

EXHIBIT F-1

DEPARTMENT OF ENVIRONMENTAL QUALITY

SUBJECT: Regulation No. 2; Water Quality Standards

DESCRIPTION: The Clean Water Act requires the state to review and update the water quality standards every three years. The proposed rule is the result of the triennial review process for the regulation.

PUBLIC COMMENT: Public hearings were July 13, 2010 (Fayetteville, AR), July 15, 2010 (Jonesboro, AR), July 19, 2010 (Arkadelphia), and July 21, 2010 (North Little Rock, AR). The public comment period expired on August 4, 2010. Public comments were as follows:

COMMENTS RELATED TO SPECIFIC REGULATIONS

Chapter One, Page Numbering

Siloam Springs

Comment: Page numbers in Chapter 1 appear to be incorrectly labeled.

Response: Revisions to the Chapter 1 page numbers will be made such that the first page will be numbered 1-1.

Reg.2.102, Purpose

Arkansas Department of Health (hereinafter "ADH")

Comment: Section 304(a) of the Clean Water Act requires the [U.S. Environmental Protection Agency] and the states to establish water quality criteria which will be protective of human health in addition to protecting the environment. Regulation No. 2 is deficient in not following the requirements of the Clean Water Act to include the protection of public health as one of its stated purposes. It is also inconsistent with other parts of the Regulation, such as 2.106 and 2.508, which specifically reference public or human health. This section should be modified accordingly.

Response: The Department acknowledges this comment; however this type of revision to the water quality standards would require additional public notice and comment due to the potential interest of many parties. During this Triennial Review, this section of the regulation was not opened for public comment in the Department's proposed rulemaking. Pursuant to Regulation No. 8, the Commission's review of the proposed rulemaking is limited to the proposed changes submitted by the Department. See Reg.8.818, ("When amending portions of an existing regulation, the Commission's deliberations shall be restricted to those proposed amendments described in the public notice. Rulemaking proceedings concerning legally required periodic update of regulations shall be restricted to Department staff proposals."). The Department respectfully requests that ADH assist ADEQ in the development of this revised language prior to the next Triennial Review.

Reg.2.106, Definitions (Aquatic life, Perennial aquatic life, Seasonal aquatic life, Fishery, and Seasonal Fishery and Reg 2.302(F), Designated Use) (two similar comments)

Beaver Water District (hereinafter “BWD”)

Comment: Definitions for Aquatic life, Perennial aquatic life, and Seasonal aquatic life were added and the definition for Fishery was deleted in the proposed amendments to Reg. 2 that were submitted to the APCEC in March 2010.... ADEQ’s May 2010 version [of the proposed rulemaking], however, does not include these March 2010 changes. BWD suggests that the definitions regarding aquatic life be included and the definition for fishery and seasonal fishery be deleted in Reg.2.106, and that “aquatic life” replace “fisheries” as the applicable designated use in Reg.2.302(F). It is important that all aquatic life and not just fish be taken into consideration for the purpose of the water quality standards. This also would be in keeping with accepted scientific practice for water quality studies.

Arkansas Natural Heritage Commission (hereinafter “ANHC”)

Comment: In the first draft version of the Regulation, a change in terminology from “fisheries” to “aquatic life” was noted. This change was subsequently removed from the final draft document. We believe the “aquatic life” terminology is more accurate and appropriate for the regulation. “Fishery” is a specific term with connotations related to the commercial or recreational harvest of fish. The water quality standards seek to protect the value of streams for fish and wildlife propagation. This must take into consideration the full range of aquatic life (plant and animal). We support the use of the term “aquatic life” for the Regulation.

Response: The Department acknowledges this comment but cannot consider this addition as it was not part of the final proposed rulemaking submitted by the Department and initiated for public comment by the Commission. Based on the number of responses received during the triennial review process, ADEQ has decided to delay this proposed revision until interested parties are able to fully express their interests. It was the intent of the Department to better reflect the definitions and language used in the Clean Water Act, and to be in line with the currently accepted language used by other environmental agencies and entities. U.S. Environmental Protection Agency (hereinafter “EPA”) guidance documents define the designated use of aquatic life as “a beneficial use designation in which the water body provides suitable habitat for survival and reproduction of desirable fish, shellfish, and other aquatic organisms.”

<http://water.epa.gov/scitech/swguidance/waterquality/standards/criteria/aqlife/biocriteria/useclass.cfm>

Reg.2.302(F) states that “[The fisheries designated use] provides for the protection and propagation of fish, shellfish and other forms of aquatic life.” Historically the Department has used these two terms interchangeably, for example in the 303(d) list, Use Attainability Analyses, etc.

The Department respectfully requests that BWD, ANHC, and other interested parties assist in the development of this revised language prior to the next Triennial Review.

Reg.2.106, Definitions (Critical Flows) and 2.511, Mineral Quality

ADEQ

After a brief review of the Site Specific Mineral Quality Criteria in Reg 2.511(A), it has become apparent that an in-depth investigation of how and when the 4 cfs critical background flow rule was applied to the various Use Attainability Analyses (hereinafter “UAA”) from which these Site Specific Mineral Quality Criteria were proposed is necessary. Due to the necessity of this investigation, the Department has decided not to make revisions to certain regulations concerning the 4 cfs critical background flow rule at this time.

1) Reg 2.106 – ADEQ proposed that the minerals criteria portion of the Critical Flows definition should read as follows:

For minerals criteria – harmonic mean flow or 4 cfs, except in those waters listed in Reg.2.511. Those waters in Reg.2.511 which are noted with an asterisk will have a critical flow of 4 cfs.

For waters listed as Extraordinary Resource Waters, Ecologically Sensitive Waters, or waters impaired for minerals, use harmonic mean flow.

2) Reg 2.511(A) – In the draft version the single asterisks (*) under 2.511(A) have been struck thru. ADEQ proposed to put the asterisk notations back into 2.511(A), along with the corresponding footnote that explains the asterisk means the criteria was “based on critical background flow of 4 cfs.”

Response: No response is necessary.

Reg.2.106, Definitions (Critical Flows)

Ouachita Riverkeeper

Comment: ADEQ removes the term “Critical Flows” from the Definitions section at Reg. 2.106 without substitution. ADEQ continued to use the term “critical flow” elsewhere in Regulation 2.

Response: In the first draft proposed regulation, the critical flow definition was removed from this regulation. Critical Flow is a component of implementing the minerals standards in NPDES permits. Procedures for the implementation of water quality standards in the permitting process are included in the State of Arkansas Continuing Planning Process (hereinafter “CPP”). In the second amended draft proposed rulemaking that was submitted by the Department and was initiated for public comment by the Commission, the definition for “critical flows” was retained. Based on the number of responses received during the triennial review process, ADEQ has decided to delay any proposed revision to the “critical flows” definition until interested parties are able to fully express their interests.

Reg.2.106, Definitions (Critical Flows)

BWD

Comment: This definition pertains to “background dilution flows” to be used in calculating NPDES permit limits. This definition should be based on actual flows and not on arbitrary, scientifically indefensible numbers such as the automatic four (4) cfs allowed for calculating limits for minerals or the one (1) cfs allowed for calculating permit limits involving seasonal fisheries. Where sufficient flow data does not exist,

permittees should be required to conduct flow studies. Also, it would seem more appropriate that these definitions be included in Reg. 6.

Response: Mineral standards are viewed as more similar to human health criteria and are designed to protect against long-term exposure, which in some cases includes the lifetime of the organism. Minerals, in the low concentrations set forth in the water quality standards, do not cause discernable effects to the aquatic community. Rather, as mineral concentrations are modified from low to high concentrations over long periods of time, certain species may be impacted and usually disappear to be replaced by other species. This effect takes place over the long-term, chronological flow hydrograph instead of at short-term, low flow concentrations.

Criteria for long-term effects such as human health criteria for consumption of aquatic life are converted to permit limits by using a statistically determined flow condition where 30% to 50% of the time the instream concentration will be less than the criteria. EPA has determined that the critical flow condition for human health criteria should be derived by determining the harmonic mean flow for the receiving stream.

To treat minerals in a similar manner requires that some flow condition other than 7Q10 be considered in determining permit limits. Although several options are available, such as long term average, geometric mean, and percent flow exceedances, none had the advantage of EPA acceptability, other than harmonic mean.

Once harmonic mean flows were selected as the critical flow for minerals, all available flow data was grouped by ecoregion and analyzed to determine if a regression model could be constructed to accurately predict harmonic mean flows by drainage basin size. Unfortunately, there was not enough flow data available from small stream basins to accurately extrapolate to the small watershed streams upon which many dischargers are located. However, adequate flow data was available from medium and large size watersheds.

Regulation No. 2 requires that ecoregion-specific perennial stream fisheries designated uses must be maintained and protected in waters with a watershed size equal to or greater than 10 mi². A review of the limited number of flow data from the smallest watershed sizes within each ecoregion indicated that the median flow for 10 mi² watershed streams range from just less than 3 cfs to just over 7 cfs. Ecoregion averages were from about 3 to 5 cfs. Therefore, a statewide median flow of 4 cfs was selected to be used in place of harmonic mean flows where insufficient data exists to establish such flows.

Reg.2.106, Definitions (Critical Flows)

GBMc & Arkansas Environmental Federation (hereinafter "AEF") & El Dorado Chemical Company (hereinafter "EDCC") & Siloam Springs (submitted identical comments)

Comment: We recommend the deletion of "a permittee may" from both the human health and minerals criteria. The inclusion of "a permittee may" would appear to allow other parties (e.g. ADEQ or environmental groups) to consider other flows as the critical

flows upon which permit limitations are based. The regulation should define the flow and eliminate all subjectivity.

Response: The phrase “a permittee may use” will be removed. However, for clarification, in the absence of sufficient data to establish a harmonic mean flow in small watersheds, a critical flow of 4 cfs will be used.

Reg.2.106, Definitions (Critical Flows) (two similar comments)

GBMc

Comment: The last section of this critical flow definition should be amended to read: “For all other criteria use the critical flow of Q7-10”. The use of the term “waters” as is proposed is not appropriate and would result in no defined critical flow for aquatic life criteria.

AEF

Comment: The third sentence leading into the various flow definitions states: " These following critical flows are applicable:" The 1st three critical flows deal with uses and criteria, the last deals with "other waters". By applying the Q7-10 to "all other waters" ADEQ is, in effect, eliminating any low flow definition or applicability for other uses or criteria. For example, there are critical flow definitions for seasonal fishery, human health criteria, and mineral criteria; what critical flow should, for example, be used for aquatic life criteria, dissolved oxygen, or non-seasonal fisheries? AEF recommends that the existing definition be retained, i.e. "For all others - the critical flow will be Q7-10". This encompasses both the remaining uses and criteria.

Response: The Department agrees that the use of the term “waters” is not appropriate because the language in the three preceding statements refers to specific uses and criteria, not waters. According to 40 CFR131.3(i) “Water quality standards ... consist of a designated use or uses ... and water quality criteria...” This sentence will be revised to state, “For all other standards use the critical flow of Q7-10.”

Reg.2.106, Definitions (Critical Flows) (four similar comments)

GBMc & AEF & Siloam Springs (submitted identical comments)

Comment: In addition the minerals criteria critical flow definition should be amended to read “harmonic mean flow or 4 cfs, whichever is greater” instead of the current language which reads “harmonic mean flow or 4 cfs”. The 4 cfs needs to be the default value and there should not be any subjectivity. If the “whichever is greater” language is not added the current language should be retained including the use of the asterisks in Reg. 2.511.

AEF

Comment: In the mineral criteria flow definition the reference to the waters noted with an asterisk has been deleted. These asterisks denote, in part, stream segments that have been subjected to use attainability studies pursuant to 2.303 at great expense to municipal and industrial dischargers. These studies have demonstrated that alternative criterion and/or uses are applicable to certain waters and by removing the asterisks ADEQ is proposing to negate these findings and subject the dischargers to significant cost for additional studies and/or the installation of additional treatment, which has already shown not to be necessary to protect the waters of the state.

Response: The portion of the definition referring to waters in Reg. 2.511 that is noted with an asterisk will be retained. After a brief review of the Site Specific Mineral Quality Criteria in Reg 2.511(A) it has become apparent that it is necessary to conduct an in-depth investigation of how and when the 4 cfs critical background flow rule was applied to the various UAAs from which these Site Specific Mineral Quality Criteria were derived. The Department has decided not to make any revisions to certain regulations concerning the 4 cfs critical background flow rule until the review can be completed and all interested parties can be included in the process.

Reg.2.106, Definitions (Critical Flows)

ADH

Comment: Streams and lakes currently being used as public drinking water sources need to be better protected and viewed similar to Extraordinary Resource and Ecologically Sensitive Waters. The mineral criteria for critical flows should be revised with the underlined words added so that it reads: *For minerals criteria – a permittee may use harmonic mean flow or 4 cfs, with the following exception: For waters listed as Extraordinary Resource Waters, Ecologically Sensitive Waters, water bodies in use as a public drinking water source, or waters impaired for minerals, use harmonic mean flow.*

Response: The Department acknowledges this comment; however, this type of revision to the water quality standards would require additional public notice and comment due to the potential interest of many parties. ADEQ respectfully requests that ADH assist in the development of this revised language prior to the next Triennial Review.

Reg.2.106, Definitions (Primary Season Critical Flow) (four similar comments)

GBMc & SWEPCO (submitted identical comments)

Comment: This definition is proposed to be deleted. We feel it should be retained to ensure that there is recognition of the 1 cfs background seasonal flow which is often used for developing aquatic life criteria based effluent limitations and critical dilutions for biomonitoring at small discharges into small watersheds with limited or no upstream flow.

