



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6

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JAN 24 2008

Steve Drown
Chief, Water Division
Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118-5317

RE: Arkansas Triennial ("Phase II") Revisions to Regulation No. 2

Dear Mr. Drown:

Thank you for your recent letter, dated November 20, 2007, requesting review and approval of several revisions to Arkansas' Regulation No. 2, *Regulation Establishing Water Quality Standards for Surface Waters of the State of Arkansas*. This letter pertains to the U.S. Environmental Protection Agency's (EPA) review of Arkansas' triennial "Phase II" revisions adopted by the Arkansas Pollution Control and Ecology Commission (APC&EC or Commission) via Minute Order No. 07-36 on September 28, 2007.

"Phase II" of Arkansas' triennial review focused on a variety of technical issues and water quality standards (WQS) revisions aimed at providing clarification on various provisions within Regulation No. 2. The majority of revisions were associated with the following four sections of Arkansas' WQS: Regulation 2.503 – Turbidity; Regulation 2.507 – Bacteria; Regulation 2.508 – Toxic Substances; and, Regulation 2.511 – Mineral Quality. Several other revisions were aimed at codifying into Regulation No. 2 previously adopted site-specific WQS revisions associated with various third-party rulemakings in Arkansas.

As noted above, these revisions were submitted by the Arkansas Department of Environmental Quality (ADEQ or Department) for EPA review via letter dated November 20, 2007, as required under federal regulations at 40 C.F.R. 131.5, along with an attorney's statement certifying that the revised WQS were duly adopted pursuant to the laws of the State of Arkansas. EPA received the WQS submission on November 26, 2007.

I am pleased to inform you that in today's action, EPA is approving the majority of new and revised WQS pursuant to Clean Water Act (CWA) § 303(c) and implementing regulations at 40 C.F.R. Part 131. However, for reasons described in the enclosed Record of Decision (ROD), EPA is also hereby disapproving the revised heading title of "All Flows Values" and associated text revisions in Regulation 2.503 – Turbidity (from "storm-flow" to "all flows") and Appendix A (from "storm" to "all"). EPA is also disapproving revisions to the first paragraph in Regulation 2.511(A) – Site Specific Mineral Quality Criteria, site-specific chloride, sulfate, and total dissolved solids criteria for Bayou Bartholomew in Regulation 2.511(A), as well as revisions to the "Ecoregion Reference Stream Data" table in Regulation 2.511(B). Please note that under 40 C.F.R. § 131.21(c), new and revised standards do not go into effect for CWA

purposes until approved by EPA. Therefore, as described in further detail within the enclosed ROD, the previously approved language associated with these revisions in the April 23, 2004, version of the Arkansas WQS, remain in effect for CWA purposes.

In addition, please note that EPA is taking no action on several revisions to Regulation No. 2, as described in more detail within Section IV of the enclosed ROD. There are two primary reasons for EPA's taking no action on these revisions. First, EPA has determined that several of the revisions do not constitute new or revised WQS subject to EPA review and approval/disapproval under CWA § 303(c). Second, several revisions associated with ADEQ's triennial "Phase II" were included for the purpose of codifying into Regulation No. 2 previously adopted site-specific WQS revisions associated with various third-party rulemakings in Arkansas which either were or will soon be submitted under separate cover to EPA for review and approval. EPA's action on these new and revised WQS has either already been taken or will soon be taken in response to these separate submissions and, therefore, EPA is taking no action on these revisions.

The approval of the new and revised WQS identified in Section II of the enclosed ROD are subject to the results of consultation under section 7(a)(2) of the Endangered Species Act (ESA). Section 7(a)(2) requires that federal agencies consult with the U.S. Fish & Wildlife Service and/or National Marine Fisheries Service, as appropriate, to insure that actions they take, fund, or authorize are not likely to jeopardize the continued existence of listed species or result in the adverse modification or destruction of critical habitat. As of today, this consultation has not been completed. By approving the WQS revisions identified in Section II of the enclosed ROD "subject to the results of consultation under section 7(a)(2) of the Endangered Species Act," EPA retains the full range of options available under CWA § 303(c) for ensuring that WQS are environmentally protective. EPA retains the discretion to revise its approval decision of these new and revised WQS if the consultation identifies deficiencies in the WQS that require remedial action.

I would like to commend the Commission and the Department for their commitment and hard work in completing this task of reviewing and revising the State's WQS. We look forward to working with you during the next triennial review. If you have any questions or concerns, please contact me at (214) 665-7101, or have your staff contact Melinda McCoy at (214) 665-8059.

Sincerely yours,



Miguel I. Flores

Director

Water Quality Protection Division

Enclosure

RECORD OF DECISION:

**REGULATION NO. 2: REGULATION ESTABLISHING WATER QUALITY
STANDARDS FOR SURFACE WATERS OF THE STATE OF
ARKANSAS**

Revisions Adopted by the Arkansas Pollution Control and Ecology
Commission via Minute Order No. 07-36

**U.S. EPA REGION 6
WATER QUALITY PROTECTION DIVISION
January 2008**

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I. Introduction

Background

As described in § 303(c) of the Clean Water Act (CWA) and in the water quality standards (WQS) regulation at 40 C.F.R. § 131.20, states and authorized tribes have primary responsibility to develop and adopt WQS to protect their waters. State and tribal WQS consist of three primary components: designated uses, criteria to support those uses, and an antidegradation policy. In addition, CWA § 303(c)(1) and 40 C.F.R. § 131.20 require states to hold public hearings at least once every three years to review and, as appropriate, modify and adopt standards. Under 40 C.F.R. § 131.21, the Environmental Protection Agency (EPA) reviews new and revised surface WQS that have been adopted by states and authorized tribes. Authority to approve or disapprove new and/or revised standards submitted to EPA for review has been delegated to the Water Quality Protection Division Director in Region 6. State or tribal water quality standards are not considered effective under the CWA until approved by EPA.

The purpose of this Record of Decision is to provide the basis for EPA's review and actions concerning revisions to Regulation No. 2: *Regulation Establishing Water Quality Standards for Surface Waters of the State of Arkansas* adopted by the Arkansas Pollution Control and Ecology Commission (APC&EC or Commission) via Minute Order No. 07-36 on September 28, 2007.

Chronology of Events

The Arkansas Department of Environmental Quality (ADEQ) began its triennial review of Regulation No. 2 on February 10, 2006. ADEQ organized its triennial review into two phases. "Phase I" of the review focused on issues related to Arkansas' outstanding resource waters. "Phase I" revisions to Regulation No. 2 were ultimately adopted by the APC&EC via Minute Order No. 07-35 and are addressed in a separate EPA Record of Decision.

"Phase II" of the triennial review focused on several additional revisions to the Arkansas WQS and were adopted by the APC&EC via Minute Order 07-36. The "Phase II" water quality standards revisions are the subject of this Record of Decision. EPA received the adopted amendments to Regulation No. 2 on November 26, 2007. Provided below is a detailed chronology of events associated with ADEQ's triennial "Phase II" review.

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| February 10, 2006 | The ADEQ issued a news release announcing seven public informational meetings to begin its triennial review of Regulation No. 2. |
| March 2, 2006 | ADEQ held a public meeting on the triennial review of Regulation No. 2 at Northridge Middle School in Van Buren, Arkansas. |

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| March 9, 2006 | ADEQ held a public meeting on the triennial review of Regulation No. 2 at Arkansas State University in Mountain Home, Arkansas. |
| March 16, 2006 | ADEQ held a public meeting on the triennial review of Regulation No. 2 at South Arkansas Community College in El Dorado, Arkansas. |
| March 23, 2006 | ADEQ held a public meeting on the triennial review of Regulation No. 2 at the Clarion Inn in Fayetteville, Arkansas. |
| March 30, 2006 | ADEQ held a public meeting on the triennial review of Regulation No. 2 at Henderson State University in Arkadelphia, Arkansas. |
| April 6, 2006 | ADEQ held a public meeting on the triennial review of Regulation No. 2 at the Nettleton High School Commons in Jonesboro, Arkansas. |
| April 13, 2006 | ADEQ held a public meeting on the triennial review of Regulation No. 2 at the State Police Headquarters in Little Rock, Arkansas. |
| April 13, 2007 | ADEQ filed a petition with the Commission to initiate rulemaking to amend Regulation No. 2. |
| April 27, 2007 | The Commission's Regulations Committee met to review ADEQ's petition and recommended that the Commission initiate rulemaking proceeding. |
| April 27, 2007 | The Commission accepted the recommendation of the Regulations Committee and initiated the rulemaking proceeding (Docket No. 07-003-R) via Minute Order No. 07-09. |
| May 2-3, 2007 | ADEQ published a public notice concerning the proposed rulemaking in the <i>Arkansas Democrat – Gazette</i> . |
| June 20, 2007 | ADEQ held a public hearing on the proposed rulemaking at the State Police Headquarters in Little Rock, Arkansas. |
| June 28, 2007 | Miguel Flores, Director, Water Quality Protection Division, EPA Region 6, sent a comment letter regarding proposed revisions to Regulation No. 2 to Doug Szenher, Public Outreach and Assistance Division, ADEQ. |
| July 5, 2007 | The public comment period ended on the proposed rulemaking to amend Regulation No. 2. |

