

ENCLOSURE

**EPA REGION VII APPROVAL OF PORTIONS OF THE
MISSOURI 2006 WATER QUALITY STANDARDS**

Under section 303(c) of the Clean Water Act (CWA), the Administrator of the United States Environmental Protection Agency (EPA) is charged with reviewing and approving or disapproving state-adopted new or revised water quality standards (WQS). This authority has been delegated to the ten EPA Regional Administrators and, in EPA Region 7, further delegated to the Director of the Water, Wetlands, and Pesticides Division. To determine if new or revised state WQS are consistent with CWA and its implementing regulations, pursuant to EPA regulations 40 CFR §§ 131.5 and 131.6, EPA must review the new or revised WQS and determine:

- (1) Whether the State has adopted water uses which are consistent with the requirements of CWA;
- (2) Whether the State has adopted criteria that protect the designated water uses;
- (3) Whether the State has followed its legal procedures for revising or adopting standards;
- (4) Whether the State standards which do not include the uses specified in section 101(a)(2) of the Act are based upon appropriate technical and scientific data and analyses, and

In addition, 40 CFR § 131.6 specifies minimum requirements for WQS submissions.

SECTION I – ITEMS EPA IS APPROVING	2
A. 10 CSR 20-7.031 (1) Definitions (C) Beneficial or Designated Uses	2
B. 10 CSR 20-7.031 (1) Definitions (G) Early Life Stages of Fish	3
C. 10 CSR 20-7.031 (1) Definitions (G) Existing Use.....	3
D. 10 CSR 20-7.031 (1) Definitions (O) Low-flow Conditions.....	4
E. 10 CSR 20-7.031 (1) Definitions (T) Reference Lakes or Reservoirs.....	5
F. 10 CSR 20-7.031 (1) Definitions (W) Use Attainability Analysis (UAA).....	5
G. 10 CSR 20-7.031 (1) Definitions (X) Water Effect Ratio	6
H. 10 CSR 20-7.031 (1) Definitions (AA) Waters of the State	6
I. 10 CSR 20-7.031 (4) Specific Criteria.....	7
J. 10 CSR 20-7.031 (4)(A) 5. A., B., C., D., E., and F. Development of Specific Criteria for Wetlands.....	7
K. 10 CSR 20-7.031 (4)(B)1. Toxic Substances.....	8
L. 10 CSR 20-7.031 (4)(B)6. Chromium III and Silver Criteria.....	9
M. 10 CSR 20-7.031 (4)(B)7. Total Ammonia Nitrogen	9
N. 10 CSR 20-7.031 (4)(L)1. Sulfate plus Chloride Limit Revision.....	11
O. 10 CSR 20-7.031 (10) Rule reference to the Missouri Effluent Regulations at 10 CSR 20-7.015 (9)(H)	11
P. 10 CSR 20-7.015 (9) General Conditions (I) Temporary Suspension of Accountability for Bacteria Standards during Wet Weather.	12
Q. 10 CSR 20-7.031 Table C – Waters Designated for Cold-Water Fishery.....	13

R.	10 CSR 20-7.031 Table D – Outstanding National Resource Waters.	13
S.	10 CSR 20-7.031 Table E – Outstanding State Resource Waters.	14
T.	10 CSR 20-7.031 Table G – Lake Classifications and Use Designations.	14
U.	10 CSR 20-7.031 Table H – Stream Classifications and Use Designations.....	14
V.	10 CSR 20-7.031 Table I – Biocriteria Reference Location.....	15
SECTION II – ITEM EPA IS PARTIALLY APPROVING/DISAPPROVING.....		16
A.	10 CSR 20-7.015 (9)(H) Implementation Schedule for Protection of Whole Body Contact and Secondary Contact Recreation.....	16
SECTION III – ITEMS IN WHICH EPA IS TAKING NO ACTION.....		20
A.	10 CSR 20-7.031 (2) Antidegradation (D)	20
B.	10 CSR 20-7.031 Table A – Groundwater Criteria for Boron.....	20
C.	Nonsubstantive Changes to 10 CSR 20-7.031	21
D.	Nonsubstantive Changes to Tables A and B – Criteria for Designated Uses	22
E.	Nonsubstantive Changes to Table E – Outstanding State Resource Waters	22
F.	Nonsubstantive Changes to Table G – Lake Classifications and Use Designations	23
G.	Nonsubstantive Changes to Table H – Classified Streams	23
H.	Typographical Errors for Future Correction	23
	Table 1	25
	Table 2	25
	Table 3:	26
	Table 4	26
	Table 5	27
	Table 6	28
	Table 7	31
	Table 8	33
	Table 9	34
	Table 10	34

The Sections below contain italicized language representing the Missouri water quality standard rules per 10 CSR 20-7.031; underlined words represent additions to existing provisions within 10 CSR 20-7.031, and strike-through words are those that have been deleted from 10 CSR 20-7.031.

SECTION I – ITEMS EPA IS APPROVING

A. 10 CSR 20-7.031 (1) Definitions (C) Beneficial or Designated Uses

Missouri revised the definition for beneficial or designated uses as follows:

“Beneficial or designated ~~water~~ uses. Those uses specified in paragraphs 1.-15. of this subsection for each water body segment whether or not they are attained. Beneficial or designated uses (1)(C)1.-11. of classified

waters are identified in Tables G and H. Beneficial or designated uses (1)(C)12.-15. of classified waters must be determined on a site-by-site basis and are therefore not listed in Table G and H.”

The revised definition for “Beneficial or designated uses” acknowledges that those uses apply to specified water body segments, regardless of whether or not they are currently being attained. EPA considers this revision to be an improvement in the definition of “Beneficial and designated uses” and facilitates their protection through subsequent implementation. The revised language is consistent with EPA’s implementing regulations at 40 CFR § 131.3(f) and is hereby approved. Existing provisions of the Missouri WQS that include this definition continue to be consistent with CWA and EPA’s implementing regulations.

B. 10 CSR 20-7.031 (1) Definitions (G) Early Life Stages of Fish

Missouri added the following new definition:

“Early life stages of fish—The pre-hatch embryonic period, the post-hatch free embryo or yolk-sac fry, and the larval period during which the organism feeds. Juvenile fish, which are anatomically rather similar to adults, are not considered early life stage.”

Missouri added this new definition to be consistent with its implementation of the updated EPA ammonia criteria (see Section I.M of this document regarding the use of this definition in the new ammonia criteria provision). The definition is consistent with EPA’s guidance set forth in the Federal Register Notice (64 F.R. 71974-71980) regarding the 1999 updated ammonia criteria and will assist in Missouri’s implementation of its ammonia criteria. Accordingly, Missouri’s adoption of the definition of “early life stages of fish” is consistent with EPA’s implementing regulations at 40 CFR § 131.11 governing criteria adoption and implementation and is hereby approved.

C. 10 CSR 20-7.031 (1) Definitions (G) Existing Use

Missouri added the following new definition:

“Existing uses –Those uses actually attained in the water body on or after November 28, 1975, whether or not they are identified in the WQS.”

This new definition is consistent with EPA’s definition of existing use found at 40 CFR § 131.3 (e). This definition is important as it ensures that historic uses are protected, whether or not they are currently attained in the water body. EPA commends the State for adopting the federal definition for an existing use and hereby approves this new addition to the WQS. Existing provisions of the Missouri WQS that include this definition continue to be consistent with CWA and EPA’s implementing regulations.

D. 10 CSR 20-7.031 (1) Definitions (O) Low-flow Conditions

(O) Low flow conditions—Where used in this regulation in the context of mixing zones, the low flow conditions shall refer to the minimum amount of stream flow occurring immediately upstream of a wastewater discharge and available, in whole or in part, for attenuation of wastewater pollutants.

- 1. Seven (7)-day one (1)-in ten (10)-year flow (7-day Q_{10})—The ~~average minimum~~ lowest average flow for seven (7) consecutive days that has a probable recurrence interval of once-in-ten (10) years.*
- 2. Sixty (60)-day one (1)-in two (2)-year flow (60-day Q_2)—The ~~average minimum~~ lowest average flow for sixty (60) consecutive days that has a probable recurrence interval of once-in-two (2) years.*
- 3. Thirty (30)-day, one (1)-in ten (10)-year flow (30-day Q_{10})—The lowest average flow for thirty (30) consecutive days that has a probable recurrence interval of once-in-ten (10) years.*
- 4. One (1)-day, one (1)-in ten (10)-year flow (1-day Q_{10})—The lowest average flow for one (1) consecutive day that has a probable recurrence interval of once-in-ten (10) years.*

Missouri revised its definition for low-flow conditions by adding language to the definition, which makes it clear the definition applies only in the context of mixing zones and the derivation of effluent discharges. Missouri also revised and clarified its low-flow definitions for (1) the 7Q10, and (2) the 60Q2, to reflect that the specific design flows are based upon the lowest average flow. Missouri also added two new low-flow values for (3) the 30Q10, and (4) the 1Q10. The low-flow design values are intended to be used for the calculation of effluent limits and consequently, be protective of low-flow situations that occur on an infrequent basis. The concept of a critical low-flow is consistent with CWA and its implementing regulations. EPA's policy indicates that states, under CWA, may identify such critical low-flow values to use as the basis for calculation of effluent limits.

Federal regulations at 40 CFR § 131.13 allow states to develop policies such as low-flows for the implementation of WQS so long as the application of such provisions do not result in impairment of designated uses and they are approved by EPA. The revisions to the low-flow conditions definition, as outlined above, are consistent with EPA's regulations and are hereby approved. Existing provisions of the Missouri WQS that include this definition continue to be consistent with CWA and EPA's implementing regulations.

E. 10 CSR 20-7.031 (1) Definitions (T) Reference Lakes or Reservoirs

Missouri added the following new definition:

“Reference lakes or reservoirs—Lakes or reservoirs determined by Missouri Department of Natural Resources to be the best available representatives of ecoregion waters in a natural condition with respect to habitat, water quality, biological integrity and diversity, watershed land use, and riparian conditions.”