AEF

Comment: ADEQ proposes to remove this definition from the regulation. AEF believes that this designation should be retained since it is essential for municipal and industrial dischargers to establish the clear applicability of Q7-10 during the primary season and/or a reasonable background seasonal flow of 1 cfs for watersheds less than 10² miles. Without this definition, small cities discharging to intermittent streams are left with no regulatory basis to establish background flows.

BWD

Comment: BWD supports the deletion of this definition, particularly as to the automatic one (1) cfs allowed for watersheds less than ten (10) square miles. (See BWD comments on “Critical flows”).

Response: The Primary Season Critical Flow is a component of process for implementing minerals standards in NPDES permits. Significant concerns have been expressed over the removal of this definition; therefore, the primary season critical flow definition will remain in the regulation until the Department and Commission can further consider the concerns surrounding the removal of this definition.

Reg.2.106, Definitions (Harmonic Mean Flow)

BWD

Comment: BWD suggests that [harmonic mean flow] definition specify the minimum number of flow measurements and the minimum time period required.

Response: As with other implementation procedures regarding NPDES permits, the procedures for calculating harmonic mean flow are found in the State of Arkansas CPP. Arkansas is awaiting final approval from the EPA on the most current revisions to the CPP, including harmonic mean flow calculation procedures.

Reg.2.106, Definitions (Nonpoint source)

EPA

Comment: This definition is confusing given the stormwater example, since some stormwater is point source. EPA suggests this be reworded to "...stormwater runoff not regulated under CWA 402(p),"

Response: The definition for Nonpoint source will be revised to state, "A contributing factor to water pollution that is not confined to an end-of-the-pipe discharge, i.e., stormwater runoff not regulated under Clean Water Act § 402(p), agricultural or silvicultural runoff, irrigation return flows, and other sources of diffuse runoff." The inclusion of "stormwater runoff not regulated under Clean Water Act § 402(p)" is appropriate because the Department has authority over permitting programs for Construction, Industrial, and Municipal Separate Storm Sewer System (MS4) stormwater discharges.

Reg.2.106, Definitions (Naturally Occurring Excursions)

EPA

Comment: It is unclear what a "severe storm" is. It is also unclear what the impact of this definition would have on the permitting program, especially stormwater permits.

Response: The Department acknowledges this comment. However, this section of the regulation was not opened for public comment in the Department's proposed rulemaking. Pursuant to Regulation No. 8, the Commission's review of the proposed rulemaking during this Triennial Review is limited to the proposed changes submitted by the Department. See Reg.8.818 ("When amending portions of an existing regulation, the Commission's deliberations shall be restricted to those proposed amendments described in the public notice. Rulemaking proceedings concerning legally required periodic update of regulations shall be restricted to Department staff proposals."). The Department respectfully requests that EPA assist the Department in the development of this revised language prior to the next Triennial Review.

Reg.2.106, Definitions (Maximum Contaminant Level (MCL))

ADH

Comment: Substitute the word “goals” for the proposed word “guidelines” in order to make the wording compatible with the language of the federal Safe Drinking Water Act and the National Primary Drinking Water Regulations.

Response: The Department agrees that compatibility with federal language is appropriate. Therefore, the definition for Maximum Contaminant Level will be revised to state, “The highest level of a contaminant that is allowed in drinking water. Maximum contaminant levels are set as close to maximum contaminant level goals as feasible using the best available treatment technology and taking cost into consideration.”

Reg.2.106, Definitions (State of Arkansas Continuing Planning Process)

ADH

Comment: The purpose for this document’s inclusion in Reg. No.2 is unclear and its description is incorrect. After some effort, a document by this name was found on ADEQ’s website but it is over 10 years old, out of date, and, while it may give a description of ADEQ’s Clean Water Act programs, it in no way “... describes the principal processes of the State’s water quality management programs...” both because of its age and because of its exclusion of other existing state and federal programs which deal with water quality.

Response: The proposed change to this definition reflects the current title of the document referenced. The definition and references to the State of Arkansas CPP were in prior versions of Regulation 2 and the definition of the document itself has not changed. The Department is in the process of revising the State of Arkansas CPP and is waiting on final approval of the document from EPA. The draft 2010 CPP is more comprehensive, summarizing the Department’s water quality management programs.

Reg.2.203, Outstanding Resource Waters

ADH

Comment: Streams and lakes currently being used as public drinking water sources need to be better protected and viewed similar to ERWs and ESWs. This section should be revised to include waters in use as a public drinking water source.

Response: Public drinking water sources are afforded protection by the designated use of domestic water supply. All waters of the state have a designated use of domestic water supply, unless Regulation No. 2 has been amended to specify the removal of the domestic water supply use for a specific water body or water body segment.

This proposed change would require additional public notice and comment due to the potential interest of many parties in this type of addition to the water quality standards. ADEQ respectfully requests that ADH assist in the development of this revised language prior to the next Triennial Review.

Reg.2.303, Use Attainability Analysis

EPA

Comment: Federal regulations at 40 CFR 131.10 describe requirements for the designation of appropriate uses. There is no federal requirement for the inclusion of like provisions in State rules. However, the State has elected to include a provision that essentially mimics the language in 40 CFR 131.10(g). EPA considers it inappropriate to limit the language in this provision to a description of requirements for removing or downgrading a designated use(s). EPA strongly recommends that the State include all aspects of 40 CFR 131.10 if it intends to repeat federal regulations in its own rules. This includes requirements outlined in 40 CFR 131.10(i), which requires States to evaluate the uses actually being attained when performing its triennial review given that Coffee Creek, Mossy Lake and other waters in the State lack designated uses.

Response: The Department acknowledges the comment. As stated in the comment, there is no federal requirement to include the exact language of the federal regulations in the state water quality standards. Additionally 40 CFR 131.10(i) does not pertain to Reg.2.303, the conditions which must be met for designated use removal, it pertains to the process of standards revisions. The Department may look at this issue and consider making the revision in a future rulemaking. Issues related to Coffee Creek, Mossy Lake and other waters where designated uses have been removed through the State's rulemaking process are addressed in a response below; however, it should be noted that Coffee Creek and Mossy Lake have industrial water supply and agricultural supply designated uses. The Department is not aware of any water bodies completely lacking designated uses.

Reg.2.304, Physical Alteration of Habitat

River Valley Regional Water District (hereinafter "RVRWD")

Comment: It is River Valley Regional Water District's understanding that the changes proposed in this Triennial review are not intended to change or affect in any way the provisions of Reg. 2.310 for removing the [Extraordinary Resource Water (hereinafter "ERW")] designation, and they are not intended to revoke or undermine the original historical understanding involved in the initial ERW designations. If this understanding is correct, River Valley Regional Water District has no objection to the proposed changes. If, however, the changes to Reg. 2.304 currently proposed by ADEQ are intended to alter or have any effect on Reg. 2.310 or on the original historical understanding involved in the initial designation of ERWs, then River Valley Regional Water District opposes the change.

Response: Based on several comments received, the Department has decided to withdraw the proposed changes to Reg.2.304. As EPA did not approve the changes to Reg.2.304 that were adopted by the Commission in the 2007 Triennial Review, the previously approved language (April 23, 2004) will be returned to the regulation. Prior to the 2007 Triennial Review, the Department convened a workgroup to discuss issues related to ERWs, Ecologically Sensitive Water Bodies (hereinafter "ESWs"), and Natural and Scenic Waterways (hereinafter "NSWs"). The workgroup produced the 2007 changes to Reg.2.304 that were disapproved by EPA. The proposed changes to Reg.2.304 submitted by the Department during this Triennial Review were intended to find a balance between the intent of the workgroup and the concerns expressed by EPA in the

Record of Decision on the 2007 changes. However, based on several comments received, the Department has decided to withdraw the proposed changes to Reg.2.304. As EPA did not approve the changes to Reg.2.304 that were adopted by the Commission in the 2007 Triennial Review, the previously approved language will be inserted in the regulation.

The proposed changes to Reg.2.304 were not intended to alter or have any effect on Reg.2.310. However, be reminded that EPA neither approved nor denied Reg.2.310 during the 2007 Triennial Review. EPA reserved approval or disapproval for individual water quality standards changes made under the procedure of Reg.2.310.

Without more explanation by the commenter, the Department cannot either agree or deny that changes to Reg.2.304 were “not intended to revoke or undermine the original historical understanding involved in the initial ERW designations.” The Department cannot assume what the commenter means by “original historical understanding” without further explanation.

Reg.2.304, Physical Alteration of Habitat (three similar comments)

Ouachita Riverkeeper

Comment: ADEQ’s proposed revision would change this protection so that “*significant physical alterations will . . . be allowed* where water quality, natural flow regime, and habitat of fish, shellfish, or other forms of aquatic biota will be maintained and protected.” Proposed Reg. 2.304. But allowing significant changes to specially protected waters does not maintain and protect those waters. ADEQ should not implement the proposed revision to Reg 2.304. Instead, ADEQ should (1) maintain its prohibition on significant physical alterations to special water bodies, and (2) require that a proponent show that “water quality [and other factors] will be maintained and protected” (*i.e.*, the language ADEQ proposes for its revision) to demonstrate that a proposed physical alteration is not significant.

EPA

Comment: EPA recommends that the State revert to the previously approved narrative or provide new language that addresses the concerns outlined below.

As described in the January 2008 action, EPA stated that the general prohibition in 40 CFR 131.12(a)(3) is facially absolute, limiting authorization of an activity that diminishes ONRW water quality as it exists when the activity is authorized. However, EPA has long interpreted 40 CFR 131.12(a)(3) as allowing some limited activities resulting in temporary and short term changes in the water quality of an [Outstanding National Resource Water (hereinafter “ONRW”)]. See Fed. Reg. 51400,51402 (November 8,1983).

As discussed in our previous action, EPA has also interpreted the term "degradation" as referencing detectable, rather than hypothetical, decreases in ONRW water quality. See *Arkansas v. Oklahoma*, 503 U.S. 91 (1992). A state's discretion for allowing ONRW water quality degradation is thus limited both as to magnitude (no detectable degradation) and duration (temporary and short term). When approved, the term "significant" in Regulation 2.304 was presumably subject to interpretation consistent with either or both of these limitations. And further, EPA is concerned that term "physical alteration of

habitat" in itself implies permanent modification of the physical structure of an ONRW, which would likely result in permanent, not temporary and short term degradation.

Dr. Richard Grippo

Comment: Proposed change to Reg. 2.304 takes away the ability of the Director to determine whether a proposed physical alteration is significant or not. I am not arguing against this change but I am wondering why it was felt this change was necessary. It seems to be a rather significant change in the ability of the Director to respond to certain situations and I would like to hear what the justification is for this change.

Response: At the conclusion of the 2007 triennial review, EPA disapproved the revised (October 26, 2007) Regulation No. 2.304 and Appendix D in their Record of Decision dated January 24, 2008. EPA stated "As revised, Regulation 2.304(A) provides no more antidegradation protection to ONRW water quality than Regulation No 2.304(B) provides to other Arkansas waters. The revisions to Regulation 2.304 are inconsistent with federal requirements..." Based on several comments received, the Department has decided to withdraw the proposed changes to Reg.2.304. As EPA did not approve the changes to Reg.2.304 that were adopted by the Commission in the 2007 Triennial Review, the previously approved language (April 23, 2004) will be returned to the regulation. Prior to the 2007 Triennial Review, the Department convened a workgroup to discuss issues related to ERWs, ESWs, and NSWs. The workgroup produced the 2007 changes to Reg.2.304 that were disapproved by EPA. The proposed changes to Reg.2.304 submitted by the Department during this Triennial Review were intended to find a balance between the intent of the workgroup and the concerns expressed by EPA in the Record of Decision on the 2007 changes. However, based on several comments received, the Department has decided to withdraw the proposed changes to Reg.2.304. As EPA did not approve the changes to Reg.2.304 that were adopted by the Commission in the 2007 Triennial Review, the previously approved language will be inserted in the regulation.

Reg.2.305, Short Term Activity Authorization

ADH

Comment: Notification needs to be provided to other state agencies for any short term authorization by the ADEQ Director which will result in a violation of Arkansas Water Quality Standards. The programs of other agencies can be dependent of water quality, and those programs could be adversely impacted if water quality is degraded. The ADEQ Director has a responsibility to notify those other agencies if such a degradation is authorized.

Response: ADEQ acknowledges the comment. This procedural type of action is probably not best suited for inclusion in the State's Water Quality Standards, but ADEQ will consider the comment when reviewing our procedures regarding STAAs. Please note that the Department publishes public notices for Clean Water Act § 401 certifications in cases where the project(s) are located on a waterbody that is designated as an ERW, ESW, or NSW. Additionally, STAAs can be viewed by county on the ADEQ website at the following web address

http://www.adeq.state.ar.us/water/branch_permits/individual_permits/temp_permits/temp_permits.asp.

EPA

Comment: The last sentence in the opening paragraph appears to authorize dredge and fill projects. Although the provision states that it is not intended to supersede the federal permitting process, it is unclear what authority the State has to authorize such activities, given that a federal §404 permit is required?

Response: Please note that this section of the regulation was not opened for public comment in the Department's proposed rulemaking. Pursuant to Regulation No. 8, the Commission's review of the proposed rulemaking during this Triennial Review is limited to the proposed changes submitted by the Department. See Reg.8.818 ("When amending portions of an existing regulation, the Commission's deliberations shall be restricted to those proposed amendments described in the public notice. Rulemaking proceedings concerning legally required periodic update of regulations shall be restricted to Department staff proposals."). However, it is also important to note that the intent of this provision is only to authorize such activities that are in accordance with the authority of the Department, not to supersede the authority of any other federal or state law.

