

BEFORE THE ARKANSAS POLLUTION CONTROL AND ECOLOGY COMMISSION

IN THE MATTER OF AMENDMENTS TO)
8 CODE OF ARKANSAS RULES, PART 21,)
RULE ESTABLISHING WATER QUALITY) DOCKET NO. 24-005-R
STANDARDS FOR SURFACE WATERS OF THE)
STATE OF ARKANSAS)

RESPONSIVE SUMMARY

Comes now, the Department of Energy and Environment, Division of Environmental Quality (“Division”), by and through its attorney, Basil V. Hicks III, and provides this Responsive Summary as required by Arkansas Pollution Control and Ecology Commission (“APC&EC”) Rule for Administrative Procedures, Title 8, Part 11, Section 815 (8 CAR § 11-815).

I. INTRODUCTION

The public comment period for the proposed changes to APC&EC Rule 2, to be codified at 8 Code of Arkansas Rules (CAR) Part 21, began on December 22, 2024. Public hearings to receive comments on the proposed changes to the rule occurred on January 6, 2025 and February 5, 2025.

The Division received six (6) comments on the record for Docket No. 24-005-R pertaining to changes to this rule.

II. RESPONSES TO WRITTEN AND VERBAL COMMENTS

The following people or organizations submitted comments during the public comment period and public hearings.

American Electric Power Service Corporation (AEP), Arkansas Department of Transportation (ARDOT), Arkansas Game and Fish Commission (AGFC), American Forest & Paper Association (AF&PA) and National Council for Air and Stream Improvement, Inc. (NCASI), Jonesboro City Water and Light, Springdale Water Utilities

EXHIBIT B

Commenter American Electric Power Service Corporation (AEP)

8 CAR § 21-512 (Rule 2.512) Ammonia

Comment: The revision of chronic ammonia water quality standards no longer accounts for presence versus absence of fish early life stages. In addition, the proposed water quality standards for warm waters where fish early life stages are present would be reduced by approximately half, with water quality standards reduced by an even greater percentage for warm waters where fish early life stages were designated as absent. The reduction is so significant that for warm waters with high pH, AEP is concerned that the water quality standard will be below the reporting limit (RL) for laboratories we have used in the past, and that accurate monitoring results will not be feasible, even if limits are above the method detection limits. AEP encourages ADEQ to keep the limited capabilities in sample analysis in mind when using these water quality standards to develop permit limits. AEP also requests that ADEQ reconsider applying separate water quality standards based on fish early life stage presence.

Response: The 1999 U.S. Environmental Protection Agency (EPA) ammonia chronic criteria were based on the most sensitive species toxicity known at the time, consisting of four (4) invertebrate genera and five (5) fish genera (*EPA-822-R-18-002*), which included bluegill sunfish early life stage toxicity (*EPA-820-F-13-013*). The 2013 EPA ammonia chronic criteria are based on the most sensitive species toxicity known at this time, which includes sixteen (16) genera of freshwater mussels and gill breathing snails (*EPA-822-R-18-002*). Freshwater mussels and gill breathing snails are more sensitive to chronic ammonia toxicity than bluegill sunfish early life stage. There is no longer a need for separate ammonia chronic early life stage present and absent criteria due to the 2013 EPA ammonia chronic criteria being protective of freshwater mussels, gill breathing snails, fish early life stage present, and fish early life stage absent.

The lowest temperature and pH dependent proposed EPA ammonia chronic criteria is 0.08 mg/L. Analysis of ammonia with a reporting limit of 0.03 mg/L is possible using standard methods SM-4500-NH₃H-2021, an approved method pursuant to 40 C.F.R. Part 136.

Commenter Arkansas Department of Transportation (ARDOT)

Comment: It is recommended that adequate information/procedures be included in the proposed rule to allow permittees to calculate their new permit limits. This information is necessary to adequately assess the potential impacts of the proposed changes.

Response: General information and procedures required to calculate National Pollutant Discharge Elimination System (NPDES) permit limits are included in the State of Arkansas Continuing Planning Process (CPP). Permit specific information and procedures are included within each permit.

Comment: It is unclear how the removal of the fecal coliform standard will affect permittees. Clarification is needed to inform permittees on what the new standard will be and how DEQ will assess the permit limits.

Response: Permittees with fecal coliform bacteria (FCB) limits should expect to receive *E. coli* limits that are found in 8 CAR § 21-507 (Rule 2.507).

Current FCB Limit	Expected <i>E. coli</i> limit (ORW ¹ /lake)	Expected <i>E. coli</i> limit (all other waters)
200 col/100 mL (monthly avg.)	126 col/100 mL (monthly avg.)	126 col/100 mL (monthly avg.)
400 col/100 mL (daily max.)	298 col/100 mL (daily max.)	410 col/100 mL (daily max.)
400 col/100 mL (7-day avg.)	298 col/100 mL (7-day avg.)	410 col/100 mL (7-day avg.)
1000 col/100 mL (monthly avg.)	630 col/100 mL (monthly avg.)	630 col/100 mL (monthly avg.)
2000 col/100 mL (daily max.)	1490 col/100 mL (daily max.)	2050 col/100 mL (daily max.)
2000 col/100 mL (7-day avg.)	1490 col/100 mL (7-day avg.)	2050 col/100 mL (7-day avg.)