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| August 6, 2007 | ADEQ filed a <i>Statement of Basis and Purpose</i> and <i>Responsiveness Summary</i> for proposed amendments to Regulation No. 2 with the APC&EC. |
| August 24, 2007 | Teresa Marks, Director, ADEQ, sent a letter to Thomas Schueck, Chair, APC&EC, and Randy Young, Chair, Regulations Committee, APC&EC, requesting an extension of time to present the final proposed amendments to Regulation No. 2 to the APC&EC for final adoption at the regularly scheduled September Commission meeting. |
| August 24, 2007 | Michael O'Malley, Administrative Hearing Officer, APC&EC, sent a letter to Teresa Marks, Director, ADEQ, granting ADEQ an extension of time to present the final proposed amendments to Regulation No. 2 to the APC&EC for final adoption at the regularly scheduled September Commission meeting. |
| August 31, 2007 | ADEQ filed a supplement to its original <i>Responsiveness Summary</i> for proposed amendments to Regulation No. 2 with the APC&EC. |
| September 6, 2007 | ADEQ formally presented the final proposed amendments to Regulation No. 2 to the Administrative Rules and Regulations Subcommittee of the Legislative Council. |
| September 7, 2007 | ADEQ filed a second supplement to its original <i>Responsiveness Summary</i> for proposed amendments to Regulation No. 2 with the APC&EC. |
| September 7, 2007 | ADEQ filed with APC&EC a motion to adopt the final proposed amendments to Regulation No. 2. |
| September 20, 2007 | ADEQ formally presented the final proposed amendments to Regulation No. 2 to the Public Health and Welfare Committee of the Legislative Council and received approval from the Committee. |
| September 28, 2007 | ADEQ formally presented the final proposed amendments to Regulation No. 2 to the Regulations Committee of the APC&EC. |
| September 28, 2007 | ADEQ formally presented the final proposed amendments to Regulation No. 2 to the APC&EC for adoption. |
| September 28, 2007 | The Commission adopted the final proposed amendments to Regulation No. 2 via Minute Order No. 07-36. |
| October 1, 2007 | ADEQ sent two copies of the adopted amendments to Regulation No. 2 to the Arkansas Secretary of State. |

October 10, 2007 The final amendments to Regulation No. 2 adopted via Minute Order No. 07-36 became effective under State law.

November 26, 2007 Miguel Flores, Director, Water Quality Protection Division, EPA Region 6, received a letter dated November 20, 2007, from Steve Drown, Chief, Water Division, ADEQ, submitting the final amendments to Regulation No. 2 for EPA's review and approval.

Summary of Revisions to Regulation No. 2

The specific revisions to Arkansas' WQS regulation resulting from ADEQ's triennial "Phase II" revision in 2007 are provided in Attachment A of this Record of Decision. Deletions in Attachment A are denoted by a line through the text and additions are denoted by underlined text.

The majority of revisions were associated with the following four sections of Arkansas' WQS: Regulation 2.503 – Turbidity; Regulation 2.507 – Bacteria; Regulation 2.508 – Toxic Substances; and, Regulation 2.511 – Mineral Quality. Several other revisions were aimed at codifying previously adopted site-specific WQS revisions associated with various third-party rulemakings in Arkansas which were submitted separately to EPA for review and approval. More detailed summaries of these and additional revisions to Arkansas' WQS are provided in the sections that follow.

II. New or Revised Provisions EPA is Approving

Chapter 3: Waterbody Uses

Regulation 2.302 – Designated Uses

The common name for the "grass pickerel," one of the fish identified as a key species in the description for both the Typical and Springwater-influenced Gulf Coastal Ecoregion stream fishery designated uses, was revised to "redfin pickerel." In providing its rationale for this revision, ADEQ stated that this revision was made in accordance with *Common and Scientific Names of Fishes from the United States, Canada, and Mexico, Sixth Edition* (Nelson et al. 2004), and that State ichthyologists agree with this nomenclature change.¹

Action: For the reasons described above, EPA approves the revision to the common name for the grass pickerel within Regulation 2.302.

Regulation 2.305 – Short Term Activity Authorization

The requirement to obtain a short term activity authorization for the use of "tracers used in hydrological studies" was removed for the following reasons identified by ADEQ:

¹ Nelson, Joseph S., et al. 2004. *Common and Scientific Names of Fishes from the United States, Canada, and Mexico, Sixth Edition*. American Fisheries Society, Bethesda, Maryland. 386 pp.

- There are very few requests for such authorization.
- The tracers are mainly used as part of scientific studies.
- There are no impacts to water quality when used.
- There are no violations of water quality standards when used.

Action: For the reasons described above, EPA approves this revision.

Chapter 5: Specific Standards

Regulation 2.503 – Turbidity

Arkansas' Regulation 2.503 provides ecoregion-specific turbidity criteria for streams, turbidity criteria for specific rivers, and turbidity criteria for lakes (measured in nephelometric turbidity units (NTUs)) applicable under two different flow scenarios, with the more stringent criteria applying during base flow conditions and the less stringent criteria applying during conditions when storm water runoff is present. In the previous (April 23, 2004) version of Regulation No. 2, the more stringent turbidity criteria were identified in a column under a heading titled "Primary Values." As part of ADEQ's triennial "Phase II" revision, the Department replaced the heading "Primary Values" with a new heading titled "Base Flows Values" and also revised the word "primary" in the text of Regulation 2.503 to "base flows" (see Attachment A of this Record of Decision to view the general format for Regulation 2.503 and associated revisions).

These revisions to the heading title and text within Regulation 2.503, as well as the inclusion of a definition in Regulation 2.106 for "Base Flows," were intended to clarify the flow conditions under which the more stringent turbidity criteria were applicable. These revisions were also intended to reduce potential confusion associated with the word "primary" which is also included throughout Regulation No. 2 in connection with the phrases "primary season" and "primary contact recreation."

Action: For the reasons described above and in accordance with the new definition for "Base Flows" in Regulation 2.106, EPA approves the revised heading title of "Base Flows Values" and associated text revision (from "primary" to "base flows") in Regulation 2.503.

Regulation 2.507 – Bacteria

In the previous (April 23, 2004) version of Regulation No. 2, Regulation 2.507(A) and Regulation 2.507(B) provided geometric mean and "monthly maximum" criteria for fecal coliform, as well as geometric mean and "monthly maximum" criteria for *E. coli* specific to lakes, reservoirs, Extraordinary Resource Waters, and "other rivers and streams," for primary and secondary contact waters, respectively. Regulation 2.507(C) described procedures applicable for the assessment of ambient waters as impaired by bacteria.

Several revisions were made to Regulation 2.507 as part of ADEQ's triennial "Phase II" revision in 2007. For example, the phrase "monthly maximum" in Regulations

2.507(A) and (B) was revised to "single-sample maximum" in order to achieve greater consistency with EPA's *Ambient Water Quality Criteria for Bacteria – 1986*.²

In addition, Ecologically Sensitive Waterbodies (ESWs) and Natural and Scenic Waterways (NSWs) were added to Regulation 2.507(A) and (B) to clarify what single sample maximum *E. coli* criteria are applicable to these waterbodies.

Regulation 2.507(C) was also revised to include the phrase "for *E. coli*" in order to clarify that the assessment language in Regulation 2.507(C) applies only to the *E. coli* criteria identified in Regulations 2.507(A) and (B).

Additional language revisions to Regulation 2.507 were also made in order to provide increased clarity.

Action: For the reasons described above, EPA approves the revisions to Regulation 2.507.

Regulation 2.508 – Toxic Substances

The previous human health criterion for beryllium in the Arkansas WQS was revised from 76 ng/L to 4000 ng/L, with the addition of the following footnote:

4000 ng/l is also represented as 4.0 µg/l, which is the Maximum contaminant level (MCL) under the EPA Safe Drinking Water Act [42 U.S.C. s/s 300f et seq. (1974)].

This revised criterion is consistent with the national recommended water quality criterion for beryllium for the protection of human health as shown in EPA's current (2006) national recommended water quality criteria table (which refers to the MCL of 4 µg/L developed for beryllium under the Safe Drinking Water Act).³

Action: For the reason described above, EPA approves the revised beryllium criterion of 4000 ng/L in Arkansas' Regulation 2.508.

Regulation 2.511 – Mineral Quality

Background

Please note that as part of ADEQ's triennial "Phase II" revision in 2007, three subheadings were added in Regulation 2.511 in order to increase the clarity of the minerals regulation and to differentiate between the three types of minerals criteria. The three new subheadings are as follows:

² U.S. EPA. 1986. *Ambient Water Quality Criteria for Bacteria – 1986*. United States Environmental Protection Agency, Office of Water, Washington, D.C. EPA 440/5-84-002.

³ U.S. EPA. 2006. *National Recommended Water Quality Criteria*. United States Environmental Protection Agency, Office of Water, Washington, D.C. (Website: <http://epa.gov/waterscience/criteria/nrwqc-2006.pdf>).

- (A) Site Specific Mineral Quality Criteria
- (B) Ecoregion Reference Stream Minerals Values
- (C) Domestic Water Supply Criteria

EPA is taking no action on the addition of subheadings A and B, as further described below in Section IV of this Record of Decision. EPA is approving the addition of subheading C as described further below within this section of the Record of Decision.

(A) Site Specific Mineral Water Quality

Lost Creek Ditch within the White River Basin was added to the site-specific mineral quality criteria table in Regulation 2.511(A), along with site-specific chloride, sulfate, and total dissolved solids criteria of 20 mg/L, 30 mg/L, and 270 mg/L, respectively. Lost Creek Ditch (hydrologic unit code (HUC) 8020302, segment reach 009U) is the headwaters of Bayou DeView (HUC 8020302, segment reaches 002, 003, 004, 005, 006, 007, 009L) draining portions of Jonesboro, Arkansas.

