83	Polk	X			1G	2,4
202	Piper Creek (Town Branch)	1444	P	Unknown	Unknown	2006	7.5	37.6004	-93.4042	37.6794	-93.4054	7.5	Mouth	Hwy 83	Polk	X			1G	2,4
203	Pond Creek, Tributary to	2128	C	Inorganic Sediment	Barite Tailings Pond	1998	1.0	37.9516	-90.6820	37.9648	-90.6760	1.0	Mouth	3,37N,3E	Washington	X			1G	2,4
204	Red Oak Creek	2038	C	Low D.O.	Owensville WWTP	2006	2.0	38.3406	-91.4404	38.3373	-91.4086	9.0	28,42N,4W	16,41N,5W	Gasconade	X			1	2,4
205	Red Oak Creek, Tributary to	3360	P	Low D.O.	Owensville WWTP	2006	0.5	38.3442	-91.4485	38.3405	-91.4404	0.5	Mouth	35,42N,5W	Gasconade	X			1	2,4
206	Red Oak Creek, Tributary to	3361	C	Low D.O.	Owensville WWTP, NPS	2006	1.5	38.3503	-91.4780	38.3442	-91.4485	1.5	35,42N,5W	27,42N,5W	Gasconade	X			1	4
207	River des Peres	1711	C	Chloride	Urban NPS	2006	1.0	38.5596	-90.2829	38.5483	-90.2716	1.0	Gravois Cr.	Morgan Ford Road	St. Louis	X			1	4
208	River des Peres	1711U -01	U	Chloride	Urban NPS	2006	2.5	38.6740	-90.3427	38.6616	-90.3100	n/a	at University City		St. Louis	X			1G	
209	Salt River	0091	P	Low D.O.	Reregulation Dam	2008	29.0	39.5652	-91.5708	39.5218	-91.2027	29.0	Hwy. 79	Re-Reg Dam	Ralls/ Pike	X			1	2,3,4,5,6
210	Salt River	0091	P	Mercury (T)	Atmospheric deposition	2002	29.0	39.5652	-91.5708	39.5218	-91.2027	29.0	Hwy. 79	Re-Reg Dam	Ralls/ Pike	X			1G	2,3,4,5,6
211	Sandy Creek	0652	C	Unknown	Unknown	2002	3.0	40.5037	-92.8466	40.4996	-92.8131	3.0	Mouth	19,66N,17W	Putnam	X			1G	2,4
212	Schuman Park Lake	7280	L3	Mercury (T)	Atmospheric deposition	2002	5.0	37.9553	-91.7664	37.9555	-91.7684	5.0	02,37N,08W		Phelps	X			1G	2,4
213	Scroggins Branch	2916U-01	U	Cadmium (W)	Glover Smelter site	2008	0.5	37.4829	-90.6968	37.4790	-90.6884	n/a	n/a		Iron	X			1G	
214	Scroggins Branch	2916U-01	U	Zinc (W)	Glover Smelter site	2008	0.5	37.4829	-90.6968	37.4790	-90.6884	n/a	n/a		Iron	X			1G	
215	Shaw Branch	2170	C	Cadmium (S)	Federal AML	2006	2.0	37.8335	-90.5170	37.8478	-90.5171	2.0	Mouth	20,36N,5E	St. Francois	X			1G	2,4
216	Shaw Branch	2170	C	Inorganic Sediment	Federal AML	1994	2.0	37.8335	-90.5171	37.8478	-90.5171	2.0	Mouth	20,36N,5E	St. Francois	X			1G	2,4