EPA

Comment: While it is an important aspect of this provision, it is unclear how the prohibition on activities that may affect threatened and or endangered species and critical habitat will be implemented. The current wording makes the provision somewhat open ended. The State should consider extending this sentence to "...unless, after consultation with the USFWS, the adverse effect has been authorized by an incidental take statement or ESA section 10 permit."

Response: Please note that this section of the regulation was not opened for public comment in the Department's proposed rulemaking. Pursuant to Regulation No. 8, the Commission's review of the proposed rulemaking during this Triennial Review is limited to the proposed changes submitted by the Department. See Reg.8.818 ("When amending portions of an existing regulation, the Commission's deliberations shall be restricted to those proposed amendments described in the public notice. Rulemaking proceedings concerning legally required periodic update of regulations shall be restricted to Department staff proposals."). The Department respectfully requests that the EPA assist in the development of this revised language prior to the next Triennial Review.

Reg.2.309, Temporary Variance

EPA

Comment: Second sentence states "The variance will be for specified constituents and shall be no longer than a three year period." EPA Region 6 has concerns with variances which may have open ended compliance dates in NPDES permits. It is recommended that ADEQ consider revisions to this section which will require at the end of the period of variance, that the permit include an enforceable final effluent limit with a specific date for its achievement, even if it extends beyond the expiration date of the permit.

Response: The Department acknowledges this comment but cannot consider this addition as it was not part of the proposed rulemaking submitted by the Department. Implementation procedures for Temporary Variances can be found in the CPP and follow current EPA guidance. Please note that this section of the regulation was not opened for public comment in the Department's proposed rulemaking. Pursuant to Regulation No.

8, the Commission's review of the proposed rulemaking during this Triennial Review is limited to the proposed changes submitted by the Department. See Reg.8.818 ("When amending portions of an existing regulation, the Commission's deliberations shall be restricted to those proposed amendments described in the public notice. Rulemaking proceedings concerning legally required periodic update of regulations shall be restricted to Department staff proposals."). Additionally, requirements regarding NPDES permits are more appropriately addressed through APCEC Regulation No. 6, Regulations for State Administration of the National Pollutant Discharge Elimination System (NPDES).

Reg.2.310, Procedure for the Removal of the Designated Use of Extraordinary Resource Water, or Ecologically Sensitive Waterbody, or Natural and Scenic Waterway for the Purpose of Constructing a Reservoir on a Free Flowing Waterbody to Provide a Domestic Water Supply.

ADH

Comment: The Arkansas Department of Health is responsible for the approval of a public water supply source. The criteria required to initiate a petition to remove an ERW, ESW, or NSW designation should include written approval or concurrence from the Arkansas Department of Health. Suggested wording to be added to the criteria:

A letter of concurrence of approval of the water supply as a public drinking water source from the Arkansas Department of Health.

Response: ADEQ acknowledges this request and would be interested in including such an addition; however, this change would require additional public notice and comment due to the potential interest of many parties in this type of addition to the water quality standards. Reg.2.310 was adopted based upon the recommendations of a workgroup with diverse interests. ADEQ respectfully requests that ADH assist in the development of this revised language prior to the next triennial review.

Reg.2.404, Mixing Zones

EDCC & GBMc & Siloam Springs (submitted identical comments)

Comment: The proposed regulation eliminated the use of a mixing zone for pH. We know of no technical basis for such a change and recommend that the current wording of this section be retained.

Response: The Department intended for this proposed change to be removed in Exhibit A to the Second Amended Petition but it was inadvertently overlooked. The language present in the October 26, 2007 version of Regulation No. 2 will be retained.

Reg.2.405, Biological Integrity

AEF

Comment: The 2nd paragraph of this section is proposed to be changed (from previous drafts) to remove the reference to "variety and abundance" and replace it with the terms "habitat and hydrological condition". Further the proposed revisions remove the requirement that the reference stream should have similar habitat and hydrological conditions. AEF is concerned that a small municipality, for example, discharging to an intermittent stream is likely creating a "habitat and hydrological condition" that is unlike any reference stream in the same ecoregion and, therefore, is unlikely to support a comparable aquatic biota community. The potential ramifications in economic impact

terms are enormous, including studies and more stringent effluent limitations, while the environmental benefits are marginal if positive at all. Therefore AEF recommends that the sentence “The reference stream should have similar habitat and hydrologic conditions.” be retained.

Response: The Department agrees with the recommendation by AEF that a reference stream being used in a study to determine water quality and biological impacts in a stream as a result of any type of influent should be compared to a reference stream that is “similar in habitat and hydrologic condition.” The requirement is contained in the first sentence of the second paragraph of Reg. 2.405.

The intent of this revision is to clarify that the comparisons should be made according to stream conditions, not aquatic biota communities. An investigation should include: 1) the stream being assessed; and 2) a reference stream in the same ecoregion with similar habitat and hydrologic conditions. If the assessed stream has experienced perturbation, then the aquatic biota will not be similar. This is the intent of the regulation.

Comparing streams that are similar in the “variety and abundance” of aquatic species may result in comparing one impacted stream with another. Clearly this is not the intent of Reg. 2.405; however, as written, this type of comparison could be conducted.

The Department does not agree with the statement made by AEF that “The potential ramifications in economic impact terms are enormous, including studies and more stringent effluent limitations, while the environmental benefits are marginal if positive at all.” AEF does not present any data to justify this statement.

Reg.2.405, Biological Integrity

GBMc & Siloam Springs & EDCC (submitted identical comments)

Comment: We believe the addition of “hydrologic condition” in the first sentence of the second paragraph could nullify both upstream and downstream point source comparisons within small watersheds. Therefore, we request this sentence remain unchanged. In addition, we believe the second sentence of that paragraph, and its use of “hydrologic condition” should remain unchanged.

Response: The Department agrees that the proposed language could nullify both upstream and downstream point source comparisons within small watersheds that have little or no upstream flow. However, such a comparison is inappropriate for water bodies with little or no upstream flow.

Reg.2.405, Biological Integrity

AEF

Comment: ADEQ proposes to remove the words “collect and” from the last sentence. The purported reason for this is that, with the current language, ADEQ is prohibited from using the UAA studies in 303d determinations and for other purposes because it did not “collect” the data. AEF, first, believes that the stated reason is dubious, and, secondly, is concerned that the proposed change violates earlier ADEQ assurances that the inclusion of the Biological Integrity Criterion would not impose on permittees’ requirements to

conduct expensive and time consuming assessments. Although the sentence goes on to say that the "data will not be used to develop or impose permit limits" it does not reinforce the earlier ADEQ commitment that the studies themselves won't be required in permits, only that the "data will not be used to develop or impose permit conditions". AEF believes that ADEQ should honor its original intent and retain the words "collect and" in this section.

Response: The removal of the words "collect and" from the last sentence is in direct compliance with 40 CFR 130.7(5) "Each state shall assemble and evaluate all existing and readily available water quality-related data..." If this language is not removed, Regulation No. 2.405 will remain in violation of 40CFR 130.7(5). It would continue to prohibit the use of outside data and force the Department into nullifying any and all previous determinations that have occurred using data collected by outside entities. This would include all third party rulemakings that have occurred since the adoption of this language in 2004. In addition, leaving this language in the regulation would require the Department to perform all biological assessments as they relate to changes in standards, thus drastically changing the third party rulemaking process. This would result in enormous delays in the rulemaking process because the small staff and limited resources of the Department are not equipped to handle the potential additional workload. As a result, revisions of standards would not keep pace with permitting, permits would be issued with more stringent limits, and point source dischargers would be required to implement additional treatment options to meet the more stringent permit limits.

Reg.2.405, Biological Integrity

EPA

Comment: The last sentence of the second paragraph indicates the evaluation of data from an aquatic biota assessment will not be used to develop or impose permit limits. It is unclear why the State would not give consideration to such information when developing permit limits? Please clarify.

Response: Currently, biological collections are conducted as a support mechanism for water body assessments (303(d) listings), designated use and standards attainment, TMDL development, UAA studies, and third party rulemakings.

BWD

Comment: BWD generally supports the proposed changes as helpful clarifications, subject to the following: (1) Not just some, but all of the changes proposed in the March 2010 version on page 4-2 should be utilized. The terms "aquatic life" and "aquatic life use" should replace "fisheries" and "fishery," respectively...; (2) BWD agrees that it should not be the sole responsibility or purview of ADEQ to "collect" data for an aquatic biota assessment. There are a number of entities qualified to collect the data for an aquatic biota assessment and BWD would not want Reg.2.405 to be read as excluding such a possibility; and (3) It makes good sense scientifically to be able to utilize available aquatic biota assessments when developing NPDES permit limits, which is why BWD prefers the language in the last sentence of the March 2010 version of Reg.2.405 and objects to the statement in the last sentence of the proposed Reg.2.405 that "such data will not be used to develop or impose permit limits."

Response: The Department acknowledges these comments. As to (1) and (3), these changes would require additional public notice and comment due to the potential interest of many parties in this type of addition to the water quality standards. ADEQ respectfully requests that BWD assist in the development of such amendments prior to the next Triennial Review.

In addition, historically, NPDES permits were issued with little consideration of biological data due to the lack of such data. Currently, biological collections are conducted as a support mechanism for water body assessments (303(d) listings), designated use and standards attainment, TMDL development, Use Attainability Analysis studies, and third party rulemakings.

Reg.2.503, Turbidity

ADEQ

Comment: A sample size of not less than 24 monthly samples is noted in the draft Reg 2.503. This sample size is only appropriate for the ambient monitoring network. A revision was proposed in the draft Reg 2.503 that would allow ADEQ to consider data collected from both the ambient and roving monitoring networks.

ADEQ recommends that the paragraph be revised as follows:

There shall be no distinctly visible increase in turbidity of receiving waters attributable to municipal, industrial, agricultural, other waste discharges or instream activities.

Specifically, in no case shall any such waste discharge or instream activity cause turbidity values to exceed the base flows values listed below. Additionally, the non-point source runoff shall not result in the exceedance of the in stream all flows values in more than 20% of the Arkansas Department of Environmental Quality monitoring network samples taken in not less than 12 samples.

Response: In addition, based on comments received, the definition for Nonpoint source will be revised to state, "A contributing factor to water pollution that is not confined to an end-of-the-pipe discharge, i.e., stormwater runoff not regulated under Clean Water Act § 402(p), agricultural or silvicultural runoff, irrigation return flows, and other sources of diffuse runoff." The inclusion of "stormwater runoff not regulated under CWA 402(p) Clean Water Act § 402(p) is appropriate because the Department has authority over permitting programs for Construction, Industrial, and Municipal Separate Storm Sewer System (MS4) stormwater discharges.

Reg.2.504, pH

ADH

Comment: We oppose the proposed changes in the section. While probably not intentional, the proposed language would allow a variation in the pH of the stream or lake of as much as 5 pH units (between 5.0 and 10.0) within a 24 hour period. Such a variation is excessive and unreasonable for any public water system which must treat water from a stream or lake. The existing language of the regulation with allows no more that a 1.0 pH unit variation within a 24 period needs to be preserved.

Response: The Department agrees that the current proposed language is unclear. Reg. 2.504 will be revised to state, "The pH standards of between 6.0 and 9.0 are applicable. As a result of waste discharges, the pH of water in streams or lakes must not fluctuate in

excess of 1.0 standard unit over a period of 24 hours. pH standards are applicable to all waters of the state, except in those water bodies where natural background conditions result in pH values to either be less than or greater than the criteria listed.”

Reg.2.504, pH

EPA

Comment: The final sentence in this provision indicates that pH values are applicable to all waters, with the exception of "those waterbodies where natural background conditions result in pH values to either be less than or greater than the criteria listed." States may establish site-specific criteria equal to natural background, where natural background is defined as background due only to non-anthropogenic sources. At a minimum, State standards should include:

- (1) A definition of natural background consistent with the above;
- (2) A provision that site specific criteria may be set equal to natural background; and
- (3) A procedure for determining natural background, or alternatively, a reference in the water quality standards to another document describing the binding procedure that will be used. Without these components, Arkansas cannot exempt waters from compliance with numeric criteria for pH or other contaminants.

Response: In Reg.2.106, “Natural background” is defined as “Ambient conditions or concentrations of a parameter due to non-anthropogenic sources; natural background does not typically interfere with support of designated uses nor the level of aquatic life expected to occur naturally at the site.” Although the Department disagrees that procedures and provisions belong in the State water quality standards regulation, Reg.2.308 addresses procedures for setting criteria. Reg. 2.303 addresses the determination that natural background conditions are not impacting attainment of assigned designated uses.

Reg.2.505, Dissolved Oxygen

Ouachita Riverkeeper

Comment: ADEQ’s Dissolved Oxygen (DO) criteria at Reg. 2.505 do not protect Aquatic Life uses for all waters. EPA has explained DO criteria must be protective of all aquatic life forms in all life stages - including growth, reproduction, juvenile stages, and in intergravel sites – and shown that a DO of 4 mg/L is not protective, and in fact can cause impairments. *See* 1986 “Ambient Water Quality Criteria for Dissolved Oxygen” page 31 (EPA 440/5-86-003). Reg. 2.505 sets DO levels as low as 2 or 3 mg/L. ADEQ does not give or reference any scientific or site specific justification (or referenced) in the rules for such low criteria. ADEQ’s current DO levels are inadequate to support healthy fish and aquatic life, especially for early life stages. Therefore, ADEQ should adopt criteria for DO that do not allow levels to drop below 4 mg/L.

