



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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

JUL 11 2012

Mr. John Madras
Director, Water Protection Program
Water Protection and Soil Conservation Program
Missouri Department of Natural Resources
1101 Riverside Drive
Jefferson City, Missouri 65101

Dear Mr. Madras:

The U.S. Environmental Protection Agency has completed its review of the 2012 Missouri Clean Water Act Section 303(d) List of water quality-limited segments still requiring Total Maximum Daily Loads, submitted by the Missouri Department of Natural Resources, and received by the EPA on June 14, 2012. In the 2012 submittal, the MDNR included the following items:

- A hard copy letter officially submitting the 2012 Missouri Section 303(d) List
- A compact disc containing the following information:
 - Missouri's proposed 2012 CWA Section 303(d) impaired waters list
 - A copy of the 2012 § 303(d) Listing Methodology Document
 - A copy of the 2012 Missouri Section 305(b) Report
 - A copy of Missouri's TMDL schedule
 - An administrative record of all written comments received by the MDNR on the proposed Section 303(d) List and the MDNR's responses
 - A complete set of water quality assessment files

The MDNR's submission included the 2012 CWA Section 303(d) List as approved by the Clean Water Commission on May 2, 2012. The EPA has determined that Missouri's list of water quality-limited segments still requiring TMDLs partially meets the requirements of Section 303(d) of the CWA and the EPA's implementing regulations. Therefore, today the EPA is partially approving and partially disapproving Missouri's 2012 CWA Section 303(d) List. The enclosure to this letter provides a more detailed rationale of today's action on Missouri's § 303(d) list. In today's decision:

- The EPA approves the listing of 342 water body/pollutant pairs.
- The EPA approves the delisting of 88 water body/pollutant pairs.
- The EPA disapproves Missouri's decision to not list 11 water body/pollutant pairs and is proposing to restore them to the state's 2012 § 303(d) List.
- The EPA proposes to change a listed pollutant to correspond to an EPA-approved water quality standard criterion, to maintain consistency with another water listed by the state.
- The EPA proposes to delist two water body/pollutant pairs for a TMDL that the EPA established.

The EPA will open a public comment period to receive comments concerning the decision to delist or restore water body/pollutant pairs to the state's list. The list of water bodies that the EPA proposes restoring to the 2012 § 303(d) Missouri List, as well as the rationale supporting this action, is included as an enclosure to this letter.

I congratulate you and your staff for the completion of the Section 305(b) water assessment report and the § 303(d) list development and submission process. This process requires a significant amount of staff resources and involves a complex evaluation and assessment of water quality data. We look forward to working with the MDNR on the development of the 2014 Section 303(d) List.

If you would like to further discuss the EPA's action, please contact me at 913-551-7782, or John DeLashmit, Chief of the Water Quality Management Branch at 913-551-7821.

Sincerely,



Karen A. Flourney
Director
Water, Wetlands and Pesticides Division

Enclosure

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

Mr. Eric Monschein, EPA HQ

United States Environmental Protection Agency

Region 7

2012 Decision Document



Missouri's Clean Water Act

Section 303(d) List

Water Quality Limited Segments Still Requiring TMDLs

Karen A. Flournoy

Karen A. Flournoy

Director

Water, Wetlands and Pesticides Division

7-11-12

Date

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**U. S. ENVIRONMENTAL PROTECTION AGENCY - REGION 7's REVIEW
of the
2012 MISSOURI CLEAN WATER ACT SECTION 303(D) LIST**

The purpose of this review document is to provide the U. S. Environmental Protection Agency's (EPA's) rationale for approving certain delistings from Missouri's 2010 Clean Water Act (CWA) Section 303(d) List. The EPA's review of Missouri's 2012 CWA Section 303(d) List is based on the EPA's analysis of whether the state reasonably considered existing and readily available data and information and reasonably identified waters required to be listed by the CWA and the EPA regulations (40 Code of Federal Regulations § 130.7). Throughout this review document the CWA Section 303(d) List is referred to as the "§ 303(d) List" or the "Section 303(d) List." The following is a list of acronyms and abbreviations used in this review document:

303(d) list	Clean Water Act Section 303(d) List
C	Streams that maintain permanent pools
CFR	Code of Federal Regulations
CWA	Clean Water Act
EPA	U. S. Environmental Protection Agency
IR	Integrated Report
L1	Public drinking water supply lake
L2	Major reservoir
L3	Other lakes
MDNR	Missouri Department of Natural Resources
NPDES	National Pollutant Discharge Elimination System
P1	Standing-water reaches of Class P streams
P	Permanently flowing stream
TMDL	Total Maximum Daily Load
U	Unclassified Water Body
WBID	Water Body Identification
WQS	Water Quality Standards

2012 Decision Document of Missouri's Clean Water Act, Section 303(d) List Water Quality Limited Segments Still Requiring TMDLs

I. Executive Summary

On June 14, 2012, the U.S. Environmental Protection Agency (EPA) received the Missouri Department of Natural Resources (MDNR) 2012 update to its Clean Water Act (CWA) Section 303(d) List for review, herein referred to as the submittal. Following its review of Missouri's complete submittal, the EPA is partially approving and partially disapproving Missouri's 2012 Section 303(d) List as submitted. At this time the EPA does approve the state's addition of 56 water bodies representing 83 water body/pollutant impairment pairs to its CWA Section 303(d) List. In addition, the EPA approves the removal of 51 water bodies representing 88 water body/pollutant impairment pairs from the state's CWA Section 303(d) List. This document summarizes the EPA's review and the basis for its approvals and its proposed actions.

Section 303(d)(1) of the CWA directs states to identify those waters within their jurisdictions for which effluent limitations required by Section 301(b)(1)(A) and (B) are not stringent enough to implement any applicable water quality standard (referred to as 'water quality-limited segments' defined in 40 CFR 130.7), and to establish a priority ranking for such waters, taking into account the severity of the pollution and the uses to be made of such waters. The CWA Section 303(d) listing requirement applies to water quality-limited segments impaired by pollutant loadings from both point and nonpoint sources. After a state submits its CWA Section 303(d) List to the EPA, the Agency is required to approve or disapprove that list.

Missouri's 2012 submittal is an update to the state's most recently approved/established CWA Section 303(d) List, approved/established by the EPA on October 6, 2011, (i.e., the state's 2010 CWA Section 303(d) List). In its submittal, the MDNR included its assessment methodology to identify waters that do not meet the state's EPA-approved water quality standards and, therefore, are required to be included on CWA Section 303(d) Lists. This 2012 assessment methodology includes revisions to the methodology used to develop the 2010 Missouri Section 303(d) List. Water quality data that meet the assessment criteria included within the state's 2012 revised methodology were evaluated by the MDNR. Those waters determined to be water quality-limited were submitted to the EPA as an update to the 2010 Section 303(d) List. The methodology establishes specific protocols and thresholds for assessing water bodies, in addition to data sufficiency and data quality requirements. The methodology contains procedures for assessing both aquatic life use support and human health use support.

All waters which are included in Missouri's approved 2012 CWA Section 303(d) List will remain on the state's CWA Section 303(d) List, unless the MDNR removes a water body from a future list and the EPA approves the removal. The MDNR's submittal for the EPA's review includes an updated list reflecting, among other things:

- additional water bodies which MDNR determined to be water quality-limited segments pursuant to the state's listing methodology and, therefore, included in the update of the Section 303(d) List which the MDNR submitted to the EPA for review; and
- water bodies included on Missouri's previously approved/established 2010 CWA Section 303(d) List which were determined not to need TMDLs pursuant to the listing methodology and,

therefore, removed from the update of the CWA Section 303(d) list submitted to the EPA for review (Table 1).

While the guidelines, protocols, and requirements in state statute and the MDNR methodology might be useful tools for the MDNR to use in identifying impaired waters, they are not part of the state's EPA-approved water quality standards. Hence, the EPA did not rely solely on the state statutes or the methodology in reviewing Missouri's list. Instead, the EPA reviewed all available information including any information excluded under the state's methodology, to determine if the state's list was developed consistent with the underlying state EPA-approved water quality standards. The EPA's review process generally followed a two-step analysis:

- 1) the Region reviewed the state's listing methodology, including data collection and data assessment requirements, to determine whether, based on Missouri's EPA-approved water quality standards, the methodology was a reasonable method for identifying water quality-limited segments; and
- 2) where the EPA was unsure whether the methodology was a reasonable method for identifying water quality-limited segments, the Region requested additional information from the MDNR to conduct further water body and data analysis.

Following the EPA's decision on Missouri's 2012 submission, the current Section 303(d) List (Table 2) in the state of Missouri contains:

- approved additions and removals to the 2010 Section 303(d) List; and
- waters carried over from the EPA-approved 2010 Section 303(d) List.

This action by the EPA and the waters listed in Table 2 represent a partial decision on the 2012 Missouri submittal. Following this decision the EPA will provide for public comment on the water bodies and pollutants listed in Table 3.

The statutory and regulatory requirements relevant to Section 303(d) Lists, and the EPA's review of Missouri's compliance with each requirement, are described in detail below.

II. Statutory and Regulatory Background

A. Identification of Water Quality-Limited Segments for Inclusion on the Section 303(d) List

Section 303(d)(1) of the CWA directs states to identify those waters within its jurisdiction for which effluent limitations required by Section 301(b)(1)(A) and (B) are not stringent enough to implement any applicable water quality standards (WQS), and to establish a priority ranking for such waters, taking into account the severity of the pollution and the uses to be made of such waters. The Section 303(d) listing requirement applies to waters impaired by point and/or nonpoint sources.

The EPA regulations provide that states do not need to list waters where the following controls are adequate to implement applicable standards: (1) technology-based effluent limitations required by the Act, (2) more stringent effluent limitations required by federal, state or local authority and (3) other

pollution control requirements required by state, local or federal authority. See Code of Federal Regulations at 40 CFR 130.7(b)(1).

B. Consideration of Existing and Readily Available Water Quality-Related Data and Information

In developing Section 303(d) lists, states are required by 40 CFR 130.7(b)(5) to assemble and evaluate all existing and readily available water quality-related data and information, including, at a minimum, consideration of existing and readily available data and information about the following categories of waters: (1) waters identified as partially meeting or not meeting designated uses, or as threatened, in the state's most recent Section 305(b) report; (2) waters for which dilution calculations or predictive modeling indicate nonattainment of applicable standards; (3) waters for which water quality problems have been reported by governmental agencies, members of the public, or academic institutions; and (4) waters identified as impaired or threatened in any Section 319 nonpoint assessment submitted to the EPA. In addition to these minimum categories, states are required to evaluate any other water quality-related data and information that are existing and readily available. The EPA's *Guidance for Water Quality-Based Decisions: The TMDL Process* (EPA Office of Water, 1991, Appendix C) describes categories of water quality-related data and information that may be existing and readily available. While states are required to evaluate all existing and readily available water quality-related data and information, states may decide to rely or not rely on particular data or information in determining whether to list particular waters.

In addition to requiring states to assemble and evaluate all existing and readily available water quality-related data and information, the EPA regulations at 40 CFR 130.7(b)(6) require states to include as part of their submittals to the EPA documentation to support decisions to use or not use particular data and information in decisions to list or not list waters. Such documentation needs to include, at a minimum, the following information: (1) a description of the methodology used to develop the list; (2) a description of the data and information used to identify waters and (3) any other reasonable information requested by the Region.

C. Priority Ranking

The EPA regulations also codify and interpret the requirement in Section 303(d)(1)(A) that states establish a priority ranking for listed waters. The regulations at 40 CFR 130.7(b)(4) require states to prioritize waters on their Section 303(d) list for Total Maximum Daily Load development and identify those targeted for TMDL development in the next two years. In prioritizing and targeting waters, states must, at a minimum, take into account the severity of the pollution and the uses to be made of such waters. As long as these factors are taken into account, the CWA provides that states establish priorities. States may consider other factors relevant to prioritizing waters for TMDL development, including immediate programmatic needs, vulnerability of particular waters as aquatic habitats, recreational, economic, and aesthetic importance of particular waters, degree of public interest and support and state or national policies and priorities. See 57 Federal Register 33040, 33045 (July 24, 1992) and the EPA's 1991 Guidance cited above. The EPA reviews but does not take action to approve or disapprove the priority ranking.

III. Missouri's Approach to Identifying Waters for the 2012 Section 303(d) List

A. Missouri's 2012 Integrated Report Format

The EPA strongly encourages states to submit a single, Integrated Report (IR) to satisfy the reporting requirements of CWA Sections 303(d), 305(b) and 314. A summary of states reporting requirements for each of these sections and corresponding regulations is provided below:

CWA § 303(d) – by April 1 of all even numbered years, a list of impaired and threatened waters still requiring TMDLs; identification of the impairing pollutant(s); and priority ranking of these waters, including waters targeted for TMDL development within the next two years.

CWA § 305(b) – by April 1 of all even numbered years, a description of the water quality of all waters of the state (including, rivers/stream, lakes, estuaries/oceans and wetlands). States may also include in their CWA § 305(b) submittal a description of the nature and extent of ground water pollution and recommendations of state plans or programs needed to maintain or improve ground water quality.

CWA § 314 – in each CWA § 305(b) submittal, an assessment of status and trends of significant publicly owned lakes including extent of point source and nonpoint source impacts due to toxics, conventional pollutants and acidification.

Each IR will report on the WQS attainment status of all waters, document the availability of data and information for each water, identify certain trends in water quality conditions and provide information to managers in setting priorities for future actions to protect and restore the health of our nation's waters. The EPA promotes this comprehensive assessment approach to enhance a state's ability to track programmatic and environmental goals of the CWA. The EPA promotes the use of the five-part categorization format for sorting waters in the IR.¹ In summary, the categories are:

Category 1: All designated uses are supported, no use is threatened,

Category 2: Available data and/or information indicate that some, but not all of the designated uses are supported,

Category 3: There is insufficient available data and/or information to make a use support determination,

Category 4: Available data and/or information indicate that at least one designated use is not being supported or is threatened, but a TMDL is not needed and

Category 5: Available data and/or information indicate that at least one designated use is not being supported or is threatened, and a TMDL is needed.

¹ EPA. 2005. Guidance for 2006 Assessment, Listing, and Reporting Requirements Pursuant to Sections 303(d), 305(b) and 314 of the CWA. EPA Office of Wetlands, Oceans, and Watersheds. July 29, 2005.
- and -

EPA. 2006. Memorandum: Information Concerning 2008 Clean Water Act Sections 303(d), 305(b), and 314 Integrated Reporting and Listing Decisions. EPA Office of Wetlands, Oceans, and Watersheds. October 12, 2006.

Missouri's 2012 submittal included the CWA Section 303(d) List of impaired waters (Category 5) and the state's assessment data. Today's decision is based on the 2012 Missouri § 303(d) List received by the EPA on June 14, 2012.

B. 2012 Missouri Methodology

Missouri's Methodology for the Development of the 2012 Section 303(d) List in Missouri (September 8, 2010), guides the MDNR's evaluation of "existing and readily available water quality-related data and information" (40 CFR 130.7(b)(5)) and identification of "water quality-limited segments still requiring TMDLs" (40 CFR 130.7(a)). As described earlier, Category 5 of the 2012 IR constitutes Missouri's list of impaired waters for purposes of CWA Section 303(d) and is subject to the EPA's review and approval. The EPA is taking action only on Category 5 which consists of water quality-limited segments still requiring TMDLs.

According to the state's "Listing Methodology," data sources used to assess water quality conditions in Missouri for purposes of Section 305(b) reporting and to aid in developing the state's 303(d) list include:

- (1) Fixed station water quality and sediment data collected and analyzed by MDNR
- (2) Fixed station water quality data collected under contract by the U.S. Geological Survey
- (3) Fixed station water quality data collected by the U.S. Geological Survey under other agreements
- (4) Fixed station water quality, sediment quality and aquatic biological data collected by the U.S. Geological Survey under their national programs.
- (5) Fixed station water quality data collected by water supply companies in Kansas City, St. Louis and Springfield
- (6) Fixed station water quality data collected by the U.S. Army Corps of Engineers
- (7) Fixed station water quality data collected by agencies from bordering states
- (8) Fixed station water quality monitoring by corporations
- (9) Annual fish tissue monitoring programs of the EPA and the Missouri Department of Conservation
- (10) Special water quality surveys conducted by the MDNR
- (11) Special water quality surveys conducted by the U.S. Geological Survey
- (12) Special water quality surveys conducted by other agencies
- (13) Fish occurrence and distribution monitoring by the Missouri Department of Conservation
- (14) Fish kill and water pollution investigations by the Missouri Department of Conservation
- (15) Selected graduate research projects
- (16) Water quality, sediment and aquatic biological data collected by the EPA, MDNR or contractors at hazardous waste site in the state
- (17) Self-monitoring of receiving streams by dischargers where such monitoring is required
- (18) Compliance monitoring of receiving waters by the MDNR and the EPA
- (19) Bacterial monitoring of lakes and streams by county health departments and other organizations using acceptable methodologies
- (20) Other monitoring under a MDNR approved quality assurance project plan
- (21) Fixed station water quality and aquatic invertebrates by qualified volunteers

The states methodology also specifies the data quality considerations used to determine if data is acceptable for use in 303(d) assessments.

IV. Analysis of Missouri's Submission

A. Identification of Water Quality-Limited Segments for Inclusion on the CWA Section 303(d) List

The EPA has reviewed Missouri's 2012 submission and found that while Missouri's submission included all the components as required by the CWA and federal regulations, the state's 2012 Section 303(d) List did not include all water quality-limited segments still requiring a TMDL. The EPA's action is based on its analysis of whether the state reasonably considered existing and readily available water quality-related data and information and reasonably identified waters to be listed. The EPA finds that Missouri's submission only partially satisfies the statutory and regulatory requirements of Section 303(d) and 40 CFR § 130.7. The EPA is partially approving and partially disapproving the 2012 Missouri Section 303(d) List and proposes adding several water bodies and corresponding pollutants to the state's list, as described in greater detail below. The sections below cover broad categories of the EPA's action on Missouri's 2012 list submission.

B. Consideration of Existing and Readily Available Water Quality-Related Data and Information

Missouri used its *Methodology for the Development of the 2012 Section 303(d) List in Missouri* (Listing Methodology) to develop its 2012 submission. The Listing Methodology provides a detailed explanation of the data generated by the MDNR's monitoring program; describes the procedures and methods for collecting data from other federal agencies, state agencies, universities, and monitoring networks; lists the supporting laboratories; and lists other data sources the MDNR uses for compiling the state's CWA Section 305(b) report and Section 303(d) list. The Listing Methodology also explains how the MDNR considers and evaluates each type of data for listing purposes.