Lost Creek Ditch had been considered Bayou DeView in previous water quality assessments until such time as an ambient monitoring station was placed in segment 009. At that time, it was discovered that the upper end of Bayou DeView was actually called Lost Creek Ditch. The revision to include Lost Creek Ditch in Regulation 2.511(A) reflects this new information. The new chloride, sulfate, and total dissolved solids criteria for Lost Creek Ditch remain the same as when this waterbody was considered part of Bayou DeView. Therefore, the revisions to Regulation 2.511(A) associated with Lost Creek Ditch simply reflect this re-segmentation of Bayou DeView.

Action: For the reasons described above, EPA approves the revision to Regulation 2.511(A) to include Lost Creek Ditch and associated chloride, sulfate, and total dissolved solids criteria.

(C) Domestic Water Supply Criteria

As noted above, a subheading titled "(C) Domestic Water Supply Criteria" was added to Regulation 2.511 prior to the following text:

In no case shall discharges cause concentrations in any waterbody to exceed 250, 250 and 500 mg/l of chlorides, sulfates and total dissolved solids, respectively, or cause concentrations to exceed the applicable limits in the streams to which they are tributary, except in accordance with Reg. 2.306.

The addition of this new subheading provides clarification (which was previously absent) that the chloride, sulfate, and total dissolved solids criteria of 250 mg/L, 250 mg/L, and 500 mg/L, respectively, are associated with protection of the domestic water supply designated use. This clarification affects implementation of these minerals criteria as it pertains to Arkansas' CWA § 305(b)/303(d) assessment, and is therefore, considered a new WQS subject to EPA review under CWA § 303(c).

These criteria are consistent with the secondary maximum contaminant levels for public water systems set forth in 40 C.F.R. § 143.3 and with EPA's human health criteria recommendations for chloride and sulfate as described in EPA's *Quality Criteria for Water* – 1986.⁴

Action: For the reasons described above, EPA approves the revision to include subheading "(C) Domestic Water Supply Criteria" in Regulation 2.511.

Appendix A: Designated Uses, Specific Standards and Maps of Waters of the State by Ecoregions

Background

Appendix A of Regulation No. 2 is divided into six sections corresponding to six ecoregions within Arkansas (Ozark Highlands, Boston Mountains, Arkansas River Valley, Ouachita Mountains, Gulf Coastal, and Delta). Each of the six "ecoregion" sections of Appendix A are further divided into two parts titled "Designated Uses" and "Specific Standards." The "Designated Uses" part identifies the various designated uses applicable to the waterbodies within the ecoregion, along with any use variations for individually identified waterbodies or waterbody segments that are supported by use attainability analysis (UAA) studies. The "Specific Standards" part identifies the specific criteria applicable to the waterbodies within the ecoregion, along with any site-specific criteria applicable to individually identified waterbodies or waterbody segments and supported by a UAA study.

All Ecoregions - Specific Standards

Within the "Specific Standards" part of Appendix A for each of the six ecoregions, the words "primary/storm" (following the words "Turbidity (NTU)") were replaced with the words "base/all" in accordance with the revisions to Regulation 2.503 (described above within this section and in Section III below).

Action: As noted above, EPA is approving the revised heading title of "Base Flows Values" and associated text revision (from "primary" to "base flows") in Regulation 2.503. Therefore, EPA also approves the corresponding revision of the word "primary" to "base" in the six "Specific Standards" parts within Appendix A.

⁴ U.S. EPA. 1986. *Quality Criteria for Water* – 1986. [Also known as EPA's "Gold Book"]. United States Environmental Protection Agency, Office of Water, Washington, D.C. EPA 440/5-86-001.

III. New or Revised Provisions EPA is Disapproving

Chapter 5: Specific Standards

Regulation 2.503 – Turbidity

Arkansas' Regulation 2.503 provides ecoregion-specific turbidity criteria for streams, turbidity criteria for specific rivers, and turbidity criteria for lakes (measured in NTUs) applicable under two different flow scenarios, with the more stringent criteria applying during base flow conditions and the less stringent criteria applying during conditions when storm water runoff is present. In the previous (April 23, 2004) version of Regulation No. 2, the less stringent turbidity criteria were identified in a column under a heading titled "Storm-Flow Values." As part of ADEQ's triennial "Phase II" revision in 2007, the Department replaced the heading "Storm-Flow Values" with a new heading titled "All Flows Values" and also revised the word "storm-flow" in the text of Regulation 2.503 to "all flows" (see Attachment A of this Record of Decision to view the general format for Regulation 2.503 and associated revisions).

In connection with the two revisions described above, a new definition for "All Flows" was also included in Regulation 2.106 which states:

Takes into account all flows and data collected throughout the year, including elevated flows due to rainfall events.

All three of these revisions to Regulation No. 2 were intended to clarify the flow conditions under which the less stringent turbidity criteria are applicable. However, as described in more detail below, these revisions actually modify the application of the less stringent turbidity criteria in a way that is inconsistent with the way in which the criteria were originally derived and which may also result in the potential misidentification of a waterbody in the State's CWA § 305(b)/303(d) Assessment as supporting its applicable fisheries designated use when it may actually be impaired due to turbidity.

First, the phrase "takes into account all flows" within the new definition for "All Flows" in Regulation 2.106 renders the revisions to the word "storm-flow" in Regulation 2.503 inconsistent with the original derivation of the less stringent turbidity criteria. The less stringent turbidity criteria in Regulation No. 2 were derived by setting the criteria equal to the 90th percentile of available turbidity measurements recorded for streams in each ecoregion, specific rivers, and lakes using long-term databases. As described in ADEQ's *Responsiveness Summary* to comments on Arkansas WQS revisions adopted during the State's previous triennial review on April 23, 2004, these criteria were "intended to recognize the naturally occurring increase in turbidity after a storm event" and "provide a reasonable threshold to differentiate between naturally elevated storm-related turbidity versus impairment due to non-point source pollution." Revisions of the word "storm-flow" to "all flows" as part of Arkansas' triennial "phase II" revision, however, allows for the application of these criteria during all flow scenarios, not just storm-flow scenarios.

Second, it is EPA's understanding that ADEQ does not currently collect flow data as part of its ambient water quality monitoring sampling efforts. For this reason,

Arkansas' CWA § 305(b)/303(d) Assessment Methodology, provides that the more stringent turbidity criteria are to be applied during the critical season, when rainfall is infrequent, between June 1 and October 31. Further, the Department has been applying the less stringent turbidity criteria to all samples collected (regardless of the flow scenario under which the sample was actually collected) in making its designated use support determinations under CWA § 305(b)/303(d). The phrase "takes into account all...data collected throughout the year" within the new definition for "All Flows" within Regulation 2.106 reflects this current ADEQ practice.

Applying the less stringent turbidity criteria to data collected throughout the year (rather than employing a seasonal approach) will ensure that any sample that was actually collected during a storm event is compared to the less stringent turbidity criterion. However, employing such an approach, as opposed to a seasonal approach or some similar method to approximate flow conditions, may also increase the likelihood that a waterbody which is truly impaired due to exceedances of the less stringent turbidity criterion will go undetected. This is due to the fact that applying the less stringent turbidity criteria to data collected throughout the year creates a larger sample size and, therefore, a reduced probability that the frequency rate of 20% associated with the less stringent turbidity criteria will be exceeded.

Action: For the reasons described above, EPA disapproves the revised heading title of "All Flows Values" and associated text revision (from "storm-flow" to "all flows") in Regulation 2.503. Under 40 C.F.R. § 131.21(c), new and revised standards do not go into effect for CWA purposes until approved by EPA. Therefore, the previously approved heading title of "Storm-Flow" in Regulation 2.503 and the word "storm-flow" within the text of Regulation 2.503 remain in effect for CWA purposes.

Regulation 2.511 – Mineral Quality

(A) Site-Specific Mineral Water Quality

Regulation 2.511(A) provides site-specific water quality criteria for minerals. Language within Regulation 2.511(A) was revised in the 2007 triennial "Phase II" revision as follows (with deletions denoted by a line through the text and additions denoted by underlined text):

Mineral quality shall not be altered by municipal, industrial, other waste discharges or instream activities so as to interfere with designated uses. The following limits apply to the streams indicated, and represent the monthly average concentrations of chloride (Cl⁻), sulfate (SO₄⁻) and total dissolved solids (TDS) ~~not to be exceeded in more than one (1) in ten (10) samples collected over a period of not less than 30 days or more than 360 days.~~

Adequate supporting documentation pursuant to 40 C.F.R. § 131.6(b) and (f), including methods used and analysis conducted to support this water quality standards revision and general information to aid EPA in determining the adequacy of the scientific basis of the standards, was not provided for this revision to Regulation 2.511(A).

Action: For the reason described above, EPA disapproves this revision to Regulation 2.511(A). Under 40 C.F.R. § 131.21(c), new and revised standards do not go into effect for CWA purposes until approved by EPA. Therefore, the previously approved language ("not to be exceeded in more than one (1) in ten (10) samples collected over a period of not less than 30 days or more than 360 days") remains in effect for CWA purposes.

The water quality criteria for chloride, sulfate, and total dissolved solids for Bayou Bartholomew in the Ouachita River Basin were revised from 30 mg/L to 50 mg/L, from 30 mg/L to 20 mg/L, and from 220 mg/L to 500 mg/L, respectively. ADEQ has indicated that these revisions were unintentional changes.⁵ Further, these revisions were not subject to public review and comment as required under 40 C.F.R. Part 25.