Response: The 1986 EPA study did not take into account site-specific or ecoregional water body characteristics. The dissolved oxygen standards in Regulation No. 2 are based on: (1) the 1987 study, *Physical, Chemical, and Biological Characteristics of Least-Disturbed References Streams in Arkansas’ Ecoregions*; (2) on the findings of UAA studies; and (3) on other approved EPA studies. Each of these studies document sustainable aquatic life communities in waterbodies with dissolved oxygen

concentrations less than 4 mg/L. In addition, the primary season DO standards were established to protect early life stages of aquatic organisms.

Reg.2.505, Dissolved Oxygen

EDCC & GBMc & Siloam Springs

Comment: We recommend that the current language be retained and that all references to “fish community as described in Reg. 2.302” be deleted from this section. The fish communities in Reg. 2.302 include key and indicator species developed from research on least-disturbed waterbodies which specifically excluded point source dischargers. It is not reasonable to expect waterbodies which receive point source discharges to maintain those communities.

Response: The term “fishery” will be retained. A fishery is clearly defined in Reg. 2.303(F) as “Fisheries - This beneficial use provides for the protection and propagation of fish, shellfish, and other forms of aquatic life.” The research mentioned in this comment is the 1987 study titled, *Physical, Chemical, and Biological Characteristics of Least-Disturbed Reference Streams in Arkansas' Ecoregions*. This study was conducted on least-disturbed water bodies (not undisturbed) and included waterbodies which receive point source discharges; i.e. Kings River, Flint Creek, Moro Bayou, Bayou De View, etc. Furthermore, it is the purpose of Regulation No. 2 “... to designate the uses for which the various waters of the State shall be maintained and protected; to prescribe the water quality standards required to sustain the designated uses; and to prescribe regulations necessary for implementing, achieving and maintaining the prescribed water quality.” This applies to all waterbodies including those receiving point source discharges. It is reasonable to expect waterbodies which receive point source discharges to “support diverse communities of indigenous or adapted species and other forms of aquatic biota” and be “generally characterized” by the key and indicator species listed. The key and indicator species listed in Reg.2.302(F)(3)(a-f) were present in least-disturbed waterbodies, some of which receive point source discharges, according to the 1987 study.

Reg.2.505, Dissolved Oxygen

AEF

Comment: The first sentence of the first full paragraph in this section states that "In streams with watershed of less than 10 mi², it is assumed that insufficient water exists to support a fish community as described in Reg. 2.302 during the critical season." In the first sentence of the second paragraph it states that "All streams with watersheds of less than 10 mi² are expected to support a fish community as described in Reg. 2.302 during the primary season when stream flows, including discharges, equal or exceed 1 cubic foot per second (cfs). So, in essence, a watershed of less than 10 mi² is not expected to support a fishery in the critical season but is expected to support a fishery during the primary season....and not just any fishery, but a fishery "as described in Reg. 2.302", or essentially, the same fishery as a reference stream.

Ichthyologists, limnologists, and other scientists who work for member companies of AEF are unable to understand how one can expect not to find fisheries in critical periods but expect to find a diverse and representative fisheries in the primary season...in the same small waterbody. AEF suggest that the first sentence in the second paragraph be

changed to read; "Streams with watersheds of less than 10 mi² are generally expected to support a fishery during the primary season when....." We believe this removes the illusion that "All" streams of less than 10 mi² are expected to support an ecoregion reference stream fishery at any time.

In the third paragraph the proposed draft states that in those watershed of less than 10 mi² where there is a discharge of 1 cfs or more that there is sufficient water to support a "perennial fish community as described in Reg. 2.302..." AEF is unable to find a "perennial fish community" listed in Reg. 2.203 and, therefore, suggest that the reference to a "perennial fish community" be changed to "fishery".

Response: The term "fishery" will be retained. According to Reg.2.505 a watershed of less than 10 mi² without significant groundwater flows or enduring pools is not expected to support a fishery during the critical season. During the primary season, all watersheds of less than 10 mi² are expected to support a fishery generally characterized by the species found in least-disturbed water bodies.

It is appropriate to expect not to find a fisheries during the critical season but to expect to find a diverse community during the primary season. It is well documented that fish species utilize the habitat in small tributaries for spawning and routinely migrate into these tributaries during the primary season. Reg.2.505 states that "all streams with watersheds of less than 10mi² are expected to support a fishery during the primary season...." This is contrary to the above statement that "'All' streams of less than 10 mi² are expected to support a...fishery at any time."

The Department acknowledges the suggestion that the reference to a "perennial fish community" be changed to "fishery" and will investigate the historical intent of the perennial fish community language. However, at this time, this change would require additional public notice and comment due to the potential interest of many parties in this type of addition to the water quality standards. ADEQ respectfully requests that AEF assist in the development of such amendments prior to the next Triennial Review.

Reg.2.507, Bacteria

ADH

Comment: One of the purposes of Reg. No. 2 under the Clean Water Act is to protect designated uses, including maintaining state waters as swimmable. The *E. coli* and Fecal Coliform standards in Reg. 2.507 fail to achieve this purpose since they exceed the bacteria limit for a swimmable stream or lake as defined by the Arkansas Department of Health in its *Rules and Regulations Pertaining to Outdoor Bathing Places*. That criteria is an arithmetic average for *E. coli* of 126/100 ml on two consecutive days.

Response: ADEQ is charged with the protection of the Primary Contact Recreation Designated Use of waterbodies, as described in Regulation No. 2. ADH is charged with the protection of daily use of outdoor bathing places (swimming areas). Although a two day exceedance of an ADH standard may result in a temporary loss of the use of a bathing area, it does not result in the nonattainment of the designated use. The standards set forth in this regulation are protective of the designated use and meet the requirements of the Clean Water Act. While the APCEC standards may differ from the bacteria limits

found in the ADH regulations, the Department follows the methodology established in EPA's 1986 document *Ambient Water Quality Criteria for Bacteria*.

Reg.2.507, Bacteria

EPA

Comment: Paragraph C: The method of assessing data collected to determine impairment has been dropped from the regulation. How will the state determine whether a stream is impaired for bacteria based on data collected?

Section 2.507 includes both E coli and Fecal Coliform numbers, are criteria for both parameters applied in permits?

Response: Based on recommendations from EPA, the Department has removed assessment procedures from the text of Regulation No. 2, when possible. The procedure for determining stream impairment due to bacteria is found in the Assessment Methodology, which is reviewed every two years in conjunction with the Integrated Water Quality Monitoring and Assessment Report (305(b) Report). Procedures for applying water quality criteria to permit limits are found in the State of Arkansas CPP. Currently, *E. coli* is used for assessing water quality for inclusion on the 303(d) impaired waterbodies list.

Reg.2.507, Bacteria (two similar comments)

Friends of the North Fork and White Rivers (hereinafter "Friends")

Comment: Support in part and object in part to proposed Reg. 2.507 regarding Bacteria. Support the proposed changes to Reg. 2.507 that have made this provision more readable. Object, however, to the changes that have been deleted: (1) the primary contact season *Escherichia coli* (*E.Coli*) geometric mean numeric criteria of 126 colonies/100mL for all waters other than Lakes, Reservoirs, Extraordinary Resource Waters (ERW), Ecologically Sensitive Waterbodies (ESW), and Natural and Scenic Waterways (NSW); (2) the secondary contact season *E.Coli* geometric mean numeric criteria of 630 colonies/100mL for all waters other than Lakes, Reservoirs, ERW, ESW, and NSW; and (3) the term "reservoir" from the list of waterbodies subject to the more stringent criteria for *E.Coli*.

BWD

Comment: Although the current Reg. 2.507(A) and (B) is somewhat confusing, the only reasonable interpretation of the regulation is that the *E.Coli* criteria calculated as geometric means **apply to all waterbodies** (according to the applicable primary versus secondary contact designations), not just to lakes, reservoirs, ERW, ESW, and NSW. In addition to the clear reading of the current Reg. 2.507(A) and (B), it makes no sense that there would only be individual sample criteria and no geometric mean criteria for *E.Coli* in waters other than Lakes, Reservoirs, ERW, ESW, and NSW.

The deletion of the current Reg. 2.507(A) and (B) geometric mean numeric criteria for *E.Coli* that apply to waters other than Lakes, Reservoirs, ERW, ESW, and NSW is contrary to and prohibited by the antidegradation provisions of Section 303(d)(4)(B) of the Clean Water Act, 33 U.S.C. § 1313(d)(4)(B), 40 C.F.R. § 131.12, and Reg. 2.201 - 2.202. The current Reg.2.507(A) and (B) geometric mean numeric criteria for *E.Coli* that

apply to waters other than Lakes, Reservoirs, ERW, ESW, and NSW can only be deleted from Reg. 2 if they are replaced with equivalent or more stringent criteria.

Response: The Department respectfully disagrees with the interpretation of the regulation by the commenters. The bacteria standards remain unchanged from the October 26, 2007 version of Reg.2.507. Geometric mean for primary and secondary contact standards for *E. coli* did not apply to “All Other Waters,” but only to ERW, ESW, NSW, Reservoirs, and Lakes.

The Department inadvertently removed the reference to reservoirs under the section for primary contact and secondary contact. This section will be revised to state “ERW, ESW, NSW, Reservoirs, Lakes.”

Reg.2.507, Bacteria

BWD

Comment: Proposed Reg. 2.507 provides: “For assessment of ambient waters, at least eight (8) data points must be taken during the primary contact season or during the secondary contact season.” Reg. 2.507 also provides: “Geometric Mean – Calculated on a minimum of five samples spaced evenly and within a thirty-day period.” These provisions are unclear and seemingly contradictory. How does the requirement for a minimum of eight samples relate to the requirement that the geometric means be calculated on a minimum of five samples? If only five samples within a thirty-day period are required for calculating the geometric mean, does this mean that any additional samples can be ignored? These two provisions should be clarified in a way that does not allow for manipulation of the data.

Response: The assessment criteria for evaluating the geometric mean of bacteria data is adopted from the EPA guidance document, “Ambient Water Quality for Bacteria, 1986.” The assessment of bacteria data to determine the season long designated use attainment is established in the Department’s Assessment Methodology that is developed in conjunction for Integrated Water Quality Monitoring and Assessment Report and submitted every two years to EPA.

Regarding the number of samples needed to calculate the geometric mean, all data that meet the requirements will be utilized during the assessment process. A minimum of 8 data points will be collected during the primary contact season (May to September). The geometric mean is calculated with at least five data points that are collected evenly spaced over a 30 day period within the primary contact season.

Reg.2.507, Bacteria

ADEQ

Comment: A typo was noted in Part (A), this section should read “Primary Contact Season – May 1 to September 30” instead of **and**.

Response: No response is necessary.

Reg.2.508, Toxic Substances

Dr. Richard Grippo

Comment: Under Reg. 2.508 Toxic substances, lines 5 and 6 after the deleted section state “Within the Zone of Dilution acute toxicity standards may be exceeded but acute toxicity may not occur”. How is acute toxicity determined? The concept is defined at the beginning of Reg. 2 on page 2-2 but this does not explain how toxicity is determined in the above case. There should either be an explanation of the method of determining acute toxicity included with the statement or the reader should be referred to another section of Reg. 2 where the procedure for determining acute toxicity is described.

Response: A reference to the procedure for determining acute toxicity is located in the next to last paragraph on page 5-8 and Attachment IX of the State of Arkansas CPP.

Reg.2.508, Toxic Substances (two similar comments)

Ouachita Riverkeeper

Comment: ADEQ’s Proposed Criteria for Toxic Substances are as much as 10 times EPA’s recommended Human Health Criteria. The proposed “Human Health Criteria” for “Toxic Substances” at Reg. 2.508 are inconsistent with and far less stringent than EPA’s National Recommended Water Quality Criteria. See <http://www.epa.gov/waterscience/criteria/wqctable/>. ADEQ proposes values that are ten times higher than the EPA recommended values. For example, the EPA human health recommended criterion for Toxaphene is 0.00028 ug/L (which would be 0.28 ng/L), while the Arkansas proposal is 2.8 ng/L (or 0.0028 ug/L). The same appears true for the other criteria, which each allowing ten times more toxic substances than recommended by EPA before Arkansas considers a body of water polluted. This difference is directly attributable to Arkansas choosing to a less stringent, higher risk public health regulation: EPA values are based on a cancer risk factor of one in a million (10⁻⁶), while the Arkansas’ “[c]riteria [are] based on a lifetime risk factor of 10⁻⁵,” i.e. ten times more cancer risk at one in 100,000 (10⁻⁵). See Reg. 2.508. Allowing this risk over the national recommended value is not in the public interest and should be changed to be consistent with EPA values. At a minimum, the Ouachita Riverkeeper requests that ADEQ explain why the state has chosen to allow a higher cancer risk from pollution.

Ozark Society

Comment: While the proposed changes to the allowable concentrations of toxic substances section 2.508 are strengthened in some cases, they are also weakened in other cases. The Ozark Society opposes the weakening of water quality standards in this and any other section of Regulation 2.

Response: The Department acknowledges these comments. However, all proposed amendments to water quality criteria for toxic substances were removed in Exhibit A to the Second Amended Petition, thus this section of the regulation was not opened for public comment in the Department’s proposed rulemaking. Pursuant to Regulation No. 8, the Commission’s review of the proposed rulemaking during this Triennial Review is limited to the proposed changes submitted by the Department. See Reg.8.818 (“When amending portions of an existing regulation, the Commission’s deliberations shall be restricted to those proposed amendments described in the public notice. Rulemaking proceedings concerning legally required periodic update of regulations shall be restricted

to Department staff proposals.”). The Department respectfully requests Ouachita Riverkeeper and the Ozark Society present any information they may be able to provide regarding water quality criteria for toxic substances prior to the next Triennial Review.