US EPA ARCHIVE DOCUMENT

							MDNR Proposed Segment*					Impaired Classified Segment*								
No.	Water Body Name	WBID	Class	Pollutant	Source	Year WB/PP Listed	Segment Size	Upstream Latitude	Upstream Longitude	Down-stream Latitude	Down-stream Longitude	Classified Segment Size	From	To	County(ies)	Listing Approved	Approved Pollutant Change	Delisting Disapproved, Restored by EPA	Impaired Uses	Unimpaired Uses
217	Shaw Branch	2170	C	Lead (S)	Federal AML	1994	2.0	37.8335	-90.5170	37.8478	-90.5171	2.0	Mouth	20,36N,5E	St. Francois	X			1G	2,4
218	Shibboleth Creek	2120	C	Inorganic Sediment	Mill tailings (Aban.)	1998	3.0	38.0075	-90.7079	38.0209	-90.6639	3.0	14,38N,3E	21,38N,3E	Washington	X			1G	2,4
219	Shoal Creek	3222	P	Bacteria	Rural NPS	2008	43.5	36.8917	-94.0977	37.0328	-94.6179	43.5	State Line	10,25N,29W	Newton	X			2	1,3,4,5,6
220	Shoal Creek	3231	C	Low D.O.		2006	4	36.6741	-93.9768	36.7289	-94.0129	4	12,23N,29W	Hwy. 86	Barry	X			1	2,4
221	Sni-a-Bar Creek	0399	P	Low D.O.		2006	32	38.9428	-94.1665	39.1406	-93.9688	32	Mouth	30,48N,29W	Jackson/ Lafayette	X			1	2,4,5
222	South Blackbird Creek	0655	C	Ammonia	Unknown	2006	5.0	40.4286	-92.9564	40.4165	-92.8886	13.0	2,64N,17W	18,65N,18W	Putnam	X			1	2,4
223	South Fabius River	71	P	Bacteria		2006	--	--	--	--	--	61.5	24,59N,6W	29,62N,11W	Marion, Knox			X		
224	South Fork Salt River	0142	C	Low D.O.		2006	17.9	39.0498	-91.8401	39.1900	-91.8753	32.0	Audrain Co. Line	5,49N,4W	Callaway/ Audrain	X			1	2,3,4
225	South Grand River	1249	P	Bacteria	Rural NPS	2006	62.5	38.6675	-94.5318	38.3318	-93.8014	62.5	Mouth	02,44N,33W	Cass/ Henry	X			2	1,4,5
226	South Indian Creek	3259	P	Bacteria	Rural NPS	2008	9.0	36.7483	-94.1291	36.7949	-94.2320	9.0	24,24N,31W	1,23N,30W	McDonald/ Newton	X			2	1(CDF),4
227	Spring Branch (Creek)	3708	P	Low D.O.	Point/NPS	1994	7.4	37.6353	-91.5183	37.6977	-91.5685	7.4	02,34N,06W	Hwy. 32	Dent	X			1	4
228	Spring Branch (Creek)	3708	P	Organic Sediment	Salem WWTP	1994	7.4	37.6353	-91.5183	37.6977	-91.5685	7.4	02,34N,06W	Hwy. 32	Dent	X			1G	4