Action: For the reasons described above, EPA disapproves the revisions to the chloride, sulfate, and total dissolved solids criteria for Bayou Bartholomew. Under 40 C.F.R. § 131.21(c), new and revised standards do not go into effect for CWA purposes until approved by EPA. Therefore, the previously approved chloride, sulfate, and total dissolved solids criteria of 30 mg/L, 30 mg/L, and 220 mg/L, respectively, for Bayou Bartholomew remain in effect for CWA purposes.

(B) Ecoregion Reference Stream Minerals Values

The following language and table were provided in Regulation 2.511 in the previous (April 23, 2004) version of Regulation No. 2:

The following values determined from Arkansas' least-disturbed ecoregion reference streams are considered to be the maximum naturally occurring levels. For waterbodies not listed above, any discharge which results in instream concentrations more than 1/3 higher than these values for Cl and SO₄ or more than 15 mg/l, whichever is greater, is considered to be a significant modification of the water quality. Similarly, such modification exists if the following TDS values are exceeded after being increased by the sum of the increases to Cl and SO₄. Such modifications may be made only in accordance with Reg. 2.306.

ECOREGION REFERENCE STREAM DATA (mg/l)

| | <u>Cl⁻</u> | <u>SO₄⁼</u> | <u>TDS</u> |
|-----------------------|-----------------------|-----------------------------------|------------|
| Ozark Highlands | 13 | 17 | 240 |
| Boston Mountains | 13 | 9 | 85 |
| Arkansas River Valley | 10 | 13 | 103 |
| Ouachita Mountains | 6 | 15 | 128 |
| Gulf Coastal Plains | 14 | 31 | 123 |
| Delta | 36 | 28 | 390 |

⁵ Personal communication from Sarah Clem, ADEQ, to Melinda McCoy, EPA Region 6, on Thursday, January 17, 2008.

As part of ADEQ's triennial "Phase II" revision in 2007, the Department revised the above table with the intention of making it more user-friendly by reflecting the final calculations for chloride, sulfate, and total dissolved solids described within the text of Regulation 2.511 as: "...more than 1/3 higher than these values for Cl and SO₄⁼ or more than 15 mg/l, whichever is greater" and "...if the following TDS values are exceeded after being increased by the sum of the increases to Cl and SO₄." As revised Regulation 2.511(B) now states:

The following values determined from Arkansas' least-disturbed ecoregion reference streams are considered to be the maximum naturally occurring levels. For waterbodies not listed above, any discharge which results in instream concentrations more than 1/3 higher than these values for Cl and SO₄⁼ or more than 15 mg/l, whichever is greater, is considered to be a significant modification of the water quality. Similarly, such modification exists if the following TDS values are exceeded after being increased by the sum of the increases to Cl and SO₄. Such modifications may be made only in accordance with Reg. 2.306.

CALCULATED ECOREGION REFERENCE STREAM VALUES (mg/l)

| Ecoregion | Chlorides | Sulfates | TDS |
|-----------------------|-----------|----------|-------|
| Ozark Highlands | 17.3 | 22.7 | 250 |
| Boston Mountains | 17.3 | 15 | 95.3 |
| Arkansas River Valley | 15 | 17.3 | 112.3 |
| Ouachita Mountains | 15 | 20 | 142 |
| Gulf Coastal Plains | 18.7 | 41.3 | 138 |
| Delta | 48 | 37.3 | 411.3 |

However, because revised Regulation 2.511(B) still retains the previous text describing the calculations and because the text references the now revised table, the ecoregion chloride, sulfate, and total dissolved solids criteria associated with Regulation 2.511 have been effectively revised to less stringent concentrations. Further, adequate supporting documentation pursuant to 40 C.F.R. § 131.6(b) and (f), including methods used and analysis conducted to support these water quality standards revisions and general information to aid EPA in determining the adequacy of the scientific basis of the standards, was not provided for these revisions to Regulation 2.511(B).

Action: For the reasons described above, EPA disapproves the revisions to the table in Regulation 2.511(B). Under 40 C.F.R. § 131.21(c), new and revised standards do not go into effect for CWA purposes until approved by EPA. Therefore, the previously approved "Ecoregion Reference Stream Data" table remains in effect for CWA purposes.

Appendix A: Designated Uses, Specific Standards and Maps of Waters of the State by Ecoregions

All Ecoregions - Specific Standards

Within the "Specific Standards" part of Appendix A for each of the six ecoregions, the words "primary/storm" (following the words "Turbidity (NTU)") were replaced with the words "base/all" in accordance with the revisions to Regulation 2.503 (described above within this section and in Section II above).

Action: As noted above, EPA is disapproving the revised heading title of "All Flows Values" and associated text revision (from "storm-flow" to "all flows") in Regulation 2.503. Therefore, EPA also disapproves the corresponding revision of the word "storm" to "all" in the six "Specific Standards" parts within Appendix A. Under 40 C.F.R. § 131.21(c), new and revised standards do not go into effect for CWA purposes until approved by EPA. Therefore, the previously approved word "storm" within the six "Specific Standards" parts of Appendix A remains in effect for CWA purposes.

IV. New or Revised Provisions for Which EPA is Taking No Action

Background

EPA regulations at 40 C.F.R. § 131 require that WQS include beneficial use designations for all waters of a state consistent with 40 C.F.R. § 131.10, water quality criteria supporting those use designations consistent with 40 C.F.R. § 131.11, and an antidegradation policy consistent with 40 C.F.R. § 131.12. In addition, 40 C.F.R. § 131.13 allows, but does not require, states to include policies affecting application of their WQS, e.g., mixing zone and variance policies. State agencies charged with adopting and revising WQS may, and frequently do, include other types of regulations in their codification of WQS. That, however, does not render such regulations WQS *per se* and thus does not require that EPA review them pursuant to CWA § 303(c). Historically, however, EPA Region 6 has generally reviewed such regulations for consistency with the CWA when they were submitted by a state along with regulations that were in fact WQS. Recent litigation has called the wisdom of that approach into question. See, e.g., Florida Public Interest Research Group Citizen Lobby v. EPA, 386 F.3d 1070 (11th Cir. 2004). Region 6 is accordingly being somewhat more circumspect here than in some past actions and has determined that some of the revisions described below (e.g., revisions to Regulation 2.106, 2.203, and Appendix C) do not establish and are not themselves designated uses, water quality criteria, or an antidegradation policy. Therefore such revisions do not constitute new or revised WQS and EPA takes no action on them.

Other revisions described in more detail below (e.g., revisions to Regulation 2.511 and Appendix A) do constitute new and revised WQS in so far as they relate to designated use removals and site-specific water quality criteria. However, these revisions were intended to codify into Regulation No. 2 previously adopted site-specific WQS revisions associated with various third-party rulemakings in Arkansas which either were or will

soon be submitted under separate cover to EPA for review and approval. EPA's action on these new and revised WQS has either already been taken or will be taken in response to these separate submissions. For this reason, EPA is taking no action on the revisions associated with ADEQ's triennial "Phase II" which were included for the purpose of codifying these previously adopted site-specific WQS revisions into Regulation No. 2.

Also, please note that additional, non-substantive revisions (e.g., editorial revisions, update to the Table of Contents, WQS adoption date changes on the cover page of Regulation No. 2 and Appendices A, B, and C) were incorporated into Regulation No. 2. EPA takes no action on these non-substantive revisions.

Chapter 1: Authority, General Principles, and Coverage

Regulation 2.106 – Definitions

The following definitions were added to Regulation 2.106:

All Flows: Takes into account all flows and data collected throughout the year, including elevated flows due to rainfall events.

Base Flows: That portion of the stream discharge that is derived from natural storage (i.e., outflow from groundwater or swamps), or sources other than recent rainfall that creates surface runoff. Also called sustaining, normal, dry weather, ordinary, or groundwater flow.

Escherichia coli: a rod shaped gram negative bacillus (0.5 – 3-5 microns) abundant in the large intestines of mammals.

The definitions for "All Flows," "Base Flows," and "*Escherichia coli*" do not establish and are not themselves designated uses, water quality criteria, or an antidegradation policy. Therefore the additions of these definitions in Regulation 2.106 do not constitute new or revised WQS subject to EPA review under CWA § 303(c).

EPA has, however, considered these new definitions in its review of the revisions to Regulation 2.503 (Turbidity) and Regulation 2.507 (Bacteria) which are associated with these new definitions. The revisions to Regulation 2.503 and 2.507 are considered new and revised WQS and EPA has acted upon these revisions accordingly (see Sections II and III of this Record of Decision).

No Action Determination: For the reasons described above, EPA takes no action on the revisions to add definitions for "All Flows," "Base Flows," and "*Escherichia coli*" in Regulation 2.106.

Chapter 2: Antidegradation Policy

Regulation 2.203 – Outstanding Resource Waters

The agency name referenced as "Arkansas Soil and Water Conservation Commission" in the previous (April 23, 2004) version of Arkansas' WQS within

Regulation 2.203 was revised to reflect this agency's new name: "Arkansas Natural Resources Commission." This name change does not constitute new or revised WQS subject to EPA review under CWA § 303(c).

No Action Determination: For the reason described above, EPA takes no action on the revision in Regulation 2.203 to update the name of the "Arkansas Soil and Water Conservation Commission" to the "Arkansas Natural Resources Commission."