Reg.2.508, Toxic Substances

ADEQ

Comment: The revised first sentence in the draft Reg 2.508 erroneously contains the phrase “aquatic life biota”. ADEQ recommends that the sentence be revised as follows: The following standards for toxic substances in receiving waters, after mixing, represent the concentrations that will not be toxic to human, animal, plant, or aquatic biota, or will not interfere with the normal propagation, growth, and survival of the indigenous aquatic life.

Response: No response is necessary.

Reg.2.508, Toxic Substances (Selenium)

GBMc & AEF (two identical comments)

Comment: As stated in the fact sheet developed by EPA for the new draft Selenium criteria, and as presented in the draft Selenium criteria document <http://www.epa.gov/seleniumcriteria.htm>, Selenium is a bioaccumulative pollutant. Aquatic life is exposed to selenium primarily through their diets. Risks stem from aquatic life eating food that is contaminated with selenium rather than from direct exposure to selenium in the water.

For aquatic life, the toxic effects with the lowest thresholds (and those that form the basis of the water quality criteria) are effects on the growth and survival of juvenile fish and effects on larval offspring of the adult fish that were exposed to selenium during the overwintering period.

Therefore it is reasonable to utilize the stream conditions expected to occur during this overwintering period as the critical flow for selenium, not the 7Q-10 flow. We recommend that Reg. 2.106 be amended to delineate the critical flow for selenium as the average flow during the primary season and that critical flow be additionally noted in Reg. 2.508.

Response: The comment suggests that a higher flow volume be used for developing effluent limitations for selenium. By applying this higher flow, the limitation would be a higher concentration of selenium than if a Q7-10 flow was applied. This higher concentration would occur during a period in which research has shown that fish are more sensitive to selenium and its effects (mid-September to mid-May). Designating wintertime flows as critical for selenium concentrations would allow permittees to discharge higher concentrations of selenium into water bodies during the critical season. This would result in increased selenium assimilation by developing juvenile fish. Although selenium is stored in higher concentrations in detoxifying organs, it also accumulates in ovaries and is passed on to progeny. Increasing selenium concentrations during low flows would result in greater selenium uptake by adults, and thus higher selenium concentrations in newly hatched fish. Increased selenium concentrations cause greater risk of mortality due to edema, lordosis, and other physical deformations. The

revision requested by the commenter would not protect Fisheries designated uses as found in Reg.2.302(F) and Appendix A, would be contrary to Regs.2.301, 2.405, and 2.508, and is not in accordance with the toxic implementation strategy found in the State of Arkansas Continuing Planning Process.

Reg.2.508, Toxic Substances (Mercury)

AEF & GBMc (submitted identical comments)

Comment: At AEF's earlier suggestion, ADEQ re-inserted the asterisks referencing the bioaccumulation of mercury rather than the acute and chronic toxicity. However, mercury remains in the table entitled "Dissolved Metals" under "Aquatic Life Criteria". Since mercury is of primary concern as a bioaccumulation factor for human health, AEF believes that the mercury criterion of 0.012 ug/L should be moved from the "Aquatic Life Criteria-Dissolved Metals" table to the appropriate Human Health Criteria table.

We request that the Dissolved Metals table in Reg. 2.508 be amended by removing the "chronic" mercury criterion of 0.012 ug/L from that table and placing it under the appropriate Human Health Criteria table on the next page. As noted by the asterisk in the current Reg. 2.508, the mercury criterion is "based on bioaccumulation of residues in aquatic organisms, rather than toxicity".

Response: The criteria designations in Reg.2.508 are appropriate according to the *Quality Criteria for Water 1986 (Gold Book)*. The *Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organism and Their Uses* indicate that, except possibly where locally important species are very sensitive, freshwater aquatic organisms and their uses should not be affected unacceptably if the four-day average concentration of mercury does not exceed 0.012 ug/L more than once every three years and if the one hour average concentration does not exceed 2.4 ug/L more than once than every three years. If the four-day average concentration exceeds 0.012 ug/L more than once in a three-year period, the edible portion of consumed species should be analyzed to determine whether the concentration of methylmercury exceeds the Food and Drug Administration action level. ADH is the lead agency on human health criteria due to the consumption of mercury in fish tissue.

Reg.2.509, Nutrients (six similar comments)

Ouachita Riverkeeper

Comment: ADEQ's proposed revisions, however, remove numeric limits for Phosphorus impaired waters. ADEQ does not include any replacement or additional nutrient standards or any explanation for why ADEQ proposes to weaken nutrient limitation, except to include a site-specific standard for a single lake, Beaver Lake.

Accordingly, the Ouachita Riverkeeper submits that

1. ADEQ must not remove the Phosphorus limitations that are currently in Reg.2.509.
2. Should ADEQ decide to proceed with the proposed changes to Reg.2.509, the Ouachita Riverkeeper requests that ADEQ provide an explanation for its decision.

Allan Gates

Comment: The proposed revisions include a change that would delete language in Reg 2.509 that calls for specific numeric discharge limits on phosphorus in certain waterbodies. The question of phosphorus limits in Northwest Arkansas are currently implicated in a number of ongoing administrative actions. In addition, an Intergovernmental Working Group representing the five principal cities in Northwest Arkansas is currently organizing a joint effort to address strategy and planning for water quality concerns. I believe it would be imprudent to alter the provisions regarding phosphorus limits, which were approved by EPA in the 2007 Triennial Review, until there is more clarity on the likely outcome in the other ongoing administrative actions and the Department has a chance to obtain the views of the Intergovernmental Working Group. I am concerned that some parties may misinterpret the proposed changes if they are made final, or argue that the deletion of the language approved in 2007 regarding phosphorus limits should somehow authorize or require other changes in the regulation of phosphorus discharges even though such changes are not intended by ADEQ, the Commission, or any other party in Arkansas. I also believe it would be desirable for ADEQ to have the benefit of the Intergovernmental Working Group's thoughts before making the proposed changes.

ADH

Comment: The proposed change deletes the total phosphorus limit for higher flow discharges and for those discharges to impaired streams. No language is proposed for that deleted. ADEQ needs to explain why the existing language is being deleted; what the agency's long range plan is for controlling nutrients; and how the remaining vague, qualitative nutrient standard in Reg. No. 2 will control nutrients in Arkansas streams and lakes.

Friends

Comment: Object to the removal in proposed Reg. 2.509 of the phosphorus requirements for point source discharges into specified waterbodies, which include certain waterbodies in the legislatively designated nutrient surplus watersheds and on Arkansas's list of impaired waterbodies (the so-called 303(d) list). The Reg. 2.509 numeric phosphorus requirements have been an important tool in reducing nutrient loadings to these waterbodies. The deletion of the Reg. 2.509 phosphorus requirements is contrary to and prohibited by the antidegradation provisions of Section 303(d)(4)(B) of the Clean Water Act, 33 U.S.C. § 1313(d)(4)(B), 40 C.F.R. § 131.12, and Reg. 2.201 through 2.203. The Reg. 2.509 phosphorus requirements, therefore, can only be deleted from Reg. 2 if they are first replaced with equivalent or more stringent instream, numeric phosphorus criteria or, possibly, if equivalent or more stringent effluent limitations on phosphorus are first included in APCEC Regulation No. 6.

League of Women Voters (hereinafter "LWV")

Comment: [T]he LWVAR and the LWVWC oppose the removal of the phosphorus limits on point source discharges into the watershed of waters listed as impaired by phosphorus pursuant to section 303(d) of the Clean Water Act or into waters in the nutrient surplus watersheds as designated by the Arkansas Legislature, which include the Beaver Lake and Illinois River watersheds in Northwest Arkansas. The phosphorus

standards for point source discharges in Reg. 2.509 are, once again, fully in alignment with the position of the LWVAR and the LWVWC. The Reg. 2.509 phosphorus standards for point source discharges are the bases for the phosphorus limits in a number of NPDES permits that have significantly reduced the phosphorus loads to impacted water bodies in Northwest Arkansas. These standards are not included in any other regulations of the APCEC. If these standards are removed from Reg. 2, then the legal basis for existing and future NPDES permits may be called into question.

BWD

Comment: BWD objects to the removal of the numeric phosphorus requirements for point source discharges into certain waterbodies in the legislatively designated nutrient surplus watersheds and on Arkansas's list of impaired waterbodies (the so-called 303(d) list). The Beaver Lake watershed was declared to be a Nutrient Surplus Area by Act 1061 of 2003 (codified at Ark. Code Ann. § 15-20-1104). The Reg.2.509 numeric phosphorus requirements have been an important tool in reducing nutrient loadings to Beaver Lake. Discharges of nutrient-containing wastewater into Beaver Lake watershed have the potential to adversely impact the Lake's water quality and can have a direct bearing on what it costs BWD to provide our customers with drinking water that meets or exceeds all federal and state regulatory requirements.

The deletion of the Reg.2.509 phosphorus requirements also is contrary to and prohibited by the antidegradation provisions of the Clean Water Act. ADEQ has conducted none of the analyses that would be required by Reg.2.201 through Reg.2.203 and 40 C.F.R. § 131.12 in order to consider removal of the Reg.2.509 phosphorus requirements. ADEQ's position appears to be that the phosphorus requirements in Reg.2.509 are not "water quality standards" and, therefore, they should be removed. The Reg.2.509 phosphorus requirements, however, have been in the Arkansas water quality standards for many years. They were adopted into the water quality standards following a complete public participation process and EPA review and approval. By definition, therefore, they are water quality standards....

BWD believes that even if ADEQ had attempted the requisite analyses, such waterbody-by-waterbody analyses would not support removal of the Reg.2.509 phosphorus requirements (this would unquestionably be the case for the affected Outstanding Resource Waters). The Reg.2.509 phosphorus requirements, therefore, can only be deleted from Reg. 2 if they are first replaced with equivalent or more stringent instream, numeric phosphorus criteria or, possibly, if equivalent or more stringent effluent limitations on phosphorus are first included in APCEC Regulation No. 6.

Response: In an enclosure to a letter received on July 31, 2009, EPA recommended "that this section be removed from the numeric portion of the standards and placed into an implementation document such as the CPP." However, based on varied responses received, the Department has decided not to remove the numeric discharge limits from Reg.2.509 until all interested parties are able to fully express their concerns.

In addition, it must be understood that the two paragraphs and table concerning point source discharges are not water quality standards. This portion of Reg.2.509 is guidance for development of permit limits. As with other implementation procedures regarding NPDES permits, the procedures for determining phosphorus limits are found in the State of Arkansas CPP. Arkansas is awaiting final approval from the EPA on the most current revisions to the CPP, including procedures for determining phosphorus permit limits.

Reg.2.509, Nutrients (Beaver Lake)

Ouachita Riverkeeper:

Comment: ADEQ does not explain why it only provides nutrient standards for Beaver Lake or why it limits that standard to the growing season. It also omits a daily maximum for Secchi Transparency.

Response: An interdisciplinary workgroup was convened to develop a process by which site-specific standards for nutrients could be developed for lakes. Because of its importance to Arkansans, Beaver Lake was selected as the prototype for developing this process.

It was the recommendation of the workgroup that a growing season geometric mean for Chlorophyll-a and the annual average for Secchi Transparency were the most protective criteria for the protection of the domestic water supply designated use. As resources become available, site-specific criteria can be developed for other Arkansas lakes.

Reg.2.509, Nutrients (Beaver Lake)

Northwest Arkansas Council, Friends, LVW (submitted very similar comments)

Comment: Support the adoption of the water quality criteria for Chlorophyll a and Secchi Transparency. It is our understanding that these criteria were developed by a scientific process that was carried out over a period of several years. Having scientifically-based numeric, as opposed to narrative, standards for indicators of nutrient pollution will provide a straightforward method of assessing whether the water quality standards are being met and will help to ensure the long-term use of Beaver Lake as a drinking water source. Friends would suggest that this criteria apply to all our lakes.

Response: The Department acknowledges these comments. These criteria were developed as site-specific criteria for Beaver Lake and may not be appropriate for other state lakes in other ecoregions. As resources become available, site-specific criteria can be developed for other Arkansas lakes.

Reg.2.509, Nutrients (Beaver Lake)

Larry Kelly – Arkansas Realtors Association

Comment: As a realtor, state wide and locally, we're interested in water quality at Beaver Lake and other water sources throughout the state. And also, now that it may affect development and building and property rights around the state so reasonable water regulations are quite acceptable, and we applaud and support those ourselves. The Benton County master planning committee is dealing with some of these issues right now as in riparian rights and water quality as we're trying to look at some kind of master plan for growth in Benton County. All within reason and all balance so I've heard nothing or seen nothing this evening to cause me alarm or concern.

Response: The Department acknowledges this comment.

Reg.2.509, Nutrients (Beaver Lake)

BWD

Comment: BWD supports the addition of site-specific numeric water quality criteria for Chlorophyll a and Secchi Transparency for Beaver Lake.... The proposed numeric criteria for Chlorophyll a and Secchi Transparency were selected to limit nutrients and algae to levels that do not impair the Lake's designated drinking water use. These criteria were recommended by a broadly-based scientific workgroup following several years of meetings, research, discussion, and information sharing.... Having scientifically-based numeric, as opposed to narrative, criteria for indicators of nutrient pollution will provide a straightforward method of assessing whether the water quality standards are being met. BWD believes that numeric criteria related to nutrients are essential to ensure the long-term protection of Beaver Lake as a drinking water source....