229	Spring River	3160	P	Bacteria	Rural NPS	2006	58.5	37.1210	-93.8959	37.1946	-94.6182	58.5	State Line	20,28N,27W	Lawrence/ Jasper	X			2	1,4,5,6,7
230	St. Johns Ditch	3138	P	Bacteria	Urban/Rural NPS	2006	35.0	37.0539	-89.5591	36.6108	-89.4467	35.0	29,23N,15E	25,28N,13E	Scott/ New Madrid	X			1G	2,4
231	St. Johns Ditch	3138	P	Mercury (T)	Atmospheric deposition	2006	35.0	37.0539	-89.5591	36.6108	-89.4467	35.0	29,23N,15E	25,28N,13E	Scott/ New Madrid	X			1G	2,4
232	Stevenson Bayou	3135	C	Low D.O.		2006	14	36.9372	-89.2579	36.7632	-89.3373	14	33,25N,16E	31,27N,17E	Mississippi	X			1	2,4
233	Stinson Creek	0710	C	Low D.O.	Unknown	1994	9.0	38.8419	-91.9413	38.7736	-91.8504	9.0	Mouth	16,47N,9W	Callaway	X			1	2,4
234	Stinson Creek	0710	C	Organic Sediment	Fulton WWTP	1994	9.0	38.8419	-91.9413	38.7736	-91.8504	9.0	Mouth	16,47N,9W	Callaway	X			1G	2,4
235	Stockton Branch	1361	C	Low D.O.	Stockton WWTP	2006	1.0	37.7082	-93.7889	37.7171	-93.7867	5.0	Mouth	4,34N,26W	Cedar	X			1	2,4
236	Straight Fork	0959	C	Chloride	Versailles WWTP	2006	2.5	38.4446	-92.8506	38.4758	-92.8494	6.0	6,43N,17W	36,43N,18W	Morgan	X			1	2,4
237	Straight Fork	0959	C	Low D.O.	Versailles WWTP	2006	2.5	38.4446	-92.8506	38.4758	-92.8494	6.0	6,43N,17W	36,43N,18W	Morgan	X			1	2,4
238	Strother Creek	2751	P	Lead (S)	Buick Mine	2008	2.1	37.5948	-91.0472	37.6051	-91.0167	7.0	Mouth	33,34N,1W	Iron	X			1G	2,4
239	Strother Creek	2751	P	Nickel (S)	Buick Mine	2008	2.1	37.5948	-91.0472	37.6051	-91.0167	7.0	Mouth	33,34N,1W	Iron	X			1G	2,4
240	Strother Creek	2751	P	Zinc (S)	Buick Mine	2008	2.1	37.5948	-91.0472	37.6051	-91.0167	7.0	Mouth	33,34N,1W	Iron	X			1G	2,4
241	Strother Creek	2751U-01	U	Arsenic (S)	Buick Mine	2008	1	37.5881	-91.0602	37.5948	-91.0472	n/a	n/a		Reynolds/ Iron	X			1G	
242	Strother Creek	2751U-01	U	Lead (S)	Buick Mine	2008	1	37.5881	-91.0602	37.5948	-91.0472	n/a	n/a		Reynolds/ Iron	X			1G	
243	Strother Creek	2751U-01	U	Nickel (S)	Buick Mine	2008	1	37.5881	-91.0602	37.5948	-91.0472	n/a	n/a		Reynolds/ Iron	X			1G	