Chapter 5: Specific Standards

Regulation 2.511 – Mineral Quality

(A) Site-Specific Mineral Quality Criteria

Subheading (A)

As noted above in Section II within this Record of Decision, a subheading titled "(A) Site-Specific Mineral Quality Criteria" was added to Regulation 2.511. The addition of this new subheading provides clarity related to the formatting in Regulation 2.511, but does not affect the current implementation of the site-specific minerals criteria identified under Regulation 2.511(A) as it pertains to permitting or Arkansas' CWA § 305(b)/303(d) Assessment. Therefore, the addition of subheading "(A) Site-Specific Mineral Quality Criteria" is not considered a new or revised WQS subject to EPA review under CWA § 303(c).

No Action Determination: For the reason described above, EPA takes no action on the revision in Regulation 2.511 to add subheading "(A) Site-Specific Mineral Quality Criteria."

Bayou Meto Water Management District (BMWMD) Third-Party Rulemaking Revisions

The segment description and the chloride and sulfate criteria for Bayou Meto in the Arkansas River Basin were revised and a footnote was added. These revisions are shown below (with deletions denoted by a line through the text and additions denoted by underlined text):

| Stream | Concentration-mg/L | | |
|---|--------------------|------------------------------|-----------|
| | Cl ⁻ | SO ₄ ⁼ | TDS |
| Bayou Meto (Rocky Branch <u>mouth</u> to Bayou Two Prairie) | 64* <u>95**</u> | ER <u>45**</u> | ER |
| <u>Bayou Meto (mouth to Rickey Branch)</u> | <u>95**</u> | <u>45**</u> | <u>ER</u> |

** - These limits shall apply to all tributaries of Bayou Meto and Bayou Two Prairie listed in Appendix A

These revisions are associated with the BMWMD third-party rulemaking and were adopted by the APC&EC on October 26, 2007, via Minute Order No. 07-41.

ADEQ is currently preparing to submit these site-specific WQS revisions associated with the BMWMD third-party rulemaking separately to EPA for review and approval, along with supporting documentation for the revisions. EPA will review and act upon the site-specific WQS revisions associated with the BMWMD third-party rulemaking in response to ADEQ's anticipated separate WQS submission.

Revisions to Regulation 2.511(A) associated with this third-party rulemaking as part of ADEQ's triennial "Phase II" revision were intended simply to codify into Regulation No. 2 these previously adopted site-specific WQS revisions.

No Action Determination: For the reasons described above, EPA takes no action on the codification of these site-specific WQS revisions associated with the BMWMD third-party rulemaking.

Associated Electric Cooperative, Inc. (AECI) Third-Party Rulemaking Revisions

The segment description for Tyronza River in the St. Francis River Basin was revised, and three new waterbody segments with associated site-specific chloride, sulfate, and total dissolved solids criteria were added to Regulation 2.511(A). These revisions are shown below (with additions denoted by underlined text):

| Stream | Concentration-mg/L | | |
|---|--------------------|------------------------------|-------------|
| | Cl ⁻ | SO ₄ ⁼ | TDS |
| Tyronza River (<u>headwaters to Ditch No. 6 confluence</u>) | 20 | 30 | 350 |
| <u>Ditch No. 27</u> | <u>ER</u> | <u>480</u> | <u>1200</u> |
| <u>Ditch No. 6 (mouth to Ditch No. 27 confluence)</u> | <u>ER</u> | <u>210</u> | <u>630</u> |
| <u>Tyronza River (mouth to Ditch No. 6 confluence)</u> | <u>20</u> | <u>60</u> | <u>350</u> |

These revisions are associated with the AECI third-party rulemaking and were adopted by the APC&EC on April 28, 2006, via Minute Order No. 06-22. ADEQ previously submitted these site-specific WQS revisions to EPA for review and approval via letter dated August 16, 2006, which was received by EPA on September 7, 2006. EPA subsequently approved these site-specific WQS revisions on October 26, 2006.

Revisions to Regulation 2.511(A) associated with this third-party rulemaking as part of ADEQ's triennial "Phase II" revision were intended simply to codify into Regulation No. 2 these previously adopted site-specific WQS revisions.

No Action Determination: For the reasons described above, EPA takes no action on the codification of these site-specific WQS revisions associated with the AECI third-party rulemaking.

Great Lakes Chemical Corporation (GLCC) Third-Party Rulemaking Revisions

Six new waterbody segments with associated site-specific chloride, sulfate, and total dissolved solids criteria were added to Regulation 2.511(A). These revisions are shown below (with additions denoted by underlined text):

| Stream | Concentration-mg/L | | |
|--|--------------------|------------------------------|-------------|
| | Cl ⁻ | SO ₄ ⁼ | TDS |
| <u>Unnamed trib from GLCC 003</u> | <u>538*</u> | <u>35*</u> | <u>519*</u> |
| <u>Unnamed trib to Little Cornie Bayou</u> | <u>305*</u> | <u>ER</u> | <u>325*</u> |
| <u>Little Cornie Bayou from unnamed trib to State Line</u> | <u>215*</u> | <u>25*</u> | <u>500*</u> |
| <u>Bayou de L'Outre Creek above Loutre Creek</u> | <u>180</u> | <u>ER</u> | <u>970</u> |
| <u>Unnamed trib UT004 from GLCC</u> | <u>014*</u> | <u>ER</u> | <u>311*</u> |
| <u>Unnamed trib UT002 from GLCC</u> | <u>278*</u> | <u>90*</u> | <u>500*</u> |

These revisions are associated with the GLCC third-party rulemaking and were adopted by the APC&EC on June 22, 2007, via Minute Order No. 07-18.⁶ ADEQ previously submitted these site-specific WQS revisions to EPA for review and approval via letter dated August 17, 2007, which was received by EPA on September 17, 2007. EPA responded to ADEQ's request on January 3, 2008, stating that ADEQ's submission did not meet the minimum requirements of a WQS submission as described in 40 C.F.R. § 131.6, and encouraging ADEQ to work with GLCC in responding to several issues identified by EPA.

Revisions to Regulation 2.511(A) associated with this third-party rulemaking as part of ADEQ's triennial "Phase II" revision were intended simply to codify into Regulation No. 2 these previously adopted site-specific WQS revisions.

No Action Determination: For the reasons described above, EPA takes no action on the codification of these site-specific WQS revisions associated with the GLCC third-party rulemaking.

⁶ Please note that the chloride, sulfate, and total dissolved solids criteria revisions cited in Regulation 2.511(A) associated with "Bayou de L'Outre Creek above Loutre Creek," "Unnamed trib UT004 from GLCC," and "Unnamed trib UT002 from GLCC" appear to be incorrect values due to an unintentional oversight resulting from computer error. The chloride, sulfate, and total dissolved solids criteria revisions actually adopted by the APC&EC on June 22, 2007, and submitted to EPA are as follows: Bayou de L'Outre Creek above Loutre Creek – chloride = 278 mg/L; Unnamed trib UT004 from GLCC – chloride = 239 mg/L and total dissolved solids = 324 mg/L; and, Unnamed trib UT002 from GLCC – chloride = 65 mg/L, sulfate = 35 mg/L, and total dissolved solids = 141 mg/L.

Walker Branch Revision

An asterisk (*) was added following the chloride and total dissolved solids criteria of 180 mg/L and 970 mg/L, respectively, for Walker Branch in the Ouachita River Basin.⁷ The asterisk signifies that the modeling utilized in the derivation of the site-specific criteria incorporated an assumed critical background flow equal to four cubic feet per second (cfs). Because the asterisk simply provides supplemental information to describe assumptions utilized in the derivation of the site-specific criteria, the asterisk itself does not constitute new or revised WQS subject to EPA review under CWA § 303(c).

No Action Determination: For the reasons described above, EPA takes no action on the revisions to add the asterisk following the chloride and total dissolved solids criteria for Walker Branch.

Revision to Two Stream Segment Descriptions in the Ouachita River Basin

As shown using underlined text in the table below, the phrase "Hurricane Cr from" was added to the beginning of two descriptions for stream segments in the Ouachita River Basin:

| Stream | Concentration-mg/L | | |
|---|--------------------|------|------|
| | Cl ⁻ | SO4= | TDS |
| <u>Hurricane Cr from</u> Ben Ball Bridge to Hwy.270 | 125 | 700 | 1200 |
| <u>Hurricane CR from</u> Hwy 270 to Saline River | 100 | 500 | 1000 |

These revisions were intended to clarify the descriptions for these two stream segments, since the previous descriptions only included a portion of each segment and did not reference the streams by name. These revisions did not add or remove any segments to the table in Regulation 2.511(A). Further, the chloride, sulfate, and total dissolved solids criteria for these two segments were not revised. Therefore, these revisions do not affect the current implementation of the site-specific minerals criteria identified under Regulation 2.511(A) for these waterbodies. As such, these revisions are not considered new or revised WQS subject to EPA review under CWA § 303(c).

No Action Determination: For the reasons described above, EPA takes no action on the revision of two stream segment descriptions for Hurricane Creek in Regulation 2.511.

⁷ ADEQ has indicated that this revision to add the asterisk to the chloride and total dissolved solids criteria for Walker Branch was an unintentional change (personal communication from Sarah Clem, ADEQ, to Melinda McCoy, EPA Region 6, on Thursday, January 17, 2008).