In the absence of any numeric nutrient criteria, nutrient enrichment and algal growth in the Lake may be allowed to increase to levels that will require significant water treatment costs. Already, BWD experiences episodic taste and odor events typically caused by 2-Metholisoborneal (MIB) and occasionally by Geosmin. MIB and Geosmin are related to the concentration of algae and cyanobacteria in the raw water.... Should the taste and odor events increase in frequency and intensity in the future, additional treatment may become necessary.... In addition, increases in algal growth due to nutrient enrichment will impact Lake turbidity (summer turbidity in Beaver Lake is mostly algal as evidenced by the ratio of total suspended solids to total volatile suspended solids)....

Algal blooms also can cause operational problems for our treatment processes, such as the clogging of our filters. In addition and also related to the nutrient levels in the lake, BWD is seeing an increase in disinfection byproducts precursors in the water at our intake. When chlorinated, these precursors form disinfection byproducts (DBPs). DBPs are strictly regulated under the Safe Drinking Water Act, with the DBP limits becoming even more stringent in 2012. The cost for BWD and its customer cities to maintain compliance with the 2012 DBP standards is expected to be significant. For all of the reasons set forth above, it is critical to the long-term protection of Beaver Lake as a drinking water source that the proposed Reg.2.509 site-specific, numeric water quality criteria for Chlorophyll a and Secchi Transparency for Beaver Lake be adopted.

Response: The Department acknowledges this comment.

Reg.2.509, Nutrients

EPA

Comment: EPA recommends that Arkansas develop and adopt numeric criteria for nutrients in addition to the narrative standards currently in place.

Response: As resources become available, site-specific criteria can be developed for other Arkansas waterbodies, pursuant to Arkansas's Nutrient Criteria Development Plan, as mutually agreed upon with EPA.

Reg.2.509, Nutrients

Ouachita Riverkeeper

Comment: ADEQ's proposed revisions to Arkansas' water quality standards are unlawful because they do not institute numeric nutrient limits and, instead, remove numeric standards for the nutrient Phosphorus.... EPA guidance calls for states to adopt numeric criteria for nutrients, including for nitrogen, phosphorous, chlorophyll-a, and transparency.... This Triennial Review period is Arkansas' opportunity to set its own numeric criteria rather than have EPA set such criteria for the state. Should ADEQ decide not to establish numeric criteria for nutrients for all waters, the Ouachita Riverkeeper requests that ADEQ provide an explanation for its decision.

Response: Guidance documents published by EPA do not have the force of law and, therefore, are not binding. A memo from Mr. Geoffrey Grubbs, Director of EPA's Office of Science and Technology (Nov. 14, 2001) titled, *Development and Adoption of Nutrient Criteria into Water Quality Standards*, indicates that states may elect to establish translators in lieu of numeric criteria for nutrients. The Department and the Beaver Lake Scientific Workgroup's approach utilized this guidance and established such criteria. The Department is in the process of developing such criteria for other state waterbodies following the process outlined in the *State of Arkansas Nutrient Criteria Development Plan, 2008*, which has been mutually agreed upon with EPA.

Reg.2.509, Nutrients (Assessment of Impairment for Nutrients)

EPA

Comment: The first sentence of the last paragraph refers to the use of "Department assessment methodology" for determining when nutrients result in stream impairments. Since the current water quality standard is narrative in context, is there a written procedure in place for performing this type of assessment? If so, please provide EPA with a copy for review. If not, a written implementation procedure should be developed.

Response: The Department is currently developing and evaluating an assessment methodology for determining impairments due to nutrients. This procedure is more appropriate to be included in the Assessment Methodology submitted in conjunction with the Integrated Water Quality Monitoring and Assessment Report (305(b) Report).

Reg.2.509, Nutrients

ADEQ

Comment: A typo was noted in the second sentence of Reg 2.509 (A). The sentence should read "Impairment of a waterbody from excess nutrients is dependent on the natural waterbody characteristics ..."

Response: No response is necessary.

Reg.2.510, Oil and Grease (five similar comments)

Ouachita Riverkeeper & BWD (submitted identical comments)

Comment: The proposed change at Reg 2.510 for oil and grease omits the words "no more than" after the words "average of" and before the words "10 mg/L." The sentence should read: "Oil and grease shall be an average of no more than 10 mg/L or a maximum of 15 mg/L."

SWEPCO

Comment: Replacement language in this section states, "Oil and grease shall be an average of 10 *mg/L* or a maximum of 15 *mg/L* when discharging to surface waters." This language indicates oil and grease must be discharged to surface waters, which clearly is not the Department's intent. We suggest changing the original language to, "As a guideline, oil and grease concentrations shall not exceed an average of 10 *mg/L*, or exceed a maximum of 15 *mg/L*."

AEF

Comment: In its current form the regulation mandates that "Oil and grease shall be an average of 10 *mg/L* of a maximum of 15 *mg/L* when discharging to surface waters." AEF does not believe that is the ADEQ intent. In addition, as with changes in the critical flow definition, this seems to go against EPA preferences to remove implementation language from the regulation. Regulation No. 2 establishes in-stream WQS, not discharge requirements. AEF suggest that the words "when discharging to surface waters" be stricken.

EPA

Comment: The second to last sentence reads to support that discharges will have 10 *mg/L* oil and grease or a maximum of 15 *mg/L* when discharging. This wording does not clearly reflect the goal of minimizing the presence of oil and grease from Arkansas waterbodies. The State may choose to reference its implementation language to clarify the previously approved statement.

Response: The Department acknowledges that this revision was unclear. This sentence will be revised to state, "Oil and grease shall not be added to any waterbody in excess of an average of 10 *mg/L* or a maximum of 15 *mg/L* when discharged to surface waters." The intent of this revision was to establish this regulation as a standard instead of as a guideline. Furthermore, based upon a recommendation from EPA, the language of "shall not exceed" was removed to be consistent with language in the State's assessment methodology.

Reg 2.511(A), Mineral Quality (four similar comments)

Ouachita Riverkeeper

Comment: Regulation 2.511 on Mineral Quality omits the footnote for the asterisks (*) that it includes throughout the criteria.

GBMc & EDCC & Siloam Springs (submitted identical comments)

Comment: We also recommend that the waterbodies which went through 3rd party rulemakings for dissolved minerals using the 4 cfs background flow continue to be marked with an asterisk. In this way the 3rd party rulemakings are better documented.

Response: In Exhibit A to the Second Amended Petition that was submitted for public comment, the asterisks throughout Reg.2.511 were intended to be deleted; however, the word processing software used makes it look as though the asterisks were underlined (which is the mark-up notation for an addition to the regulation). The Department acknowledges the confusion this may have caused to the public reviewing the draft document.

Based on the comments received, the footnote and the corresponding asterisks will be retained in Reg.2.511(A). It is important to note that not all site specific mineral criteria adopted as part of a UAA are denoted with an asterisk.

Reg.2.511(A), Mineral Quality (four similar comments)

GBMc & EDCC

Comment: We recommend that the current Reg. 2 language be retained which states that the dissolved minerals values listed are monthly average concentrations. This is important when the eco-region criteria are used for unnamed waterbodies and because those facilities which developed site specific dissolved minerals criteria did so on the basis of those values being used as such in the NPDES permitting process. Unless similar language is retained in the regulations it will become subjective as to whether the criteria are monthly averages or daily maximum values. It would cause facilities compliance problems.

AEF

Comment: ADEQ proposes to remove the reference to monthly average concentrations in Subsection (A) because it complicates the calculations used in 303d determinations; purportedly because a month with only one data point may be the determining factor in a 303d list determination. AEF believes that if, in fact, that is the case, that it's the 303d list evaluation criteria that need changing not the Arkansas WQS.

Numerous permittees have expended hundreds of thousands of dollars demonstrating that many of these criteria are not appropriate, don't affect the use, or should be changed to be more representative. These studies were based on the existing language which uses monthly averages and removal of the language bring uncertainty regarding future mineral criteria requirements. Municipalities and industries need stability to reinforce prior capital expenditures and plan for future growth and development. AEF request that the reference to the use of monthly averages should be retained.

Siloam Springs

Comment: We believe mineral values should remain as monthly average concentrations. Current municipal and industrial NPDES permits specifically address monthly averages and therefore, the removal of this verbiage would allow ambiguous interpretation of the Regulation. Significant compliance issues would arise if these concentrations were subsequently interpreted and regulates as daily maximums.

Response: The criteria listed in Reg.2.511(A) represent site-specific criteria, most of which were adopted following the development of a UAA study. UAAs, and the resulting third-party rulemakings, do not develop permit limits, but water quality criteria for a specific portion of a waterbody. The procedures for developing permit limits as either monthly averages or daily maximum values are found in the State of Arkansas CPP.

While some UAAs may have been based on monthly averages, the term “monthly average concentrations” only was added to the regulation in 2007 in response to comments on the 2007 Triennial Review, Docket No. 07-003-R. Most of the site-specific criteria added to Reg.2.511 were developed prior to the adoption of that language in 2007. Therefore, retaining the language “monthly average” in the regulation would not be consistent with the studies supporting the criteria. Furthermore, water quality standards are not listed as monthly averages.

Reg 2.511(B), Mineral Quality

EDCC & Siloam Spring & GBMc (submitted identical comments)

Comment: We recommend the continuance of the current table entitled “Calculated Ecoregion Reference Stream Values”. The proposed revised table contains values which represent the improper calculation of allowable concentrations based on the current methodology.

Response: The Department cannot determine from the submitted comments where the improper calculation occurs within the proposed revised table. The Department has reviewed the table and has determined that the calculations are correct.

Reg 2.511(B), Mineral Quality

AEF

Comment: In prior versions of subsection (B), the ecoregion values were specifically listed. In this version, ADEQ is proposing to remove the "1/3 higher or more than 15 mg/L language", add 1/3 to the ecoregion values and establish "Calculated" values. AEF sees no justification for the proposed changes and, by removing the 15 mg/L flexibility, imposes more stringent standards on those dischargers (primarily small municipalities) that can least afford it...with no concomitant environmental enhancement.

Response: The Department respectfully disagrees. The current values in the table incorporate “the 1/3 higher or more than 15 mg/L, whichever is greater,” calculation as appropriate. There is not a 15 mg/L “flexibility,” or a subsequent 15 mg/L added to the calculated value, as referred to by the commenter. For example, prior to calculation, the Ouachita Mountains ecoregion reference stream chloride value is 6 mg/L. The 1/3 higher calculation is 8 mg/L. Because this value is less than 15 mg/L, 15 mg/L becomes the calculated ecoregion reference stream value. The Department proposed this revision because of this kind of confusion when calculating these values for permit limit development and compliance.

Reg 2.511(B), Mineral Quality

BWD

Comment: In general, BWD strongly supports the changes to Reg.2.511(B) as they have made this provision much clearer. BWD agrees with deleting the language about calculations in the current Reg.2.511(B) because, as BWD understands it, the table already incorporated those calculations. BWD is not clear, however, whether the values in the table are water quality criteria, as we believe they should be, or whether they are just values representing “significant modification of the water quality” (whatever that means). For Reg.2.511(B) to be perfectly clear, BWD believes that the language should be changed to specify that the values in the table in Reg.2.511(B) are the water quality

criteria applicable to streams in the various ecoregions that are not otherwise listed in Reg.2.511(A).

Response: The Department acknowledges the comment. These values are the instream concentrations applicable to streams in the various ecoregions that are not otherwise listed in Reg.2.511(A) for the determination of permit limits and for the initiation of the use attainability analysis process for mineral standards revisions.

Appendix A

Tim Klinger

Comment: In almost every case, there are inconsistencies between the Plates and the lists included as *Designated Use Variations Supported by UAA or other Investigations* and *Specific Standards Variations Supported by UAA*. As an example, the Ozark Highlands Ecoregion includes 4 plates labeled OH-1, OH-2, OH-3, and OH-4. On Plate OH-1 are included OH-1 #1, OH-1 #2, and OH-1 #5. All but OH-1 #5 are included in the list labeled *Designated Use Variations Supported by UAA or other Investigations*. And all but OH-1 #2 are included in the list labeled *Specific Standards Variations Supported by UAA*. Similar inconsistencies are found throughout.

Response: When a UAA is preformed there can be four outcomes:

- 1) No Site-Specific Standard(s) & No Designated Use Removal(s)
- 2) Site-Specific Standard(s) & Designated Use Removal(s)
- 3) No Site-Specific Standard(s) & Designated Use Removal(s)
- 4) Site-Specific Standard(s) & No Designated Use Removal(s)

In the example of OH-1 #5, SWEPCO Reservoir has a site-specific temperature standard, but none of the designated uses were removed. In the example of OH-1 #2, Columbia Hollow Creek has no site-specific standards, but does have a seasonal fishery use. Thus, there will not always be a corresponding footnote between the two maps.

Appendix A

ADH

Comment: The current identification mechanism of stream segments and protected areas in Appendix A is by a hard copy of the respective plate of the ecoregion. ADEQ should develop and make this information available in GIS format. Such a format would allow other agencies to more easily determine the impact of these designations on their programs. It would also more easily provide ADEQ locational information, if required, on the proximity of other agencies' program efforts on streams and lakes.

Response: In cooperation with the Arkansas Geographic Information Office, the Department has made several layers of GIS data available on GeoStor. This includes GIS layers for the Ecologically Sensitive Water Bodies, Trout Waters, Extraordinary Resource Waters, Natural and Scenic Waterways, and the Department's base water layer. These GIS layers were developed based on the National Hydrography Dataset Medium Resolution data. The Department is developing a GIS layer of waterbodies with Variations by Use Attainability Analyses (UAA) and plans to make this layer available on GeoStor in 2012.