This new definition to the WQS is consistent with Missouri’s existing definition of reference stream conditions. Through application, lakes and reservoirs that meet the State’s new definition can be identified in the WQS for use in implementing biocriteria. Missouri previously adopted narrative provisions addressing the biological integrity of its waters (10 CSR 20-7.031 (4)(Q) Biocriteria). EPA supports Missouri’s efforts to develop biocriteria for lakes and reservoirs. The development of biocriteria helps to strengthen the State’s designated uses and increases the protection of aquatic life.

EPA hereby approves this definition of reference lakes or reservoirs as it is consistent with EPA’s implementing regulations governing adoption of water quality criteria at 40 CFR § 131.11. By approving this definition, EPA is not approving a determined use or implementation of this definition. Additional studies incorporating the use of reference sites will need to be scientifically defensible. Specifically, in the use of reference sites for the development of site-specific criteria, EPA notes that the “best available” water body may not be equivalent to natural conditions for the purposes of establishing background concentrations. Additionally, the quality of waters identified as “best available” may change over time, and therefore do not necessarily provide a stable benchmark from which to measure actual improvement or deterioration of conditions. For further information regarding the use of reference sites in support of site-specific aquatic life criteria development using the natural conditions provision, refer to the November 5, 1997, EPA memo from Tudor Davies entitled Establishing Site Specific Aquatic Life Criteria Equal to Natural Background.

F. 10 CSR 20-7.031 (1) Definitions (W) Use Attainability Analysis (UAA)

Missouri added the following new definition:

“Use Attainability Analysis—A structured scientific assessment of the factors affecting the attainment of the use which may include physical, biological, and economic factors as described in 40 CFR 131.10(g).”

Section 101(a)(2) of CWA sets out the goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife, and recreation in and on the water. This goal is often referred to as the “fishable/swimmable” goal of CWA. States are to consider the use and value of the water for public water supplies, propagation of fish and wildlife, recreation, agriculture and industrial purposes, and navigation. Where

states adopt uses consistent with 101(a)(2) goals, a UAA is not necessary, provided that water quality criteria are not less stringent than those required to protect 101(a)(2) uses. When states propose to change a designated use that results in less stringent criteria or the use is less than a 101(a)(2) goal use, a UAA must accompany the change to WQS and justify the proposed use designation. Missouri's new definition of Use Attainability Analysis (UAA) is consistent with EPA's definition in the federal regulation at 40 CFR § 131.3(g) and is hereby approved. Existing provisions of the Missouri WQS that include this definition continue to be consistent with CWA and EPA's implementing regulations. See Sections I.P and II.A of this document regarding the use of this definition in new provisions in Missouri's WQS.

G. 10 CSR 20-7.031 (1) Definitions (X) Water Effect Ratio

Missouri added the following new definition:

“Water effect ratio—Appropriate measure of toxicity of a material obtained in a site water divided by the same measure of toxicity of the same material obtained simultaneously in a laboratory dilution water.”

The new definition of the Water Effect Ratio (WER) is consistent with EPA's description of Water Effect Ratios contained in EPA's 1994 Interim Guidance on Determination and Use of Water-Effect Ratios for Metals. EPA regulations at 40 CFR § 131.11(b)(1)(ii) allow states to establish aquatic life criteria to reflect site-specific conditions. Site-specific criteria are ambient water quality criteria applicable to a site. A water-effect ratio is a means to account for a difference between the toxicity of the pollutant in laboratory dilution water and its toxicity in the water at the site. Any revised aquatic life criterion developed through the WER method would be subject to EPA review and approval under section 303(c) of CWA, 40 CFR § 131.20(c). EPA hereby approves this new definition.

H. 10 CSR 20-7.031 (1) Definitions (AA) Waters of the State

Missouri added the following new definition:

“Waters of the state—All rivers, streams, lakes, and other bodies of surface and subsurface water lying within or forming a part of the boundaries of the state which are not entirely confined and located completely upon lands owned, leased, or otherwise controlled by a single person or by two (2) or more persons as tenants in common and includes waters of the United States lying within the state.”

The new definition of “Waters of the state” is consistent with CWA's requirement at section 303(c), which requires WQS to apply to all waters of the United States. The definition of “Waters of the state” is consistent with, and broader than, the federal definition of waters of the United States found at 33 CFR § 328.3, because the definition also applies to groundwater. While the State may include groundwater under its

definition of “Waters of the state”, EPA’s actions under section 303(c) of CWA are limited to those aspects of the State’s WQS regulation that relate to surface waters. The new definition is hereby approved. Existing provisions of the Missouri WQS that include this definition continue to be consistent with CWA and EPA’s implementing regulations.

I. 10 CSR 20-7.031 (4) Specific Criteria

Missouri revised the Specific Criteria provision by deleting the struck through text below:

The specific criteria shall apply to classified waters. Protection of drinking water supply is limited to surface waters designated for raw drinking water supply and aquifers. Protection of whole body contact recreation is limited to classified waters designated for that use. ~~Only waters designated for livestock and wildlife watering are considered to be long-term supplies and are subject to the chronic toxicity requirements of the specific criteria.~~

Responding to public comment in the Final Order of Rulemaking, the Missouri Department of Natural Resources (MDNR) explained the revision in the following manner:

“The sentence ‘Only waters designated for livestock and wildlife watering are considered to be long-term supplies and are subject to the chronic toxicity requirements of the specific criteria’ does not provide any more or less protection of the classified waters of the state. All classified waters are protected according to the designated uses assigned to them in Tables G and H, and the criteria associated with each designated use as assigned in Tables A and B. All of the criteria in Tables A and B are chronic values, unless specifically identified as being acute, as stated in subsection (4)(A). Because the last sentence in section (4) has not (sic) effect on the standards, the department has deleted this sentence.”

Given MDNR’s response to this comment regarding the removal of the language, EPA defers to Missouri’s interpretation of the action. Because the revisions to this provision have no effect on the implementation of other WQS it remains consistent with 40 CFR § 131.11 and is approved.

J. 10 CSR 20-7.031 (4)(A) 5. A., B., C., D., E., and F. Development of Specific Criteria for Wetlands

Missouri added the following new language (A – F) to its wetlands provision:

5. For wetlands. Water quality needs will vary depending on the individual characteristics of wetlands. Application of numeric criteria will depend on the specific aquatic life, wildlife and vegetational requirements.

A. Specific criteria for wetlands shall be developed using scientific procedures including, but not limited to, those procedures described in the U.S. Environmental Protection Agency's WQS Handbook, Second Edition, August 1994.

B. Specific criteria shall protect all life stages of species associated with wetlands and prevent acute and chronic toxicity in all parts of the wetland.

C. Specific criteria shall include both chronic and acute concentrations to better reflect the different tolerances to the inherent variability between concentrations and toxicological characteristics of a condition.

D. Specific criteria shall be clearly identified as maximum "not to be exceeded" or average values, and if an average, the averaging period and the minimum number of samples. The conditions, if any, when the criteria apply shall be clearly stated (e.g., specific levels of hardness, pH, or water temperature). Specific sampling requirements (e.g., location, frequency), if any, shall also be identified.

E. The data, testing procedures, and application (safety) factors used to develop specific criteria shall reflect the nature of the condition (e.g., persistency, bioaccumulation potential) and the most sensitive species associated with the wetland.

F. Each specific criterion shall be promulgated in rule 10 CSR 20-7.031. The public notice shall include a description of the affected wetland and the reasons for applying the proposed criterion. A public hearing may be held in the geographical vicinity of the affected wetland. Any specific criterion promulgated under these provisions is subject to U.S. EPA approval prior to becoming effective.

The addition of the underlined text above provides a meaningful framework to develop wetland water quality criteria for all wetlands of the State. The development of water quality criteria specific to wetlands would ensure an opportunity for the protection of water quality that is unique to wetlands and the wildlife and vegetation dependent upon wetlands. The new procedure to develop wetland water quality criteria is consistent with the statutory goals of section 101(a)(2) of CWA and federal regulations, which require that states adopt, where attainable, uses that provide for the protection and propagation of fish, shellfish, and wildlife, and recreation (40 CFR § 131.10). Federal regulations also require that states adopt water quality criteria sufficient to protect the designated use (40 CFR § 131.11). EPA views this procedure as a way to strengthen Missouri's protection of its wetland resources. The provision directs how Missouri will develop future criteria and includes language that ensures that any criteria developed as part of this procedure are subject to EPA review and approval under section 303(c) of CWA and 40 CFR § 131.20(c) prior to becoming effective for CWA purposes. EPA continues to encourage the State to develop specific criteria to protect wetlands. EPA hereby approves these new wetlands criteria development provisions.

K. 10 CSR 20-7.031 (4)(B)1. Toxic Substances

The toxic substances provision was revised by deleting the struck through text below:

1. Water contaminants shall not cause the criteria in Tables A and B to be exceeded. Concentrations of these substances in bottom sediments or waters shall not harm benthic organisms and shall not accumulate

~~through the food chain in harmful concentrations, nor shall state and federal maximum fish tissue levels for fish consumption be exceeded. More stringent criteria may be imposed if there is evidence of additive or synergistic effects. Site-specific criterial modifications may be allowed. With the department's approval, entities may conduct studies to determine if site-specific factors would justify modifications in the criteria that apply to specific receiving waters. In approving a study and reviewing its results, the department will take into account EPA and other appropriate guidelines as they exist at the time the study is submitted for approval.~~

The language deleted above did not allow for EPA review and approval of revised criteria to determine whether it is protective of designated uses, as required by section 303(c) of CWA and 40 CFR § 131.20(c). On April 28, 2006, EPA approved a new provision in Missouri's WQS outlining the procedure for adopting site-specific criteria, which includes EPA review and approval before the criteria become effective (10 CSR 20-7.031 (4)(R)). The revisions to 10 CSR 20-7.031 (4)(B)1., coupled with the procedure for adopting site-specific criteria (10 CSR 20-7.031 (4)(R)), ensure that State-adopted site-specific water quality criteria will be submitted to EPA for review and approval. As such, the revised rule now complies with the procedural requirements in CWA section 303(c)(2)(A) and EPA's regulations at 40 CFR § 131.20(c), and is hereby approved.