C. Priority Ranking

Table 17 of the *Missouri Water Quality Report (Section 305(b) Report) 2012* submitted by Missouri contains the state's schedule for completing TMDLs for those waters still needing a TMDL and identified goal years for development through 2020. The Listing Methodology submitted with Missouri's list details the process by which the MDNR ranks waters for TMDL development and states that the TMDL schedule represents the MDNR's priority ranking. (See *Methodology for the Development of the 2012 Section 303(d) List in Missouri*.) As such, the EPA understands that the TMDL development schedule serves as the state's priority ranking as required by federal regulations at 40 CFR § 130.7(b). The EPA is not taking action on these schedules as federal regulations do not require the EPA approval of priority rankings or schedules.

D. Listing of Waters Impaired by Nonpoint Sources

Based solely on an evaluation of the final 2012 Missouri Section 303(d) List, the EPA concludes that Missouri listed waters with nonpoint sources causing or expected to cause impairment, consistent with Section 303(d) of the CWA and the EPA's guidance. The EPA believes that Section 303(d) provides

ample authority to require states to list waters impaired solely by nonpoint source pollutants. There is no expressed exclusion of the nonpoint source impaired water bodies in the CWA. The EPA's belief that Section 303(d) applies to nonpoint sources is also consistent with the CWA definition of the term "pollutant" and Congress' use of that term in other sections of the CWA, such as Section 319 and Section 320. Therefore, state § 303(d) lists are to include all water quality-limited segments still needing TMDLs, regardless of whether the source of the impairment is a point or a nonpoint source or a combination of both.

E. Public Comments

The MDNR provided several opportunities for public participation and comment in finalizing the 2012 Missouri CWA Section 303(d) List. Missouri posted its final draft 2012 § 303(d) List for a 90-day public comment period on November 28, 2011, held three public meetings and a public hearing on the proposed list. Missouri evaluated and responded to each public comment and, where deemed appropriate, incorporated suggested changes into its 2012 § 303(d) List. The Missouri Clean Water Commission approved the MDNR draft Section 303(d) List on May 2, 2012. Missouri included copies of comments and Missouri's response with its list submission. In this decision the EPA seeks public comments on the actions proposed in Section VII of this document which are summarized in Table 3.

V. Approved Listings

A. Water Quality-Limited Segments for Inclusion on the Section 303(d) List

The EPA has reviewed Missouri's 2012 list submission and concludes that the state partially developed its list of impaired waters (i.e., Category 5 of its IR) in compliance with Section 303(d) of the CWA and 40 CFR § 130.7, and as a result, approves the listing of the water bodies and corresponding pollutants identified in Table 2. The EPA's review is based on its analysis of whether the state reasonably considered existing and readily available water quality-related data and information and reasonably identified waters to be listed. The EPA is partially approving and partially disapproving the state's submitted CWA Section 303(d) List. Water body/pollutant pairs the EPA disapproves for delisting and proposes to restore are described in Section VII of this document and the tables that follow.

B. Corrections to Listed Water Body/Pollutant Pairs

In its 2012 list submission, Missouri proposed several corrections to water body/pollutant combinations that had been identified as impaired during previous listing cycles. These corrections were based on Missouri's November 2, 2009, submission of water quality standards to the EPA. The EPA has acted on the submitted water quality standards and approved some changes to Missouri's WQS, and as such, where listed water bodies names, extent or identification numbers were approved this action uses that information as submitted by the state.

Cedar Creek, Tributary to (WBID 0743) – Missouri included this water body under the name Renfro Creek as impaired on its 2012 list for low D.O. Missouri had previously identified Cedar Creek, Tributary to, as impaired by low D.O. on its 2004/2006 and 2008 § 303(d) Lists. This name change has been approved by the EPA. The EPA has included this water body under the approved name in Table 2.

Douger Branch (WBID 3168) – This water body is now identified as Chat Creek (WBID 3168) after the EPA action on Missouri’s water quality standards submittal. Douger Branch is now WBID 3810 and consists of the downstream portion of the previous water body.

Maline Creek (WBID 1709[part]) – This water body segment has been re-segmented into WBID 3839 and 1709 after the EPA action on Missouri’s water quality standards submittal.

River des Peres (WBID 1711) – This water body segment has been combined with WBID 1710 and the combined segment is WBID 1710 after the EPA action on Missouri’s water quality standards submittal.

St. Johns Ditch (WBID 3138) – This water body segment has been re-segmented into WBID 3138 and 3707 after the EPA action on Missouri’s water quality standards submittal.

C. Segment Length

As discussed in the EPA’s 2006 IR guidance, “ideally, all decisions about the WQS attainment status of individual assessment units would be based on a complete census of water quality conditions, which could involve sampling every portion of a water body at frequent intervals. Unfortunately, gathering this vast amount of data is not currently feasible, due to the limitation of current monitoring technology as well as the amount of funding available for gathering and analysis of water quality information. Given this situation, states and EPA will continue to need to make WQS attainment status determination by extrapolating, in time and space, to a substantial degree, from individual points of data.”

It is important that Missouri, the EPA, and the general public be able to track the progress of individual water bodies as they are listed, pollution controls are implemented, and the applicable WQS are eventually attained. The EPA’s 2006 IR guidance promotes the use of the IR format, the five category approach, and the assessment database as tools to better enable states to assess and track progress of water quality-limited segments. “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.” The IR guidance continues, noting “it is important that the selected segmentation approach be consistent with the state’s water quality standards,” which is critical to tracking progress.

A key component of identifying impairments is determining the designated beneficial uses for each water body in the state’s WQS regulations. The 2012 Missouri § 303(d) List does not contain unique identifiers for each impaired portion that are easily comparable to the classified segment in the state’s WQS. The EPA raised this issue beginning with Missouri’s 2004/2006 submission and added the entire classified segment to the § 303(d) listed waters for that list, the 2008 list and the 2010 List. The 2012 Missouri § 303(d) List submission included the WBID, the size of the impaired portion, latitude and longitude coordinates of the impaired portion and the size of the classified segment. While this information provides more details about Missouri’s assessment, it does not remedy the need to be consistent with the state’s WQS and enable straightforward tracking between listing cycles. While the EPA approves the addition of waters to the 2012 § 303(d) List, the EPA is maintaining the position that the entire classified segment must be listed.

To provide as much information as possible to the public, the EPA is including descriptive information submitted by Missouri for each classified water body (Table 2). This enables one to more readily compare the § 303(d) list to the state's WQS regulations and track changes from one assessment cycle to the next. Should Missouri want to assess sub-segments of waters for listing purposes, Missouri could develop smaller assessment units with defined endpoints and unique identifiers. The EPA is willing to work with Missouri on this issue to find a system that meets the needs of both the EPA and the state.

In some cases Missouri divided its listings to account for different sources of pollutants. These water bodies are identified in Table 2 as sub-numbers "a" and "b."

VI. Approved Delistings (Table 1)

Federal regulations require that the state provide documentation to the EPA to support its decision to list or not to list its waters. Upon request from the EPA, the state must demonstrate good cause for not including a water or waters on its list (40 CFR § 130.7(6)). In its *Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d), 305(b) and 314 of the Clean Water Act* (known as the IR guidance), the EPA describes what constitutes good cause for removing a water body from the § 303(d) list. Consistent with 40 CFR § 130.7(b), good cause for not including segments on the § 303(d) list may be based on the following determinations:

- New information or more sophisticated water quality modeling is available that demonstrates that the applicable WQS(s) is being met.
- Flaws in the original analysis of data and information led to the segment being incorrectly listed.
- Effluent limitations required by state or local authorities that are more stringent than technology-based effluent limitations, required by the CWA, will result in the attainment of WQS for the pollutant causing the impairment (pursuant to 40 CFR § 130.7(b)(1)(ii)).
- Other pollution control requirements required by state, local, or federal authority will result in attainment of WQS within a reasonable period of time (pursuant to 40 CFR § 130.7(b)(1)(iii)).
- Documentation that the state included on a previous § 303(d) list an impaired segment that was not required to be listed by the EPA regulations, e.g., segments where there is no pollutant associated with the impairment.
- The water body and pollutants are addressed in a TMDL approved or established by the EPA.

States may assign waters to Category 4 if available data and/or information indicate that one or more designated uses are not being attained or are threatened, but a TMDL is not needed. States may place these water bodies in one of the following three subcategories:

Category 4a – An EPA-approved TMDL has been established to address the water body and pollutant.

Category 4b – Alternative pollution controls required by local, state, or federal authority are sufficiently stringent and expected to achieve WQS within a reasonable period of time. One example of such controls is an EPA-approved state National Pollutant Discharge Elimination System (NPDES) permit in lieu of a TMDL (PIL).

Category 4c – Impairment not caused by a pollutant, but instead caused by other types of "pollution," as defined by the CWA. Development of a TMDL is not required.

Table 1 is a summary list of the water body/pollutant pairs the EPA approves for delisting, as described below.

A. Waters with EPA-Approved TMDLs (five water bodies, Table 1)

Main Ditch (WBID 2814) – In their 2010 Section 303(d) List, Missouri listed Main Ditch as impaired by ammonia. On December 19, 2005, the EPA approved a Missouri TMDL for ammonia. As such, this water body/pollutant pair is appropriate for removal from the Missouri 303(d) List. In today’s action, the EPA is approving the delisting of Main Ditch because this water body no longer requires the development of a TMDL for ammonia, consistent with 40 CFR 130.7(b).

North Moreau Creek (WBID 0942) – In their 2010 Section 303(d) List, Missouri listed North Moreau Creek as impaired for low dissolved oxygen. To address a previous listing the EPA had approved a Missouri TMDL for carbonaceous biological oxygen demand, ammonia and non-filterable residue. This previously approved TMDL continues to address the low dissolved oxygen impairment relisted in 2010. In today’s action the EPA is once again approving the delisting of North Moreau Creek because this water body no longer requires the development of a TMDL for low dissolved oxygen, consistent with 40 CFR 130.7(b).

Tributary to Big Creek (WBID 3940) – This water body was previously listed under the name Scroggins Branch (MO-2916U-01). In their 2010 Section 303(d) List, Missouri listed Scroggins Branch as impaired for cadmium. On January 28, 2006, the EPA approved a Missouri TMDL for cadmium in Big Creek. That TMDL also contained the required components for a TMDL to address cadmium in this tributary. In today’s action, the EPA is approving the delisting of Tributary to Big Creek because this water body no longer requires the development of a TMDL for cadmium, consistent with 40 CFR 130.7(b).

Tributary to Big Creek (WBID 3940) – This water body was previously listed under the name Scroggins Branch (MO-2916U-01). In their 2010 Section 303(d) List, Missouri listed Scroggins Branch as impaired for zinc. On January 28, 2006, the EPA approved a Missouri TMDL for zinc in Big Creek. That TMDL also contained the required components for a TMDL to address zinc in this tributary. In today’s action, the EPA is approving the delisting of Tributary to Big Creek because this water body no longer requires the development of a TMDL for zinc, consistent with 40 CFR 130.7(b).

Turkey Creek (WBID 3282) - In their 2010 Section 303(d) List, Missouri listed Turkey Creek as impaired for low dissolved oxygen. This water body had also previously been listed for low dissolved oxygen. To address that previous listing, on January 13, 2005, the EPA approved a Missouri TMDL for biological oxygen demand and volatile suspended solids to address the impairment. This previously approved TMDL continues to address the low dissolved oxygen impairment relisted in 2010. In today’s action the EPA is once again approving the delisting of this water body/pollutant pair as appropriate for removal from the Missouri 303(d) List. In today’s action, the EPA is approving the delisting of Turkey Creek because this water body no longer requires the development of a TMDL for low dissolved oxygen, consistent with 40 CFR 130.7(b).

West Fork Sni-a-Bar Creek (WBID 0400) – In their 2010 Section 303(d) List, Missouri listed West Fork Sni-a-Bar Creek as impaired for low dissolved oxygen. On January 6, 2006, the EPA approved a Missouri TMDL to address low dissolved oxygen. In today’s action, the EPA is approving the delisting of West Fork Sni-a-Bar Creek because this water body no longer requires the development of a TMDL for low dissolved oxygen, consistent with 40 CFR 130.7(b).

B. Water with Required Alternative Pollution Controls (one water body, Table 1)

McKenzie Creek (WBID 2786) – Missouri proposed removing McKenzie Creek from the 2012 § 303(d) List for low dissolved oxygen citing an NPDES permit that was issued on July 03, 2008, to the city of Piedmont. Missouri provided documentation of the alternative pollution controls required under this permit and the rationale that these limits will result in the meeting of WQS. The EPA has reviewed the supporting information and concludes that McKenzie Creek is appropriate for removal from the Missouri 303(d) List. In today’s action, the EPA is approving the delisting of McKenzie Creek because this water body no longer requires the development of a TMDL for low dissolved oxygen, consistent with 40 CFR 130.7(b).

C. Restored Waters the EPA Approves for Delisting as Meeting WQS (58 water bodies, Table 1)

Atkinson Lake (WBID 7234) – Missouri identified this water body as impaired by chlorophyll a on its 2010 Missouri § 303(d) List. After the EPA’s disapproval of Missouri’s submitted general lake nutrient criteria on August 16, 2011, the state has proposed to delist all lakes that were listed using these now-disapproved criteria. In today’s action, the EPA is approving the delisting of Atkinson Lake because this water body no longer requires the development of a TMDL for chlorophyll a, consistent with 40 CFR 130.7(b).

Atkinson Lake (WBID 7234) – Missouri identified this water body as impaired by phosphorus on its 2010 Missouri § 303(d) List. After the EPA’s disapproval of Missouri’s submitted general lake nutrient criteria on August 16, 2011, the state has proposed to delist all lakes that were listed using these now-disapproved criteria. In today’s action, the EPA is approving the delisting of Atkinson Lake because this water body no longer requires the development of a TMDL for phosphorus, consistent with 40 CFR 130.7(b).

Bee Fork (WBID 2760) – Missouri identified this segment of Bee Fork as impaired by lead in sediment on the 2010 Missouri 303(d) List. In its assessment for the 2012 Missouri 303(d) List, Missouri showed there is only one excursion of the narrative translator for sediment toxicity in this segment. These data indicate that this water body is not impaired by lead in sediment. In today’s action, the EPA is approving the delisting of Bee Fork for lead in sediment because this water body no longer requires the development of a TMDL for lead in sediment, consistent with 40 CFR § 130.7(b).

Bilby Ranch Lake (WBID 7368) – Missouri identified this water body as impaired by chlorophyll a on its 2010 Missouri § 303(d) List. After the EPA’s disapproval of Missouri’s submitted general lake nutrient criteria on August 16, 2011, the state has proposed to delist all lakes that were listed using these now-disapproved criteria. In today’s action, the EPA is approving the delisting of Bilby Ranch Lake because this water body no longer requires the development of a TMDL for chlorophyll a, consistent with 40 CFR 130.7(b).

Binder Lake (WBID 7185) – Missouri identified this water body as impaired by chlorophyll a on its 2010 Missouri § 303(d) List. After the EPA’s disapproval of Missouri’s submitted general lake nutrient criteria on August 16, 2011, the state has proposed to delist all lakes that were listed using these now-disapproved criteria. In today’s action, the EPA is approving the delisting of Binder Lake because this water body no longer requires the development of a TMDL for chlorophyll a, consistent with 40 CFR 130.7(b).

Binder Lake (WBID 7185) – Missouri identified this water body as impaired by phosphorus on its 2010 Missouri § 303(d) List. After the EPA’s disapproval of Missouri’s submitted general lake nutrient criteria on August 16, 2011, the state has proposed to delist all lakes that were listed using these now-disapproved criteria. In today’s action, the EPA is approving the delisting of Binder Lake because this water body no longer requires the development of a TMDL for phosphorus, consistent with 40 CFR 130.7(b).

Bobs Creek (WBID 0035) – New water quality data indicates this water body is meeting WQS for low dissolved oxygen. In its assessment for the 2012 Missouri 303(d) List, Missouri showed there are only two excursions of the criterion for dissolved oxygen in 32 measurements. Missouri’s listing methodology cites the EPA’s IR guidance and recommended use of the “10% rule” (i.e., no more than 10% of measurements fail to meet the water quality criterion) for evaluating conventional pollutants.² Many states implement the “10% rule” by using the binomial probability method, which is a tool for calculating and balancing the probability of drawing inaccurate determinations of impairment or attainment, for assessing water quality data. Specifically, Missouri’s Listing Methodology discusses the use of the binomial test to determine if “no more than 10% of all samples exceed the water quality criterion.”³ These data indicate that this water body is no longer impaired for low dissolved oxygen. In today’s action, the EPA is approving the delisting of Bobs Creek for low dissolved oxygen because this water body no longer requires the development of a TMDL for low dissolved oxygen, consistent with 40 CFR § 130.7(b).

Brush Creek (WBID 1371) – Missouri identified this segment of Brush Creek as impaired by organic sediment on the 2010 Missouri 303(d) List. Data submitted to the EPA by the MDNR show concentrations of volatile suspended solids to be below the limit of detection with one exception which is at the limit of detection. These data indicate that this water body is not impaired for organic sediment. In today’s action, the EPA is approving the delisting of Brush Creek for organic sediment because this water body no longer requires the development of a TMDL for organic sediment, consistent with 40 CFR § 130.7(b).

Brush Creek (WBID 1372) – Missouri identified this segment of Brush Creek as impaired by low dissolved oxygen on the 2010 Missouri 303(d) List. In its assessment for the 2012 Missouri 303(d) List, Missouri identified that the data previously used to list this water was not from this segment. There is no data available from this segment of Brush Creek. In today’s action, the EPA is approving the delisting of Brush Creek for low dissolved oxygen because this water body

² Conventional pollutants are listed in Section 304(a)(4) of the Clean Water Act as including biological oxygen demanding (BOD) pollutants, suspended solids, fecal coliform, pH, and oil and grease.

³ For additional discussion about the use of the binomial probability method, refer to the administrative record supporting EPA January 16, 2009 decision on Missouri’s 2004/2006 303(d) list.

no longer requires the development of a TMDL for low dissolved oxygen, consistent with 40 CFR § 130.7(b).