El Dorado Chemical Company (EDCC) Third-Party Rulemaking Revisions

Four new waterbody segments with associated site-specific chloride, sulfate, and total dissolved solids criteria were added to Regulation 2.511(A). These revisions are shown below (with additions denoted by underlined text):

| Stream | Concentration-mg/L | | |
|--|--------------------|------------------------------|-------------|
| | Cl ⁻ | SO ₄ ⁼ | TDS |
| <u>Haynes Creek from mouth of Flat Creek to Smackover creek</u> | <u>360*</u> | <u>55*</u> | <u>855*</u> |
| <u>Flat Creek from mouth of UTA to Haynes Creek</u> | <u>165*</u> | <u>67*</u> | <u>560*</u> |
| <u>Unnamed trib A to Flat Creek from mouth of EDCC 001 ditch to confluence with Flat Creek</u> | <u>16*</u> | <u>80*</u> | <u>315*</u> |
| <u>Confluence with unnamed trib A to Flat Creek</u> | <u>23*</u> | <u>125*</u> | <u>475*</u> |

These revisions are associated with the EDCC third-party rulemaking and were adopted by the APC&EC on June 22, 2007, via Minute Order No. 07-19. ADEQ previously submitted these site-specific WQS revisions to EPA for review and approval via letter dated August 17, 2007, which was received by EPA on September 17, 2007. EPA responded to ADEQ's request on January 3, 2008, stating that ADEQ's submission did not meet the minimum requirements of a WQS submission as described in 40 C.F.R. § 131.6, and encouraging ADEQ to work with EDCC in responding to several issues identified by EPA.

Revisions to Regulation 2.511(A) associated with this third-party rulemaking as part of ADEQ's triennial "Phase II" revision were intended simply to codify into Regulation No. 2 these previously adopted site-specific WQS revisions.

No Action Determination: For the reasons described above, EPA takes no action on the codification of these site-specific WQS revisions associated with the EDCC third-party rulemaking.

Lion Oil Company Third-Party Rulemaking Revisions

Ten new waterbody segments with associated site-specific chloride, sulfate, and total dissolved solids criteria were added to Regulation 2.511(A). These revisions are shown below (with additions denoted by underlined text):

| Stream | Concentration-mg/L | | |
|---|--------------------|------------------------------|--------------|
| | Cl ⁻ | SO ₄ ⁼ | TDS |
| <u>Loutre Creek- from Hwy 15 South to the confluence of Bayou de Loutre</u> | <u>256*</u> | <u>997*</u> | <u>1756*</u> |

| Stream | Concentration-mg/L | | |
|--|--------------------|------------------------------|--------------|
| | Cl ⁻ | SO ₄ ⁼ | TDS |
| <u>Bayou de Loutre – from Loutre Creek to the discharge for the City of El Dorado - South facility</u> | <u>264*</u> | <u>635*</u> | <u>1236*</u> |
| <u>Bayou de Loutre – from the discharge for the City of El Dorado-South downstream to the mouth of Gum Creek</u> | <u>250*</u> | <u>431*</u> | <u>966*</u> |
| <u>Bayou de Loutre – from the mouth of Gum Creek downstream to the mouth of Boggy Creek</u> | <u>250*</u> | <u>345*</u> | <u>780*</u> |
| <u>Bayou de Loutre- from the mouth of Boggy Creek downstream to the mouth of Hibank Creek</u> | <u>250*</u> | <u>296*</u> | <u>750*</u> |
| <u>Bayou de Loutre – from the mouth of Hibank Creek downstream to the mouth of Mill Creek</u> | <u>250*</u> | <u>263*</u> | <u>750*</u> |
| <u>Bayou de Loutre – from the mouth of Mill Creek downstream to the mouth of Buckaloo Branch</u> | <u>250*</u> | <u>237*</u> | <u>750*</u> |
| <u>Bayou de Loutre- from the mouth of Buckaloo Branch downstream to the mouth of Bear Creek</u> | <u>250*</u> | <u>216*</u> | <u>750*</u> |
| <u>Bayou de Loutre – from the mouth of Bear Creek downstream to the final segment of Bayou de Loutre</u> | <u>250*</u> | <u>198*</u> | <u>750*</u> |
| <u>Bayou de Loutre (Final segment) – from the mouth of Bear Creek to the Arkansas/ Louisiana State Line</u> | <u>250*</u> | <u>171*</u> | <u>750*</u> |

These revisions are associated with the Lion Oil Company third-party rulemaking and were adopted by the APC&EC on June 22, 2007, via Minute Order No. 07-20. ADEQ previously submitted these site-specific WQS revisions to EPA for review and approval via letter dated August 17, 2007, which was received by EPA on September 17, 2007. EPA responded to ADEQ's request on January 3, 2008, stating that ADEQ's submission did not meet the minimum requirements of a WQS submission as described in 40 C.F.R. § 131.6, and encouraging ADEQ to work with Lion Oil Company in responding to several issues identified by EPA.

Revisions to Regulation 2.511(A) associated with this third-party rulemaking as part of ADEQ's triennial "Phase II" revision were intended simply to codify into Regulation No. 2 these previously adopted site-specific WQS revisions.

No Action Determination: For the reasons described above, EPA takes no action on the codification of these site-specific WQS revisions associated with the Lion Oil Company third-party rulemaking.

Clean Harbors El Dorado, LLC., Third-Party Rulemaking Revisions

One new waterbody segment with associated site-specific chloride, sulfate, and total dissolved solids criteria were added to Regulation 2.511(A). These revisions are shown below (with additions denoted by underlined text):

| Stream | Concentration-mg/L | | |
|--|--------------------|------------------------------|--------------|
| | Cl ⁻ | SO ₄ ⁼ | TDS |
| <u>Boggy Creek - from the discharge for Clean Harbors El Dorado LLC to the confluence of Bayou de Loutre</u> | <u>631*</u> | <u>63*</u> | <u>1360*</u> |

These revisions are associated with the Clean Harbors El Dorado, LLC., third-party rulemaking and were adopted by the APC&EC on July 27, 2007, via Minute Order No. 07-24. ADEQ previously submitted these site-specific WQS revisions to EPA for review and approval via letter dated August 17, 2007, which was received by EPA on September 17, 2007. EPA subsequently approved these site-specific WQS revisions on November 9, 2007.

Revisions to Regulation 2.511(A) associated with this third-party rulemaking as part of ADEQ's triennial "Phase II" revision were intended simply to codify into Regulation No. 2 these previously adopted site-specific WQS revisions.

No Action Determination: For the reasons described above, EPA takes no action on the codification of these site-specific WQS revisions associated with the Clean Harbors El Dorado, LLC., third-party rulemaking.

(B) Ecoregion Reference Stream Minerals Values

As noted above in Section II within this Record of Decision, a subheading titled "(B) Ecoregion Reference Stream Minerals Values" was added to Regulation 2.511. The addition of this new subheading provides clarity related to the formatting in Regulation 2.511, but does not affect the current implementation of the site-specific minerals criteria identified under Regulation 2.511(B) as it pertains to permitting or Arkansas' CWA § 305(b)/303(d) Assessment. Therefore, the addition of subheading "(B) Ecoregion Reference Stream Minerals Values" is not considered a new or revised WQS subject to EPA review under CWA § 303(c).

No Action Determination: For the reason described above, EPA takes no action on the revision in Regulation 2.511 to add subheading "(B) Ecoregion Reference Stream Minerals Values."

Appendix A: Designated Uses, Specific Standards and Maps of Waters of the State by Ecoregions

Gulf Coastal Ecoregion – Designated Uses

Clean Harbors El Dorado, LLC., Third-Party Rulemaking Revision

Within the "Designated Uses" part of Appendix A for the Gulf Coastal Ecoregion, the following language was added under the subheading "Use Variations Supported by UAA:"

Boggy Creek from the discharge from Clean Harbors El Dorado LCC downstream to the confluence of Bayou de Loutre - no domestic water supply use

This revision to remove the domestic water supply designated use from Boggy Creek is associated with the Clean Harbors El Dorado, LLC., third-party rulemaking and was adopted by the APC&EC on July 27, 2007, via Minute Order No. 07-24. ADEQ previously submitted this site-specific WQS revision to EPA for review and approval via letter dated August 17, 2007, which was received by EPA on September 17, 2007. EPA subsequently approved this site-specific WQS revision on November 9, 2007.

As part of ADEQ's triennial "Phase II" revision, the above-described revision to Appendix A associated with the Clean Harbors El Dorado, LLC., third-party rulemaking was intended simply to codify into Regulation No. 2 this previously adopted site-specific WQS revision.

No Action Determination: For the reasons described above, EPA takes no action on the codification of this site-specific WQS revision associated with the Clean Harbors El Dorado, LLC., third-party rulemaking.

Gulf Coastal Ecoregion – Specific Standards

Company Name Change

Within the "Specific Standards" part of Appendix A for the Gulf Coastal Ecoregion and under the subheading "Variations Supported by UAA," the company name referenced as "Great Lakes" in the previous (April 23, 2004) version of Arkansas' WQS was revised to reflect this company's new name: "Chemtura." This name change does not constitute new or revised WQS subject to EPA review under CWA § 303(c).

No Action Determination: For the reason described above, EPA takes no action on the revision in Appendix A to update the name of "Great Lakes" to the "Chemtura."

Entergy Arkansas, Inc., Third-Party Rulemaking Revision

Within the "Specific Standards" part of Appendix A for the Gulf Coastal Ecoregion, the following language was added under the subheading "Variations Supported by UAA:"

Unnamed tributary of Lake June below Entergy Couch Plant to confluence with Lake June – maximum water temperature 95 degrees F (limitation of 5 degrees above natural temperature does not apply) (GC-1, #30).