L. 10 CSR 20-7.031 (4)(B)6. Chromium III and Silver Criteria

In its new regulations, Missouri revised its metals criteria, adding subpart (4)(B)(6), which reads: "Metals criteria for which toxicity is hardness dependent are in equation format in Table A." Missouri adopted acute and chronic hardness-dependent equations for chromium III and silver that are based on EPA's most recent recommendations (see attached Table 1). By adding subpart (4)(B)(6) and amending Table A to express the metals criteria for Chromium III and Silver in equation format, Missouri's aquatic life criteria for Chromium III and Silver are scientifically defensible and will protect aquatic life uses consistent with 40 CFR §§ 131.6(b), (c), and 131.11(b)(1). EPA hereby approves these revisions to the Chromium III and Silver criteria.

M. 10 CSR 20-7.031 (4)(B)7. Total Ammonia Nitrogen

Missouri added the following new provisions:

7. Total ammonia nitrogen. For any given sample, the total ammonia nitrogen criteria shall be based on the pH and temperature of the water body measured at the time of each sample at the point of compliance.

A. The acute criteria shall not be exceeded at any time except in those waters for which the department has allowed a zone of initial dilution (ZID). The one (1)-day Q_{10} low flow condition will be used in determining acute total ammonia nitrogen criteria.

- B. The chronic criteria shall not be exceeded except in water segments for which the department has allowed a mixing zone (MZ). The chronic criteria shall be based on a thirty (30)-day exposure period. Therefore, the thirty (30)-day Q_{10} low flow condition of the receiving water body will be used in determining chronic total ammonia nitrogen criteria.
- C. Without sufficient and reliable data, it is assumed that early life stages are present and must be protected at all times of the year.
- (I) Sufficient and reliable data shall include, but is not limited to, seasonal studies on the fish species distributions, spawning periods, nursery periods, duration of sensitive life stages, and water body temperature. Best professional judgement from fisheries biologists and other scientists will be considered as appropriate.
- (II) The time frames during the year when early life stages are considered to be absent are those time periods when early life stages are present in numbers that, if chronic toxicity did occur, would not affect the long-term success of the populations.
- (III) A source of information for determining the duration of early life stages is **The American Society for Testing and Materials (ASTM) Standard E-1241, "Standard Guide for Conducting Early Life-Stage Toxicity Tests with Fishes."**
- (IV) Protection of early life stages should include the most sensitive species that have used a water body for spawning and rearing since November 28, 1975.

Missouri revised its total ammonia criteria to be consistent with EPA's 1999 national recommendation that the chronic ammonia criteria be both pH and temperature dependent, that the criteria consider when sensitive early life stages of fish may be present, and to accommodate the special needs of cold-water species like salmonids. Missouri's revisions specify that the $1Q_{10}$ will be used for the design flow for determining acute criteria permit limits. For chronic ammonia limits, the $30Q_{10}$ will be used as the design flow. The criteria as adopted by Missouri are consistent with EPA's guidance published in the Federal Register (64 FR 71974-71980), and are consistent with EPA's implementing regulations at 40 CFR § 131.11(b)(1), which encourage states to adopt criteria based upon 304(a) guidance or 304(a) guidance modified to reflect site-specific conditions. As such, these revisions are hereby approved.

The State should be aware that the US Fish and Wildlife Service has raised concerns regarding federally listed and candidate mussel species and the potential effects of ammonia to these species, water bodies, and counties identified in EPA's Biological Evaluation (enclosed) prepared under section 7 of the Endangered Species Act. EPA encourages Missouri to minimize potential impacts to the federally listed and candidate

mussel species by coordinating with the US Fish and Wildlife Service office, in Columbia, Missouri, when deriving or reissuing NPDES permits for discharges into waters where these species may be located.

N. 10 CSR 20-7.031 (4)(L)1. Sulfate plus Chloride Limit Revision

Missouri revised the Sulfate plus Chloride Limit provision by deleting the struck through text below:

1. Streams with seven (7)-day Q_{10} low flow of less than one (1) cubic foot per second. The concentration of chloride plus sulfate shall not exceed one thousand milligrams per liter (1000 mg/L) ~~at the seven (7)-day Q_{10} low flow.~~ Table A includes additional chloride criteria.

The above noted deletions to 10 CSR 20-7.031 (4)(L)(1) makes the application of the sulfate and chloride limit a “not to exceed” value regardless of flow, resulting in a more stringent application of the criterion and increased protection of aquatic life. These changes are consistent with 40 CFR §§ 131.6(c) and 131.11 and are hereby approved.

O. 10 CSR 20-7.031 (10) Rule reference to the Missouri Effluent Regulations at 10 CSR 20-7.015 (9)(H)

Missouri added the following new provision:

Compliance with new or revised National Pollutant Discharge Elimination System (NPDES) or Missouri operating permit limitations based on criteria in this rule shall be achieved with all deliberate speed and no later than three (3) years from the date of issuance of the permit except where provided for otherwise in 10 CSR 20-7.015(9)(H).

Missouri’s revised WQS at 10 CSR 20-7.031 (10) reference the compliance schedule authorizing provision for implementing water quality based effluent limits to protect whole body contact and secondary contact recreational uses. EPA’s regulations at 40 CFR § 131.13 allow states in their discretion, to develop policies for the implementation of WQS. The Administrator has held that schedules of compliance fall within the category of policies listed in this regulation. *In the Matter of Star-Kist* 3 E.A.D. 172, 182-183 n. 16 (1990). Where states have chosen in their discretion to adopt compliance schedule authorizing provisions, such regulations must be submitted to EPA and must be approved to be in effect for CWA purposes (40 CFR §§ 131.13 and 131.21(c)). As such, EPA considers the new compliance schedule authorizing provision located at 10 CSR 20-7.015(9)(H) to be a new or revised water quality standard and, therefore, EPA is reviewing this provision pursuant to 40 CFR § 131.13.

The revision to 10 CSR 20-7.031 (10) to incorporate a reference to the compliance schedule authorizing provision is consistent with CWA and EPA’s implementing regulations, and therefore, EPA approves these revisions. EPA’s review of the rule

referenced compliance schedule authorizing provision contained within Missouri's Effluent Regulations at 10 CSR 20-7.015(9)(H) is located in Section II.A below.

P. 10 CSR 20-7.015 (9) General Conditions (I) Temporary Suspension of Accountability for Bacteria Standards during Wet Weather.

(I) Temporary Suspension of Accountability for Bacteria Standards during Wet Weather. The accountability for bacteria standards may be temporarily suspended for specific discharges when conditions contained in paragraphs (9)(I)1. through 3. are met.

1. *No existing recreational uses downstream of the discharge will be impacted during the period of suspension as confirmed through a water quality review for reasonable potential for downstream impacts and a use attainability analysis performed in accordance with the Recreational Use Attainability Analysis Protocol approved by the Missouri Clean Water Commission on November 3, 2004.*
2. *The period of suspension must be restricted to the defined wet weather event that corresponds to the period when recreational uses are unattainable. The period must be determinable at any time by the discharger and the general public (such as from stream depth or flow readings or other stream conditions on which publicly accessible records are kept).*
3. *The suspension shall be subject to public review and comment, Missouri Clean Water Commission approval, and U.S. Environmental Protection Agency approval before becoming effective and shall be contained as a condition in a discharge permit or other written document developed through public participation.*

In its 2005 action, Missouri adopted a new provision pertaining to Effluent Regulations within 10 CSR 20-7.015 where the accountability for bacteria standards may be temporarily suspended for specific discharges when certain conditions are met. This provision is potentially applicable to all NPDES permits, including combined sewer overflows and sanitary sewer overflows. EPA views this type of discharger-specific change to WQS as a variance. As such, the new variance authorizing policy located at 10 CSR 20-7.015 (9)(I) and any subsequent variance issued under this provision constitute a change to the WQS requiring EPA review pursuant to 40 CFR §§ 131.5 and 131.6.

Water quality standard variances require similar substantive and procedural requirements as removing a designated use, but unlike use removal, variances are both discharger and pollutant specific, are time-limited, and do not forego the currently designated use of a water body. A variance is most appropriate where the State believes that the standard can be ultimately attained. By maintaining the standard rather than changing it, this provision provides a mechanism by which the State can assure that further progress is made in improving the water quality and attaining the standard. With a variance, NPDES permits may be written such that reasonable progress is made toward attaining the standards without violating section 402(a)(1) of CWA, which requires that NPDES permits must meet the applicable WQS.

State-adopted variances have been approved by EPA where, among other things, the state demonstrates, consistent with 40 CFR § 131, that meeting the standard is unattainable based on one or more of the grounds outlined in 40 CFR § 131.10(g). The variance is granted for a specified period of time and reexamined at least every three years as reasonable progress is made toward meeting the standards.

The provision at 10 CSR 20-7.015 (9)(I) authorizes variances if certain requirements are met, which include protecting existing recreational uses, conducting a use attainability analysis (UAA), subjecting the change in WQS to public review and comment, and submitting the resulting change in WQS to EPA for its review and approval prior to becoming effective. These requirements are consistent with those found in 40 CFR § 131.10 governing changes to designated uses. As such, this variance authorizing provision establishes the framework by which Missouri could adopt subsequent variances that would be consistent with the federal regulatory and statutory requirements and is hereby approved.

As noted above, any individual variance, or temporary suspension, issued under 10 CSR 20-7.015 (9)(I) would constitute a specific change to WQS that requires EPA review and approval (under CWA section 303(c) and 40 CFR § 131.20(c)) prior to becoming effective or implemented in a NPDES permit. As such, EPA will review individual variances, which must be identified within the State WQS regulations, in addition to today's approval of the State's variance policy, as identified in 10 CSR 20-7.015 (9)(I).

Q. 10 CSR 20-7.031 Table C – Waters Designated for Cold-Water Fishery.

In EPA's September 8, 2000 letter to Missouri, EPA approved the increased length of the designated Cold-Water Fishery on Little Piney Creek. The 2005 revisions revert back to the original segment description noted in the 1994 WQS. Additional analysis of the legal descriptions reveals that the 1996 changes and 2000 approval were erroneous. The legal description for the 19-mile segment (from Sec 25, 37N, 9W to Sec. 31, T37N, 8W) did not describe any section of Little Piney Creek. The 2005 revisions restore the previous designation of Cold-Water Fishery to Little Piney Creek and are hereby approved (see attached Table 2).