Cedar Creek, Tributary to [now Renfro Creek] (WBID 0743) – Missouri identified this water body as impaired by low dissolved oxygen on its 2010 Missouri § 303(d) List. New water quality data indicates this water body is meeting WQS for low dissolved oxygen. In its assessment for the 2012 Missouri 303(d) List, Missouri showed there is only one excursion of the criterion for dissolved oxygen in eight measurements. Missouri’s listing methodology cites EPA’s IR guidance and recommended use of the “10% rule” (i.e., no more than 10% of measurements fail to meet the water quality criterion) for evaluating conventional pollutants.² Many states implement the “10% rule” by using the binomial probability method, which is a tool for calculating and balancing the probability of drawing inaccurate determinations of impairment or attainment, for assessing water quality data. Specifically, Missouri’s Listing Methodology discusses the use of the binomial test to determine if “no more than 10% of all samples exceed the water quality criterion.”³ These data indicate that this water body is no longer impaired for low dissolved oxygen. In today’s action, the EPA is approving the delisting of Renfro Creek for low dissolved oxygen because this water body no longer requires the development of a TMDL for low dissolved oxygen, consistent with 40 CFR § 130.7(b).

Center Creek (WBID 3203) – Missouri identified this segment of Center Creek as impaired by bacteria on the 2010 Missouri 303(d) List. Data submitted to the EPA by the MDNR show geometric means from the last three years of data are all below the water quality standards criterion. These data indicate that this water body is not impaired for bacteria. In today’s action, the EPA is approving the delisting of Center Creek for bacteria because this water body no longer requires the development of a TMDL for bacteria, consistent with 40 CFR § 130.7(b).

Clear Fork (WBID 0935) – Missouri identified this water body as impaired by low dissolved oxygen on its 2010 Missouri § 303(d) List. New water quality data indicates this water body is meeting WQS for low dissolved oxygen. In its assessment for the 2012 Missouri 303(d) List, Missouri showed there are only six excursions of the criterion for dissolved oxygen in 25 measurements. Of these only four samples were measured below the water quality criterion of the 18 samples collected in 2011. Missouri’s listing methodology cites EPA’s IR guidance and recommended use of the “10% rule” (i.e., no more than 10% of measurements fail to meet the water quality criterion) for evaluating conventional pollutants.² Many states implement the “10% rule” by using the binomial probability method, which is a tool for calculating and balancing the probability of drawing inaccurate determinations of impairment or attainment, for assessing water quality data. Specifically, Missouri’s Listing Methodology discusses the use of the binomial test to determine if “no more than 10% of all samples exceed the water quality criterion.”³ These data indicate that this water body is no longer impaired for low dissolved oxygen. In today’s action, the EPA is approving the delisting of Clear Fork for low dissolved oxygen because this water body no longer requires the development of a TMDL for low dissolved oxygen, consistent with 40 CFR § 130.7(b).

Coon Creek (WBID 0132) – Missouri identified this water body as impaired by low dissolved oxygen on its 2010 Missouri § 303(d) List. New water quality data indicates this water body is meeting WQS for low dissolved oxygen. In its assessment for the 2012 Missouri 303(d) List, Missouri showed there is only one excursion of the criterion for dissolved oxygen in five measurements. Missouri’s listing methodology cites EPA’s IR guidance and recommended use

of the “10% rule” (i.e., no more than 10% of measurements fail to meet the water quality criterion) for evaluating conventional pollutants.² Many states implement the “10% rule” by using the binomial probability method, which is a tool for calculating and balancing the probability of drawing inaccurate determinations of impairment or attainment, for assessing water quality data. Specifically, Missouri’s Listing Methodology discusses the use of the binomial test to determine if “no more than 10% of all samples exceed the water quality criterion.”³ These data indicate that this water body is no longer impaired for low dissolved oxygen. In today’s action, the EPA is approving the delisting of Coon Creek for low dissolved oxygen because this water body no longer requires the development of a TMDL for low dissolved oxygen, consistent with 40 CFR § 130.7(b).

Fishpot Creek (WBID 2186) – Missouri identified this water body as impaired by low dissolved oxygen on its 2010 Missouri § 303(d) List. New water quality data indicates this water body is meeting WQS for low dissolved oxygen. In its assessment for the 2012 Missouri 303(d) List, Missouri showed there is only one excursion of the criterion for dissolved oxygen in 30 measurements. Missouri’s listing methodology cites EPA’s IR guidance and recommended use of the “10% rule” (i.e., no more than 10% of measurements fail to meet the water quality criterion) for evaluating conventional pollutants.² Many states implement the “10% rule” by using the binomial probability method, which is a tool for calculating and balancing the probability of drawing inaccurate determinations of impairment or attainment, for assessing water quality data. Specifically, Missouri’s Listing Methodology discusses the use of the binomial test to determine if “no more than 10% of all samples exceed the water quality criterion.”³ These data indicate that this water body is no longer impaired for low dissolved oxygen. In today’s action, the EPA is approving the delisting of Fishpot Creek for low dissolved oxygen because this water body no longer requires the development of a TMDL for low dissolved oxygen, consistent with 40 CFR § 130.7(b).

Grand Glaize Creek (WBID 2184) – Missouri identified this segment of Center Creek as impaired by bacteria on the 2010 Missouri 303(d) List. Data submitted to the EPA by the MDNR show geometric means from the last three years of data are all below the water quality standards criterion. These data indicate that this water body is not impaired for bacteria. In today’s action, the EPA is approving the delisting of Grand Glaize Creek for bacteria because this water body no longer requires the development of a TMDL for bacteria, consistent with 40 CFR § 130.7(b).

Gravois Creek (WBID 1713) – Missouri identified this water body as impaired by low dissolved oxygen on its 2010 Missouri § 303(d) List. New water quality data indicates this water body is meeting WQS for low dissolved oxygen. In its assessment for the 2012 Missouri 303(d) List, Missouri showed there is only one excursion of the criterion for dissolved oxygen in 36 measurements. Missouri’s listing methodology cites the EPA’s IR guidance and recommended use of the “10% rule” (i.e., no more than 10% of measurements fail to meet the water quality criterion) for evaluating conventional pollutants.² Many states implement the “10% rule” by using the binomial probability method, which is a tool for calculating and balancing the probability of drawing inaccurate determinations of impairment or attainment, for assessing water quality data. Specifically, Missouri’s Listing Methodology discusses the use of the binomial test to determine if “no more than 10% of all samples exceed the water quality criterion.”³ These data indicate that this water body is no longer impaired for low dissolved oxygen. In today’s action, the EPA is approving the delisting of Gravois Creek for low dissolved

oxygen because this water body no longer requires the development of a TMDL for low dissolved oxygen, consistent with 40 CFR § 130.7(b).

Grindstone Reservoir (WBID 7384) – Missouri identified this water body as impaired by chlorophyll a on its 2010 Missouri § 303(d) List. After the EPA’s disapproval of Missouri’s submitted general lake nutrient criteria on August 16, 2011, the state has proposed to delist all lakes that were listed using these now-disapproved criteria. In today’s action, the EPA is approving the delisting of Grindstone Reservoir because this water body no longer requires the development of a TMDL for chlorophyll a, consistent with 40 CFR 130.7(b).

Grindstone Reservoir (WBID 7384) – Missouri identified this water body as impaired by nitrogen on its 2010 Missouri § 303(d) List. After the EPA’s disapproval of Missouri’s submitted general lake nutrient criteria on August 16, 2011, the state has proposed to delist all lakes that were listed using these now-disapproved criteria. In today’s action, the EPA is approving the delisting of Grindstone Reservoir because this water body no longer requires the development of a TMDL for nitrogen, consistent with 40 CFR 130.7(b).

Grindstone Reservoir (WBID 7384) – Missouri identified this water body as impaired by phosphorus on its 2010 Missouri § 303(d) List. After the EPA’s disapproval of Missouri’s submitted general lake nutrient criteria on August 16, 2011, the state has proposed to delist all lakes that were listed using these now-disapproved criteria. In today’s action, the EPA is approving the delisting of Grindstone Reservoir because this water body no longer requires the development of a TMDL for phosphorus, consistent with 40 CFR 130.7(b).

Harrison County Lake (WBID 7386) – Missouri identified this water body as impaired by chlorophyll a on its 2010 Missouri § 303(d) List. After the EPA’s disapproval of Missouri’s submitted general lake nutrient criteria on August 16, 2011, the state has proposed to delist all lakes that were listed using these now-disapproved criteria. In today’s action, the EPA is approving the delisting of Harrison County Lake because this water body no longer requires the development of a TMDL for chlorophyll a, consistent with 40 CFR 130.7(b).

Harrison County Lake (WBID 7386) – Missouri identified this water body as impaired by phosphorus on its 2010 Missouri § 303(d) List. After the EPA’s disapproval of Missouri’s submitted general lake nutrient criteria on August 16, 2011, the state has proposed to delist all lakes that were listed using these now-disapproved criteria. In today’s action, the EPA is approving the delisting of Harrison County Lake because this water body no longer requires the development of a TMDL for phosphorus, consistent with 40 CFR 130.7(b).

Hazel Hill Lake (WBID 7387) – Missouri identified this water body as impaired by chlorophyll a on its 2010 Missouri § 303(d) List. After the EPA’s disapproval of Missouri’s submitted general lake nutrient criteria on August 16, 2011, the state has proposed to delist all lakes that were listed using these now-disapproved criteria. In today’s action, the EPA is approving the delisting of Hazel Hill Lake because this water body no longer requires the development of a TMDL for chlorophyll a, consistent with 40 CFR 130.7(b).

Indian Creek (WBID 1747) – Missouri identified this water body as impaired by low dissolved oxygen on its 2010 Missouri § 303(d) List. The state has proposed to delist this water body because of an error in the calculation of the level of impairment. Missouri’s listing methodology

cites EPA's IR guidance and recommended use of the "10% rule" (i.e., no more than 10% of measurements fail to meet the water quality criterion) for evaluating conventional pollutants.² Many states implement the "10% rule" by using the binomial probability method, which is a tool for calculating and balancing the probability of drawing inaccurate determinations of impairment or attainment, for assessing water quality data. Specifically, Missouri's Listing Methodology discusses the use of the binomial test to determine if "no more than 10% of all samples exceed the water quality criterion."³ Data indicate that this water body is not impaired for low dissolved oxygen since only two of eight measurements indicate an excursion from criteria. In today's action, the EPA is approving the delisting of Indian Creek for low dissolved oxygen because this water body no longer requires the development of a TMDL for low dissolved oxygen, consistent with 40 CFR § 130.7(b).

Indian Creek (WBID 3256) – Missouri identified this water body as impaired by an unknown pollutant on its 2010 Missouri § 303(d) List. Aquatic macroinvertebrate data had indicated that the biological community did not meet Missouri's narrative criteria. In its assessment for the 2012 Missouri 303(d) List, MDNR presented data that shows the proportion of impaired biological samples in this water body is not significantly different than that in biological reference sites in the same ecological drainage unit. In accordance with the procedures stipulated in the state's listing methodology this new data indicates that this water body is not impaired by an unknown pollutant. In today's action, the EPA is approving the delisting of Indian Creek for an unknown pollutant because this water body no longer requires the development of a TMDL for an unknown pollutant, consistent with 40 CFR § 130.7(b).

Kraut Run Lake (WBID 7056) – Missouri identified this water body as impaired by chlorophyll a on its 2010 Missouri § 303(d) List. After the EPA's disapproval of Missouri's submitted general lake nutrient criteria on August 16, 2011, the state has proposed to delist all lakes that were listed using these now-disapproved criteria. In today's action, the EPA is approving the delisting of Kraut Run Lake because this water body no longer requires the development of a TMDL for chlorophyll a, consistent with 40 CFR 130.7(b).

Kraut Run Lake (WBID 7056) – Missouri identified this water body as impaired by phosphorus on its 2010 Missouri § 303(d) List. After the EPA's disapproval of Missouri's submitted general lake nutrient criteria on August 16, 2011, the state has proposed to delist all lakes that were listed using these now-disapproved criteria. In today's action, the EPA is approving the delisting of Kraut Run Lake because this water body no longer requires the development of a TMDL for phosphorus, consistent with 40 CFR 130.7(b).

La Belle Lake #2 (WBID 7023) – Missouri identified this water body as impaired by chlorophyll a on its 2010 Missouri § 303(d) List. After the EPA's disapproval of Missouri's submitted general lake nutrient criteria on August 16, 2011, the state has proposed to delist all lakes that were listed using these now-disapproved criteria. In today's action, the EPA is approving the delisting of La Belle Lake #2 because this water body no longer requires the development of a TMDL for chlorophyll a, consistent with 40 CFR 130.7(b).

La Belle Lake #2 (WBID 7023) – Missouri identified this water body as impaired by phosphorus on its 2010 Missouri § 303(d) List. After the EPA's disapproval of Missouri's submitted general lake nutrient criteria on August 16, 2011, the state has proposed to delist all lakes that were listed using these now-disapproved criteria. In today's action, the EPA is approving the delisting of La

Belle Lake #2 because this water body no longer requires the development of a TMDL for phosphorus, consistent with 40 CFR 130.7(b).

Lake Jacomo (WBID 7101) – Missouri identified this water body as impaired by chlorophyll a on its 2010 Missouri § 303(d) List. After the EPA’s disapproval of Missouri’s submitted general lake nutrient criteria on August 16, 2011, the state has proposed to delist all lakes that were listed using these now-disapproved criteria. In today’s action, the EPA is approving the delisting of Lake Jacomo because this water body no longer requires the development of a TMDL for chlorophyll a, consistent with 40 CFR 130.7(b).

Lake of the Ozarks (WBID 7205) – Missouri identified this water body as impaired by nitrogen on its 2010 Missouri § 303(d) List. After the EPA’s disapproval of Missouri’s submitted general lake nutrient criteria on August 16, 2011, the state has proposed to delist all lakes that were listed using these now-disapproved criteria. In today’s action, the EPA is approving the delisting of Lake of the Ozarks because this water body no longer requires the development of a TMDL for nitrogen, consistent with 40 CFR 130.7(b).

Lake of the Ozarks (WBID 7205) – Missouri identified this water body as impaired by phosphorus on its 2010 Missouri § 303(d) List. After the EPA’s disapproval of Missouri’s submitted general lake nutrient criteria on August 16, 2011, the state has proposed to delist all lakes that were listed using these now-disapproved criteria. In today’s action, the EPA is approving the delisting of Lake of the Ozarks because this water body no longer requires the development of a TMDL for phosphorus, consistent with 40 CFR 130.7(b).

Lake Springfield (WBID 7312) – Missouri identified this water body as impaired by chlorophyll a on its 2010 Missouri § 303(d) List. After the EPA’s disapproval of Missouri’s submitted general lake nutrient criteria on August 16, 2011, the state has proposed to delist all lakes that were listed using these now-disapproved criteria. In today’s action, the EPA is approving the delisting of Lake Springfield because this water body no longer requires the development of a TMDL for chlorophyll a, consistent with 40 CFR 130.7(b).

Lake Springfield (WBID 7312) – Missouri identified this water body as impaired by nitrogen on its 2010 Missouri § 303(d) List. After the EPA’s disapproval of Missouri’s submitted general lake nutrient criteria on August 16, 2011, the state has proposed to delist all lakes that were listed using these now-disapproved criteria. In today’s action, the EPA is approving the delisting of Lake Springfield because this water body no longer requires the development of a TMDL for nitrogen, consistent with 40 CFR 130.7(b).

Lake Springfield (WBID 7312) – Missouri identified this water body as impaired by phosphorus on its 2010 Missouri § 303(d) List. After the EPA’s disapproval of Missouri’s submitted general lake nutrient criteria on August 16, 2011, the state has proposed to delist all lakes that were listed using these now-disapproved criteria. In today’s action, the EPA is approving the delisting of Lake Springfield because this water body no longer requires the development of a TMDL for phosphorus, consistent with 40 CFR 130.7(b).

Lake Ste. Louise (WBID 7055) – Missouri identified this water body as impaired by bacteria on its 2010 Missouri § 303(d) List. Data submitted to the EPA by the MDNR show geometric means from the last three years of data are all below the water quality standards criterion. These

data indicate that this water body is not impaired for bacteria. In today's action, the EPA is approving the delisting of Lake Ste. Louise for bacteria because this water body no longer requires the development of a TMDL for bacteria, consistent with 40 CFR § 130.7(b).

Lake Taneycomo (WBID 7314) – Missouri identified this water body as impaired by nitrogen on its 2010 Missouri § 303(d) List. After the EPA's disapproval of Missouri's submitted general lake nutrient criteria on August 16, 2011, the state has proposed to delist all lakes that were listed using these now-disapproved criteria. In today's action, the EPA is approving the delisting of Lake Taneycomo because this water body no longer requires the development of a TMDL for nitrogen, consistent with 40 CFR 130.7(b).

Lake Wappapello (WBID 7336) – Missouri identified this water body as impaired by chlorophyll a on its 2010 Missouri § 303(d) List. After the EPA's disapproval of Missouri's submitted general lake nutrient criteria on August 16, 2011, the state has proposed to delist all lakes that were listed using these now-disapproved criteria. In today's action, the EPA is approving the delisting of Lake Wappapello because this water body no longer requires the development of a TMDL for chlorophyll a, consistent with 40 CFR 130.7(b).

Lake Wappapello (WBID 7336) – Missouri identified this water body as impaired by nitrogen on its 2010 Missouri § 303(d) List. After the EPA's disapproval of Missouri's submitted general lake nutrient criteria on August 16, 2011, the state has proposed to delist all lakes that were listed using these now-disapproved criteria. In today's action, the EPA is approving the delisting of Lake Wappapello because this water body no longer requires the development of a TMDL for nitrogen, consistent with 40 CFR 130.7(b).

Lake Wappapello (WBID 7336) – Missouri identified this water body as impaired by phosphorus on its 2010 Missouri § 303(d) List. After the EPA's disapproval of Missouri's submitted general lake nutrient criteria on August 16, 2011, the state has proposed to delist all lakes that were listed using these now-disapproved criteria. In today's action, the EPA is approving the delisting of Lake Wappapello because this water body no longer requires the development of a TMDL for phosphorus, consistent with 40 CFR 130.7(b).

Little Muddy Creek, Tributary to (WBID 3490) – Missouri identified this water body as impaired by color on its 2010 Missouri § 303(d) List. Data submitted to the EPA by the MDNR show color from the last three years of data are lower below the source of increased color than above. These data indicate that this water body is no longer impaired for color. In today's action, the EPA is approving the delisting of Little Muddy Creek, Tributary to, for color because this water body no longer requires the development of a TMDL for color, consistent with 40 CFR § 130.7(b).