<http://www.geostor.arkansas.gov/G6/Home.html>

Appendix A

Central Arkansas Water (hereinafter "CAW")

Comment: Central Arkansas Water (CAW) respectfully requests that the ecoregion designation for the Lake Maumelle Watershed, including the Lake and those tributaries that lay to the west and north of the Lake (including but not limited to Bringle Creek, Yount Creek and Reece Creek) be changed from the Arkansas River Valley Ecoregion (as shown in Plate ARV-2 of Appendix A of Reg 2) to the Ouachita Mountains Ecoregion.

Response: The Department acknowledges this comment but cannot consider this revision because ecoregion boundary revisions were not part of the proposed rulemaking. This change would require additional public notice and comment due to the potential interest of many parties in this type of revision to the water quality standards. The Department respectfully requests that CAW provide further information pertaining to the change in ecoregion designation for the Lake Maumelle Watershed for possible inclusion in the next Triennial Review.

Appendix A

ADEQ

Comment: The Drafts of Regulation No. 2 submitted to the PC&E Commission in March 2010 and April 2010 contained several proposed revisions to the regulation clarifying the intent of the terms "Fishery" and "Aquatic Life". Subsequently all of these revisions were to be removed from the Draft of Regulation No. 2 submitted to the PC&E Commission in May 2010. The March 2010 and April 2010 proposed revisions inadvertently remained in Appendix A of Regulation No. 2. There are approximately 28 instances in which the term "Fishery" is struck thru and the term "Aquatic Life" remains in Appendix A.

Response: No response is necessary.

Appendix A

AEF

Comment: ADEQ re-instated the fisheries use(s) in the proposed draft. However, the term "aquatic life use" remains in Appendix A and is undefined in Section 2.106. AEF requests that the term fishery be substituted for aquatic life use throughout the Appendix A to make it consist with the rest of the regulation.

Response: Revisions will be made to reflect that the term "Fishery" remains in Appendix A. See ADEQ comment above.

GENERAL COMMENTS NOT RELATED TO A SPECIFIC REGULATION

Coffee Creek/Mossy Lake

Ouachita River Keeper

Comment: ADEQ's Triennial Review process must redesignate Coffee Creek and Mossy Lake, tributaries of the Ouachita River, as Aquatic Life uses water bodies.... Regulation 2, Appendix A...exempts Coffee Creek and Mossy Lake from the perennial

fisheries/Aquatic Life designation based on a 1984 Use Attainability Analysis that is 1) outdated and superseded, and 2) not in the administrative record in a complete form.

It is unlawful to exempt Coffee Creek and Mossy Lake from the fisheries/Aquatic Life designation because EPA has shown that Aquatic Life is an existing use for these water bodies. ADEQ must maintain and protect existing instream uses.... In 2007, EPA performed a Use Attainability Analysis “to determine if the current ‘no aquatic life use designation’ for Coffee Creek and Mossy Lake is appropriate.”... EPA concluded that the current designation is not appropriate, explaining that “[f]rom the biological data collected it is apparent there is a diverse and abundant, though seasonal, aquatic community in the Reference Site stream.” EPA noted, among other things, that “[t]he waters of Coffee Creek and Mossy Lake have the potential to support aquatic life indicative of streams in the ecoregion....

In addition, the exemption of Coffee Creek and Mossy Lake from the Aquatic Life use is unlawful because Arkansas’ 1984 Use Attainability Analysis cannot justify removing an existing use. Arkansas’ regulations only allow a use attainability analysis to justify “removing a fishable/swimmable [i.e. Aquatic Life/Primary Contact] designated, which is not an existing use, from a water body. Here, the fishable/swimmable use is an existing use. The Arkansas’s regulations describes the “Aquatic Life” use for “streams” as “water which is suitable for the protection and propagation of fish or other forms of aquatic life adapted to flowing water systems.”... The 2007 EPA UAA found key species and indicator species from the lists for the Gulf Coastal Region at Ark. Reg. 2.302(F)(3) at the Reference site on Coffee Creek.... Because Coffee Creek and Mossy Lake are “suitable for the protection and propagation of fish or other forms of aquatic life adapted to flowing water systems,” they have existing Aquatic Life uses under Arkansas’ regulations. Therefore, Arkansas’ regulation 2.303 does not allow ADEQ to rely on a use attainability analysis to justify removal of that use and the current exemption is unlawful.

Moreover, ADEQ does not have in its records a complete copy of the 1984 UAA upon which it relied to remove Coffee Creek’s and Mossy Lake’s uses in the first place, a fact the agency acknowledged by email dated March 27, 2009.... For example, the 1984 Analysis is missing Sections II C, III, and IV, which include the biological factors of Coffee Creek, findings, and summary and conclusions, respectively. As a result, the administrative record lacks a valid UAA to support continuing the exemption from the fishable/swimmable and water supply uses that would otherwise apply to Coffee Creek and Mossy Lake.

Response: Regulation No. 2, Appendix A does not “exempt Coffee Creek and Mossy Lake from the perennial fisheries/Aquatic Life.” Regulation No. 2, Appendix A states that there is “no fishable/swimmable or domestic water supply uses” for Coffee Creek and Mossy Lake.

The fishable/swimmable use for Coffee Creek is not an existing use. According to the Clean Water Act an existing use is: 1) the use a waterbody is capable of supporting at present; and 2) the use a waterbody has actually attained since November 28, 1975. There is no documentation that either of these criteria have been met. Although the Department has no scientifically defensible documentation of the lack of

fishable/swimmable use since 1984, the water quality present is insufficient to support a fishable/swimmable use.

The September 1973 Arkansas Water Quality Standards, Regulation No. 2, Appendix A, page X, lists Coffee Creek as having the limiting condition of PM. Condition PM states, "Such streams receive large volumes of treated paper mill wastes in proportion to their flow and are unsuitable for Class B uses...." Class B Use is defined as "[s]uitable for desirable species of fish, wildlife and other aquatic and semi-aquatic life, raw water source for public water supplies, secondary contact recreation and other uses." The 1984 UAA was not relied upon "...to remove Coffee Creek's and Mossy Lake's uses in the first place." It was conducted to verify the absence of a fishable/swimmable use, as had been noted as early as 1973. EPA approved this study and the continuation of the use variations for these waterbodies.

Due to concerns of the Department and Georgia-Pacific with the veracity of the 2007 EPA UAA, the decision was made not to make a water quality standard revision based upon that report at this time. As noted in Georgia-Pacific's comment below, the Department and the facility have been in consultation with EPA, and Georgia-Pacific has committed to performing a full Use Attainability Analysis. The Department will make any necessary changes to the water quality standards following the completion of that study depending upon the outcome of the study.

Coffee Creek/Mossy Lake

Georgia Pacific

Comment: Georgia-Pacific supports the APC&EC's proposed Regulation 2 and is providing these comments specifically regarding the continued inclusion of the existing use variation for Coffee Creek and Mossy Lake...which directly affects Georgia-Pacific's Crossett operations. This use variation was originally based on a 1984 Use Attainability Analysis completed by Georgia-Pacific and has been maintained based on reevaluation in subsequent Triennial Reviews by the APC&EC and approval of those Triennial Reviews by the US EPA.

Comments filed on the currently proposed Regulation 2 by the Tulane Environmental Law Clinic on behalf of the Ouachita Riverkeeper reference a 2007 "Use Attainability Analysis" on Coffee Creek, Mossy Lake and the Ouachita River (the "2007 Report") prepared by U.S. EPA Region 6. In those comments, the Ouachita Riverkeeper asserts the Coffee Creek and Mossy Lake should be redesignated as Aquatic Life uses water bodies based on the 2007 Report. Georgia-Pacific disagrees. As Georgia-Pacific has previously stated in submitted comments to U.S. EPA Region 6, there are a number of substantive and procedural flaws in the 2007 Report, and the facts in the 2007 Report do not support the conclusions. It does not provide a sound basis for the removal of the existing use variation. The 2007 Report does not address the 40 CFR 131.10 factors on which the original use variation was based and did not follow the State of Arkansas' specific requirements and procedures applicable to Use Attainability Analyses. Additionally, despite requests to participate in and comment on the 2007 Report, neither Georgia-Pacific nor the ADEQ were given the opportunity to comment on the draft 2007

Report or given notice before it was finalized. Despite this omission, Georgia-Pacific submitted comments to U.S. EPA Region 6 on July 21, 2008 and resubmitted those comments on February 3, 2009. [Those comments were attached to the comment letter.]

In an effort to resolve concerns with the 2007 Report, Georgia-Pacific, in conjunction with ADEQ, met with U.S. EPA Region 6 and has committed to working with the ADEQ to conduct an Use Attainability Analysis on Coffee Creek and Mossy Lake. Appropriate portions of the previous U.S. EPA work will be incorporated as allowed by the ADEQ Continuing Planning Process. This UAA will follow applicable state procedures, which include a public participation process, and is expected to be completed by the end of 2011. ADEQ will evaluate the existing use variations and initiate any necessary changes to Regulation 2 following receipt and review of the final UAA.

Response: The Department acknowledges the comments. Upon receipt of scientifically defensible data, the Department will evaluate the data and consider revising designated uses as appropriate.

Application of Fishable/Swimmable Designated Uses

Ouachita River Keeper

Comment: ADEQ unlawfully applies categorical designated uses to small watershed streams that are less protective uses than the Clean Water Act requires. Federal regulations include a rebuttable presumption that primary contact and aquatic life, i.e., “fishable/swimmable,” designated uses apply to all water bodies.... Arkansas’ regulations, however, reverse the burden so that the ADEQ assumes without evidence that small watershed water cannot attain the “101(a)(2) uses” and requires a showing that those more protective uses can be attained. This approach is unlawful both because it fails to incorporate the more protective assumption of attainability and because it overlooks all existing uses....

[Regs.2.302 and 2.507] assume without evidence that the criteria for primary contact recreation are not attainable in all small watershed streams, unlawfully reversing the rebuttable presumption that 40 C.F.R. 131.12(a)(1) requires in favor of the more stringent use.... Because categorically removing “fishable/swimmable” designated uses on the assumptions that those uses are not attainable and are not existing uses violated the Clean Water Act, ADEQ’s Triennial Review Process must revise Regulation 2 so that the default designations for all waters are Primary Contact uses and Perennial Aquatic Life uses.

Response: The Clean Water Act requires states to: 1) designate uses; 2) establish water quality criteria; and 3) develop and implement antidegradation policies. To this end, it is not “unlawful” to designate uses as the State deems appropriate. A State may designate uses for a waterbody by examining the suitability of a waterbody for certain designated uses based on the physical, chemical, and biological characteristics of the waterbody.

Based on physical characteristics, watersheds of less than 10 mi² are not appropriate for primary contact recreation because conditions (water depths) allowing full body contact are generally not present. At best, watersheds of less than 10 mi² are suitable only for secondary contact for part of the year.

Application of Fishable/Swimmable Designated Uses

EPA

Comment: Arkansas has multiple waters listed in Appendix A as not supporting “fishable swimmable” uses (i.e. Coffee Creek and Mossy Lake). EPA continues to strongly support that Arkansas utilize the triennial review process to add appropriate uses to these waterbodies.

Response: The Department acknowledges the comments. Upon receipt of scientifically defensible data, the Department will evaluate the data and consider revising designating uses as appropriate.

Anti-degradation implementation procedures

EPA

Comment: EPA notes that Regulation No. 2 does not include information on Arkansas’ Anti-degradation implementation procedures. Please incorporate written procedures establishing how the state will implement its Anti-degradation policy via NPDES permits.

Response: As with other implementation procedures, anti-degradation implementation procedures are found in the State of Arkansas CPP. Arkansas is awaiting final approval from EPA on the most current revision to the CPP, including anti-degradation implementation procedures.

Multijurisdictional waters

EPA

Comment: Has or does ADEQ plan on addressing differing criteria across “multijurisdictional waters”? This is relevant especially when the upstream state has an impairment in addition to a less stringent standard than the downstream state, and thereby potentially causing and contributing to downstream impairment (as is potentially the case with waterbodies in Arkansas, the upstream state, that flow into either Louisiana and Oklahoma, the downstream states).

Response: The Department acknowledges the comment. “[D]iffering criteria across ‘multijurisdictional waters’” are most appropriately addressed through the permitting process, not as part of the water quality standards for the State of Arkansas. As stated previously in this Responsive Summary, implementation procedures are found in the State of Arkansas CPP. Arkansas understands its responsibility under the law to protect the water quality of all downstream states.

Request for stakeholder workgroups

BWD & Friends

Comment: Suggests that in the future ADEQ conduct stakeholder workshops prior to filing proposed changes to Reg. 2 with the APCEC. As stated in EPA’s Water Quality Standards Handbook,…”An important component of the water quality standards setting and review process is a meaningful involvement of those affected by the standards decisions.... Enlisting the support of municipalities, industries, environmentalists, universities, other agencies, and the affected public in collecting and evaluating information for the decision making process should assist the State in improving the

scientific basis for, and in building support for, standards decisions. The more that people and groups are involved early in the process of setting appropriate standards, the more support the State will have in implementing the standard.”