R. 10 CSR 20-7.031 Table D – Outstanding National Resource Waters.

Missouri revised Table D, Outstanding National Resource Waters, refining the location information to include legal descriptions for each water body (see attached Table 3). The added legal descriptions increase the clarity in identifying the locations of these Outstanding National Resource Waters (ONRW's). The revised legal descriptions provided for the Current River and the Jack's Fork River are nonsubstantive in that they do not change the protection afforded under Missouri's Tier 3 Antidegradation Policy.

The legal description for the Eleven Point River was also revised to coincide the headwaters of this river with the border of the land under the control of the National Forest Service in Oregon County near Thomasville, Missouri. This revision to the legal

description of the Eleven Point River results in the headwaters of the river no longer being designated as ONRW's, however, these waters are still protected under the WQS rules, as the designated uses, and the criteria to protect those uses, have not changed. MDNR should take care in ensuring that activities in these headwaters should not be allowed which would likely result in a real change in water quality in the downstream ONRW segment.

The WQS regulation at 40 CFR § 131.12 require each state and authorized Tribe to adopt, as part of its WQS, an antidegradation policy consistent with 40 CFR § 131.12 and identify implementation methods for such a policy. Regarding the process for adoption of ONRWs, the existing federal regulation requires the State or Tribe to provide an ONRW level of protection in their antidegradation policies. The federal regulation at 40 CFR § 131.12 does not require States to identify specific waters as ONRW and, similarly, does not preclude States from removing waters from ONRW status. Nonetheless, Missouri's revision effectively decreasing the length of the Eleven Point River segment identified as an ONRW is a substantive change to Missouri's WQS and is therefore subject to EPA's review. This revision and the clarifying revisions to the legal descriptions of the Current River and Jack's Fork River are consistent with the requirements of 40 CFR § 131.12. Therefore, EPA is approving this revision to the WQS.

S. 10 CSR 20-7.031 Table E – Outstanding State Resource Waters.

Missouri revised Table E, Outstanding State Resource Waters, by adding a new water body, Bull Creek (see attached Table 4). In identifying Bull Creek as an Outstanding State Resource Water, Missouri has taken a proactive step to maintain and protect the resource. EPA encourages states to identify waters of high quality and to maintain and protect the quality, as proscribed under the State's antidegradation policy (10 CSR 20-7.031 (2)). The designation of Bull Creek as an Outstanding State Resource Water is consistent with federal regulations governing antidegradation at 40 CFR § 131.12 and is hereby approved.

T. 10 CSR 20-7.031 Table G – Lake Classifications and Use Designations.

Missouri revised Table G - Lake Classifications and Use Designations. The changes to Table G can be classified as one of two types of revisions: (1) Increase in lake acreage and/or (2) Adjustment to legal description (see attached Table 5). These revisions to Table G provide further clarity and accuracy, and are hereby approved.

U. 10 CSR 20-7.031 Table H – Stream Classifications and Use Designations

Missouri revised Table H - Stream Classifications and Use Designations to correct segment lengths, increase the length of a classified water body, resegment certain water bodies, and to incorporate other changes (see attached Table 6). Regarding the revised segment length for Brush Creek (Benton County), the September 8, 2000 letter identified this classified segment as having decreased in length from 9.2 miles to 9.0 miles in the

1996 revised WQS. EPA's comment was in error because, in fact, the 1996 revisions increased the mileage from 9.0 miles to 9.2 miles. While EPA noted the 1996 revisions in the September 8, 2000 letter, it did not approve or disapprove those revisions, but recommended that the State review the modification and make any necessary corrections. As a solution, Missouri revised the classification table to revert to the pre-1996 description until further investigation provides the necessary documentation of the extended mileage. Missouri's revision back to the original legal description affords the same protection for the water body as had been previously provided for in their WQS. As such, the current designation does not result in a substantive change to the protection afforded to Brush Creek (Benton County) and EPA hereby approves the revision.

In today's decision, for those water bodies in Table 6 (attached) where EPA is approving a resegmentation of a water body, EPA is not taking action on the recreational use designation for that particular water body. On October 31, 2006, EPA made a determination regarding the recreational use designations for 141 of Missouri's classified streams. Nine water bodies identified in attached Table 6 are included in that review and determination. Please refer to the October 31, 2006, letter from EPA to MDNR for further information regarding the recreational uses for those waterbodies.

EPA has reviewed the revisions made to Table H, with the exception of any designated use revisions or omissions, and finds the changes, as identified in attached Table 6 of this document, to be consistent with CWA and its implementing federal regulations and are hereby approved. Nonsubstantive changes to Table H are addressed in Section III.G of this document.

V. 10 CSR 20-7.031 Table I – Biocriteria Reference Location.

Missouri revised Table I – Biocriteria Reference Location to incorporate several new water bodies to be used as biocriteria reference locations, to correct legal descriptions, and to delete two water bodies (see attached Table 7). 10 CSR 20-7.031 Table I is referenced in section (4)(Q) Missouri's WQS. These waters serve as the basis for determinations regarding the protection of biological integrity as part of the State's narrative biological criteria.

The incorporation of new water bodies to Table I expands Missouri's ability to protect the biological integrity of waters, as measured by lists or numeric diversity indices of benthic invertebrates, fish, algae or other appropriate biological indices. The regulations at 10 CSR 20-7.031 (4)(Q) state that the biological integrity of waters shall not be significantly different from reference waters, and waters shall be compared to reference waters of similar size within an ecoregion. This provision provides further protection to waters in the State of Missouri by expanding the means by which Missouri can assess the health of water bodies. The adoption of new water bodies into Table I is hereby approved.

Huffstetter Lateral Ditch and Ash Slough Ditch were deleted from Table I. Both of these streams were manipulated for the purpose of irrigation. Missouri deleted these streams as

reference sites due to stream manipulation for irrigation and/or drainage purposes, which render them non-representative of natural conditions. A biocriteria reference location, by definition, is a specific locality on a water body that is unimpaired or minimally impaired and is representative of the expected biological integrity of other localities on the same water body or nearby water bodies. The two irrigation ditch water bodies deleted from Table I did not provide this representation and therefore it is appropriate to delete these from the Table I. The deletion of these two water bodies from Table I does not affect the protection afforded to them under the Missouri WQS, and is hereby approved.

SECTION II – ITEM EPA IS PARTIALLY APPROVING/DISAPPROVING

A. 10 CSR 20-7.015 (9)(H) Implementation Schedule for Protection of Whole Body Contact and Secondary Contact Recreation

1. For all permitted wastewater discharges containing bacteria, the department shall, upon the issuance or first renewal or first significant modification of each permit on or after December 31, 2005, include within each permit a compliance schedule that provides up to five (5) years for the permittee to either install disinfection systems, present an evaluation sufficient to show that disinfection is not required to protect one (1) or both designated recreational uses, or present a use attainability analysis (UAA) that demonstrates one (1) or both designated recreational uses are not attainable in the classified waters receiving the effluent. This provision does not apply to permits issued for construction applications submitted to the department after December 31, 2005.
2. Notwithstanding the provisions of (9)(H)1., all permits shall insure compliance with effluent limits to protect whole body contact and secondary contact recreation by no later than December 31, 2013, unless the permittee presents an evaluation sufficient to show that disinfection is not required to protect one (1) or both designated recreational uses, or a use attainability analysis (UAA) demonstrates that one (1) or both designated recreational uses are not attainable in the classified waters receiving the effluent.

Under EPA's WQS regulations, the State has discretion to include in its standards "policies generally affecting their application and implementation, such as mixing zones, low-flows and variances." 40 CFR § 131.13. Under a 1990 decision by the Administrator, in order for a permitting authority to authorize a schedule of compliance, the State must have an authorizing provision for such a schedule in its WQS or implementing regulations. *In the Matter of Star-Kist Caribe, Inc.* 3 E.A.D. 172, 182-183, n.16 (1990). The NPDES regulations at 40 CFR § 122.47 require that a compliance schedule only be included in an NPDES permit where "appropriate" and require compliance with the final effluent limitation "as soon as possible." Additionally, any NPDES permit establishing a compliance date more than one year from permit issuance shall set forth interim requirements and dates for their achievement and/or progress reports.

Though discretionary with the State, the Administrator has stated that authorizing provisions for compliance schedules such as those contained within 10 CSR 20-7.015 (9)(H) fall within the category of implementing policies and procedures subject to EPA review under 40 CFR § 131.13. *In the Matter of Star-Kist Caribe, Inc.*, 3 E.A.D. 172, 182-183, n. 16 (Adm'r 1990), *modification denied*, 4 E.A.D. 33 (EAB 1992); *In re City of Ames*, 6 E.A.D. 374 (EAB 1996). As such, authorizing provisions for compliance schedules are subject to EPA review and approval under CWA section 303(c).

10 CSR 20-7.015 (9)(H) offers NPDES dischargers temporary relief from the disinfection requirement by providing permitted entities up to five years to either: (1) install disinfection systems, (2) present an evaluation sufficient to show that disinfection is not required to protect the designated recreational uses, or (3) present a use attainability analysis (UAA) that demonstrates the designated recreational uses are not attainable in the classified waters receiving the effluent.

CWA at section 502(17) defines a schedule of compliance as “a schedule of remedial measures including an enforceable sequence of actions or operations leading to compliance with an effluent limitation, other limitation, prohibition, or standard.” This definition contemplates that there will be an enforceable series of actions by the permittee that will result in compliance with a final water quality-based effluent limitation in an NPDES permit.

Any compliance schedule in an NPDES permit must meet the requirements of 40 CFR § 122.47. Subsection (a) states: “The permit may, when appropriate, specify a schedule of compliance leading to compliance with CWA and regulations.” Subsection (b), among other things, requires compliance “as soon as possible but not later than the statutory deadline under CWA”; these regulations apply to states pursuant to 40 CFR § 123.25(a)(18).

Install Disinfection Systems

EPA finds the new provision in the Effluent Regulations that provides for a compliance schedule only under the circumstances that allow a facility a specified time to install a disinfection system, listed as (1) above, as necessary to meet the water quality-based effluent limitations, to be consistent with CWA, and EPA’s implementing regulations at 40 CFR § 131.13. Compliance schedules in individual permits may be authorized, where appropriately justified, to allow the discharger to undertake the measures necessary to come into compliance with a water quality-based effluent limitation. Accordingly, EPA is hereby approving this component of the new provision at 10 CSR 20-7.015 (9)(H). It is EPA’s understanding that the compliance schedules issued under this new provision will be issued “when appropriate” to come into compliance “as soon as possible”, in accordance with federal regulations at 40 CFR 122.47.