Lone Elm Hollow (WBID 3216U) – Missouri identified this water body as impaired by metals (other than mercury) on its 2010 Missouri § 303(d) List. In its assessment for the 2012 Missouri 303(d) List, Missouri proposed to delist this water body based on unknown quality of the data used to list the water body previously. As such there is no data available to make an assessment decision on this water body. In today's action, the EPA is approving the delisting of Lone Elm Hollow, for metals (other than mercury) because this water body no longer requires the development of a TMDL for metals (other than mercury), consistent with 40 CFR § 130.7(b).

Maline Creek (WBID 1709) – Missouri identified this water body as impaired by low dissolved oxygen on its 2010 Missouri § 303(d) List. New water quality data indicates this water body is meeting WQS for low dissolved oxygen. In its assessment for the 2012 Missouri 303(d) List, Missouri showed there are only three excursions of the criterion for dissolved oxygen in 37 measurements. Missouri’s listing methodology cites EPA’s IR guidance and recommended use of the “10% rule” (i.e., no more than 10% of measurements fail to meet the water quality criterion) for evaluating conventional pollutants.² Many states implement the “10% rule” by using the binomial probability method, which is a tool for calculating and balancing the probability of drawing inaccurate determinations of impairment or attainment, for assessing water quality data. Specifically, Missouri’s Listing Methodology discusses the use of the binomial test to determine if “no more than 10% of all samples exceed the water quality criterion.”³ These data indicate that this water body is no longer impaired for low dissolved oxygen. In today’s action, the EPA is approving the delisting of Maline Creek for low dissolved oxygen because this water body no longer requires the development of a TMDL for low dissolved oxygen, consistent with 40 CFR § 130.7(b).

Manito Lake (WBID 7198) – Missouri identified this water body as impaired by nitrogen on its 2010 Missouri § 303(d) List. After the EPA’s disapproval of Missouri’s submitted general lake nutrient criteria on August 16, 2011, the state has proposed to delist all lakes that were listed using these now-disapproved criteria. In today’s action, the EPA is approving the delisting of Manito Lake because this water body no longer requires the development of a TMDL for nitrogen, consistent with 40 CFR 130.7(b).

Manito Lake (WBID 7198) – Missouri identified this water body as impaired by phosphorus on its 2010 Missouri § 303(d) List. After the EPA’s disapproval of Missouri’s submitted general lake nutrient criteria on August 16, 2011, the state has proposed to delist all lakes that were listed using these now-disapproved criteria. In today’s action, the EPA is approving the delisting of Manito Lake because this water body no longer requires the development of a TMDL for phosphorus, consistent with 40 CFR 130.7(b).

Marceline New Lake (WBID 7136) – Missouri identified this water body as impaired by chlorophyll a on its 2010 Missouri § 303(d) List. After the EPA’s disapproval of Missouri’s submitted general lake nutrient criteria on August 16, 2011, the state has proposed to delist all lakes that were listed using these now-disapproved criteria. In today’s action, the EPA is approving the delisting of Marceline New Lake because this water body no longer requires the development of a TMDL for chlorophyll a, consistent with 40 CFR 130.7(b).

Marceline New Lake (WBID 7136) – Missouri identified this water body as impaired by nitrogen on its 2010 Missouri § 303(d) List. After the EPA’s disapproval of Missouri’s submitted general lake nutrient criteria on August 16, 2011, the state has proposed to delist all lakes that were listed using these now-disapproved criteria. In today’s action, the EPA is approving the delisting of Marceline New Lake because this water body no longer requires the development of a TMDL for nitrogen, consistent with 40 CFR 130.7(b).

Marceline New Lake (WBID 7136) – Missouri identified this water body as impaired by phosphorus on its 2010 Missouri § 303(d) List. After the EPA’s disapproval of Missouri’s submitted general lake nutrient criteria on August 16, 2011, the state has proposed to delist all lakes that were listed using these now-disapproved criteria. In today’s action, the EPA is

approving the delisting of Marceline New Lake because this water body no longer requires the development of a TMDL for phosphorus, consistent with 40 CFR 130.7(b).

Mark Twain Lake (WBID 7033) – Missouri identified this water body as impaired by nitrogen on its 2010 Missouri § 303(d) List. After the EPA’s disapproval of Missouri’s submitted general lake nutrient criteria on August 16, 2011, the state has proposed to delist all lakes that were listed using these now-disapproved criteria. In today’s action, the EPA is approving the delisting of Mark Twain Lake because this water body no longer requires the development of a TMDL for nitrogen, consistent with 40 CFR 130.7(b).

McDaniel Lake (WBID 7236) – Missouri identified this water body as impaired by chlorophyll a on its 2010 Missouri § 303(d) List. After the EPA’s disapproval of Missouri’s submitted general lake nutrient criteria on August 16, 2011, the state has proposed to delist all lakes that were listed using these now-disapproved criteria. In today’s action, the EPA is approving the delisting of McDaniel Lake because this water body no longer requires the development of a TMDL for chlorophyll a, consistent with 40 CFR 130.7(b).

McDaniel Lake (WBID 7236) – Missouri identified this water body as impaired by phosphorus on its 2010 Missouri § 303(d) List. After the EPA’s disapproval of Missouri’s submitted general lake nutrient criteria on August 16, 2011, the state has proposed to delist all lakes that were listed using these now-disapproved criteria. In today’s action, the EPA is approving the delisting of McDaniel Lake because this water body no longer requires the development of a TMDL for phosphorus, consistent with 40 CFR 130.7(b).

Meramec River (WBID 1841) – Missouri identified this water body as impaired by mercury in fish tissue on its 2010 Missouri § 303(d) List. In its assessment for the 2012 Missouri 303(d) List, MDNR presented fish tissue data that indicated the mercury concentration did not exceed Missouri’s narrative criteria. In accordance with the procedures stipulated in the state’s listing methodology this new data indicates that this water body is not impaired by mercury in fish tissue. In today’s action, the EPA is approving the delisting of Meramec River for mercury in fish tissue because this water body no longer requires the development of a TMDL for mercury in fish tissue, consistent with 40 CFR § 130.7(b).

Middle Fork Salt River (WBID 0121) – Missouri identified this water body as impaired by low dissolved oxygen on its 2010 Missouri § 303(d) List. The state has proposed to delist this water body because of an error in the calculation of the level of impairment. Missouri’s listing methodology cites EPA’s IR guidance and recommended use of the “10% rule” (i.e., no more than 10% of measurements fail to meet the water quality criterion) for evaluating conventional pollutants.² Many states implement the “10% rule” by using the binomial probability method, which is a tool for calculating and balancing the probability of drawing inaccurate determinations of impairment or attainment, for assessing water quality data. Specifically, Missouri’s Listing Methodology discusses the use of the binomial test to determine if “no more than 10% of all samples exceed the water quality criterion.”³ Data indicate that this water body is not impaired for low dissolved oxygen since only four of 28 measurements indicate an excursion from criteria. In today’s action, the EPA is approving the delisting of Middle Fork Salt River for low dissolved oxygen because this water body no longer requires the development of a TMDL for low dissolved oxygen, consistent with 40 CFR § 130.7(b).

Moberly Rothwell Lake (WBID 7165) – Missouri identified this water body as impaired by chlorophyll a on its 2010 Missouri § 303(d) List. After the EPA’s disapproval of Missouri’s submitted general lake nutrient criteria on August 16, 2011, the state has proposed to delist all lakes that were listed using these now-disapproved criteria. In today’s action, the EPA is approving the delisting of Moberly Rothwell Lake because this water body no longer requires the development of a TMDL for chlorophyll a, consistent with 40 CFR 130.7(b).

Monzingo Lake (WBID 7402) – Missouri identified this water body as impaired by chlorophyll a on its 2010 Missouri § 303(d) List. After the EPA’s disapproval of Missouri’s submitted general lake nutrient criteria on August 16, 2011, the state has proposed to delist all lakes that were listed using these now-disapproved criteria. In today’s action, the EPA is approving the delisting of Monzingo Lake because this water body no longer requires the development of a TMDL for chlorophyll a, consistent with 40 CFR 130.7(b).

Muddy Creek (WBID 0853) – Missouri identified this water body as impaired by color on its 2010 Missouri § 303(d) List. Data submitted to the EPA by the MDNR show color from the last year of data, after a facility removed color from their effluent, are lower than the control site. These data indicate that this water body is no longer impaired for color. In today’s action, the EPA is approving the delisting of Muddy Creek for color because this water body no longer requires the development of a TMDL for color, consistent with 40 CFR § 130.7(b).

Nodaway Lake (WBID 7076) – Missouri identified this water body as impaired by chlorophyll a on its 2010 Missouri § 303(d) List. After the EPA’s disapproval of Missouri’s submitted general lake nutrient criteria on August 16, 2011, the state has proposed to delist all lakes that were listed using these now-disapproved criteria. In today’s action, the EPA is approving the delisting of Nodaway Lake because this water body no longer requires the development of a TMDL for chlorophyll a, consistent with 40 CFR 130.7(b).

Nodaway Lake (WBID 7076) – Missouri identified this water body as impaired by nitrogen on its 2010 Missouri § 303(d) List. After the EPA’s disapproval of Missouri’s submitted general lake nutrient criteria on August 16, 2011, the state has proposed to delist all lakes that were listed using these now-disapproved criteria. In today’s action, the EPA is approving the delisting of Nodaway Lake because this water body no longer requires the development of a TMDL for nitrogen, consistent with 40 CFR 130.7(b).

North Lake (WBID 7218) – Missouri identified this water body as impaired by chlorophyll a on its 2010 Missouri § 303(d) List. After the EPA’s disapproval of Missouri’s submitted general lake nutrient criteria on August 16, 2011, the state has proposed to delist all lakes that were listed using these now-disapproved criteria. In today’s action, the EPA is approving the delisting of North Lake because this water body no longer requires the development of a TMDL for chlorophyll a, consistent with 40 CFR 130.7(b).

North Lake (WBID 7218) – Missouri identified this water body as impaired by phosphorus on its 2010 Missouri § 303(d) List. After the EPA’s disapproval of Missouri’s submitted general lake nutrient criteria on August 16, 2011, the state has proposed to delist all lakes that were listed using these now-disapproved criteria. In today’s action, the EPA is approving the delisting of North Lake because this water body no longer requires the development of a TMDL for phosphorus, consistent with 40 CFR 130.7(b).

Odessa Lake (WBID 7093) – Missouri identified this water body as impaired by chlorophyll a on its 2010 Missouri § 303(d) List. After the EPA’s disapproval of Missouri’s submitted general lake nutrient criteria on August 16, 2011, the state has proposed to delist all lakes that were listed using these now-disapproved criteria. In today’s action, the EPA is approving the delisting of Odessa Lake because this water body no longer requires the development of a TMDL for chlorophyll a, consistent with 40 CFR 130.7(b).

Odessa Lake (WBID 7093) – Missouri identified this water body as impaired by nitrogen on its 2010 Missouri § 303(d) List. After the EPA’s disapproval of Missouri’s submitted general lake nutrient criteria on August 16, 2011, the state has proposed to delist all lakes that were listed using these now-disapproved criteria. In today’s action, the EPA is approving the delisting of Odessa Lake because this water body no longer requires the development of a TMDL for nitrogen, consistent with 40 CFR 130.7(b).

Osage River (WBID 1031) – Missouri identified this water body as impaired by total dissolved gas on its 2010 Missouri § 303(d) List. For 2012, the state submitted data which show less than 10% of samples collected after recent Bagnell Dam facilities upgrades indicated impairment. Missouri’s listing methodology cites EPA’s IR guidance and recommended use of the “10% rule” (i.e., no more than 10% of measurements fail to meet the water quality criterion) for evaluating conventional pollutants.² Data shows this water body is meeting that goal. In today’s action, the EPA is approving the delisting of Osage River because this water body no longer requires the development of a TMDL for total dissolved gas, consistent with 40 CFR 130.7(b).

Petite Saline Creek (WBID 0785) – Missouri identified this water body as impaired by low dissolved oxygen on its 2010 Missouri § 303(d) List. The state has proposed to delist this water body because of an error in the calculation of the level of impairment. Missouri’s listing methodology cites EPA’s IR guidance and recommended use of the “10% rule” (i.e., no more than 10% of measurements fail to meet the water quality criterion) for evaluating conventional pollutants.² Many states implement the “10% rule” by using the binomial probability method, which is a tool for calculating and balancing the probability of drawing inaccurate determinations of impairment or attainment, for assessing water quality data. Specifically, Missouri’s Listing Methodology discusses the use of the binomial test to determine if “no more than 10% of all samples exceed the water quality criterion.”³ Data indicate that this water body is not impaired for low dissolved oxygen since only four of 20 measurements indicate an excursion from criteria. In today’s action, the EPA is approving the delisting of Petite Saline Creek for low dissolved oxygen because this water body no longer requires the development of a TMDL for low dissolved oxygen, consistent with 40 CFR § 130.7(b).

Pike Creek (WBID 2815) – Missouri identified this water body as impaired by temperature on its 2010 Missouri § 303(d) List. The state has proposed to delist this water body because the data does not indicate impairment. Missouri’s listing methodology cites EPA’s IR guidance and recommended use of the “10% rule” (i.e., no more than 10% of measurements fail to meet the water quality criterion) for evaluating conventional pollutants.² Many states implement the “10% rule” by using the binomial probability method, which is a tool for calculating and balancing the probability of drawing inaccurate determinations of impairment or attainment, for assessing water quality data. Specifically, Missouri’s Listing Methodology discusses the use of the binomial test to determine if “no more than 10% of all samples exceed the water quality

criterion.”³ Data indicate that this water body is not impaired for temperature since only two of eight measurements indicate an excursion from criteria. In today’s action, the EPA is approving the delisting of Pike Creek for temperature because this water body no longer requires the development of a TMDL for temperature, consistent with 40 CFR § 130.7(b).

Pomme de Terre Lake (WBID 7238) – Missouri identified this water body as impaired by chlorophyll a on its 2010 Missouri § 303(d) List. After the EPA’s disapproval of Missouri’s submitted general lake nutrient criteria on August 16, 2011, the state has proposed to delist all lakes that were listed using these now-disapproved criteria. In today’s action, the EPA is approving the delisting of Pomme de Terre Lake because this water body no longer requires the development of a TMDL for chlorophyll a, consistent with 40 CFR 130.7(b).

Pomme de Terre Lake (WBID 7238) – Missouri identified this water body as impaired by nitrogen on its 2010 Missouri § 303(d) List. After the EPA’s disapproval of Missouri’s submitted general lake nutrient criteria on August 16, 2011, the state has proposed to delist all lakes that were listed using these now-disapproved criteria. In today’s action, the EPA is approving the delisting of Pomme de Terre Lake because this water body no longer requires the development of a TMDL for nitrogen, consistent with 40 CFR 130.7(b).

Richland Creek (WBID 0884) – Missouri identified this water body as impaired by low dissolved oxygen on its 2010 Missouri § 303(d) List. The state has proposed to delist this water body because the data does not indicate impairment. Missouri’s listing methodology cites EPA’s IR guidance and recommended use of the “10% rule” (i.e., no more than 10% of measurements fail to meet the water quality criterion) for evaluating conventional pollutants.² Many states implement the “10% rule” by using the binomial probability method, which is a tool for calculating and balancing the probability of drawing inaccurate determinations of impairment or attainment, for assessing water quality data. Specifically, Missouri’s Listing Methodology discusses the use of the binomial test to determine if “no more than 10% of all samples exceed the water quality criterion.”³ Data indicate that this water body is not impaired for low dissolved oxygen since only 3 of 23 measurements indicate an excursion from criteria. In today’s action, the EPA is approving the delisting of Richland Creek for low dissolved oxygen because this water body no longer requires the development of a TMDL for low dissolved oxygen, consistent with 40 CFR § 130.7(b).

River Des Peres (WBID 1711) – Missouri identified this water body as impaired by low dissolved oxygen on its 2010 Missouri § 303(d) List. The state has proposed to delist this water body because the data does not indicate impairment. Missouri’s listing methodology cites EPA’s IR guidance and recommended use of the “10% rule” (i.e., no more than 10% of measurements fail to meet the water quality criterion) for evaluating conventional pollutants.² Many states implement the “10% rule” by using the binomial probability method, which is a tool for calculating and balancing the probability of drawing inaccurate determinations of impairment or attainment, for assessing water quality data. Specifically, Missouri’s Listing Methodology discusses the use of the binomial test to determine if “no more than 10% of all samples exceed the water quality criterion.”³ Data indicate that this water body is not impaired for low dissolved oxygen since only 5 of 53 measurements indicate an excursion from criteria. In today’s action, the EPA is approving the delisting of River Des Peres for low dissolved oxygen because this water body no longer requires the development of a TMDL for low dissolved oxygen, consistent with 40 CFR § 130.7(b).

Sadler Branch (WBID 3577) – Missouri identified this water body as impaired by low dissolved oxygen on its 2010 Missouri § 303(d) List. The state has proposed to delist this water body because the data does not indicate impairment. Missouri’s listing methodology cites EPA’s IR guidance and recommended use of the “10% rule” (i.e., no more than 10% of measurements fail to meet the water quality criterion) for evaluating conventional pollutants.² Many states implement the “10% rule” by using the binomial probability method, which is a tool for calculating and balancing the probability of drawing inaccurate determinations of impairment or attainment, for assessing water quality data. Specifically, Missouri’s Listing Methodology discusses the use of the binomial test to determine if “no more than 10% of all samples exceed the water quality criterion.”³ Data indicate that this water body is not impaired for low dissolved oxygen since only two of eight measurements indicate an excursion from criteria. In today’s action, the EPA is approving the delisting of Sadler Branch for low dissolved oxygen because this water body no longer requires the development of a TMDL for low dissolved oxygen, consistent with 40 CFR § 130.7(b).

Salt River (WBID 0091) – Missouri identified this water body as impaired by mercury in fish tissue on its 2010 Missouri § 303(d) List. In its assessment for the 2012 Missouri 303(d) List, Missouri identified that the data previously used to list this water was not from this segment. There is no fish tissue data available from this segment of Salt River. In today’s action, the EPA is approving the delisting of Salt River for mercury in fish tissue because this water body no longer requires the development of a TMDL for mercury in fish tissue, consistent with 40 CFR § 130.7(b).