US EPA ARCHIVE DOCUMENT

							MDNR Proposed Segment*					Impaired Classified Segment*								
No.	**Water Body Name**	**WBID**	**Class**	**Pollutant**	**Source**	**Year WB/PP Listed**	**Segment Size**	**Upstream Latitude**	**Upstream Longitude**	**Down-stream Latitude**	**Down-stream Longitude**	**Classified Segment Size**	**From**	**To**	**County(ies)**	**Listing Approved**	**Approved Pollutant Change**	**Delisting Disapproved, Restored by EPA**	**Impaired Uses**	**Unimpaired Uses**
244	Strother Creek	2751U-01	U	Zinc (S)	Buick Mine	2006	1	37.5881	-91.0602	37.5948	-91.0472	n/a	n/a		Reynolds/ Iron	X			1G	
245	Sugar Creek	0686	P	Low D.O.		2006	5	39.4747	-92.4804	39.4613	-92.5558	5	Mouth	Sugar Cr. Lake Dam	Randolph	X			1	2,4
246	Sugar Creek Trib	0686U-01	U	Nickel (W)	Coal Mine (Aban.)	2008	0.2	39.4448	-92.5252	39.4469	-92.5230	n/a	n/a		Randolph	X			1G	
247	Table Rock Lake	7313	L2	Nutrients		2002	43100.0	36.3753	-93.9073	36.5955	-93.3109	43100.0	NW NW22,22N22W		Barry/ Taney	X			G	1,2,4,5
248	Thompson River	0549	P	Bacteria	Rural NPS	2008	5.0	40.5769	-93.8011	40.5433	-93.8159	65.0	Mouth	State Line	Harrison	X			2	1,3,4,6
249	Troublesome Creek	0074	C	Low D.O.		2006	34	40.1209	-92.0422	39.9046	-91.6701	34	15,59N,7W	5,61N,10W	Knox/ Marion	X			1	2,4
250	Turkey Creek	3216	P	Bacteria	Rural NPS	2006	7.0	37.1062	-94.5065	37.1249	-94.6180	7.0	State Line	35,28N,33W	Jasper	X			2	1,4
251-a	Turkey Creek	3216	P	Cadmium (S)	Mill tailings (Aban.)	2006	7.0	37.1061	-94.5066	37.1249	-94.6178	7.0	State Line	35,28N,33W	Jasper	X			1G	2,4
251-b	Turkey Creek	3216	P	Cadmium (W)	Mill tailings (Aban.)	2006	7.0	37.1061	-94.5066	37.1249	-94.6178	7.0	State Line	35,28N,33W	Jasper	X			1	2,4
252	Turkey Creek	3216	P	Lead (S)	Mill tailings (Aban.)	2008	7.0	37.1061	-94.5066	37.1249	-94.6178	7.0	State Line	35,28N,33W	Jasper	X			1G	2,4
253	Turkey Creek	3216	P	Zinc (S)	Mill tailings (Aban.)	2008	7.0	37.1061	-94.5066	37.1249	-94.6178	7.0	State Line	35,28N,33W	Jasper	X			1G	2,4
254	Turkey Creek	3217	P	Bacteria	Rural NPS	2008	5.0	37.0755	-94.4270	37.1061	-94.5066	5.0	35,28N,33W	9,27N,32W	Jasper	X			2	1,4
255	Turkey Creek	3217	P	Cadmium (S)	Mill tailings (Aban.)	2008	5.0	37.0755	-94.4270	37.1061	-94.5066	5.0	35,28N,33W	9,27N,32W	Jasper	X			1G	2,4
256	Turkey Creek	3217	P	Lead (S)	Mill tailings (Aban.)	2008	5.0	37.0755	-94.4270	37.1061	-94.5066	5.0	35,28N,33W	9,27N,32W	Jasper	X			1G	2,4
257	Turkey Creek	3217	P	Zinc (S)	Mill tailings (Aban.)	2008	5.0	37.0755	-94.4270	37.1061	-94.5066	5.0	35,28N,33W	9,27N,32W	Jasper	X			1G	2,4
258	Turkey Creek	3282	P	Cadmium (W)	Mill tailings (Aban.)	2006	2.4	37.9233	-90.5482	37.9549	-90.5569	2.4	Mouth	Hwy 47	St. Francois	X			1	2,4
259	Turkey Creek	3282	P	Lead (W)	Mill tailings (Aban.)	2006	2.4	37.9233	-90.5482	37.9549	-90.5569	2.4	Mouth	Hwy 47	St. Francois	X			1	2,4
260	Turkey Creek	3282	P	Zinc (W)	Mill tailings (Aban.)	2006	1.2	37.9233	-90.5482	37.9383	-90.5526	2.4	Mouth	Hwy 47	St. Francois	X			1	2,4
261	Village Creek	2863	P	Inorganic Sediment	Mill tailings (Aban.)	2006	1.5	37.5826	-90.2865	37.5657	-90.3094	1.5	Mouth	5,33N,7E	Madison	X			1G	2,4
262	Village Creek	2863	P	Lead		2006	1.5	37.5827	-90.2866	37.5657	-90.3093	1.5	Mouth	5,33N,7E	Madison	X			1	2.4
263	Village Creek	2864	C	Inorganic Sediment	Mine La Motte AML	1994	--	--	--	--	--	3.0	5,33N,7E	34,34N,7E	Madison			X		
264	Warm Fork Spring River	2579	P	Bacteria	Unknown	2006	1.2	36.5131	-91.5251	36.4990	-91.5275	12.0	State Line	25,23N,6W	Oregon	X			2	1,4,5,6
265	Watkins Creek	1708	C	Bacteria	Urban NPS	2006	3.5	38.7680	-90.1907	38.7736	-90.1757	3.5	Mouth	Hwy. 270	St. Louis	X			2	1,4
266	Watkins Creek	1708	C	Chloride	Urban NPS	2006	3.5	38.7680	-90.1907	38.7736	-90.1757	3.5	Mouth	Hwy. 270	St. Louis	X			1	2,4