Present Evaluation or Present UAA

10 CSR 20-7.015 (9)(H)(2) allows dischargers time to present an evaluation to demonstrate that disinfection is not necessary to protect designated uses or present a use attainability analysis (UAA). The first part of this provision would delay the effectiveness of the water quality-based effluent limit (WQBEL) that would otherwise apply under the currently applicable WQS so that the discharger could demonstrate that a different, less stringent effluent limit should apply and still protect the designated use. The second part of this provision would delay the effectiveness of the WQBEL that would otherwise apply under the current standards so that the dischargers could conduct a UAA. A UAA is a structured scientific assessment of the factors affecting the attainment of the use which may include the factors specified in 40 C.F.R. § 131.10(g). 40 C.F.R. § 131.3(g). The UAA could support a WQS change that may result in a less stringent standard and a corresponding less stringent effluent limitation.

EPA has determined that these two components of the new provision are inconsistent with CWA definition of compliance schedule. Under CWA definition of compliance schedule, CWA section 502(17), compliance schedules are an enforceable sequence of actions or operations leading to compliance with a WQBEL. A WQBEL is based on the currently applicable WQS. Time to develop a presentation that a different effluent limit should be adopted, or time to conduct a UAA to support a change to WQS and a corresponding change to a WQBEL, is not a series of actions or operations by a permittee to achieve compliance with a WQBEL based on the currently applicable WQS. As such, EPA has determined that the language within 10 CSR 20-7.015 (9)(H)(2) is inconsistent with CWA definition of compliance schedule. The purpose of a compliance schedule is to give a permittee time to make the necessary changes in its facility or operations to comply with a WQBEL in an NPDES permit, rather than to accommodate a state's need for time to change that effluent limitation, either based on a UAA or a presentation to show that disinfection is not necessary. Thus, where the purpose of the authorizing provision is to accommodate a states' or permittee's need for additional time to complete a UAA, or provide a presentation, rather than to give the permittee time to undertake action to meet a water quality-based effluent limitation in an NPDES permit, this is not an appropriate compliance schedule authorizing provision. Therefore, because the language within 10 CSR 20-7.015 (9)(H)(2), which allows dischargers time to study whether meeting the water quality criteria for bacteria is, in fact, necessary, or conduct a UAA, is inconsistent with CWA at section 502(17) and EPA's implementing regulations at 40 CFR §§ 122.47, 123.25(a)(18), and 122.44(d)(1)(vii)(A), EPA disapproves these two components of the new provision at 10 CSR 20-7.015 (9)(H)(2).

Consequently, this disapproved language is not in effect for CWA purposes as specified under 40 CFR § 131.21(c) and (d). This disapproval only applies to the language described above and does not affect the States' use of compliance schedules for the purposes of installing disinfection to meet the water quality criteria associated with the designated recreational uses. To address this disapproval, one way Missouri could correct the compliance schedule provision at 10 CSR 20-7.015 (9)(H) is by incorporating the following strikeouts of the disapproved language within the Effluent Guidelines:

- A. *For all permitted wastewater discharges containing bacteria, the department shall, upon the issuance or first renewal or first significant modification of each permit on or after December 31, 2005, include within each permit a compliance schedule that provides up to five (5) years for the permittee to either install disinfection systems. ~~present an evaluation sufficient to show that disinfection is not required to protect one (1) or both designated recreational uses, or present a use attainability analysis (UAA) that demonstrates one (1) or both designated recreational uses are not attainable in the classified waters receiving the effluent.~~ This provision does not apply to permits issued for construction applications submitted to the department after December 31, 2005.*
- B. *Notwithstanding the provisions of (9)(H)1., all permits shall insure compliance with effluent limits to protect whole body contact and secondary contact recreation by no later than December 31, 2013, ~~unless the permittee presents an evaluation sufficient to show that disinfection is not required to protect one (1) or both designated recreational uses, or a use attainability analysis (UAA) demonstrates that one (1) or both designated recreational uses are not attainable in the classified waters receiving the effluent.~~*

Further, the State may also choose not to revise and re-submit a compliance schedule authorizing provision because adopting such a provision is discretionary with the State. 40 CFR § 131.13. *In the Matter of Star-Kist Caribe*, 3 E.A.D. 172, 182-183 n. 16 (1990). Because the State's standards do not need a compliance schedule-authorizing provision to be consistent with CWA, it is not necessary for EPA to promulgate an alternative compliance schedule authorizing provision in place of the disapproved provision.

As a practical matter, Missouri's WQS at 10 CSR 20-7.031 (10) contain a general compliance schedule authorizing provision for coming into compliance with water quality based effluent limitations. The existing authorizing provision allows Missouri to issue a schedule for up to three years to come into compliance with new or revised criteria. The State's ability to issue a compliance schedule under the existing authorizing provision at 10 CSR 20-7.031 (10) is unaffected by this disapproval.

Although it is not consistent with CWA to provide a compliance schedule solely to determine if the standards should be changed or to demonstrate that a different effluent limit should be adopted, this disapproval is not intended to mandate disinfection as the only means to meeting the WQBEL. There may be alternatives to disinfection that would meet the same goal of protecting the designated uses. It is not EPA's intent to preclude the State from investigating those alternatives. While the disapproval precludes the State from issuing a compliance schedule solely for the purpose of preparing a UAA or other study, it does not prevent a discharger from conducting such analyses concurrently with the actions necessary to achieve compliance with a WQBEL based on the current applicable WQS. In other words, actions related to presenting an evaluation or UAA remain an option available to dischargers, but are taken in addition to the actions necessary to achieve compliance with the WQBEL based on the existing standard.

SECTION III – ITEMS IN WHICH EPA IS TAKING NO ACTION

Section 303(c) of CWA requires EPA to review and approve revisions to states' WQS. Numerous revisions Missouri made to their WQS regulations (10 CSR 20-7.031) do not constitute new or revised WQS. As such, EPA is not required under section 303(c) of CWA to review and approve such changes, outlined below. The provisions discussed below in subsections A – C were substantive additions or changes to Missouri's regulations, but do not constitute new or revised WQS requiring EPA review. Other revisions (subsections D – I of this section) correct grammatical errors, update references, or provide clarity. EPA notes the appropriateness of these changes in 10 CSR 20-7.031; however, these changes do not constitute new or revised WQS requiring EPA review and approval. Therefore, EPA is taking no action on any of the items detailed in the subsections below.

A. 10 CSR 20-7.031 (2) Antidegradation (D)

Missouri added the following new provision to its Antidegradation Policy:

“The three (3) levels of protection provided by the antidegradation policy in subsections (A) through (C) of this section shall be implemented according to procedures developed by the department. The antidegradation implementation procedure shall go through stakeholder development and the finalized procedure shall be referenced by this rule before it becomes effective.”

EPA recognizes and commends the State and its stakeholder group for their ongoing work to develop procedures. The new language adopted by Missouri creates a placeholder for an antidegradation implementation procedure. The new language does not constitute a change in Missouri's WQS under section 303(c) of CWA. As such, the added language does not require EPA review and approval.

B. 10 CSR 20-7.031 Table A – Groundwater Criteria for Boron

Missouri revised the Boron criteria contained in Table A-Criteria for Designated Uses. The revision includes deleting the criterion (2000 µg/L) for whole body contact recreation and adding a criterion (2000 µg/L) for protection of groundwater. MDNR explained that these revisions were made to correct a typographical error. Missouri's 1994 WQS contained a Boron criterion of 2000 µg/L for the protection of groundwater. The 1996 revised WQS no longer contained the groundwater criterion; however, they included a criterion of 2000 µg/L for whole body contact recreation. The groundwater criterion had been transposed in the 1996 standards revisions as a recreation criterion. Missouri's 2005 revisions corrected this typographical error by deleting the criterion for whole body contact recreation and adding back the criterion for protection of groundwater.

Because CWA does not require state adoption of groundwater criteria, Boron would not otherwise be regulated under Missouri’s WQS. While EPA commends the State for adopting this value for the protection of groundwater, EPA is not taking any formal action to approve this revision because EPA’s authority under CWA § 303(c) does not extend to state adoption of groundwater criteria. EPA acknowledges the State’s effort to provide further protection for its groundwater resource.

C. Nonsubstantive Changes to 10 CSR 20-7.031

The struck through language in the following table identifies language that has been deleted from the WQS. New language is underlined.

C.S.R. Section	Revision	Comment
7.031 (1)(C)7.	Federal changed to <u>Food and Drug Administration (FDA)</u>	Clarification
7.031 (1)(C)7.	Deleted parenthetical reference to “secondary contact recreation” and “ Secondary contact recreation assumes limited physical contact with the water without likelihood of water ingestion. ”, which is included as a separate definition under section 7.031 (1)(C)9.	Deleted redundancy
7.031 (1)(G) through 7.031 (1)(FF)	Lettering changes due to addition of new definitions	Reference change
7.031 (1)(N)	Division of Geology and Land Survey changed to the <u>MDNR</u>	Reference change
7.031 (1)(Y)	Revised the following provision: “...hardness will be determined by the <u>lower twenty-fifth percentile value, so that no more than twenty five percent (25%) of samples fall below the value</u> ”	Clarification
7.031 (2)	Added (A) <u>Tier One.</u> (B) <u>Tier Two.</u> (C) <u>Tier Three</u>	Clarification
7.031 (4)(A)3. through 7.031 (4)(A)5.	Numbering changes due to deletion of disapproved language.	Reference change
7.031 (4)(B)	New language added: <u>6. Metals criteria for which toxicity is hardness dependent are in equation format in Table A.</u>	Reference added
7.031 (4)(D)	Temperature. Throughout this section, Celsius equivalents were added for temperatures given in degrees Fahrenheit.	Clarification
7.031 (4)(E)	Added underlined language to the following provision: <u>Water contaminants shall not cause pH to be outside of the range of 6.5 to 9.0 standard pH units.</u>	Clarification

7.031 (5)	Throughout this section the Column roman numerals were changed to column names when referring to Table A (e.g. Column VII was changed to Groundwater).	Reference change Clarification
7.031 (7)	Added underlined language to the following provision: <i>Table D contains a list of the outstanding national resource waters in <u>Missouri</u>.</i>	Clarification
7.031 (8)	The subsections were renumbered.	Reference change
7.031 (10)	The heading <u>Compliance with Water Quality Based Limitations</u> was added to this section.	Clarification

D. Nonsubstantive Changes to Tables A and B – Criteria for Designated Uses

1. The State revised the Column headings for Criteria Tables A and B by converting the roman numerals to three letter abbreviations. These revisions are nonsubstantive and clarifying. EPA is neither approving nor disapproving these changes, which are as follows:

<i>Previous Heading</i>	<i>Designation Use</i>	<i>Revised Abbreviation</i>
Column I	Protection of Aquatic Life	AQL
Column II	Human Health Protection – Fish Consumption	HHF
Column III	Drinking Water Supply	DWS
Column IV	Irrigation	IRR
Column V	Livestock, Wildlife Watering	LWW
Column VI	Whole-Body-Contact Recreation	WBC
Column VII	Groundwater	GRW

2. The following clarifying changes were made to Table A. Language that is struck through has been deleted. New language is underlined.