Shoal Creek (WBID 3231) – Missouri identified this water body as impaired by low dissolved oxygen on its 2010 Missouri § 303(d) List. The state has proposed to delist this water body because the data does not indicate impairment. Missouri’s listing methodology cites EPA’s IR guidance and recommended use of the “10% rule” (i.e., no more than 10% of measurements fail to meet the water quality criterion) for evaluating conventional pollutants.² Many states implement the “10% rule” by using the binomial probability method, which is a tool for calculating and balancing the probability of drawing inaccurate determinations of impairment or attainment, for assessing water quality data. Specifically, Missouri’s Listing Methodology discusses the use of the binomial test to determine if “no more than 10% of all samples exceed the water quality criterion.”³ Data indicate that this water body is not impaired for low dissolved oxygen since only 3 of 12 measurements indicate an excursion from criteria. In today’s action, the EPA is approving the delisting of Shoal Creek for low dissolved oxygen because this water body no longer requires the development of a TMDL for low dissolved oxygen, consistent with 40 CFR § 130.7(b).

South Davis Creek (WBID 0913) – Missouri identified this water body as impaired by low dissolved oxygen on its 2010 Missouri § 303(d) List. The state has proposed to delist this water body because the data does not indicate impairment. Missouri’s listing methodology cites EPA’s IR guidance and recommended use of the “10% rule” (i.e., no more than 10% of measurements fail to meet the water quality criterion) for evaluating conventional pollutants.² Many states implement the “10% rule” by using the binomial probability method, which is a tool for calculating and balancing the probability of drawing inaccurate determinations of impairment or attainment, for assessing water quality data. Specifically, Missouri’s Listing Methodology discusses the use of the binomial test to determine if “no more than 10% of all samples exceed

the water quality criterion.”³ Data indicate that this water body is not impaired for low dissolved oxygen since only 2 of 10 measurements indicate an excursion from criteria. In today’s action, the EPA is approving the delisting of South Davis Creek for low dissolved oxygen because this water body no longer requires the development of a TMDL for low dissolved oxygen, consistent with 40 CFR § 130.7(b).

Stockton Branch (WBID 1361) – Missouri identified this water body as impaired by low dissolved oxygen on its 2010 Missouri § 303(d) List. The state has proposed to delist this water body because the data does not indicate impairment. Data indicate that this water body is not impaired for low dissolved oxygen since all data measured after sewage treatment plant upgrades have met criteria. In today’s action, the EPA is approving the delisting of Stockton Branch for low dissolved oxygen because this water body no longer requires the development of a TMDL for low dissolved oxygen, consistent with 40 CFR § 130.7(b).

Stockton Lake (WBID 7235) – Missouri identified this water body as impaired by chlorophyll a on its 2010 Missouri § 303(d) List. After the EPA’s disapproval of Missouri’s submitted general lake nutrient criteria on August 16, 2011, the state has proposed to delist all lakes that were listed using these now-disapproved criteria. In today’s action, the EPA is approving the delisting of Stockton Lake because this water body no longer requires the development of a TMDL for chlorophyll a, consistent with 40 CFR 130.7(b).

Stockton Lake (WBID 7235) – Missouri identified this water body as impaired by nitrogen on its 2010 Missouri § 303(d) List. After the EPA’s disapproval of Missouri’s submitted general lake nutrient criteria on August 16, 2011, the state has proposed to delist all lakes that were listed using these now-disapproved criteria. In today’s action, the EPA is approving the delisting of Stockton Lake because this water body no longer requires the development of a TMDL for nitrogen, consistent with 40 CFR 130.7(b).

Sugar Lake [Lewis and Clark State Park] (WBID 7067) – Missouri identified this water body as impaired by bacteria on its 2010 Missouri § 303(d) List. Data submitted to the EPA by the MDNR show geometric means from the last three years of data are all below the water quality standards criterion. These data indicate that this water body is not impaired for bacteria. In today’s action, the EPA is approving the delisting of Sugar Lake for bacteria because this water body no longer requires the development of a TMDL for bacteria, consistent with 40 CFR § 130.7(b).

Todd Creek (WBID 0316) – Missouri identified this water body as impaired by low dissolved oxygen on its 2010 Missouri § 303(d) List. The state has proposed to delist this water body because the data does not indicate impairment. Missouri’s listing methodology cites EPA’s IR guidance and recommended use of the “10% rule” (i.e., no more than 10% of measurements fail to meet the water quality criterion) for evaluating conventional pollutants.² Many states implement the “10% rule” by using the binomial probability method, which is a tool for calculating and balancing the probability of drawing inaccurate determinations of impairment or attainment, for assessing water quality data. Specifically, Missouri’s Listing Methodology discusses the use of the binomial test to determine if “no more than 10% of all samples exceed the water quality criterion.”³ Data indicate that this water body is not impaired for low dissolved oxygen since only 4 of 28 measurements indicate an excursion from criteria. In today’s action, the EPA is approving the delisting of Todd Creek for low dissolved oxygen because this water

body no longer requires the development of a TMDL for low dissolved oxygen, consistent with 40 CFR § 130.7(b).

Unionville Lake (WBID 7154) – Missouri identified this water body as impaired by phosphorus on its 2010 Missouri § 303(d) List. After the EPA’s disapproval of Missouri’s submitted general lake nutrient criteria on August 16, 2011, the state has proposed to delist all lakes that were listed using these now-disapproved criteria. In today’s action, the EPA is approving the delisting of Unionville Lake because this water body no longer requires the development of a TMDL for phosphorus, consistent with 40 CFR 130.7(b).

Wolf Creek (WBID 2879) – Missouri identified this water body as impaired by low dissolved oxygen on its 2010 Missouri § 303(d) List. The state has proposed to delist this water body because the data does not indicate impairment. Missouri’s listing methodology cites EPA’s IR guidance and recommended use of the “10% rule” (i.e., no more than 10% of measurements fail to meet the water quality criterion) for evaluating conventional pollutants.² Many states implement the “10% rule” by using the binomial probability method, which is a tool for calculating and balancing the probability of drawing inaccurate determinations of impairment or attainment, for assessing water quality data. Specifically, Missouri’s Listing Methodology discusses the use of the binomial test to determine if “no more than 10% of all samples exceed the water quality criterion.”³ Data indicate that this water body is not impaired for low dissolved oxygen since only 4 of 23 measurements indicate an excursion from criteria. In today’s action, the EPA is approving the delisting of Wolf Creek for low dissolved oxygen because this water body no longer requires the development of a TMDL for low dissolved oxygen, consistent with 40 CFR § 130.7(b).

D. Waters Delisted and Relisted Under New Name, Number, or More Specific Cause (24 water bodies)

Baldwin Park Tributary (WBID 3168U-01) – This water body was listed on the 2010 Missouri § 303(d) List by impairment for zinc. In its proposed 2012 § 303(d) List the state changed the WBID from 3168U-01 to 3963 and changed the name to Tributary to Chat Creek. In today’s action, the EPA is approving the delisting of zinc in WBID 3168U-01, consistent with 40 CFR § 130.7(b). On the 2012 Missouri § 303(d) List this water body is listed as Tributary to Chat Creek (WBID 3963) with a pollutant of zinc.

Bee Fork (WBID 2760U-01) – This water body was listed on the 2010 Missouri § 303(d) List by impairment for lead in sediment. In its proposed 2012 § 303(d) List the state changed the WBID from 2760U-01 to 3966. In today’s action, the EPA is approving the delisting of lead in sediment in WBID 2760U-01, consistent with 40 CFR § 130.7(b). On the 2012 Missouri § 303(d) List this water body is listed as Bee Fork (WBID 3966) with a pollutant of lead in sediment.

Big Creek (WBID 2916) – This water body was listed on the 2010 Missouri § 303(d) List by impairment for metals (other than mercury). In its proposed 2012 § 303(d) List the state delisted the pollutant metals (other than mercury) based on their more specific listing of cadmium and lead in sediment. In today’s action, the EPA is approving the delisting of metals (other than mercury) in WBID 2916, consistent with 40 CFR § 130.7(b). On the 2012 Missouri § 303(d)

List this water body is listed as Big Creek (WBID 2916) with pollutants of cadmium and lead in sediment.

Busch W.A. #37 (WBID 7056U) – This water body was listed on the 2010 Missouri § 303(d) List by impairment for mercury in fish tissue. In its proposed 2012 § 303(d) List the state changed the WBID from 7056U to 7627. In today’s action, the EPA is approving the delisting of mercury in fish tissue in WBID 7056U, consistent with 40 CFR § 130.7(b). On the 2012 Missouri § 303(d) List this water body is listed as Busch Lake #37 (WBID 7627) with a pollutant of mercury in fish tissue.

Cedar Creek (WBID 0737) – This water body was listed on the 2010 Missouri § 303(d) List for impairment by an unknown pollutant. In its proposed 2012 § 303(d) List the state changed the pollutant from unknown to an impaired aquatic macroinvertebrate bioassessment. In today’s action, the EPA is approving the change of pollutant from unknown to aquatic macroinvertebrate bioassessment, consistent with 40 CFR § 130.7(b).

Cedar Creek (WBID 1344) – This water body was listed on the 2010 Missouri § 303(d) List for impairment by an unknown pollutant. In its proposed 2012 § 303(d) List the state changed the pollutant from unknown to an impaired aquatic macroinvertebrate bioassessment. In today’s action, the EPA is approving the change of pollutant from unknown to aquatic macroinvertebrate bioassessment, consistent with 40 CFR § 130.7(b).

Cedar Creek (WBID 1357) – This water body was listed on the 2010 Missouri § 303(d) List for impairment by an unknown pollutant. In its proposed 2012 § 303(d) List the state changed the pollutant from unknown to an impaired aquatic macroinvertebrate bioassessment. In today’s action, the EPA is approving the change of pollutant from unknown to aquatic macroinvertebrate bioassessment, consistent with 40 CFR § 130.7(b).

Courtois Creek (WBID 1943) – This water body was listed on the 2010 Missouri § 303(d) List by impairment for metals (other than mercury). In its proposed 2012 § 303(d) List the state delisted the pollutant metals (other than mercury) based on their more specific listing of lead and zinc in sediment. In today’s action, the EPA is approving the delisting of metals (other than mercury) in WBID 1943, consistent with 40 CFR § 130.7(b). On the 2012 Missouri § 303(d) List this water body is listed as Courtois Creek (WBID 1943) with pollutants of lead and zinc in sediment.

Crooked Creek (WBID 1928U-01) – This water body was listed on the 2010 Missouri § 303(d) List by impairment for cadmium. In its proposed 2012 § 303(d) List the state changed the WBID from 1928U-01 to 3961. In today’s action, the EPA is approving the delisting of cadmium in WBID 1928U-01, consistent with 40 CFR § 130.7(b). On the 2012 Missouri § 303(d) List this water body is listed as Crooked Creek (WBID 3961) with a pollutant of cadmium.

Crooked Creek (WBID 1928U-01) – This water body was listed on the 2010 Missouri § 303(d) List by impairment for copper. In its proposed 2012 § 303(d) List the state changed the WBID from 1928U-01 to 3961. In today’s action, the EPA is approving the delisting of copper in WBID 1928U-01, consistent with 40 CFR § 130.7(b). On the 2012 Missouri § 303(d) List this water body is listed as Crooked Creek (WBID 3961) with a pollutant of copper.

Douger Branch (WBID 3168) – This water body was listed on the 2010 Missouri § 303(d) List for impairment by cadmium. This water body has been renamed. The name of the water body with this identification number is now Chat Creek. In today’s action, the EPA is approving the delisting of cadmium in Douger Branch, consistent with 40 CFR § 130.7(b). On the 2012 Missouri § 303(d) List this water body is listed as Chat Creek (WBID 3168) with a pollutant of cadmium.

Douger Branch (WBID 3168) – This water body was listed on the 2010 Missouri § 303(d) List for impairment by lead in sediment. This water body has been resegmented. The WBID of the water body with this name is now 3810. In today’s action, the EPA is approving the delisting of lead in sediment in Douger Branch (WBID 3168), consistent with 40 CFR § 130.7(b). On the 2012 Missouri § 303(d) List this water body is listed as Douger Branch (WBID 3810) with a pollutant of lead in sediment.

Douger Branch (WBID 3168) – This water body was listed on the 2010 Missouri § 303(d) List for impairment by zinc in sediment. This water body has been resegmented. The WBID of the water body with this name is now 3810. In today’s action, the EPA is approving the delisting of zinc in sediment in Douger Branch (WBID 3168), consistent with 40 CFR § 130.7(b). On the 2012 Missouri § 303(d) List this water body is listed as Douger Branch (WBID 3810) with a pollutant of zinc in sediment.

Dry Branch (WBID 3189) – This water body was listed on the 2010 Missouri § 303(d) List for impairment by *E. coli*. This water body has been renamed. The name of the water body with this identification number is now Dry Fork. In today’s action, the EPA is approving the delisting of *E. coli* in Dry Branch, consistent with 40 CFR § 130.7(b). On the 2012 Missouri § 303(d) List this water body is listed as Dry Fork (WBID 3189) with a pollutant of *E. coli*.

Flat River Creek Tributary (WBID 2168U-01) – This water body was listed on the 2010 Missouri § 303(d) List by impairment for zinc. In its proposed 2012 § 303(d) List the state changed the WBID from 2168U-01 to 3938. In today’s action, the EPA is approving the delisting of zinc in WBID 2168U-01, consistent with 40 CFR § 130.7(b). On the 2012 Missouri § 303(d) List this water body is listed as Trib. to Flat River Creek (WBID 3938) with a pollutant of zinc.

Foster Branch (WBID 0747U-01) – This water body was listed on the 2010 Missouri § 303(d) List for impairment by ammonia. In its proposed 2012 § 303(d) List the state changed the WBID from 0747U-01 to 3943 and the name to Tributary to Foster Creek. In today’s action, the EPA is approving the delisting of ammonia in WBID 0747U-01, consistent with 40 CFR § 130.7(b). On the 2012 Missouri § 303(d) List this water body is listed as Trib. to Foster Branch (WBID 3943) with a pollutant of unionized ammonia.

Horse Creek (WBID 1348) – This water body was listed on the 2010 Missouri § 303(d) List for impairment by an unknown pollutant. In its proposed 2012 § 303(d) List the state changed the pollutant from unknown to an impaired aquatic macroinvertebrate bioassessment. In today’s action, the EPA is approving the change of pollutant from unknown to aquatic macroinvertebrate bioassessment, consistent with 40 CFR § 130.7(b).

Lake of the Woods (WBID 0419U-01) – This water body was listed on the 2010 Missouri § 303(d) List for impairment by mercury in fish tissue. In its proposed 2012 § 303(d) List the state changed the WBID from 0419U-01 to 7629. In today’s action, the EPA is approving the delisting of mercury in fish tissue in WBID 0419U-01, consistent with 40 CFR § 130.7(b). On the 2012 Missouri § 303(d) List this water body is listed as Lake of the Woods (WBID 7629) with a pollutant of mercury in fish tissue.

Little Beaver Creek (WBID 1529) – This water body was listed on the 2010 Missouri § 303(d) List for impairment by inorganic sediment. In its proposed 2012 § 303(d) List the state changed the pollutant from inorganic sediment to sedimentation/siltation. In today’s action, the EPA is approving the change of pollutant from inorganic sediment to sedimentation/siltation, consistent with 40 CFR § 130.7(b).

Middle Indian Creek (WBID 3262) – This water body was listed on the 2010 Missouri § 303(d) List for impairment by an unknown pollutant. In its proposed 2012 § 303(d) List the state changed the pollutant from unknown to an impaired aquatic macroinvertebrate bioassessment. In today’s action, the EPA is approving the change of pollutant from unknown to aquatic macroinvertebrate bioassessment, consistent with 40 CFR § 130.7(b).

Middle Indian Creek (WBID 3263) – This water body was listed on the 2010 Missouri § 303(d) List for impairment by an unknown pollutant. In its proposed 2012 § 303(d) List the state changed the pollutant from unknown to an impaired aquatic macroinvertebrate bioassessment. In today’s action, the EPA is approving the change of pollutant from unknown to aquatic macroinvertebrate bioassessment, consistent with 40 CFR § 130.7(b).

Muddy Creek (WBID 0853) – This water body was listed on the 2010 Missouri § 303(d) List for impairment by an unknown pollutant. In its proposed 2012 § 303(d) List the state changed the pollutant from unknown to an impaired aquatic macroinvertebrate bioassessment. In today’s action, the EPA is approving the change of pollutant from unknown to aquatic macroinvertebrate bioassessment, consistent with 40 CFR § 130.7(b).

Philips Lake (WBID 1003U-01) – This water body was listed on the 2010 Missouri § 303(d) List for impairment by mercury in fish tissue. In its proposed 2012 § 303(d) List the state changed the water body from Philips Lake (WBID 1003U-01) to Perry Philips Lake (WBID 7628). In today’s action, the EPA is approving the delisting of mercury in fish tissue in Philips Lake (WBID 1003U-01), consistent with 40 CFR § 130.7(b). On the 2012 Missouri § 303(d) List this water body is listed as Perry Philips Lake (WBID 7628) with a pollutant of mercury in fish tissue.

River des Peres (WBID 1711) – This water body was listed on the 2010 Missouri § 303(d) List for impairment by chloride. The state has combined segments 1710 and 1711 of the River des Peres. As a result, this segment of River des Peres is proposed for delisting and segment 1710 is now listed for the pollutant chloride. In today’s action, the EPA is approving the delisting of chloride in River des Peres (WBID 1711), consistent with 40 CFR § 130.7(b). On the 2012 Missouri § 303(d) List this water body is listed as River des Peres (WBID 1710) with a pollutant of chloride.

River des Peres (WBID 1711U-01) – This water body was listed on the 2010 Missouri § 303(d) List for impairment by chloride. In its proposed 2012 § 303(d) List the state changed the water body from River des Peres (WBID 1711U-01) to River des Peres (WBID 3827). In today’s action, the EPA is approving the delisting of chloride in River des Peres (WBID 1711U-01), consistent with 40 CFR § 130.7(b). On the 2012 Missouri § 303(d) List this water body is listed as River des Peres (WBID 3827) with a pollutant of chloride.

Strother Creek (WBID 2751U-01) – This water body was listed on the 2010 Missouri § 303(d) List for impairment by arsenic in sediment. In its proposed 2012 § 303(d) List the state changed the water body from Strother Creek (WBID 2751U-01) to Strother Creek (WBID 3965). In today’s action, the EPA is approving the delisting of arsenic in sediment in Strother Creek (WBID 2751U-01), consistent with 40 CFR § 130.7(b). On the 2012 Missouri § 303(d) List this water body is listed as Strother Creek (WBID 3965) with a pollutant of arsenic in sediment.