This revision to the temperature criterion for the unnamed tributary to Lake June is associated with the Entergy Arkansas, Inc., third-party rulemaking and was adopted by the APC&EC on September 23, 2005, via Minute Order No. 05-24. ADEQ previously submitted this site-specific WQS revision to EPA for review and approval via letter dated October 27, 2005, which was received by EPA on November 1, 2005. On January 12, 2006, EPA approved the site-specific temperature criterion of 95°F, but disapproved the removal of the sentence at Regulation 2.502 which prohibits elevation of the natural temperature, outside the mixing zone, by more than 5°F.

As part of ADEQ's triennial "Phase II" revision, the above-described revision to Appendix A associated with the Entergy Arkansas, Inc., third-party rulemaking was intended simply to codify into Regulation No. 2 this previously adopted site-specific WQS revision.

No Action Determination: For the reasons described above, EPA takes no action on the codification of this site-specific WQS revision associated with the Entergy Arkansas, Inc., third-party rulemaking.

Great Lakes Chemical Corporation (GLCC) Third-Party Rulemaking Revisions

Within the "Specific Standards" part of Appendix A for the Gulf Coastal Ecoregion, the following language was added under the subheading "Variations Supported by UAA:"

Unnamed tributary from Great Lakes Chemical Company Outfall 002 to Bayou de Loutre-chloride 65, sulfate 35 mg/L, TDS 141 mg/L (GC-2, #31)

Unnamed tributary from Great Lakes Chemical Company Outfall 004 to Bayou de Loutre-chloride 239 mg/L., TDS 324 mg/L (GC-2, #32)

Bayou de Loutre from mouth of UT004 to mouth of Loutre Creek, chloride 278 mg/L (GC-2, #33)

Unnamed tributary from Great Lakes Chemical Company Outfall 003 (UT003) downstream to unnamed tributary to Little Cornie Bayou – chloride 538 mg/L, sulfate 35 mg/L, and TDS 519 mg/L (GC-2, #34)

Unnamed tributary of Little Cornie Bayou to confluence with Little Cornie Bayou – chloride 305 mg/L and TDS 325 mg/L (GC-2, #35)

Little Cornie Bayou from mouth UTA to state line- chloride 215mg/L,sulfate 25mg/L and TDS 500mg/L. (GC-2, #36)

These revisions are associated with the GLCC third-party rulemaking and were adopted by the APC&EC on June 22, 2007, via Minute Order No. 07-18. ADEQ previously submitted these site-specific WQS revisions to EPA for review and approval via letter dated August 17, 2007, which was received by EPA on September

17, 2007. EPA responded to ADEQ's request on January 3, 2008, stating that ADEQ's submission did not meet the minimum requirements of a WQS submission as described in 40 C.F.R. § 131.6, and encouraging ADEQ to work with GLCC in responding to several issues identified by EPA.

As part of ADEQ's triennial "Phase II" revision, the above-described revisions to Appendix A associated with the GLCC third-party rulemaking were intended simply to codify into Regulation No. 2 these previously adopted site-specific WQS revisions.

No Action Determination: For the reasons described above, EPA takes no action on the codification of these site-specific WQS revisions associated with the GLCC third-party rulemaking.

El Dorado Chemical Company (EDCC) Third-Party Rulemaking Revisions

Within the "Specific Standards" part of Appendix A for the Gulf Coastal Ecoregion, the following language was added under the subheading "Variations Supported by UAA:"

Unnamed tributary to Flat Creek from EDCC Outfall 001 d/s to confluence with unnamed tributary A to Flat Creek Chloride 23 mg/L, Sulfate 125 mg/L, TDS 475 mg/L, (GC-2, #37)

Unnamed tributary A to Flat Creek from mouth of EDCC 001 ditch to confluence with Flat Creek, Chloride 16 mg/L, Sulfate 80 mg/L, TDS 315 mg/L, (GC-2, #38)

Flat Creek from mouth of UTA to confluence with Haynes Creek, Chloride 165 mg/L, Sulfate 67 mg/L, TDS 560 mg/L (GC-2, #39)

Haynes Creek from mouth of Flat Creek to confluence with Smackover Creek, Chloride 360 mg/L, Sulfate 55 mg/L, TDS 855 mg/L (GC-2, #40)

These revisions are associated with the EDCC third-party rulemaking and were adopted by the APC&EC on June 22, 2007, via Minute Order No. 07-19. ADEQ previously submitted these site-specific WQS revisions to EPA for review and approval via letter dated August 17, 2007, which was received by EPA on September 17, 2007. EPA responded to ADEQ's request on January 3, 2008, stating that ADEQ's submission did not meet the minimum requirements of a WQS submission as described in 40 C.F.R. § 131.6, and encouraging ADEQ to work with EDCC in responding to several issues identified by EPA.

As part of ADEQ's triennial "Phase II" revision, the above-described revisions to Appendix A associated with the EDCC third-party rulemaking were intended simply to codify into Regulation No. 2 these previously adopted site-specific WQS revisions.

No Action Determination: For the reasons described above, EPA takes no action on the codification of these site-specific WQS revisions associated with the EDCC third-party rulemaking.

Lion Oil Company Third-Party Rulemaking Revisions

Within the "Specific Standards" part of Appendix A for the Gulf Coastal Ecoregion, the following language was added under the subheading "Variations Supported by UAA:"

Loutre Creek from Hwy 15 South to the confluence of Bayou de Loutre
Chloride, 256mg/l; Sulfate 997mg/l, TDS, 1756* (GC-3. #41)

Bayou de Loutre from Loutre Creek to the discharge for the City of El
Dorado South facility Chloride, 264mg/l; Sulfate 635mg/l, TDS, 1236* (GC-
3. #42)

Bayou de Loutre from the discharge from the City of El Dorado-South
downstream to the mouth of Gum Creek. Chloride, 250mg/l; Sulfate
431mg/l, TDS, 966 (GC-3. #43)

Bayou de Loutre from the mouth of Gum Creek downstream to the mouth
of Boggy Creek Chloride, 250mg/l; Sulfate 345mg/l, TDS, 780 (GC-3. #44)

Bayou de Loutre from the mouth of Boggy Creek downstream to the mouth
of Hibank Creek Chloride, 250mg/l; Sulfate 296mg/l, TDS, 750 (GC-3. #45)

Bayou de Loutre from the mouth of Hibank Creek downstream to the mouth
of Mill Creek Chloride, 250mg/l; Sulfate 263mg/l, TDS, 750 (GC-3. #46)

Bayou de Loutre from the mouth of Mill Creek downstream to the mouth of
Buckaloo Branch Chloride, 250mg/l; Sulfate 237mg/l, TDS, 750 (GC-3.
#47)

Bayou de Loutre from the mouth of Buckaloo Branch downstream to the
#48)

Bayou de Loutre from the mouth of Bear Creek to the final segment of
Bayou de Loutre. Chloride, 250mg/l; Sulfate 198mg/l, TDS, 750(GC-3. #49)

Bayou de Loutre (Final Segment) to the Arkansas / Louisiana State Line.
Chloride, 250mg/l; Sulfate 171 mg/l, TDS, 750(GC-3. #50)

These revisions are associated with the Lion Oil Company third-party rulemaking and were adopted by the APC&EC on June 22, 2007, via Minute Order No. 07-20. ADEQ previously submitted these site-specific WQS revisions to EPA for review and approval via letter dated August 17, 2007, which was received by EPA on September 17, 2007. EPA responded to ADEQ's request on January 3, 2008, stating that ADEQ's submission did not meet the minimum requirements of a WQS submission as described in 40 C.F.R. § 131.6, and encouraging ADEQ to work with Lion Oil Company in responding to several issues identified by EPA.

As part of ADEQ's triennial "Phase II" revision, the above-described revisions to Appendix A associated with the Lion Oil Company third-party rulemaking were intended simply to codify into Regulation No. 2 these previously adopted site-specific WQS revisions.

No Action Determination: For the reasons described above, EPA takes no action on the codification of these site-specific WQS revisions associated with the Lion Oil Company third-party rulemaking.

Clean Harbors El Dorado, LLC., Third-Party Rulemaking Revision

Within the "Specific Standards" part of Appendix A for the Gulf Coastal Ecoregion, the following language was added under the subheading "Variations Supported by UAA:"

Boggy Creek from the discharge from Clean Harbors El Dorado LCC downstream to the confluence of Bayou de Loutre. Chloride, 631mg/l; Sulfate, 63 mg/l, TDS, 1360; Selenium, 15.6 u/l

These revisions are associated with the Clean Harbors El Dorado, LLC., third-party rulemaking and were adopted by the APC&EC on July 27, 2007, via Minute Order No. 07-24. ADEQ previously submitted these site-specific WQS revisions to EPA for review and approval via letter dated August 17, 2007, which was received by EPA on September 17, 2007. EPA subsequently approved these site-specific WQS revisions on November 9, 2007.

As part of ADEQ's triennial "Phase II" revision, the above-described revisions to Appendix A associated with the Clean Harbors El Dorado, LLC., third-party rulemaking were intended simply to codify into Regulation No. 2 these previously adopted site-specific WQS revisions.

No Action Determination: For the reasons described above, EPA takes no action on the codification of these site-specific WQS revisions associated with the Clean Harbors El Dorado, LLC., third-party rulemaking.