Revision	Comment
Persistent, Bioaccumulative Man-Made Toxics table name changed to <u>Bioaccumulative, Anthropogenic Toxics</u> .	Clarification
Persistent, Manmade Carcinogens table name changed to <u>Anthropogenic Carcinogens</u> .	Clarification
Celsius equivalents were added to the temperature criteria table.	Clarification
Chromium changed to <u>Chromium III</u>	Clarification
TCDD spelled out in table as <u>tetrachlorodibenzo-p-dioxin</u>	Clarification

E. Nonsubstantive Changes to Table E – Outstanding State Resource Waters

Missouri revised Table E, Outstanding State Resource Waters, by making several non-substantive changes (see attached Table 8). Missouri deleted the explanatory language in the Miles description of Blue Springs Creek. The total segment length and location

description have not changed, thus, the revision is nonsubstantive and does not affect the listing of this water as an Outstanding State Resource Water. The spelling of Bonne Femme Creek was also corrected.

F. Nonsubstantive Changes to Table G – Lake Classifications and Use Designations

Missouri revised the way they listed Lake Fond du Lac, Lake Lorraine, and Lake of the Woods in Table G of their WQS (see attached Table 9). The revisions do not constitute a substantive change to the name of these lakes and the protection they offered as classified water bodies.

G. Nonsubstantive Changes to Table H – Classified Streams

Missouri revised Table H - Stream Classifications and Use Designations to correct and modify legal descriptions, delete duplicate entries, and to incorporate other nonsubstantive changes (see attached Table 10).

H. Typographical Errors for Future Correction

1. The designated use for Protection of Warm Water Aquatic Life and Human Health-Fish Consumption (AQL) for Milan Lake (old) in Sullivan County was removed from Table G in 10 CSR 20-7.031 Table G. MDNR did not provided a use attainability analysis with the submission of this WQS package for EPA to review. In an email to EPA dated June 28, 2006, MDNR explained that this omission was a typographical error, and the lake should be designated with an aquatic life use. MDNR said they would request that the Secretary of State correct the error in the next publication of the Code of State Regulations.
2. The change to the legal description for Lake Wanda Lee, outlined below, is a typographical error, which EPA anticipates will be corrected by MDNR during the next triennial review.

Items in bold are new or revised standards. Items in brackets have been deleted.

WATERBODY	CLASS	ACRES	LOCATION	Explanation
Wanda Lee, Lake	L3	220	02, 37N, 70E [07E]	Typographical error

3. During its review, EPA noted that the segment Plattin Creek described in the table below did not have a designated use for the Protection of Warm Water Aquatic Life and Human Health-Fish Consumption (AQL). In an email sent to EPA staff on July 25, 2006, MDNR staff explained that the omission of this designated use was a typographical error that occurred during the 1994 water quality standard revisions. The designated uses for Plattin Creek in the 1991 WQS are Livestock and Wildlife Watering (LWW) and AQL. The typographical error shifted the marks in the LWW and AQL columns to the left, thus changing the designated

uses to Irrigation (IRR) and LWW columns. MDNR staff stated that they intend to correct this error during the next revision of the WQS.

WATERBODY	CLASS	MILES	FROM	TO	COUNTY
Plattin Cr.	C	3	17,38N,05E	17,38N,06E	St. Francois

4. The following table identifies additional typographical errors (in bold).

C.S.R. Section	Revision	Comment
7.031 (5)(B)	When the Column numbers were changed to column names the word “in” should have been deleted. Consumption is spelled incorrectly in the changes that were made. See italicized words below. <i>“(B) When criteria in for the protection of aquatic life or human health protection-fish comsumption in Table A are more stringent...”</i>	Typographical errors
7.031 Table A	<i>Dichlorobromoethane</i> was previously <i>dichlorobromomethane</i>	Typographical error

Table 1: 10 CSR 20-7.031 Table A – Revised hardness-dependent dissolved metals equations for protection of aquatic life.

Criterion Maximum Concentration (dissolved) = $\exp\{m_a + b_A\}$ (Conversion Factor)

Criterion Continuous Concentration (dissolved) = $\exp\{m_C + b_C\}$ (Conversion Factor)

H=hardness

Metal	EPA Equation Freshwater CMC (Acute) Aquatic Life	Missouri Acute Aquatic Life Metals Equation	EPA Freshwater CCC (Chronic) Aquatic Life Equation	Missouri Chronic Aquatic Life Use Equation
Chromium III	$e^{0.8190*\ln(H)+3.7256}*0.316$	$e^{0.8190*\ln(H)+3.7256}*0.316$	$e^{0.8190*\ln(H)+0.6848}*0.860$	$e^{0.8190*\ln(H)+0.6848}*0.860$
Silver	$e^{1.72*\ln(H)-6.59}*0.850$	$e^{1.72*\ln(H)-6.59}*0.850$	No criterion	No criterion

Table 2: 10 CSR 20-7.031 Table C – Waters Designated for Cold-Water Fishery

Items in bold are new or revised standards. Items in brackets have been deleted.

Water Body	Miles/Acres	From	To	County(ies)	Explanation	Approved
L. Piney Creek	[19] 4	[25,37N,9W] 04,35N,08W	[4,35N,8W] 21,35N,08W	Phelps	Mileage reduced from 19 to 4; Legal description changed	Yes - Correction to previous error

Table 3: 10 CSR 20-7.031 Table D – Outstanding National Resource Waters

Items in bold are new or revised standards. Items in brackets have been deleted.

Water Body	Location	County(ies)	Explanation	Approved
Current River	Headwater to Northern Ripley Co. Line Sec. 22,32N,0W to Sec. 15,25N,01E	Dent to Ripley	Addition of legal description and counties	Yes
Jacks Fork River	Headwaters to Mouth Sec. 29,28N,07W to Sec. 9/15,29N,03W	Texas to Shannon	Addition of legal description and counties	Yes
Eleven Point River	Headwaters to Hwy. 142 Sec. 32,25N,05W to Sec. 21,22N,02W	Oregon	Addition of legal description and counties. The headwaters legal description coincides with border of National Forest Service land.	Yes

Table 4: 10 CSR 20-7.031 Table E – Outstanding State Resource Waters

Items in bold are new or revised standards. Items in brackets have been deleted.

Water Body	Miles/Acres	Location	County(ies)	Explanation	Approved
Bull Creek	8 mi.	Mark Twain National Forest Sec. 24,25N,21W to Sec. 22,26N, 20W	Christian	New addition	Yes

Table 5: 10 CSR 20-7.031 Table G – Lake Classifications and Use Designations

The changes to Table G outlined below can be classified as one of two types of revisions:

(1) Increase in lake acreage and/or (2) Adjustment to legal description.

Items in bold are new or revised standards. Items in brackets have been deleted.

WATERBODY	CLASS	ACRES	LOCATION	Explanation	Approved
Ben Branch Lake	L3	[44] 45	15/14, 44N, 08W	Increased acreage measurement	Yes
Callaway Lake	L3	160	[01,45N,01E,] 06,45N,02E	Legal description revised to describe location of dam	Yes
Higginsville S. Lake	L1	[150] 223	SW NE 09, 49N, 25W	Increased acreage measurement	Yes
Longview Lake	L2	930	[20] 04, 47N, 32W	Legal description revised to describe location of dam	Yes
Malta Bend Comm. Lake	L3	[5] 40	25, 51N, 23W	Increased acreage measurement	Yes
Railroad Lake	L3	20	[SW30,SE] 25, 51N, 09W [.8W]	Simplified legal description to describe downstream endpoint	Yes
Roach Lake	L3	2	[25,57N,24W&] 30,57N,23W	Simplified legal description to describe downstream endpoint	Yes
Roby Lake	L3	[10] 21	[3, 32N, 11W] 34/35, 33N, 11W	Legal description revised to more accurately describe location of lake	Yes

Table 6: 10 CSR 20-7.031 Table H – Stream Classifications and Use Designations

Items in bold are new or revised standards. Items in brackets have been deleted.