Strother Creek (WBID 2751U-01) – This water body was listed on the 2010 Missouri § 303(d) List for impairment by lead in sediment. In its proposed 2012 § 303(d) List the state changed the water body from Strother Creek (WBID 2751U-01) to Strother Creek (WBID 3965). In today’s action, the EPA is approving the delisting of lead in sediment in Strother Creek (WBID 2751U-01), consistent with 40 CFR § 130.7(b). On the 2012 Missouri § 303(d) List this water body is listed as Strother Creek (WBID 3965) with a pollutant of lead in sediment.

Strother Creek (WBID 2751U-01) – This water body was listed on the 2010 Missouri § 303(d) List for impairment by nickel in sediment. In its proposed 2012 § 303(d) List the state changed the water body from Strother Creek (WBID 2751U-01) to Strother Creek (WBID 3965). In today’s action, the EPA is approving the delisting of nickel in sediment in Strother Creek (WBID 2751U-01), consistent with 40 CFR § 130.7(b). On the 2012 Missouri § 303(d) List this water body is listed as Strother Creek (WBID 3965) with a pollutant of nickel in sediment.

Strother Creek (WBID 2751U-01) – This water body was listed on the 2010 Missouri § 303(d) List for impairment by zinc in sediment. In its proposed 2012 § 303(d) List the state changed the water body from Strother Creek (WBID 2751U-01) to Strother Creek (WBID 3965). In today’s action, the EPA is approving the delisting of zinc in sediment in Strother Creek (WBID 2751U-01), consistent with 40 CFR § 130.7(b). On the 2012 Missouri § 303(d) List this water body is listed as Strother Creek (WBID 3965) with a pollutant of zinc in sediment.

West Fork Medicine Creek (WBID 0623) – This water body was listed on the 2010 Missouri § 303(d) List for impairment by an unknown pollutant. In its proposed 2012 § 303(d) List the state changed the pollutant from unknown to an impaired aquatic macroinvertebrate bioassessment. In addition this water body’s name has been changed to Little Medicine Creek. In today’s action, the EPA is approving the change of pollutant from unknown to aquatic macroinvertebrate bioassessment, consistent with 40 CFR § 130.7(b). On the 2012 Missouri § 303(d) List this water body is listed as Little Medicine Creek (WBID 0623) with an impaired aquatic macroinvertebrate assessment.

VII. EPA Proposed Changes to the 2012 Missouri § 303(d) List (Table 3)

After review of Missouri's submittal for its 2012 § 303(d) List, the EPA proposes to make certain additions and corrections to that submittal. These proposed actions are outlined below and consist of water body/pollutant pairs that the EPA proposes to restore or add to Missouri's list of impaired waters.

A. Water Bodies and Pollutants EPA Proposes Restoring or Adding to Missouri's 2012 CWA Section 303(d) List (six water bodies)

Dardenne Creek (WBID 0221) – The state had proposed to delist this water body for inorganic sediment and impairment by an unknown pollutant. This same action was proposed in the state's 2010 Section 303(d) List submittal. The EPA restored this water body and these two pollutants to the 2010 Missouri Section 303(d) List on October 6, 2011. In its submittal for 2012 the state did not include any new or additional data for these impairments.

The state's analysis for inorganic sediment again pooled data from this segment with an adjacent unimpaired segment. The analysis for macroinvertebrates shows 75 percent of the biological assessments indicate an impaired condition. According to the state's listing methodology this is indicative of non-attainment.

As such, the EPA disapproves Missouri's decision to remove these water body/pollutant pairs from the § 303(d) List and is proposing to relist inorganic sediment and impairment by an unknown pollutant to the 2012 Missouri § 303(d) List.

Peruque Creek (WBID 0217 and 0218) – The state has proposed to delist these two water bodies for inorganic sediment. This same action was proposed in the state's 2008 and 2010 Section 303(d) List submittals. The EPA restored these water bodies and pollutants to the 2010 Missouri Section 303(d) List on October 6, 2011. In its evaluation and public notice of its decision to add these segments to Missouri's 2008 List, the EPA relied on data from the Missouri Department of Conservation in addition to the data provided by the Missouri Department of Natural Resources. In its submittal for 2012 the state did not include any new or additional data for these impairments. By not providing additional data, the EPA is unable to determine whether conditions in these segments has changed to demonstrate good cause to delist these segments. As such, the EPA disapproves Missouri's decision to remove these water bodies/pollutant pairs from the § 303(d) List and is proposing to relist both segments of Peruque Creek to the 2012 Missouri § 303(d) List with the impairment inorganic sediment.

Straight Fork (WBID 0959) – The state had proposed to delist this water body for chloride based on a permit-in-lieu of a TMDL submitted to the EPA in 2006. The EPA has not approved that submittal. Without an approved permit-in-lieu of a TMDL there is no good cause to remove this impairment. As such, the EPA disapproves Missouri's decision to remove this water body/pollutant pair from the § 303(d) List and is proposing to relist Straight Fork to the 2012 Missouri § 303(d) List with the pollutant chloride.

Truitt Creek (WBID 3175) – The state proposed to delist this water body for bacteria based on the removal of the whole body contact recreational use. In its August 16, 2011, decision on Missouri's submitted water quality standards triennial review, the EPA disapproved the removal of the primary contact use for this water body. As such, the EPA disapproves Missouri's decision

to remove this water body/pollutant pair from the § 303(d) List and is proposing to relist Truitt Creek to the 2012 Missouri § 303(d) List with the pollutant bacteria.

Whetstone Creek (WBID 1505U-01) – The state had proposed to delist this water body for ammonia based on a TMDL written to target low dissolved oxygen that was approved by the EPA in 2002. While the EPA has approved that TMDL, the TMDL explicitly states that the goal of the TMDL is to meet water quality standards in the classified segment of Whetstone Creek. While the TMDL did allocate ammonia limits in addition to biological oxygen demand limits to address the dissolved oxygen concentration in the classified portion of the stream beyond a mixing zone, the ammonia limits were not low enough to protect aquatic life in the unclassified segment. As such, the EPA disapproves Missouri’s decision to remove this water body/pollutant pair from the § 303(d) List and is proposing to relist Whetstone Creek to the 2012 Missouri § 303(d) List with the pollutant ammonia.

B. Proposed change in listed pollutant (one water body)

Drywood Creek (WBID 1314) – In the state’s submittal the pollutant for this water body was identified as total dissolved solids. The listing was made to address an impairment caused by excursion of the state’s EPA-approved water quality standard for sulfate plus chloride. After discussion with the state, the EPA proposes to change the pollutant from total dissolved solids to sulfate plus chloride.

C. Proposing to delist due to error in listing (one water body)

West Fork Locust Creek (WBID 0613) – In the state’s submittal this water body was listed as impaired for dissolved oxygen and an unknown pollutant. In the EPA’s final action regarding the 2010 Missouri § 303(d) List, this water body and both pollutants were delisted based on the establishment of a TMDL by the EPA. After discussion with the state, the EPA proposes to delist this water body for these two pollutants.

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Table 1

Missouri-Submitted Water body/Pollutant Pairs the EPA Approves for Delisting

No.	Water Body Name	WBID	Class	Classified Segment (mi/acres)	County	Pollutant	Comment
1	Atkinson Lake	7234	L3	434	St. Clair	Chlorophyll a	Criteria not approved
2	Atkinson Lake	7234	L3	434	St. Clair	Phosphorus	Criteria not approved
3	Bee Fork	2760	C	8.5	Reynolds	Lead (S)	Resegmented, impaired segment listed under WBID 3966
4	Big Creek	2916	P	34.1	Wayne/Iron	Metals (S)	Listed specific metals
5	Trib. to Big Cr (Scroggins Br)	2916U-01	U	0.5	Iron	Cadmium	TMDL
6	Trib. to Big Cr (Scroggins Br)	2916U-01	U	0.5	Iron	Zinc	TMDL
7	Bilby Ranch Lake	7368	L3	95	Nodaway	Chlorophyll a	Criteria not approved
8	Binder Lake	7185	L3	127	Cole	Chlorophyll a	Criteria not approved
9	Binder Lake	7185	L3	127	Cole	Phosphorus	Criteria not approved
10	Bobs Creek	0035	C	14.2	Lincoln	Low Dissolved Oxygen	Meeting WQS
11	Brush Creek	1371	P	4.7	Polk/St. Clair	Organic Sediment	Meeting WQS
12	Brush Creek (South Fork)	1372	C	5.5	Polk	Low Dissolved Oxygen	Listed in error
13	Cedar Creek	0737	C	37.4	Callaway	Unknown	Now listed under aquatic macroinvertebrate
14	Cedar Creek, Tributary to (Renfro Creek)	0743	C	1.5	Callaway	Low Dissolved Oxygen	Meeting WQS
15	Center Creek	3203	P	26.8	Jasper	Bacteria	Meeting WQS
16	Clear Fork	0935	P	25.8	Johnson	Low Dissolved Oxygen	Meeting WQS
17	Coon Creek	0132	C	11.8	Randolph/Monroe	Low Dissolved Oxygen	Meeting WQS
18	Fishpot Creek	2186	P	3.5	St. Louis	Low Dissolved Oxygen	Meeting WQS
19	Grand Glaizre Creek	2184	C	4	St. Louis	Bacteria	Meeting WQS

20	Gravois Creek	1713	C	6	St. Louis	Low Dissolved Oxygen	Meeting WQS
21	Grindstone Reservoir	7384	L1	173	Dekalb	Chlorophyll a	Criteria not approved
22	Grindstone Reservoir	7384	L1	173	Dekalb	Nitrogen	Criteria not approved
23	Grindstone Reservoir	7384	L1	173	Dekalb	Phosphorus	Criteria not approved
24	Harrison County Lake	7386	L1	280	Harrison	Chlorophyll a	Criteria not approved
25	Harrison County Lake	7386	L1	280	Harrison	Phosphorus	Criteria not approved
26	Hazel Hill Lake	7387	L3	62	Johnson	Chlorophyll a	Criteria not approved
27	Indian Creek	1747	C	3.6	St. Genevieve	Low Dissolved Oxygen	Listed in error
28	Indian Creek	3256	P	30.8	McDonald/Newton	Unknown	Meeting WQS
29	Kraut Run Lake	7056	L3	164	St. Charles	Chlorophyll a	Criteria not approved
30	Kraut Run Lake	7056	L3	164	St. Charles	Phosphorus	Criteria not approved
31	La Belle Lake #2	7023	L1	98	Lewis	Chlorophyll a	Criteria not approved
32	La Belle Lake #2	7023	L1	98	Lewis	Phosphorus	Criteria not approved
33	Lake Jacomo	7101	L3	998	Jackson	Chlorophyll a	Criteria not approved
34	Lake of the Ozarks	7205	L2	59520	Camden	Nitrogen	Criteria not approved
35	Lake of the Ozarks	7205	L2	59520	Camden	Phosphorus	Criteria not approved
36	Lake Springfield	7312	L3	293	Greene	Chlorophyll a	Criteria not approved
37	Lake Springfield	7312	L3	293	Greene	Nitrogen	Criteria not approved
38	Lake Springfield	7312	L3	293	Greene	Phosphorus	Criteria not approved
39	Lake Ste Louise	7055	L3	710	St. Charles	Bacteria	Meeting WQS
40	Lake Taneycomo	7314	L2	2118.6	Taney	Nitrogen	Criteria not approved
41	Lake Wappapello	7336	L2	8200	Wayne/Butler	Chlorophyll a	Criteria not approved
42	Lake Wappapello	7336	L2	8200	Wayne/Butler	Nitrogen	Criteria not approved
43	Lake Wappapello	7336	L2	8200	Wayne/Butler	Phosphorus	Criteria not approved
44	Lone Elm Hollow	3216U	U	1.4	Jasper	Metals	Listed in error
45	Main Ditch	2814	C	13	Butler	Ammonia	TMDL

46	Maline Creek	1709	C	0.5	St. Louis	Low Dissolved Oxygen	Meeting WQS
47	Manito Lake	7198	L3	77	Moniteau	Nitrogen	Criteria not approved
48	Manito Lake	7198	L3	77	Moniteau	Phosphorus	Criteria not approved
49	Marceline New Lake	7136	L1	200	Chariton	Chlorophyll a	Criteria not approved
50	Marceline New Lake	7136	L1	200	Chariton	Nitrogen	Criteria not approved
51	Marceline New Lake	7136	L1	200	Chariton	Phosphorus	Criteria not approved
52	Mark Twain Lake	7033	L2	18132	Ralls	Nitrogen	Criteria not approved
53	McDaniel Lake	7236	L1	218	Greene	Chlorophyll a	Criteria not approved
54	McDaniel Lake	7236	L1	218	Greene	Phosphorus	Criteria not approved
55	McKenzie Creek	2786	P	6.3	Wayne	Low Dissolved Oxygen	Permit-in-Lieu of TMDL
56	Meramec River	1841	P	76	Franklin/Jefferson	Mercury (T)	Meeting WQS
57	Middle Fork Salt River	0121	P	58.1	Macon/Monroe	Low Dissolved Oxygen	Meeting WQS
58	Moberly Rothwell Lake	7165	L3	27	Randolph	Chlorophyll a	Criteria not approved
59	Monzingo Lake	7402	L1	898	Nodaway	Chlorophyll a	Criteria not approved
60	Muddy Creek	0853	P	62.2	Pettis	Color	Meeting WQS
61	Nodaway Lake	7076	L3	73	Nodaway	Chlorophyll a	Criteria not approved
62	Nodaway Lake	7076	L3	73	Nodaway	Nitrogen	Criteria not approved
63	North Lake	7218	L3	19	Cass	Chlorophyll a	Criteria not approved
64	North Lake	7218	L3	19	Cass	Phosphorus	Criteria not approved
65	North Moreau Creek	0942	P	47.9	Moniteau	Low Dissolved Oxygen	TMDL
66	Odessa Lake	7093	L1	87	Lafayette	Chlorophyll a	Criteria not approved
67	Odessa Lake	7093	L1	87	Lafayette	Nitrogen	Criteria not approved
68	Osage River	1031	P	81.9	Osage/Miller	Total Dissolved Gas	Meeting WQS
69	Petite Saline Creek	0785	P	21	Cooper/Moniteau	Low Dissolved Oxygen	Listed in error
70	Pike Creek	2815	C	6	Butler	Temperature	Meeting WQS

71	Pomme de Terre Lake	7238	L2	7820	Hickory/Polk	Chlorophyll a	Criteria not approved
72	Pomme de Terre Lake	7238	L2	7820	Hickory/Polk	Nitrogen	Criteria not approved
73	Richland Creek	0884	C	10	Morgan	Low Dissolved Oxygen	Meeting WQS
74	River des Peres	1711	C	2.6	St. Louis	Low Dissolved Oxygen	Meeting WQS
75	Sadler Branch	3577	C	0.8	Polk	Low Dissolved Oxygen	Meeting WQS
76	Salt River	0091	P	29	Ralls/Pike	Mercury (T)	Segment misidentified, now listed under WBID 0103
77	Shoal Creek	3231	C	5	Barry	Low Dissolved Oxygen	Meeting WQS
78	South Davis Creek	0913	C	4.6	Lafayette	Low Dissolved Oxygen	Meeting WQS
79	Stockton Branch	1361	C	3.6	Cedar	Low Dissolved Oxygen	Meeting WQS
80	Stockton Lake	7235	L2	23680	Cedar	Chlorophyll a	Criteria not approved
81	Stockton Lake	7235	L2	23680	Cedar	Nitrogen	Criteria not approved
82	Sugar Lake (Lewis and Clark State Park)	7067	L3	403	Buchanan	Bacteria	Meeting WQS
83	Tributary to Little Muddy Creek	3490	C	1	Pettis	Color	Meeting WQS
84	Todd Creek	0316	C	9.9	Platte	Low Dissolved Oxygen	Meeting WQS
85	Turkey Creek	3282	P	2.4	St. Francois	Low Dissolved Oxygen	Meeting WQS
86	Unionville Lake	7154	L3	74	Putnam	Phosphorus	Criteria not approved
87	West Fork Sni-a-Bar	0400	P	9	Jackson	Low Dissolved Oxygen	TMDL
88	Wolf Creek	2879	C	8	St. Francois	Low Dissolved Oxygen	Meeting WQS

Table 2

Missouri-Submitted Water Quality-Limited Segments the EPA Approves for Inclusion on Missouri’s 2012 Section 303(d) List

Water body/pollutant pairs where the MDNR subdivided the classified segment to include additional information about the pollutant or pollutant source (see Section IV.D, Table 2) are denoted with an “-a,” “-b,” etc.