Delta Ecoregion – Designated Uses

Associated Electric Cooperative, Inc. (AECI) Third-Party Rulemaking Revisions

Within the "Designated Uses" part of Appendix A for the Delta Ecoregion, the following language was added under the subheading "Use Variations Supported by UAA:"

Ditch No. 27 – no domestic water supply use (D-2, #5)

Ditch No. 6 – no domestic water supply use (D-2, #6)

These revisions to remove the domestic water supply designated uses from Ditch No. 27 and Ditch No. 6 are associated with the AECI third-party rulemaking and were adopted by the APC&EC on April 28, 2006, via Minute Order No. 06-22. ADEQ previously submitted these site-specific WQS revisions to EPA for review and approval via letter dated August 16, 2006, which was received by EPA on September 7, 2006. EPA subsequently approved these site-specific WQS revisions on October 26, 2006.

As part of ADEQ's triennial "Phase II" revision, the above-described revisions to Appendix A associated with the AECl third-party rulemaking were intended simply to codify into Regulation No. 2 these previously adopted site-specific WQS revisions.

No Action Determination: For the reasons described above, EPA takes no action on the codification of these site-specific WQS revisions associated with the AECl third-party rulemaking.

Delta Ecoregion – Specific Standards

Associated Electric Cooperative, Inc. (AECl) Third-Party Rulemaking Revisions

Within the "Specific Standards" part of Appendix A for the Delta Ecoregion, the following language was added under the subheading "Variations Supported by UAA:"

Ditch No. 27 – sulfates 480 mg/l; TDS 1,200 mg/l; maximum water temperature 95°F (D-2, #5)

Ditch No. 6 from Ditch No. 27 confluence to its mouth – sulfates 210 mg/l; TDS 630 mg/l (D-2, #6)

Tyrone River from Ditch No. 6 confluence to its mouth – sulfates 60 mg/l – see Reg. 2.511 (D-2, #7)

These revisions are associated with the AECl third-party rulemaking and were adopted by the APC&EC on April 28, 2006, via Minute Order No. 06-22. ADEQ previously submitted these site-specific WQS revisions to EPA for review and approval via letter dated August 16, 2006, which was received by EPA on September 7, 2006. EPA subsequently approved these site-specific WQS revisions on October 26, 2006.

As part of ADEQ's triennial "Phase II" revision, the above-described revisions to Appendix A associated with the AECl third-party rulemaking were intended simply to codify into Regulation No. 2 these previously adopted site-specific WQS revisions.

No Action Determination: For the reasons described above, EPA takes no action on the codification of these site-specific WQS revisions associated with the AECl third-party rulemaking.

Bayou Meto Water Management District (BMWMD) Third-Party Rulemaking Revisions

Within the "Specific Standards" part of Appendix A for the Delta Ecoregion, the following language was revised under the subheading "Variations Supported by UAA" (with deletions denoted by a line through the text):

~~Rocky Branch Creek and Bayou Meto from Rocky Branch Creek to Bayou Two-Prairie~~ - chlorides 64 mg/l (D-3, #4)

In addition, within the "Specific Standards" part of Appendix A for the Delta

Ecoregion, the following language was added under the subheading "Variations Supported by UAA:"

Bayou Meto from Rocky Branch Creek to Bayou Two Prairie – chlorides 64 mg/l (D-3, #4)

Bayou Meto from mouth to Bayou Two Prairie- chlorides 95 mg/l; sulfates 45 mg/l (D-3, #4)

Bayou Two Prairie (mouth to Rickey Branch) – chlorides 95 mg/l; sulfates 45 mg/l

Little Bayou Meto – chlorides 95 mg/l; sulfates 45 mg/l

Bakers Bayou – chlorides 95 mg/l; sulfates 45 mg/l

Wabbaseka Bayou – chlorides 95 mg/l; sulfates 45 mg/l

Indian Bayou – chlorides 95 mg/l; sulfates 45 mg/l

Flat Bayou – chlorides 95 mg/l; sulfates 45 mg/l

Shumaker Branch – chlorides 95 mg/l; sulfates 45 mg/l

Skinner Branch – chlorides 95 mg/l; sulfates 45 mg/l

White Oak Branch – chlorides 95 mg/l; sulfates 45 mg/l

Caney Creek – chlorides 95 mg/l; sulfates 45 mg/l

Salt Bayou – chlorides 95 mg/l; sulfates 45 mg/l

Snow Bayou – chlorides 95 mg/l; sulfates 45 mg/l

Brooks Branch – chlorides 95 mg/l; sulfates 45 mg/l

Fish Trap Slough – chlorides 95 mg/l; sulfates 45 mg/l

Ricky Branch – chlorides 95 mg/l; sulfates 45 mg/l

Buck Creek – chlorides 95 mg/l; sulfates 45 mg/l

Faras Run – chlorides 95 mg/l; sulfates 45 mg/l

Blue Point Ditch- – chlorides 95 mg/l; sulfates 45 mg/l

Big Ditch – chlorides 95 mg/l; sulfates 45 mg/l

Main Ditch – chlorides 95 mg/l; sulfates 45 mg/l

Crooked Creek Ditch – chlorides 95 mg/l; sulfates 45 mg/l

Lonoke Ditch – chlorides 95 mg/l; sulfates 45 mg/l

Indian Bayou Ditch – chlorides 95 mg/l; sulfates 45 mg/l

Caney Creek Ditch – chlorides 95 mg/l; sulfates 45 mg/l

Salt Bayou Ditch – chlorides 95 mg/l; sulfates 45 mg/l

Bradley Slough – chlorides 95 mg/l; sulfates 45 mg/l

Tupelo Bayou – chlorides 95 mg/l; sulfates 45 mg/l

Dennis Slough – chlorides 95 mg/l; sulfates 45 mg/l

Buffalo Slough – chlorides 95 mg/l; sulfates 45 mg/l

Flynn Slough – chlorides 95 mg/l; sulfates 45 mg/l

Boggy Slough – chlorides 95 mg/l; sulfates 45 mg/l

Bear Bayou – chlorides 95 mg/l; sulfates 45 mg/l

Bubbling Slough – chlorides 95 mg/l; sulfates 45 mg/l

Five Forks Bayou – chlorides 95 mg/l; sulfates 45 mg/l

Government Slough – chlorides 95 mg/l; sulfates 45 mg/l

Brushy Slough – chlorides 95 mg/l; sulfates 45 mg/l

Tipton Ditch – chlorides 95 mg/l; sulfates 45 mg/l

Hurricane Slough – chlorides 95 mg/l; sulfates 45 mg/l

Newton Bayou – chlorides 95 mg/l; sulfates 45 mg/l

West Bayou – chlorides 95 mg/l; sulfates 45 mg/l

Long Pond Slough – chlorides 95 mg/l; sulfates 45 mg/l

Castor Bayou – chlorides 95 mg/l; sulfates 45 mg/l

Cross Bayou – chlorides 95 mg/l; sulfates 45 mg/l

These revisions are associated with the BMWMD third-party rulemaking and were adopted by the APC&EC on October 26, 2007, via Minute Order No. 07-41. ADEQ is currently preparing to submit these site-specific minerals water quality criteria revisions associated with the BMWMD third-party rulemaking separately to EPA for review and approval, along with supporting documentation for the revisions. EPA will review and act upon the site-specific minerals water quality criteria revisions

associated with the BMWMD third-party rulemaking in response to ADEQ's anticipated separate WQS submission.

As part of ADEQ's triennial "Phase II" revision, the above-described revisions to Appendix A associated with the BMWMD third-party rulemaking were intended simply to codify into Regulation No. 2 these previously adopted site-specific WQS revisions.

No Action Determination: For the reasons described above, EPA takes no action on the codification of these site-specific WQS revisions associated with the BMWMD third-party rulemaking.

Appendix C: Scientific Names of Fishes

Within Appendix C, the common name for the "grass pickerel" was revised to "redfin pickerel." This revision within Appendix C does not constitute a new or revised WQS subject to EPA review under CWA § 303(c).

EPA has, however, considered the revision to the common name for the "grass pickerel" in its review of the revisions to Regulation 2.302 (Designated Uses). Because the revision to this common name in Regulation 2.302 revises the description for both the Typical and Springwater-influenced Gulf Coastal Ecoregion stream fishery designated uses, it is considered a new and revised WQS. EPA has, accordingly, approved this revision to Regulation 2.302 (see Sections II of this Record of Decision).

No Action Determination: For the reasons described above, EPA takes no action on the revision of the common name for the "grass pickerel" within Appendix C of Regulation No. 2.

The "Current River darter" and "Strawberry River darter" were added to Appendix C, along with their associated scientific and family names. These revisions within Appendix C do not constitute new or revised WQS subject to EPA review under CWA § 303(c).

The Current River darter is not referenced anywhere else within Regulation No. 2. The Strawberry River darter is referenced within Appendix A (see Ozark Highlands Ecoregion, Designated Uses) as being present in the Strawberry River, an Ecologically Sensitive Waterbody. The identification of the Current River and Strawberry River darters within Appendix C simply provides clarification concerning the common and scientific names for these two species.

No Action Determination: For the reasons described above, EPA takes no action on the revision to include the Current River and Strawberry River darters within Appendix C of Regulation No. 2.

Attachment A

– Triennial “Phase II” Revisions to Regulation No. 2⁸

⁸ Comparison is from Arkansas Water Quality Standards (Regulation No. 2) version dated April 23, 2004 (“2004 Triennial Revision”), to version dated September 28, 2007 (“2007 Triennial Revision”). Deletions are denoted by a line through the text and additions are denoted by underlined text.