WATERBODY	CLASS	MILES	FROM	TO	COUNTY	COUNTY2	Explanation	Approved
Big Bottom Cr.	C	1.9	Mouth	Lake Anne	Ste. Genevieve		The original five mile segment was subdivided into two segments.	Yes - EPA approves resegmentation. **
[Big Bottom Cr.]	C	5	Mouth	13, 37N, 07E	Ste. Genevieve			
Big Bottom Cr.	C	2.1	Lake Anne	13,37N,07E	Ste. Genevieve			
Big Buffalo Cr.	C	[4.1] 2.5	[12,41N,20W] 06,41N,19W	28,[41N] 42N,19W	Morgan		Revisions made in response to 2000 disapproval.	Yes
Brush Cr.	C	[9.2] 9	Mouth	[30, 43N, 22W] 35,43N,23W	Benton		Reduction in length of classified stream segment. See explanation in Section I(U) above.	Yes
Brush Cr.	P	[13.2] 11.5	Mouth	[16, 35N, 24W] 31,36N,24W	St. Clair	Polk	Legal description modified in response to 2000 disapproval of 4.0 mile segment (see below).	Yes
Brush Cr.	P	4	31,36N,24W	16,35N,24W	St. Clair	Polk	Segment restored in response to 2000 disapproval. Approved 4/28/2006. Retained in this chart to support the action on the 11.5 mile Class P segment described above.	Approved 4/28/2006
[Brush Cr.]	C	1.1	16, 35N, 24W	15, 35N, 24W	St. Clair	Polk	This segment description is redundant of the 2-mile segment described below. Deleting this segment has no effect on the classification of Brush Creek.	Yes
Brush Cr.	C	2	16,35N,24W	[28] 22,35N,24W	Polk		Section 28 erroneously described S. Fk. Brush Creek, which is listed separately in Table H. The revision correctly describes the segment.	Yes
Brushy Cr.	P	[0.8] 1	Mouth	[05] 04,40N,20W	Benton		Increased length of classified segment.	Yes
Cantrell Cr.	P	7	Mouth	[28] 07,30N,16W	Webster		Missouri provided the following rationale: "The mileage for the new description is consistent with the mileage given in the WQS. The point where the stream changed from class P to C coincides with a county road (access) and the confluence with an unnamed tributary." EPA verified the location Section 7 using GIS tools and confirmed that it appropriately describes the boundary between the 7.0 and 6.0-mile segment.	Yes
Cantrell Cr.	C	6	[28] 07,30N,16W	32,30N,16W	Webster			

WATERBODY	CLASS	MILES	FROM	TO	COUNTY	COUNTY2	Explanation	Approved
Cole Camp Cr.	P	16.4	Mouth	[08] 07,42N,21W	Benton		Carver Creek joins Cole Camp Creek in Section 7, where the classification changes from Class C to Class P. Missouri verified this on a USGS topo map. The change in the legal description coincides with the classification change.	Yes
Cole Camp Cr.	C	4.3	[08] 07,42N,21W	27,43N,21W	Benton			
E. Fk. Locust Cr.	P	[16] 3.6	[Mouth] 23,62N,20W	Hwy. 6	Sullivan		The original sixteen-mile segment was subdivided into two segments. Corrections to length.*	Yes – EPA approves resegmentation. **
E. Fk. Locust Cr.	P	13	Mouth	23,62N,20W	Sullivan			
Fassnight Cr.	C	1.2	25,29N,22W	30,29N,[22] 21W	Greene		Correction to legal description.	Yes
Gabriel Cr.	C	[13] 11.1	[74, 4N, 18W] 24,44N,19W	03,42N,19W	Morgan		The original thirteen-mile segment was subdivided into two segments.	Yes – EPA approves resegmentation. **
Gabriel Cr.	C	1.9	07,44N,18W	24,44N,19W	Morgan			
L. Cedar Cr.	C	[6] 2	[Mouth] 17,48N,11W	05,48N,11W	Boone		The original six-mile segment was subdivided into two segments.	Yes – EPA approves resegmentation. **
L. Cedar Cr.	C	4	Mouth	17,48N,11W	Boone			
Maries R.	P	41.5	Mouth	24,[48]40N,10W	Osage	Maries	Correction to legal description.	Yes
Trib. M. Fk. Tebo Cr.	C	3.5	Mouth	36,[43]44N,[24]25W	Henry		Correction to legal description.	Yes
Mississippi R.	P	5	Dam #27	Missouri R.	St. Louis City	St. Charles	The original 200.5-mile segment was subdivided into two segments.	Yes - EPA approves resegmentation. **
Mississippi R.	P	[200.5] 195.5	Ohio R.	[Missouri R.] Dam #27	Mississippi	[St. Charles] St. Louis City		
Muddy Cr.	C	5.5	31,58N,20W	05,58N,20W	Linn		The original ten-mile segment was subdivided into two segments.	Yes - EPA approves resegmentation. **
Muddy Cr.	C	[10] 4.5	Mouth	[5, 58N, 20W] 31,58N,20W	Linn			
N. Fk. M. Fabius R.	C	[16] 16.2	[22, 64N, 12W] 36,65N,13W	21,66N,14W	Scotland	Schuyler	One 16.0-mile segment was resegmented to create two Class C segments. Corrections to length.*	Yes
N. Fk. M. Fabius R.	C	9.2	22,64N,12W	36,65N,13W	Scotland	Schuyler		
North R.	C	[16] 12.2	[Hwy 15] 28,60N,11W	Hwy. 151	Shelby	Knox	The original sixteen-mile segment was subdivided into two segments.*	Yes - EPA approves resegmentation. **
North R.	C	5	Hwy. 15	28,60N,11W	Shelby	Knox		
Peddler Cr.	C	2.5	28,64N,31W	16,64N,31W	Gentry		Correction to legal description.	Yes
Ramsey Cr.	P	6	Mouth	[14]20,29N,[13]14E	Scott		Correction to legal description.	Yes
Trib. to Red Oak Cr.	C	1.5	[27]35,42N,05W	[35]27,42N,05W	Gasconade		Correction to legal description.	Yes

WATERBODY	CLASS	MILES	FROM	TO	COUNTY	COUNTY2	Explanation	Approved
Trib to S. Fk. Weaubleau Cr.	C	6	Mouth	25,36N,24W	St. Clair	Hickory	Revisions to name.	Yes
S. Grand R.	P	[48] 62.5	Mouth	02,44N,33W	Henry	Cass	Correction to stream length.*	Yes
Shoal Cr.	P	13.5	Capps Cr.	12,23N,[28]29W	Newton	Barry	Correction to legal description.	Yes
Shoal Cr.	C	4	12,23N,[28]29W	Hwy. 86	Barry		Correction to legal description.	Yes
Spring Br.	P	[10] 7.4	[Mouth] 02,34N,06W	Hwy. 32	Dent		The original ten-mile segment was subdivided into two segments, totaling 12.2 miles of classified stream.*	Yes - EPA approves resegmentation. **
Spring Br.	P	4.8	Mouth	02,34N,06W	Dent			
Spring Cr.	C	4	Mouth	[24]28,49N, 01W	Lincoln		Correction to legal description.	Yes
Third Fk. Platte R.	C	[31.5] 25	[Mouth] 08,57N,33W	25,61N,33W	Buchanan	Gentry	The original 31.5-mile segment was subdivided into two segments, totaling 32.5 miles of classified stream.*	Yes - EPA approves resegmentation. **
Third Fk. Platte R.	C	7.5	Mouth	08,57N,33W	Buchanan	Gentry		
W. Fk. Black R.	P	[27] 31.7	[17,32N, 2E] Mouth	25, 33N,03W	Reynolds		Nonsubstantive change to method of describing endpoint. Increase in length of classified segment.*	Yes
Trib. to W. Fk. Lost Cr.	C	[3.0] 2.3	Mouth	[4,58N, 31W] Willow Brook Lk	DeKalb		UAA revealed Willow Brook Lake in the upstream portion of this classified segment. GIS and aerial photographs reveal that the lake is in Sec. 4, T58N, R31W (previous legal description). The revised legal description and stream length appropriately describe the segment.	Yes
Weaubleau Cr.	P	[33.0] 29.4	Mouth	03,35N,23W	St. Clair	Hickory	Correction to stream length.*	Yes
Wilson [Cr.] Br.	C	1.2	Mouth	12,35N,30W	Vernon		Revisions to name.	Yes

*Missouri is continually trying to improve the accuracy of Table H. Missouri has explained that use of more precise measurement tools results in increased segment lengths, despite the fact that the legal descriptions do not change.

** Please refer to the October 31, 2006, determination letter from EPA to MDNR for discussion on the recreational use designations for these water bodies.

Table 7: 10 CSR 20-7.031 Table I – Biocriteria Reference Location

Items in bold are new or revised standards. Items in brackets have been deleted.

STREAM	COUNTIES	UPSTREAM LOCATION	DOWNSTREAM LOCATION	[LOCATIONS]
Apple Creek	Cape Girardeau/Perry	W 1/2 Sec. 29 T34N R11E	NW Sec. 3 T33N R11E	[NW1/4,Sec 4,T33N,R11E]
[Ash Slough Ditch]	[New Madrid]			[TS. Line 24N & 25N,R13E]
Big Creek	Shannon	E 1/2 Sec. 12 T30N R04W	N 1/2 Sec. 36 T30N R04W	[NW1/4,Sec 7,T30N,R3W]
Big Sugar Creek	McDonald	SE Sec. 1 T21N R30W	NE Sec. 21 T22N R30W	[N1/2,Sec 21,T22N,R30W]
Blair Creek	Shannon	SE Sec. 25 T30N R03W	NW Sec. 18 T29N R02W	
Boeuf Creek	Franklin	SW Sec. 36 T44N R04W	NW Sec. 30 T44N R03W	[W1/2,Sec 30,T44N,R3W]
Bryant Creek	Douglas	NW Sec. 10 T25N R14W	E 1/2 Sec. 15 T25N R14W	
Bull Creek	Christian/Taney	SE Sec. 25 T25N R21W	NE Sec. 3 T24N R21W	[E1/2,Sec 36,T25N,R21W]
Burriss Fork	Moniteau	NW Sec. 6 T43N R15W	NW Sec. 28 T44N R15W	[NW1/4,Sec 5,T43N,R15W]
Castor River	Madison	NW Sec. 10 T33N R08E	S 1/2 Sec. 16 T33N R08E	
Cedar Creek	Cedar	E 1/2 Sec. 29 T34N R27W	N 1/2 Sec. 09 T34N R27W	[N1/2,Sec 9,T34N,R27W]
Center Creek	Lawrence	SE Sec. 18 T27N R28W	NE Sec. 24 T27N R29W	
Deer Creek	Benton	SE Sec. 31 T40N R20W	NE Sec. 30 T40N R20W	[NE1/4,Sec 31,T40N,R20W]
East Fork Black River	Reynolds	NE Sec. 08 T33N R02E	SW Sec. 16 T33N R02E	[W1/2,Sec 16,T33N,R2E]
East Fork Crooked River	Ray	NE Sec. 02 T52N R27W	SE Sec. 14 T52N R27W	[E1/2,Sec 27,T53N,R27W]
East Fork Grand River	Worth	N 1/2 Sec. 32 T66N R30W	NW Sec. 13 T65N R31W	[N1/2,Sec 32,T66N,R30W]
Grindstone Creek	DeKalb	SW Sec. 10 T58N R30W	NW Sec. 02 T58N R30W	[NW1/4,Sec 2,T58N,R30W]
Heaths Creek	Pettis/Saline	SW Sec. 20 T48N R20W	N 1/2 Sec. 23 T48N R20W	
Honey Creek	Nodaway	SW Sec. 25 T65N R34W	SW Sec. 25 T65N R34W	[Sec 13 & 24,T65N,R34W]
Horse Creek	Cedar	SW Sec. 09 T34N R28W	N 1/2 Sec. 02 T34N R28W	
[Huffstetter Lateral Ditch]	[Stoddard]			[Sec Corner 17,18,19,20,T24N,R11E]
Huzzah Creek	Crawford	SE Sec. 29 T36N R02W	NE Sec. 18 T36N R02W	[S1/2,Sec 20,T36N,R2W]
Jacks Fork River	Texas/Shannon	SE Sec. 35 T28N R07W	NW Sec. 04 T27N R06W	[Sec Line 31 & 32,T28N,R6W]
Jones Creek	Jasper	N 1/2 Sec. 24 T27N R31W	NW Sec. 12 T27N R31W	
Little Black River	Ripley	E 1/2 Sec. 09 T24N R03E	SE Sec. 23 T24N R03E	[N1/2,Sec 25,T24N,R3E]
Little Drywood Creek	Vernon	NW Sec. 06 T33N R31W	SE Sec. 30 T35N R31W	[NE,S30,T35N,R31W]