No.	Water Body Name	WBID	Class	MDNR Proposed Impairment Size	MDNR Water Body Size	County Upstream/ Downstream	Pollutant
1	Antire Cr.	2188	P	1.9	1.9	St. Louis	Escherichia coli (W)
2	Antire Cr.	2188	P	1.9	1.9	St. Louis	pH (W)
3	Bass Cr.	0752	C	4.4	4.4	Boone	Escherichia coli (W)
4	Baynham Br.	3240	P	4.0	4	Newton	Escherichia coli (W)
5	Beaver Br.	3265	P	2.0	2.0	McDonald	Aquatic Macroinvertebrate Bioassessments (W)
6	Bee Fk.	2760	C	1.4	8.7	Reynolds	Lead (W)
7	Bee Fk.	3966	U	0.8	n/a	Reynolds	Lead (S)
8	Belcher Branch Lake	7365	L3	55.0	55	Buchanan	Mercury in Fish Tissue (T)
9	Big Cr.	0444	P	1.0	22	Harrison	Ammonia, Total (W)
10	Big Cr.	0444	P	6.0	22	Harrison	Oxygen, Dissolved (W)
11	Big Cr.	1250	P	70.5	70.5	Jackson/Henry	Escherichia coli (W)
12	Big Cr.	2673	P	28.7	28.7	Texas/Shannon	Oxygen, Dissolved (W)
13	Big Cr.	2916	P	1.8	34.1	Iron	Cadmium (S)
14	Big Cr.	2916	P	1.8	34.1	Iron	Lead (S)
15	Big Piney R.	1578	P	4.0	8	Texas	Oxygen, Dissolved (W)
16	Big R.	2080	P	18.6	68	St. Francois	Cadmium (S)
17	Big R.	2080	P	18.6	68	St. Francois	Zinc (S)
18	Black Cr.	0111	C	19.4	19.4	Shelby	Escherichia coli (W)
19	Black Cr.	0111	C	19.4	19.4	Shelby	Oxygen, Dissolved (W)

No.	Water Body Name	WBID	Class	MDNR Proposed Impairment Size	MDNR Water Body Size	County Upstream/Downstream	Pollutant
20	Black Cr.	3825	P	1.6	1.6	St. Louis	Chloride (W)
21	Black Cr.	3825	P	1.6	1.6	St. Louis	Escherichia coli (W)
22	Black R.	2769	P	47.1	47.1	Butler	Mercury in Fish Tissue (T)
23	Black R.	2784	P	39.0	39.0	Wayne/Butler	Mercury in Fish Tissue (T)
24	Blackberry Cr.	3184	C	3.5	6.5	Jasper	Chloride (W)
25	Blackberry Cr.	3184	C	3.5	6.5	Jasper	Sulfate plus Chloride (W)
26	Blue R.	0417	P	4.0	4	Jackson	Escherichia coli (W)
27	Blue R.	0418	P	9.0	9	Jackson	Escherichia coli (W)
28	Blue R.	0419	P	9.0	9	Jackson	Escherichia coli (W)
29	Blue R.	0421	C	11.0	11	Jackson	Escherichia coli (W)
30	Bonhomme Cr.	1701	C	2.5	2.5	St. Louis	Escherichia coli (W)
31	Bonhomme Cr.	1701	C	2.5	2.5	St. Louis	pH (W)
32	Bonne Femme Cr.	0750	P	7.8	7.8	Boone	Escherichia coli (W)
33	Bonne Femme Cr.	0753	C	7.0	7	Boone	Escherichia coli (W)
34	Bourbeuse R.	2034	P	136.7	136.7	PHELPS/Franklin	Mercury in Fish Tissue (T)
35	Bowling Green (Old) Lake	7003	L1	28.2*	28.2*	Pike	Nitrogen, Total (W)
36	Bowling Green (Old) Lake	7003	L1	28.2*	28.2*	Pike	Phosphorus, Total (W)
37	Brazeau Cr.	1796	C	10.8	10.8	Perry	Escherichia coli (W)
38	Brush Cr.	1371	P	4.0	4	Polk/St. Clair	Oxygen, Dissolved (W)
39	Buffalo Cr.	3273	P	8.0	8	Newton/McDonald	Fishes Bioassessments (W)
40	Burgher Branch	1865	C	2.0	2	PHELPS	Oxygen, Dissolved (W)
41	Burriss Fork	0968	P	13.2	13.2	Moniteau	Oxygen, Dissolved (W)
42	Busch Lake #35	7057	L3	51.0	51	St. Charles	Mercury in Fish Tissue (T)
43	Busch Lake #37	7627		34.0	34	St. Charles	Mercury in Fish Tissue (T)

No.	Water Body Name	WBID	Class	MDNR Proposed Impairment Size	MDNR Water Body Size	County Upstream/Downstream	Pollutant
44	Capps Cr.	3234	P	5.0	5	Barry	Escherichia coli (W)
45	Castor River	2288	P	7.5	7.5	Bollinger	Escherichia coli (W)
46	Cedar Cr.	0737	C	7.9	37.4	Boone	Aquatic Macroinvertebrate Bioassessments (W)
47	Cedar Cr.	1344	P	10.0	31	Cedar	Aquatic Macroinvertebrate Bioassessments (W)
48	Cedar Cr.	1344	P	10.0	31	Cedar	Oxygen, Dissolved (W)
49	Cedar Cr.	1357	C	16.2	16.2	Cedar	Aquatic Macroinvertebrate Bioassessments (W)
50	Cedar Cr.	1357	C	16.2	16.2	Cedar	Oxygen, Dissolved (W)
51	Center Cr.	3203	P	19.0	26.8	Jasper	Cadmium (S)
52	Center Cr.	3203	P	19.0	26.8	Jasper	Cadmium (W)
53	Center Cr.	3203	P	19.0	26.8	Jasper	Lead (S)
54	Center Cr.	3203	P	19.0	26.8	Jasper	Zinc (S)
55	Center Cr.	3210	P	21.0	21	Newton/Jasper	Escherichia coli (W)
56	Center Cr.	3214	P	4.9	4.9	Lawrence/Newton	Escherichia coli (W)
57	Chat Cr.	3168	C	2.1	2.1	Lawrence	Cadmium (W)
58	Cinque Hommes Cr.	1781	C	8.3	17.1	Perry	Escherichia coli (W)
59	Clear Cr.	1333	P	15.5	15.5	Vernon/St.Clair	Oxygen, Dissolved (W)
60	Clear Cr.	1336	C	15.0	15	Vernon	Oxygen, Dissolved (W)
61	Clear Cr.	3238	P	11.1	11.1	Barry/Newton	Escherichia coli (W)
62	Clear Cr.	3239	C	3.5	3.5	Barry/Newton	Nutrient/Eutrophication Biol. Indicators (W)
63	Clear Cr.	3239	C	3.5	3.5	Barry/Newton	Oxygen, Dissolved (W)
64	Clearwater Lake	7326	L2	1635.0	1635	Reynolds/Wayne	Mercury in Fish Tissue (T)
65	Coldwater Cr.	1706	C	5.5	5.5	St. Louis	Chloride (W)
66	Coldwater Cr.	1706	C	5.5	5.5	St. Louis	Escherichia coli (W)

No.	Water Body Name	WBID	Class	MDNR Proposed Impairment Size	MDNR Water Body Size	County Upstream/ Downstream	Pollutant
67	Coldwater Cr.	1706	C	5.5	5.5	St. Louis	Oxygen, Dissolved (W)
68	Coonville Cr.	2177	C	1.3	1.3	St. Francois	Lead (W)
69	Courtois Cr.	1943	P	2.6	32	Washington	Lead (S)
70	Courtois Cr.	1943	P	2.6	32	Washington	Zinc (S)
71	Crane Cr.	2382	P	13.2	13.2	Stone	Aquatic Macroinvertebrate Bioassessments (W)
72	Craven Ditch	2816	C	11.6	11.6	Butler	Oxygen, Dissolved (W)
73	Creve Coeur Cr.	1703	C	2.0	2	St. Louis	Chloride (W)
74	Creve Coeur Cr.	1703	C	2.0	2	St. Louis	Escherichia coli (W)
75	Creve Coeur Cr.	1703	C	2.0	2	St. Louis	Oxygen, Dissolved (W)
76	Crooked Cr.	1928	P	3.5	3.5	Dent/Crawford	Cadmium (S)
77	Crooked Cr.	1928	P	3.5	3.5	Dent/Crawford	Cadmium (W)
78	Crooked Cr.	1928	P	3.5	3.5	Dent/Crawford	Lead (S)
79	Crooked Cr.	3961	U	5.2	n/a	Iron/Dent	Cadmium (W)
80	Crooked Cr.	3961	U	5.2	n/a	Iron/Dent	Copper (W)
81	Current R.	2636	P	124.0	124	Shannon/Ripley	Mercury in Fish Tissue (T)
82	Dardenne Cr.	0219	P1	7.0	7	St. Charles	Oxygen, Dissolved (W)
83	Dardenne Cr.	0221	P	15.0	15	St. Charles	Oxygen, Dissolved (W)
84	Dardenne Cr.	0222	C	6.0	6	St. Charles	Oxygen, Dissolved (W)
85	Dark Cr.	0690	C	9.1	9.1	Randolph	Oxygen, Dissolved (W)
86	Deer Cr.	3826	P	1.6	1.6	St. Louis	Chloride (W)
87	Deer Cr.	3826	P	1.6	1.6	St. Louis	Escherichia coli (W)
88	Deer Ridge Lake	7015	L3	48.0	48	Lewis	Mercury in Fish Tissue (T)
89	Des Moines R.	0036	P	29.0	29.0	Clark	Escherichia coli (W)
90	Ditch # 36	3109	P	7	7	Dunklin	Oxygen, Dissolved (W)

No.	Water Body Name	WBID	Class	MDNR Proposed Impairment Size	MDNR Water Body Size	County Upstream/ Downstream	Pollutant
91	Douger Branch	3810	C	3.1	3.1	Lawrence	Lead (S)
92	Douger Branch	3810	C	3.1	3.1	Lawrence	Zinc (S)
93	Dousinbury Cr.	1180	P	3.5	3.5	Dallas	Escherichia coli (W)
94	Dry Fork	3178	C	3.4	3.4	Lawrence	Aquatic Macroinvertebrate Bioassessments (W)
95	Dry Fork	3189	C	10.2	10.2	Jasper	Escherichia coli (W)
96	Dutro Carter Cr.	3569	P	0.6	1.5	Phelps	Oxygen, Dissolved (W)
97	East Fk. Crooked R.	0372	P	14.0	14	Ray	Oxygen, Dissolved (W)
98	East Fk. Grand R.	0457	P	25.0	25	Worth/Gentry	Escherichia coli (W)
99	East Fk. Locust Cr.	0608	P	13.0	13	Sullivan	Escherichia coli (W)
100a	East Fk. Locust Cr.	0610	C	0.4	13	Sullivan	Escherichia coli (W)
100b	East Fk. Locust Cr.	0610	C	12.6	13	Sullivan	Escherichia coli (W)
101	East Fk. Locust Cr.	0610	C	12.6	13	Sullivan	Oxygen, Dissolved (W)
102	East Fk. Tebo Cr.	1282	C	10.4	14.5	Henry	Oxygen, Dissolved (W)
103	Eaton Branch	2166	C	0.9	1.2	St. Francois	Cadmium (S)
104	Eaton Branch	2166	C	0.9	1.2	St. Francois	Cadmium (W)
105	Eaton Branch	2166	C	0.9	1.2	St. Francois	Lead (S)
106	Eaton Branch	2166	C	0.9	1.2	St. Francois	Zinc (S)
107	Eaton Branch	2166	C	0.9	1.2	St. Francois	Zinc (W)
108	Eleven Point R.	2593	P	22.7	22.7	Oregon	Mercury in Fish Tissue (T)
109	Eleven Point R.	2597	P	11.4	11.4	Oregon	Mercury in Fish Tissue (T)
110	Eleven Point R.	2601	P	22.3	22.3	Oregon	Mercury in Fish Tissue (T)
111	Elm Branch	1283	C	3.0	3	Henry	Oxygen, Dissolved (W)
112	Fee Fee (new) Cr.	1704	P	1.5	1.5	St. Louis	Chloride (W)
113	Fee Fee (new) Cr.	1704	P	1.5	1.5	St. Louis	Escherichia coli (W)

No.	Water Body Name	WBID	Class	MDNR Proposed Impairment Size	MDNR Water Body Size	County Upstream/ Downstream	Pollutant
114	Fellows Lake	7237	L1	800.0	800	Greene	Mercury in Fish Tissue (T)
115	Fenton Cr.	3595	P	0.5	0.5	St. Louis	Escherichia coli (W)
116	Fishpot Cr.	2186	P	2.0	2	St. Louis	Chloride (W)
117	Fishpot Cr.	2186	P	2.0	2	St. Louis	Escherichia coli (W)
118	Flat River Cr.	2168	C	5.0	9	St. Francois	Cadmium (W)
119	Forest Lake	7151	L1	573.0	573	Adair	Chlorophyll-a (W)
120	Forest Lake	7151	L1	573.0	573	Adair	Nitrogen, Total (W)
121	Forest Lake	7151	L1	573.0	573	Adair	Phosphorus, Total (W)
122	Fowler Cr.	0747	C	6	6	Boone	Oxygen, Dissolved (W)
123	Fox Cr.	1842	P	7.2	7.2	St. Louis	Cause Unknown (W)
124	Fox R.	0038	P	42.0	42.0	Clark	Escherichia coli (W)
125	Fox Valley Lake	7008	L3	89.0	89	Clark	Phosphorus, Total (W)
126	Foxboro Lake	7382	L3	22.0	22	Franklin	Mercury in Fish Tissue (T)
127	Frisco Lake	7280	L3	5.0	5	Phelps	Mercury in Fish Tissue (T)
128	Gans Cr.	1004	C	5.5	5.5	Boone	Escherichia coli (W)
129	Gasconade R.	1455	P	249.0	249	Gascon./Wright	Mercury in Fish Tissue (T)
130	Grand Glaize Cr.	2184	C	4.0	4	St. Louis	Chloride (W)
131	Grand Glaize Cr.	2184	C	4.0	4	St. Louis	Mercury in Fish Tissue (T)
132	Grand Glaize Cr.	2184	C	4.0	4	St. Louis	Oxygen, Dissolved (W)
133	Grand R.	0593	P	60.0	60	Livin./Chariton	Escherichia coli (W)
134	Gravois Cr.	1712	P	2.0	2	St. Louis	Chloride (W)
135	Gravois Cr.	1712	P	2.0	2	St. Louis	Escherichia coli (W)
136	Gravois Cr.	1713	C	4.0	4	St. Louis	Chloride (W)
137	Gravois Cr.	1713	C	4.0	4	St. Louis	Escherichia coli (W)

No.	Water Body Name	WBID	Class	MDNR Proposed Impairment Size	MDNR Water Body Size	County Upstream/ Downstream	Pollutant
138	Grindstone Cr.	1009	C	1.5	1.5	Boone	Escherichia coli (W)
139	Hays Cr.	0097	C	2.0	2	Ralls	Aquatic Macroinvertebrate Bioassessments (W)
140	Hazel Creek Lake	7152	L1	151.0	151	Adair	Chlorophyll-a (W)
141	Hazel Creek Lake	7152	L1	151.0	151	Adair	Mercury in Fish Tissue (T)
142	Heath's Cr.	0848	P	21.0	21.0	Pettis	Oxygen, Dissolved (W)
143	Hickory Cr.	3226	P	4.9	4.9	Newton	Escherichia coli (W)
144	Hinkson Cr.	1008	C	18.0	18	Boone	Escherichia coli (W)
145	Hominy Br.	1011	C	1.0	1.0	Boone	Escherichia coli (W)
146	Honey Cr.	3169	P	16.5	16.5	Lawrence	Escherichia coli (W)
147	Honey Cr.	3170	C	2.7	2.7	Lawrence	Escherichia coli (W)
148	Horse Cr.	1348	P	27.7	27.7	Cedar	Aquatic Macroinvertebrate Bioassessments (W)
149	Horse Cr.	1348	P	27.7	27.7	Cedar	Oxygen, Dissolved (W)
150	Hough Park Lake	7388	L3	7.0	7	Cole	Mercury in Fish Tissue (T)
151	Hunnewell Lake	7029	L3	228.0	228	Shelby	Mercury in Fish Tissue (T)
152	Indian Cr.	0420	C	3.0	3	Jackson	Chloride (W)
153	Indian Cr.	0420	C	3.0	3	Jackson	Escherichia coli (W)
154	Indian Cr.	1946	P	1.9	1.9	Washington	Lead (S)
155	Indian Cr.	1946	P	1.9	1.9	Washington	Zinc (S)
156	Indian Cr.	3256	P	9.7	30.8	Newton/McDonald	Escherichia coli (W)
157	Indian Creek Lake	7389	L3	192.0	192	Livingston	Mercury in Fish Tissue (T)
158	Jacobs Br.	3223	P	1.6	1.6	Newton	Zinc (W)
159	Jenkins Cr.	3207	P	2.8	2.8	Newton/Jasper	Escherichia coli (W)
160	Jones Cr.	3205	P	7.5	7.5	Newton/Jasper	Escherichia coli (W)
161	Kiefer Cr.	3592	P	1.2	1.2	St. Louis	Chloride (W)

No.	Water Body Name	WBID	Class	MDNR Proposed Impairment Size	MDNR Water Body Size	County Upstream/Downstream	Pollutant
162	Kiefer Cr.	3592	P	1.2	1.2	St. Louis	Escherichia coli (W)
163	Knob Knooster St. Park Lakes:**	7196	L3	10.0	10	Johnson	Mercury in Fish Tissue (T)
164	Koen Cr.	2171	C	1.0	1	St. Francois	Fish Bioassessments
165	Lake of the Woods	7436	L3	3.0	3	Boone	Mercury in Fish Tissue (T)
166	Lake of the Woods	7629	U	7.0	7	Jackson	Mercury in Fish Tissue (T)
167	Lake St. Louis	7054	L3	525.0	525	St. Charles	Mercury in Fish Tissue (T)
168	Lake Winnebago	7212	L3	350.0	350	Cass	Mercury in Fish Tissue (T)
169	Lamine R.	0847	P	54.0	54	Morgan/Cooper	Escherichia coli (W)
170	Lat. #2 Main Ditch	3105	P	11.5	11.5	Stoddard	Oxygen, Dissolved (W)
171	Lat. #2 Main Ditch	3105	P	11.5	11.5	Stoddard	Temperature, water (W)
172	Lee Rowe Ditch	3137	C	2.3	6	Mississippi	Oxygen, Dissolved (W)
173	Lewistown Lake	7020	L1	29.0	29	Lewis	Atrazine (W)
174	Line Cr.	3575	C	7.0	7	Platte	Escherichia coli (W)
175	Little Beaver Cr.	1529	C	3.4	3.5	Phelps	Sedimentation/Siltation (S)
176	Little Blue R.	0422	P	35.1	35.1	Jackson	Escherichia coli (W)
177	Little Bonne Femme Cr.	1003	P	9.0	9	Boone	Escherichia coli (W)
178	Little Dry Fk.	1863	P	1.0	5	Phelps	Oxygen, Dissolved (W)
179a	Little Dry Fk.	1864	C	0.6	4.5	Phelps	Oxygen, Dissolved (W)
179b	Little Dry Fk.	1864	C	3.9	4.5	Phelps	Oxygen, Dissolved (W)
180	Little Drywood Cr.	1325	P	17	17	Vernon	Oxygen, Dissolved (W)
181	Little Drywood Cr.	1326	C	10.0	10	Barton/Vernon	Oxygen, Dissolved (W)
182	Little Lost Cr.	3279	P	5.8	5.8	Newton	Escherichia coli (W)
183	Little Medicine Cr.	0623	P	40.0	40	Mercer/Grundy	Aquatic Macroinvertebrate Bioassessments (W)
184	Little Medicine Cr.	0623	P	20.0	40	Mercer/Grundy	Escherichia coli (W)