ADEQ had several informal meetings with the Arkansas Environmental Federation regarding the current proposed revisions to Reg. 2. BWD would very much like to see these type of meetings expanded to a broader range of stakeholders, with an opportunity for the exchange of drafts of the proposed changes to Reg. 2 prior to anything being filed with the APCEC. ADEQ is to be commended for its efforts to include an informal presentation and question and answer session at the public hearings held in July 2010 regarding the proposed changes to Reg. 2, but the public hearing setting does not really allow for collaborative efforts. BWD recognizes the time and effort that would be involved in undertaking stakeholder workshops, but we believe that the importance of Reg. 2 to restoring and maintaining the chemical, physical, and biological integrity of Arkansas’s waters is worth it.

Response: The Department acknowledges these comments and will give strong consideration to holding stakeholder meetings prior to future Triennial Reviews. For those issues throughout the Responsive Summary where the Department requested further information from the commenter for possible inclusion in future rulemakings, the Department requests that those issues and concerns be submitted at anytime, not only during stakeholder meetings.

Public Notice

Dr. R. Grippo

Comment: The required Notice of the Public Hearing in Jonesboro appeared to be insufficiently advertised, based on the low public turnout (one person). My understanding is that the Jonesboro public hearing (and hearings in other cities) was advertised only on the ADEQ website and in the Arkansas Democratic Gazette some time in May or June. Putting the notice on the website is fine but advertisement in only one newspaper, several weeks before the hearing, is insufficient to make the public aware of the upcoming hearing. The meeting in Jonesboro should be advertised in the local newspaper (Jonesboro Sun), one week before the public hearing and again on the day of the hearing. This should probably also be done for the cities of Fayetteville, Arkadelphia and North Little Rock, where the other public meetings were held, to encourage as much public input as possible.

Response: The Department acknowledges the comment. All notices of proposed rulemakings are done in accordance with Ark. Code Ann. § 8-4-202(d) and APCEC Reg.8.801-802.

Addition of Ecologically Sensitive Water Body Designated Use

Arkansas Natural Heritage Commission

Comment: The ANHC recently provided data to staff of the Arkansas Department of Environmental Quality (ADEQ) for use in a review of stream segments proposed by the U.S. Fish and Wildlife Service for designation as “Ecologically Sensitive Waterbodies” under Regulation 2. Using our information and input from the U.S. Fish and Wildlife Service, and the Arkansas Game and Fish Commission, ADEQ staff began working

through the Regulation 2 procedures for adding the “Ecologically Sensitive Waterbody” designation to new stream segments (Reg.2.311). We were discouraged that these streams segments were not included in this triennial review. We believe there is sufficient information available to justify the designation of most of the recommended streams. We encourage the ADEQ to move forward with the designation recommendation for those stream reaches meeting the criteria outlined in the Regulation.

Response: The Department agrees that sufficient information is available to justify the designation of ESW on several stream segments proposed by the USFWS and supported by ANHC. An ESW designated use “identifies segments known to provide habitat within the existing range of threatened, endangered, or endemic species of aquatic or semi-aquatic life forms.” Prior to the initiation of the 2010 Triennial Review, the Department was unable to complete all of the documentation necessary for these revisions. The Department acknowledges the receipt of data from ANHC pertaining to stream segments proposed for ESW designation, and requests that ANHC and USFWS continue to assist with this effort.

Economic Impact/Environmental Benefit

AEF

Comment: ADEQ has failed to comply with provisions of Regulation 8 related to the EI/EB analysis.... ADEQ’s analysis falls short of the intent of Act 1264 of 1993 and the provision of Regulation 8. The Department contends inaccurately in its EI/EB analysis that cost analysis would have to be developed for each individual point source – 57 by ADEQ’s count. This is simply not the case. The EI/EB analysis does not require such calculations, as noted below.

ADEQ’s contention that in merely completing the analysis form it has complied with Regulation 8 is also disappointing and erroneous. The analysis form itself requires the petitioner to, “Answer all questions, unless an exemption applies, using information reasonably available.” It is clear that ADEQ’s finding of “unduly cumbersome” does not fit the listed exemptions, nor is it in keeping with the Department’s commitment to stakeholders who spent several months working in good faith with ADEQ and the PCE Commission to craft the EI/EB analysis language included in Regulation 8. We contend that ADEQ cannot carve out a new exemption, then claim presumptive adequacy by simply completing the analysis form which claims its own new exemption. ADEQ cannot assume the PCE Commission’s regulatory authority by creating its own exemption under the cover of a presumptively adequate analysis form.

Furthermore, ADEQ’s section on environmental benefits states “...standards of certain toxic substances are proposed to be amended to comply with revised national criteria.” Said amendments were dropped in the second draft of the Triennial Review changes. Yet, the reference environmental benefit continued through the next two iterations of the draft regulation that were provided to stakeholders. No such toxic substances amendments exists in the current draft available for public review. This so called presumptively adequate analysis provides no clarity for the general public, only confusion and mistrust.

While the AEF understands the Department's limitations related to performing an EI/EB analysis and has worked with the Department at the Commission's request to clarify the language and better understand the scope and therefore the related costs of the proposal, it is not within the purview, nor the legal requirements of the public to provide an EI/EB analysis. The responsibility to provide a presumptively adequate analysis within the framework of law and regulation prior to initiating rulemaking lies squarely with the petitioner – ADEQ. The Department and Commission have had eight Regular Legislative Sessions since 1993 in which to address the issue of “unduly cumbersome” analysis, but have chosen not to do so. Today, the Department's efforts to shift the analysis responsibility onto the general public during review, notwithstanding the “unduly cumbersome” nature of the economic impact calculus, creates a precedent that is contrary to the purpose and Legislative intent of Act 1264 of 1993.

Response: The Department acknowledges this comment and respectfully disagrees with the AEF on most points. The Department acknowledges the oversight that left language about the toxic substances amendments in the EI/EB analysis after those amendments were withdrawn at the request of AEF.

Regulation 8 requires the petitioner to answer the questions on the EI/EB analysis form using “information readily available.” The Department believes that specific economic data of the sort contemplated by AEF is not “readily available.” Throughout the process of initiating the rulemaking the Commission instructed the Department to reevaluate the analysis and instructed AEF and other interested parties to present economic information to the Department. AEF and other interested parties did not provide any additional data regarding economic impacts to the Department; therefore, specific economic data regarding economic impacts was not “readily available” for use in an EI/EB analysis at the time of initiation of the rulemaking. Only BWD provided economic data to the Department when requested by the Commission.

However, the Department respected the position of the Commission and the concerns presented by AEF and, during the public comment period, the Department revised the EI/EB analysis – the acceptable procedure pursuant to Reg.8.813 regarding comments on the original EI/EB analysis. The revised EI/EB analysis is attached to this Responsive Summary as “Exhibit B” and is hereby incorporated by reference.

Requirement for Water Quality Standards

AEF

Comment: ADEQ should clarify that the standards in Reg. 2 apply only to waters of the United States. The requirement to adopt water quality standards, as referenced in paragraph 1 of ADEQ's Petition to Initiate Rulemaking, is mandated under the Federal Water Pollution Control Act. Section 303(c)(2) of the FWPCA (33 U.S.C. §1313(c)(2)) indicates that changes to water quality standards apply to “navigable waters”, which is defined in Section 502(7) of the FWPCA (33 U.S.C. §1362(7)), as waters of the United States. Furthermore, EPA water quality standard regulations at 40 C.F.R §130.2(d) and §131.3(i) define water quality standards as “designated uses for the waters of the United States and water quality criteria for such uses.”

As indicated in ADEQ's petition and other materials presented by the Department, the proposed changes to Reg. 2 have been initiated at the insistence of the EPA. Application of water quality standards in Reg. 2 to waters that are not waters of the United States would render Reg. 2 more stringent than federal requirements. As a result, ADEQ should clarify that the proposed standards in Reg. 2 apply only to waters of the United States.

Response: States are required to review water quality standards periodically. 33 U.S.C. § 1313(c). The Arkansas legislature, through the Arkansas Water and Air Pollution Control Act (hereinafter "the Act"), Ark. Code Ann. § 8-4-201 *et seq.*, has charged the Commission with the power and duty to promulgate rules and regulations, including *water quality standards* and the classification of the *waters of the state.*" Ark. Code Ann. § 8-4-201(b)(1)(A) (emphasis added). Likewise, Ark. Code Ann. § 8-4-202(a) & (b)(3) states that the Commission has the power and duty to adopt rules and regulations which include "water quality standards." Accordingly, Regulation No. 2, entitled "Regulation Establishing Water Quality Standards for Surface *Waters of the State* of Arkansas" was promulgated by the Commission and, under the Act, applies to all waters of the State.

The proposed effective date will be after the rule's review by the Legislative Council subcommittees, approval by the Arkansas Pollution Control and Ecology Commission, and the requisite time period after filing the final rule with the Secretary of State's office. The effective date is anticipated to be late September or early October 2011.

CONTROVERSY: This regulation is expected to be controversial. The water quality standards are some of the most important environmental rules for the state and garner interests from many interested persons and organizations. ADEQ expects that industry groups may be concerned about more restrictive criteria, while environmental groups may be concerned that some standards may not be restrictive enough to protect water quality. At this time, the department cannot anticipate every concern that the public may have with this rule. To that end, the public comment period will extend to a minimum of 60 days, instead of 45, and four public hearings will be held throughout the state.

FINANCIAL IMPACT:

Economic Impact

1. Who will be affected economically by this proposed rule? State: a) the specific public and/or private entities affected by this rulemaking, indicating for each category if it is a positive or negative economic effect; and b) provide the estimated number of entities affected by the proposed rule.

Positive -- continued protection for waters of the state, therefore benefiting tourism and recreational usage.

Negative -- approximately 57 point source dischargers may have revised permit requirements in the form of reporting or permit limits for parameters being revised under Reg 2.508 and Reg 2.511.

2. What are the economic effects of the proposed rule? State: 1) The estimated increased or decreased cost for an average facility to implement the proposed rule; and 2) the estimated total cost to implement the rule.

1) At this time, it is not possible to estimate the costs associated with parameters being revised under Reg 2.508 and Reg 2.511. Cost estimates would have to be developed for each individual point source discharger. This effort would be unduly cumbersome due to the numerous factors differentiating each discharger. These factors include, but are not limited to: type of discharge; chemicals, processes, and mechanics used during production; characteristics of receiving waterbody; age and size of facility; economic viability of surrounding region. Additionally, EPA does not consider cost for aquatic life criteria during development or when applying to an NPDES permit.

2) There is no cost to implement this proposed rule.

3. List any fee changes imposed by this proposal and justification for each.

There are no fee changes imposed by this proposal and justification for each.

4. What is the probably cost to ADEQ in manpower and associated resources to implement and enforce this proposed change, and what is the source of revenue supporting this proposed rule.

Pursuant to the Federal Water Pollution Control Act ("Clean Water Act"), 33 U. S. C. § 1251 et seq., Arkansas has been delegated the authority to establish and administer water quality standards. The Clean Water Act (CWA) requires states to review their water quality standards on a triennial basis and to amend those standards as necessary. The manpower and associated resources required to implement this proposed rule is funded through the Environmental Protection Agency through the delegated CWA program.

5. Is there a known beneficial or adverse impact to any other relevant state agency to implement or enforce this proposed rule? Is there any other relevant state agency's rule that could adequately address this issue, or is this proposed rulemaking in conflict with or have any nexus to any other relevant state agency's rule? Identify the state agency and/or rule.

There are no known adverse impacts to any other relevant state agency. Other state agencies that are charged with protecting the state's natural resources or water quality, such as Arkansas Game and Fish Commission and the Arkansas Department of Health, will benefit from the proposed rule, as it will support their mission. This proposed rule cannot be adequately addressed by another state agency's rule, as the authority to adopt water quality standards was vested in the Arkansas Pollution Control and Ecology Commission. This proposed rulemaking is not in conflict with nor has any nexus to another state agency's rule.

6. Are there any less costly, non-regulatory, or less intrusive methods that would achieve the same purpose of this proposed rule?

There are no less costly, non-regulatory, or less intrusive methods that would achieve the same purpose of the proposed rule. As stated above, the Clean Water Act requires the state to review and update water quality standards every three years. The related federal regulations outline a specific procedure for this process. Alternative methods are not available to comply with the federal requirements.

Environmental Impact

1. What issues affecting the environment are addressed by this proposal?

This proposed rule addresses water quality for all waters of the state.

2. How does this proposed rule protect, enhance, or restore the natural environment for the well being of all Arkansas?

This proposed rule will protect, enhance, or restore the natural environment for the well being of all Arkansans by maintaining and protecting the water quality of all waters of the state. For example, standards for certain toxic substances are proposed to be amended to comply with revised national criteria.

3. What detrimental effect will there be to the environment or to the public health and safety if this proposed rule is not implemented?

The proposed changes are necessary to ensure that existing uses and designated uses for waters of the state, and the water quality necessary to protect those uses, are protected and maintained.

4. What risks are addressed by the proposal and to what extent are the risks anticipated to be reduced?

Specifically, the updated toxic standards will protect aquatic life, human health, and the environment from the detrimental effects of toxic exposure.

LEGAL AUTHORIZATION: Ark. Code Ann. § 8-4-202(a) generally authorizes the Arkansas Pollution Control and Ecology Commission to "adopt, modify, or repeal, after notice and public hearings, rules and regulations implementing or effectuating the powers and duties of the Arkansas Department of Environmental Quality and the commission" under the Arkansas Water and Air Pollution Control Act. More specifically, Ark. Code Ann. § 8-4-202(b)(1) authorizes the commission to promulgate rules and regulations that prescribe "[e]ffluent standards specifying the maximum amounts or concentrations and the physical, thermal, chemical, biological, and radioactive nature of the contaminants that may be discharged into the waters of this state."