STREAM	COUNTIES	UPSTREAM LOCATION	DOWNSTREAM LOCATION	[LOCATIONS]
Little Fox River	Clark	SE Sec. 14 T66N R09W	SE Sec. 24 T66N R09W	
Little Maries River	Maries	SW Sec. 34 T41N R10W	W 1/2 Sec. 26 T41N R10W	[W1/2,Sec 34,T41N,R10W]
Little Niangua River	Hickory	NE Sec. 26 T37N R20W	S 1/2 Sec. 35 T38N R20W	[NW1/4,Sec 2,T37N,R20W]
Little Piney Creek	Phelps	NE Sec. 05 T35N R08W	NE Sec. 31 T36N R08W	[SW1/4,Sec 32,T36N,R8W]
Little Whitewater River	Cape Girardeau	NW Sec. 01 T32N R09E	NE Sec. 16 T32N R10E	[N1/2,Sec 1,T32N,R9E]
Locust Creek	Putnam	S 1/2 Sec. 10 T66N R20W	NE Sec. 34 T66N R20W	
Long Branch Platte River	Nodaway	SE Sec. 30 T63N R34W	NE Sec. 29 T62N R34W	[E1/2,Sec 19,T62N,R34W]
Loutre River	Montgomery	E 1/2 Sec. 17 T48N R06W	SE Sec. 10 T47N R06W	[N1/2,Sec 28,T48N,R6W]
Main Ditch	Dunklin	S 1/2 Sec. 20 T20N R10E	NE Sec. 08 T19N R10E	
Maple Slough Ditch	Mississippi	NW Sec. 34 T25N R15E	Sec 3 & 4 Line T24N R15E	[TS. Line 24N & 25N,R15E]
Marble Creek	Madison	E 1/2 Sec. 24 T32N R04E	E 1/2 Sec. 21 T32N R05E	[S1/2,Sec 18,T32N,R5E]
Marrowbone Creek	Daviess	SW Sec. 18 T58N R27W	NE Sec. 08 T58N R27W	[Sec. Line 5 & 8,T58N,R27W]
Meramec River	Dent	SE Sec. 13 T35N R05W	SW Sec. 11 T35N R05W	[SW1/4,Sec 35,T36N,R5W]
Middle Fabius River	Lewis	NE Sec. 15 T62N R09W	E 1/2 Sec. 04 T61N R08W	[NE1/4,Sec 5,T61N,R8W]
Mikes Creek	McDonald	E 1/2 Sec. 15 T22N R30W	SE Sec. 16 T22N R30W	
Mill Creek	Phelps	NE Sec. 08 T36N R09W	NW Sec. 28 T37N R09W	
Moniteau Creek	Cooper	SW Sec. 20 T46N R16W	E 1/2 Sec. 23 T46N R16W	
No Creek	Livingston/Grundy	S 1/2 Sec. 31 T60N R23W	SE Sec. 01 T59N R24W	[T59N,R24W & 23W]
North Fork River	Douglas	SE Sec. 12 T26N R12W	SW Sec. 19 T26N R11W	[Sec 30,T26N,R11W]
North River	Marion	SE Sec. 24 T58N R08W	SE Sec. 32 T58N R07W	[E1/2,Sec 32,T58N,R7W]
Petite Saline Creek	Cooper	W 1/2 Sec. 15 T48N R16W	SE Sec. 12 T48N R16W	[NE1/4,Sec 13,T48N,R16W]
Pomme De Terre River	Polk	NE Sec. 16 T31N R20W	SW Sec. 01 T31N R21W	[Sec Line 21 & 22,T32N,R21W]
Richland Creek	Morgan	NW Sec. 04 T43N R18W	SE Sec. 28 T44N R18W	
River Aux Vases	Ste. Genevieve	E 1/2 Sec. 33 T37N R08E	SW Sec. 26 T37N R08E	[SE1/4,Sec 27,T37N,R8E]
Saline Creek	Miller	NW Sec. 23 T41N R14W	NW Sec. 25 T41N R14W	
Saline Creek	Ste. Genevieve	NE Sec. 35 T36N R08E	SW Sec. 32 T36N R09E	[W1/2,Sec 28,T36N,R9E]
Sinking Creek	Reynolds	SE Sec. 32 T31N R04W	NE Sec. 35 T30N R02E	[NE1/4,Sec 20,T30N,R2E]
Sinking Creek	Shannon	SE Sec. 17 T30N R02E	SE Sec. 08 T30N R04W	[Sec 28,T31N,R4W]
South Fabius River	Marion	S Sec. 18 T59N R08W	SE Sec. 26 T59N R08W	

STREAM	COUNTIES	UPSTREAM LOCATION	DOWNSTREAM LOCATION	[LOCATIONS]
South River	Marion	NW Sec. 06 T57N R05W	SW Sec. 21 T58N R05W	
Spring Creek	Adair	N 1/2 Sec. 14 T63N R17W	NE Sec. 30 T63N R16W	[NE,S30,T63N,R16W]
Spring Creek	Douglas	NW Sec. 26 T25N R11W	NW Sec. 34 T25N R11W	
Spring Creek	Douglas	NW Sec. 26 T25N R11W	NW Sec. 34 T25N R11W	[SW1/4,Sec 23,T25N,R11W]
Tavern Creek	Miller	NW Sec. 07 T38N R12W	NW Sec. 33 T39N R12W	
Turnback Creek	Lawrence	Sec. 29 T29N R25W	SE Sec. 12 T29N R26W	
West Fork Big Creek	Harrison	NE Sec. 15 T65N R28W	SW Sec. 22 T65N R28W	[SW1/4,Sec 22,T64N,R28W]
West Locust Creek	Sullivan	SW Sec. 03 T62N R21W	N 1/2 Sec. 23 T62N R21W	[S1/2,Sec 14,T61N,R21W]
West Piney Creek	Texas	NW Sec. 20 T30N R10W	SW Sec. 10 T30N R10W	[NW1/4,Sec 20,T30N,R10W]
White Cloud Creek	Nodaway	NW Sec. 06 T62N R35W	SE Sec. 18 T62N R35W	[Sec 18 & 19,T62N,R35W]

Table 8: Nonsubstantive Changes to 10 CSR 20-7.031 Table E – Outstanding State Resource Waters

Items in bold are new or revised standards. Items in brackets have been deleted.

Water Body	Miles/Acres	Location	County(ies)	Explanation	Approved
Blue Springs Creek	4 mi. [(1.5 mi. adjacent to owned lands)]	Blue Spring Creek Conservation Area	Crawford	Deleted “(1.5 mi. adjacent to owned lands)”	No action
Bonne Femme Creek	2 mi.	Three Creeks Conservation Area	Boone	Corrected spelling of “Bonne”; Not a substantive change	No action

Table 9: Nonsubstantive Changes to 10 CSR 20-7.031 Table G – Lake Classifications and Use Designations

The changes to Table G outlined below can be described as nonsubstantive changes to the water body name. Items in bold are new or revised standards. Items in brackets have been deleted.

WATERBODY	CLASS	ACRES	LOCATION	Explanation	Approved
Fond du Lac, Lake [Lake Fond du Lac]	L3	33	SUR 3011, 43N, 05E	Nonsubstantive change to name	No action
Lorraine, Lake [Lake Lorraine]	L3	70	01,12, 41N, 04E	Nonsubstantive change to name	No action
Woods, Lake of the [Lake of the Woods]	L3	3	NE, 02, 48N, 12W	Nonsubstantive change to name	No action

Table 10: Nonsubstantive Changes to 10 CSR 20-7.031 Table H – Stream Classifications and Use Designations

Items in bold are new or revised standards. Items in brackets have been deleted.

WATERBODY	CLASS	MILES	FROM	TO	COUNTY	COUNTY2	Explanation	Approved
Brushy Cr.	C	0.5	[5W] 32,46N,21W	SE6,46N,21W	Pettis		Typographical correction.	No action
[Trib. to L. Muddy Cr.]	C	2.9	Mouth	06,46N,22W	Pettis		Deleted duplicate entry for this waterbody, resulting in no change to the classification of this stream.	No action
Spencer Cr.	C	18	Sur 3177(31), 55N, 4W	23,53N,6W	Ralls		Clarifying correction.	No action
Workman Br.	C	1	[22,28N,22W] Mouth	15,28N,22W	Greene		Nonsubstantive change to method of describing endpoint.	No action

*Missouri is continually trying to improve the accuracy of Table H. Missouri has explained that use of more precise measurement tools results in increased segment lengths, despite the fact that the legal descriptions do not change.

** Please refer to the October 31, 2006, determination letter from EPA to MDNR for discussion on the recreational use designations for these water bodies.