No.	Water Body Name	WBID	Class	MDNR Proposed Impairment Size	MDNR Water Body Size	County Upstream/Downstream	Pollutant
185	Little Niangua R.	1189	P	20.0	43	Dallas/Camden	Oxygen, Dissolved (W)
186	Little Osage R.	3652	C	16.0	16	Vernon	Escherichia coli (W)
187	Little Whitewater R.	2229	P	24.2	24.2	Cape G/Bollinger	Aquatic Macroinvertebrate Bioassessments (W)
188	Locust Cr.	0606	P	36.4	84	Putnam/Sullivan	Escherichia coli (W)
189	Logan Cr.	2763	P	6.1	36.0	Reynolds	Lead (S)
190	Long Branch Cr.	0696	C	2.0	13	Macon	Oxygen, Dissolved (W)
191	Longview Lake	7097	L2	930.0	930	Jackson	Mercury in Fish Tissue (T)
192	Lost Cr.	3278	P	8.5	8.5	Newton	Escherichia coli (W)
193	Main Ditch	2814	C	13.0	13.0	Butler	pH (W)
194	Main Ditch	2814	C	13.0	13.0	Butler	Temperature, water (W)
195	Maline Cr.	1709	C	0.6	0.6	St. Louis	Chloride (W)
196	Maline Cr.	1709	C	0.6	0.6	St. Louis	Escherichia coli (W)
197	Maline Cr.	3839	C	0.5	0.5	St. Louis	Chloride (W)
198	Maline Cr.	3839	C	0.5	0.5	St. Louis	pH (W)
199	Maple Slough Ditch	3140	C	16.0	16	Miss/New Madrid	Oxygen, Dissolved (W)
200	Mark Twain Lake	7033	L2	18600.0	18600	Monroe/Ralls	Mercury in Fish Tissue (T)
201	Medicine Cr.	0619	P	36.0	36	Putnam/Grundy	Escherichia coli (W)
202	Meramec R.	2183	P	22.0	22	St. Louis	Escherichia coli (W)
203	Meramec R.	2183	P	22.0	22	St. Louis	Lead (S)
204	Meramec R.	2185	P	15.7	26	St. Louis	Lead (S)
205	Miami Cr.	1299	P	18	18	Bates	Oxygen, Dissolved (W)
206	Middle Fk. Black R.	2744	P	2.5	21	Reynolds	Aquatic Macroinvertebrate Bioassessments (W)
207	Middle Fk. Grand R.	0468	P	25.0	25	Worth/Gentry	Escherichia coli (W)

No.	Water Body Name	WBID	Class	MDNR Proposed Impairment Size	MDNR Water Body Size	County Upstream/Downstream	Pollutant
208	Middle Indian Cr.	3262	C	3.5	3.5	Newton	Aquatic Macroinvertebrate Bioassessments (W)
209	Middle Indian Cr.	3263	P	2.2	2.2	Newton	Aquatic Macroinvertebrate Bioassessments (W)
210	Middle Indian Cr.	3263	P	2.2	2.2	Newton	Escherichia coli (W)
211	Missouri R.	0226	P	179.0	179	Atchison/Jackson	Escherichia coli (W)
212	Missouri R.	0356	P	129.0	129	Jackson/Saline	Escherichia coli (W)
213	Missouri R.	1604	P	100.0	100	Gasconade/St. Charles	Escherichia coli (W)
214	Mozingo Lake	7402	L1	1000.0	1000	Nodaway	Mercury in Fish Tissue (T)
215	Muddy Cr.	0853	P	1.8	1.8	Pettis	Aquatic Macroinvertebrate Bioassessments (W)
216	Muddy Cr.	0853	P	62.2	62.2	Pettis	Chloride (W)
217	Mussel Fork Cr.	0674	C	29.0	29	Sullivan/Macon	Escherichia coli (W)
218	Niangua R.	1170	P	51.0	51	Webster/Dallas	Escherichia coli (W)
219	No Cr.	0550	P	22.5	22.5	Grundy/Livin.	Escherichia coli (W)
220	No Cr.	0550	P	22.5	22.5	Grundy/Livin.	Oxygen, Dissolved (W)
221	Noblett Lake	7316	L3	26.0	26	Douglas	Mercury in Fish Tissue (T)
222	Nodaway R.	0279	P	60.0	60	Nodaway	Escherichia coli (W)
223	North Bethany Lake	7109	L3	78.0	78	Harrison	Mercury in Fish Tissue (T)
224	North Fk. Cuivre R.	0170	C	8	8	Pike	Fecal Coliform (W)
225	North Fk. Cuivre R.	0170	C	8	8	Pike	Oxygen, Dissolved (W)
226	North Fk. Spring R.	3186	P	17.4	17.4	Barton	Escherichia coli (W)
227	North Fk. Spring R.	3188	C	1.1	55.9	Barton	Ammonia, Total (W)
228	North Fk. Spring R.	3188	C	55.9	55.9	Dade/Jasper	Escherichia coli (W)
229	North Fk. Spring R.	3188	C	55.9	55.9	Dade/Jasper	Oxygen, Dissolved (W)
230	North Indian Cr.	3260	P	5.2	5.2	Newton	Aquatic Macroinvertebrate Bioassessments (W)

No.	Water Body Name	WBID	Class	MDNR Proposed Impairment Size	MDNR Water Body Size	County Upstream/ Downstream	Pollutant
231	North Indian Cr.	3260	P	5.0	5	Newton	Escherichia coli (W)
232	Osage R.	1293	P	39.3	39.3	Vernon/St.Clair	Oxygen, Dissolved (W)
233	Panther Cr.	1373	C	7.8	7.8	St.Clair/Polk	Oxygen, Dissolved (W)
234	Pearson Cr.	2373	P	8.0	8	Greene	Escherichia coli (W)
235	Perry Phillips Lake	7628	U	32.0	32	Boone	Mercury in Fish Tissue (T)
236	Peruque Cr.	0215	P1	9.6	9.6	St. Charles	Oxygen, Dissolved (W)
237	Peruque Cr.	0216	P	0.3	10.3	St. Charles	Cause Unknown (W)
238	Pickle Cr.	1755	P	7.0	7	Ste. Genevieve	pH (W)
239	Pike Cr.	2815	C	6.0	6.0	Butler	Oxygen, Dissolved (W)
240	Platte R.	0312	P	138.0	138	Worth/Platte	Escherichia coli (W)
241	Pleasant Run Cr.	1327	C	7.6	7.6	Vernon	Oxygen, Dissolved (W)
242	Pole Cat Slough	3120	P	12	12	Dunklin	Oxygen, Dissolved (W)
243	Red Oak Cr.	2038	C	10.0	10	Gasconade	Oxygen, Dissolved (W)
244	River des Peres	1710	C	2.6	2.6	St. Louis	Chloride (W)
245	River des Peres	1710	C	2.6	2.6	St. Louis	Escherichia coli (W)
246	River des Peres	3827	P	3.7	3.7	St. Louis	Chloride (W)
247	River des Peres	3827	P	3.7	3.7	St. Louis	Escherichia coli (W)
248	Salt Cr.	0594	C	14.0	14.0	Livin./Chariton	Oxygen, Dissolved (W)
249	Salt Pine Creek	2113	C	1.2	1.2	St. Francois	Aquatic Macroinvertebrate Bioassessments (W)
250	Salt R.	0091	P	29.0	29	Ralls/Pike	Oxygen, Dissolved (W)
251	Salt R.	0103	P1	9.3	9.3	Ralls	Mercury in Fish Tissue (T)
252	Shaw Branch	2170	C	2.0	2	St. Francois	Cadmium (S)
253	Shoal Cr.	3222	P	41.1	41.1	Newton	Escherichia coli (W)
254	Sni-a-bar Cr.	0399	P	32	32	Jackson/Lafayette	Oxygen, Dissolved (W)

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255	South Blackbird Cr.	0655	C	5	13	Putnam	Ammonia, Un-ionized (W)
256	South Fabius R.	0071	P	80.6	80.6	Knox/Marion	Escherichia coli (W)
257	South Fk. Salt R.	0142	C	20.1	32	Callaway/Audrain	Oxygen, Dissolved (W)
258	South Grand R.	1249	P	62.5	62.5	Cass/Henry	Escherichia coli (W)
259	South Indian Cr.	3259	P	8.7	8.7	McDonald/Newton	Aquatic Macroinvertebrate Bioassessments (W)
260	South Indian Cr.	3259	P	8.7	8.7	Newton/McDonald	Escherichia coli (W)
261	Spencer Cr.	0224	C	1.5	1.5	St. Charles	Chloride (W)
262	Spring R.	3160	C	61.7	61.7	Lawrence/Jasper	Escherichia coli (W)
263	Spring R.	3164	P	8.8	8.8	Lawrence	Escherichia coli (W)
264	Spring R.	3165	P	11.9	11.9	Lawrence	Escherichia coli (W)
265	St. Francis R.	2835	P	8.4	93.1	St. Francois	Temperature, water (W)
266	St. John's Ditch	3138	P	15.3	15.3	New Madrid	Escherichia coli (W)
267	St. John's Ditch	3138	P	15.3	15.3	New Madrid	Mercury in Fish Tissue (T)
268	Stevenson Bayou	3135	C	14	14	Mississippi	Oxygen, Dissolved (W)
269	Straight Fk.	0959	C	2.5	6	Morgan	Oxygen, Dissolved (W)
270	Strother Cr.	2751	P	6.0	6.0	Iron	Lead (S)
271	Strother Cr.	2751	P	6.0	6.0	Iron	Lead (W)
272	Strother Cr.	2751	P	6.0	6.0	Iron	Nickel (S)
273	Strother Cr.	2751	P	6.0	6.0	Iron	Zinc (S)
274	Strother Cr.	2751	P	6.0	6.0	Iron	Zinc (W)
275	Strother Cr.	3965	U	0.9	n/a	Reynolds/Iron	Arsenic (S)
276	Strother Cr.	3965	U	0.9	n/a	Reynolds/Iron	Lead (S)
277	Strother Cr.	3965	U	0.9	n/a	Reynolds/Iron	Nickel (S)
278	Strother Cr.	3965	U	0.9	n/a	Reynolds/Iron	Zinc (S)

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279	Strother Cr.	3965	U	0.9	n/a	Reynolds/Iron	Zinc (W)
280	Sugar Cr.	0686	P	6.8	6.8	Randolph	Oxygen, Dissolved (W)
281	Sunset Lake	7399	L3	6.0	6	Cole	Mercury in Fish Tissue (T)
282	Table Rock Lake, James, Kings and Long Cr. Arms	7313	L2	24507.0	24507	Barry/Taney/Stone	Nutrient/Eutrophication Biol. Indicators (W)
283	Table Rock Lake, White River Arm	7313	L2	17240.0	17240	Barry/Taney	Chlorophyll (W)
284	Table Rock Lake, White River Arm	7313	L2	17240.0	17240	Barry/Taney	Nitrogen (W)
285	Terre Du Lac Lakes *****	7297	L3	103.0	103	St. Francois	Chlorophyll-a (W)
286	Terre Du Lac Lakes *****	7297	L3	103.0	103	St. Francois	Nitrogen, Total (W)
287	Thompson R.	0549	P	5.0	65	Harrison	Escherichia coli (W)
288	Thurman Cr.	3243	P	3.0	3	Newton	Escherichia coli (W)
289	Tiff Cr.	3763	P	2.1	2.1	Jefferson	Fishes Bioassessments (W)
290	Trib. To Big Otter Cr.	1225	C	1.0	1	Henry	Oxygen, Dissolved (W)
291	Trib. To Chat Cr.	3963	U	0.9	0.9	Lawrence	Cadmium (W)
292	Trib. To Chat Cr.	3963	U	0.9	0.9	Lawrence	Zinc (W)
293	Trib. To Coon Cr.	0133	C	1.0	1	Randolph	Oxygen, Dissolved (W)
294	Trib. To Flat River Cr.	3938	U	0.3	0.3	St. Francois	Zinc (W)
295	Trib. To Foster Br.	3943	U	0.7	2.0	Boone	Ammonia, Un-ionized (W)
296	Trib. To Goose Cr.	1420	C	3.0	3.0	Lawrence	Escherichia coli (W)
297	Trib. To Little Muddy Cr.	3490	C	1.0	1.0	Pettis	Chloride (W)
298	Trib. To Old Mines Cr.	2114	C	1.5	1.5	St. Francois	Sedimentation/Siltation (S)
299	Trib. To Red Oak Cr.	3360	C	0.5	0.5	Gasconade	Oxygen, Dissolved (W)
300a	Trib. To Red Oak Cr.	3361	C	1.1	1.9	Gasconade	Oxygen, Dissolved (W)
300b	Trib. To Red Oak Cr.	3361	C	0.8	1.9	Gasconade	Oxygen, Dissolved (W)

No.	Water Body Name	WBID	Class	MDNR Proposed Impairment Size	MDNR Water Body Size	County Upstream/ Downstream	Pollutant
301	Trib. To Willow Fk.	0956	C	0.5	0.5	Moniteau	Low D.O. (W)
302	Trib. To Wolf Cr.	3589	C	1.5	1.5	St. Francois	Low D.O. (W)
303	Troublesome Cr.	0074	C	6.1	41.3	Knox	Oxygen, Dissolved (W)
304	Troublesome Cr.	0074	C	35.3	41.3	Knox/Marion	Unknown
305	Turkey Cr.	0751	C	6.3	6.3	Boone	Escherichia coli (W)
306	Turkey Cr.	3216	P	7.7	7.7	Jasper	Cadmium (S)
307	Turkey Cr.	3216	P	7.7	7.7	Jasper	Cadmium (W)
308	Turkey Cr.	3216	P	7.7	7.7	Jasper	Escherichia coli (W)
309	Turkey Cr.	3216	P	7.7	7.7	Jasper	Lead (S)
310	Turkey Cr.	3216	P	7.7	7.7	Jasper	Zinc (S)
311	Turkey Cr.	3217	P	6.1	6.1	Jasper	Cadmium (S)
312	Turkey Cr.	3217	P	6.1	6.1	Jasper	Escherichia coli (W)
313	Turkey Cr.	3217	P	6.1	6.1	Jasper	Lead (S)
314	Turkey Cr.	3217	P	6.1	6.1	Jasper	Zinc (S)
315	Turkey Cr.	3282	P	2.4	2.4	St. Francois	Cadmium (W)
316	Turkey Cr.	3282	P	2.4	2.4	St. Francois	Lead (W)
317	Turkey Cr.	3282	P	1.2	2.4	St. Francois	Zinc (W)
318	Turnback Cr.	1414	P	14.0	14.0	Lawrence/Dade	Escherichia coli (W)
319	Warm Fk. Spring R.	2579	P	13.8	13.8	Oregon	Fecal Coliform (W)
320	Watkins Cr.	1708	C	3.5	3.5	St. Louis	Chloride (W)
321	Watkins Cr.	1708	C	3.5	3.5	St. Louis	Escherichia coli (W)
322	Watkins Cr.	1708	C	3.5	3.5	St. Louis	pH (W)
323	Weatherby Lake	7071	L3	194.0	194	Platte	Chlorophyll-a (W)
324	Weatherby Lake	7071	L3	194.0	194	Platte	Mercury in Fish Tissue (T)

No.	Water Body Name	WBID	Class	MDNR Proposed Impairment Size	MDNR Water Body Size	County Upstream/Downstream	Pollutant
325	Weatherby Lake	7071	L3	194.0	194	Platte	Nitrogen, Total (W)
326	Weldon R.	0560	P	42	42	Mercer/Grundy	Escherichia coli (W)
327	West Fk. Black R.	2755	P	2.1	32.3	Reynolds	Lead (S)
328	West Fk. Black R.	2755	P	2.1	32.3	Reynolds	Nickel (S)
329	West Fk. Drywood Cr.	1317	C	8.1	8.1	Vernon	Oxygen, Dissolved (W)
330	Whetstone Cr.	1504	P	12.2	12.2	Wright	Oxygen, Dissolved (W)
331	White Oak Cr.	3182	C	18.0	18	Lawrence/Jasper	Escherichia coli (W)
332	Wildhorse Cr.	1700	C	3.9	3.9	St. Louis	Escherichia coli (W)
333	Williams Cr.	3171	P	1.0	1	Lawrence	Escherichia coli (W)
334	Williams Cr.	3172	P	8.5	8.5	Lawrence	Aquatic Macroinvertebrate Bioassessments (W)
335	Williams Cr.	3172	P	8.5	8.5	Lawrence	Escherichia coli (W)
336	Williams Cr.	3594	P	1.0	1.0	St. Louis	Escherichia coli (W)
337	Williams Cr.	3594	P	1.0	1.0	St. Louis	pH (W)
338	Willow Br.	3280	P	2.2	2.2	Newton	Escherichia coli (W)
339	Willow Fk.	0955	C	6.5	6.5	Moniteau	Oxygen, Dissolved (W)
340	Wilson Cr.	2375	P	11.9	14	Greene/Christian	Escherichia coli (W)

* Misidentified in WQ Standards as Bowling Green New Lake. Acres shown on list are the actual acres.

** Lake Buteo is the only one of the Knob Noster S.P. Lakes on this list

*** This section of the Osage River inadvertently left out of WQ Standards, thus there are no designated beneficial uses.

**** Lac Capri is the only one of the Terre du Lac lakes on the list

Table 3

Water body/pollutant pairs that the EPA disapproves for delisting and is proposing to restore or add to Missouri's 2012 303(d) List. The EPA seeks public comment on these proposed actions.

No.	Water Body Name	WBID	Class	Impaired Classified Segment (mi/acres)	County	Pollutant
1	Dardenne Creek	0221	P	16.5	St. Charles	Inorganic sediment
2	Dardenne Creek	0221	P	16.5	St. Charles	Unknown
3	Peruque Creek	0217	P	4	St. Charles	Inorganic sediment
4	Peruque Creek	0218	C	8	St. Charles	Inorganic sediment
5	Straight Fork	0959	C	8.0	Morgan	Chloride
6	Truitt Creek	3175	C	5.0	Lawrence	Bacteria
7	Whetstone Creek	1505U	U	n/a	Wright	Ammonia
For the following water a change in pollutant is proposed						
8	Drywood Creek	1314	P	29.9	Barton/Vernon	Sulfate plus Chloride
For the following water body pollutant combinations the EPA proposes to delist due to a TMDL						
9	West Fork Locust Creek	0613	C	17	Sullivan	Dissolved oxygen
10	West Fork Locust Creek	0613	C	17	Sullivan	Unknown