US EPA ARCHIVE DOCUMENT

							MDNR Proposed Segment*					Impaired Classified Segment*								
No.	**Water Body Name**	**WBID**	**Class**	**Pollutant**	**Source**	**Year WB/PP Listed**	**Segment Size**	**Upstream Latitude**	**Upstream Longitude**	**Down-stream Latitude**	**Down-stream Longitude**	**Classified Segment Size**	**From**	**To**	**County(ies)**	**Listing Approved**	**Approved Pollutant Change**	**Delisting Disapproved, Restored by EPA**	**Impaired Uses**	**Unimpaired Uses**
267	Weldon River	0560	P	Bacteria		2006	42	40.5794	-93.6108	40.1031	-93.6485	42	Mouth	State Line	Mercer/ Grundy	X			2	1,4
268	West Fork Black River	2755	P	Lead (S)	West Fk. Mine	2008	1.3	37.4900	-91.1069	37.4972	-91.0872	31.7	Mouth	25,33N,03W	Reynolds	X			1G	2,4
269	West Fork Black River	2755	P	Nickel (S)	West Fk. Mine	2008	1.3	37.4900	-91.1069	37.4972	-91.0872	31.7	Mouth	25,33N,03W	Reynolds	X			1G	2,4
270	West Fork Black River	2755	P	Nutrients		1998	31.7	37.5233	-91.2254	37.4465	-90.8520	31.7	Mouth	25,33N,03W	Reynolds	X			G	1,2,4
271	West Fork Drywood Creek	1317	C	Low D.O.		2006	5.5	37.6858	-94.6174	37.7144	-94.5494	5.5	Mouth	State Line	Vernon	X			1	2,4
272	West Fork Locust Creek	0613	C	Unknown		2002	17.0	40.3056	-93.2675	40.1391	-93.2160	17.0	Hwy. 6	33,64N,21W	Sullivan	X			1G	2,4
273	West Fork Medicine Creek	0623	P	Bacteria	Rural NPS	2006	40.0	40.5804	-93.4257	40.1021	-93.3755	40.0	9,61N,22W	State Line	Mercer/ Grundy	X			2	1,4
274	West Fork Medicine Creek	0623	P	Unknown	Unknown	2006	40.0	40.5800	-93.4257	40.1024	-93.3755	40.0	9,61N,22W	State Line	Mercer/ Grundy	X			1G	2,4
275	West Fork Niangua River	1175	P	Low D.O.		2006	7	37.3659	-92.9150	37.4459	-92.9195	7	33,32N,18W	33,31N,18W	Webster	X			1	2,4
276	West Yellow Creek	0599	C	Low D.O.		2006	43	40.0936	-92.9926	39.6518	-93.0541	43	29,56N,19W	14,61N,19W	Sullivan/ Chariton	X			1****	4****
277	Whetstone Creek	1504	P	Low D.O.	Rural NPS	2006	13.0	37.1893	-92.3644	37.3120	-92.3909	13.0	Mouth	21,29N,13W	Wright	X			1	2,4
278	Willow Branch	0654U	U	Unknown		2002	--	--	--	--	--	0.6 (U)	Mouth	22,66N,18W	Putnam			X		
279	Willow Fork	0955	C	Low D.O.		2006	6.5	38.6371	-92.8210	38.6113	-92.7359	6.5	36,45N,17W	29,45N,17W	Moniteau	X			1	2,4
280	Willow Fork, Tributary to	0956	C	Low D.O.	Tipton WWTP	2006	0.5	38.6308	-92.7681	38.6274	-92.7636	0.5	Mouth	27,45N,17W	Moniteau	X			1	4
281	Wilson Creek	2375	P	Bacteria		2006	--	--	--	--	--	18.0	Mouth	16,29N,22W	Greene			X		
282	Wilson Creek	2375	P	Unknown	Multiple Point/Urban NPS	1998	18.0	37.2245	-93.3455	37.0685	-93.4008	18.0	Mouth	16,29N,22W	Greene	X	X		1G	2,4
283	Wolf Creek	2879	C	Low D.O.		2006	8	37.7954	-90.3839	37.7284	-90.4062	8	Mouth	29,36N,6E	St. Francois	X			1	2,4
284	Wolf Creek, Tributary to	3589	C	Low D.O.		2006	1.5	37.7876	-90.4200	37.7775	-90.3985	1.5	Hwy. 32	Hwy. D	St. Francois	X			1	2,4
285	Wyaconda New Lake	7009	L1	Atrazine	Rural NPS	2008	9.0			40.3990	-91.9083	9.0	NW NW33,65N,09W		Clark	X			3	1,2,4,5

US EPA ARCHIVE DOCUMENT

							MDNR Proposed Segment*					Impaired Classified Segment*								
No.	**Water Body Name**	**WBID**	**Class**	**Pollutant**	**Source**	**Year WB/PP Listed**	**Segment Size**	**Upstream Latitude**	**Upstream Longitude**	**Down-stream Latitude**	**Down-stream Longitude**	**Classified Segment Size**	**From**	**To**	**County(ies)**	**Listing Approved**	**Approved Pollutant Change**	**Delisting Disapproved, Restored by EPA**	**Impaired Uses**	**Unimpaired Uses**

(S) = pollutant in sediment
(T) = pollutant in fish tissue
(W) = pollutant in water
* EPA considers the entire classified segment as impaired on the 303(d) list. See section IV.D of the August 6, 2009, decision document and response to comments for additional information.
** Only 0.9 miles of this stream remains after the creation of the Leadwood tailings pond.
*** Metals are believed to be the pollutant based on analysis of invertebrate community
**** presumed uses. Due to an oversight, this waterbody is currently not listed in state WQ standards and no beneficial uses designated.
Aban. = abandonded
AML = abandoned mine land
D.O. = dissolved oxygen
Mult. =multiple
NPS = nonpoint source
Unk. = unknown
Use codes for Impaired and Unimpaired Uses columns:
G = General Criteria
1G = General criteria pertaining to protection of aquatic life
1 = Protection of aquatic life
2 = Whole Body Contact Recreation (swimming)
3 = Public Drinking Water Supply
4 = Livestock and Wildlife Watering
5 = Secondary Contact Recreation (Fishing and Boating)
6 = Irrigation
7 = Industrial Water