Comment: Implementation of any proposed amendments should be part of the regular permitting renewal process unless some other action by the permittee triggers a permit modification.

Response: DEQ will incorporate new limits for bacteria and ammonia, as applicable, during the permit renewal cycle, unless the permittee requests new limits be incorporated by modification of the permit prior to the next renewal cycle in accordance with 40 C.F.R. § 122.62.

Comment: As a state agency and member of the regulated community, ARDOT requests to be a stakeholder for discussions of amendments affecting water quality standards.

Response: The Division appreciates ARDOT's commitment to protection of state waters and will add ARDOT to the list of state agencies invited to participate in the 2026 triennial review stakeholder process.

Commenter Arkansas Game and Fish Commission (AGFC)

8 CAR § 21-509 (Rule 2.509) Nutrients

Comment: AGFC recommends that Rule 2 adopt numeric nutrient criteria for water quality standards. Numeric criteria more accurately reflect water quality than the narrative criteria currently being used.

Response: Water quality criteria can include narrative statements. (See 40 C.F.R. § 131.3(b).) Nutrient water column concentrations do not always correlate directly with stream impairments. 8 CAR § 21-509. In certain waters DEQ has implemented protections, via phosphorus permit limits, based on the current narrative criteria in waterbodies where studies have shown that excess nutrients are present. Likewise, DEQ

¹ ORW: Outstanding Resource Water – Extraordinary Resource Waters (ERW), Ecologically Sensitive Waterbody (ESW), Natural and Scenic Waterways (NSW).

evaluates other water chemistry and biological data (dissolved oxygen, diurnal dissolved oxygen, pH, and aquatic-life data) to assess water quality and ultimately determine if nutrient impairment in such waterbodies is supported. The current adopted narrative criteria are protective of aquatic life.

DEQ is continuing the ecoregion projects as well as other projects with EPA to develop appropriate and protective criteria. DEQ continues to work towards updating criteria for waterbodies following the process outlined in the State of Arkansas Nutrient Criteria Development Plan, 2012. EPA has agreed with DEQ's plan.

8 CAR § 21-302 (2) (Rule 2.302(B)) Ecologically Sensitive Waterbody

Comment: AGFC recommends expanding the list of Ecologically Sensitive Waterbodies (ESW) to accurately reflect the location of Threatened and Endangered (T&E) species listed under the federal Endangered Species Act and, high priority Species of Greatest Conservation Need (SGCN). While we appreciate, and are supportive of, this proposal's effort to update the list of T&E and SGCN species that occur in existing ESW streams, updating the ESW to reflect T&E and SGCNs where they occur throughout the state is appropriate.

Response: Adding the designated use of Ecologically Sensitive Waterbody to a waterbody or waterbody segment must be completed in accordance with 8 CAR § 21-311 (Rule 2.311) and 8 CAR § 21-Appendix F. 8 CAR § 21 identifies the factors considered when adding the designated use of Ecologically Sensitive Waterbody to a waterbody or waterbody segment. AGFC or other entities may propose the addition of the ESW designated use to a waterbody or waterbody segment in accordance with the Commission's administrative procedures for rulemaking which are set forth in 8 CAR Part 11, Subpart 8.

8 CAR § 21-302 (F)(1) (Rule 2.302(F)(1)) Trout Waters

Comment: AGFC supports the removal of the trout water designation on the waterbodies listed in the Rule 2 proposed changes.

Response: The Division acknowledges this comment.

8 CAR § 21-507 (Rule 2.507) Bacteria

Comment: AGFC supports the modified data prerequisite to assess geometric mean criteria for bacteria to change to samples that are collected within a single primary contact season from a minimum of five samples spaced evenly within thirty days. The previous stipulation was very difficult to meet.

Response: The Division acknowledges this comment.

Commenter **American Forest & Paper Association (AF&PA) and National Council for Air and Stream Improvement, Inc. (NCASI)**

8 CAR § 21-508 (Rule 2.508) Toxic substances – human health criteria

Comment: Comments regarding uncertainties and conservative assumptions involved in risk estimates, a systematic and inclusive rulemaking process to ensure regional and state-specific data are used to appropriately define exposure inputs, consideration of native American tribal exposure estimates, and calculation of criteria using both probabilistic and deterministic methods.

Response: The Division acknowledges this comment. The Division follows a methodical approach in determining which human health criteria to propose for adoption, prioritizing those toxics that are discharged or present in the state according to EPA's Toxic Release Inventory (TRI). Among these, substances are then selected with medium or high confidence ratings in the EPA's Integrated Risk Information System (IRIS), which reflects the reliability of the research underlying toxicity endpoint values.

The Probabilistic Risk Assessment (PRA), which incorporates 90th percentile values for each exposure factor, is an alternate yet EPA approved method. This contrasts with the Deterministic Risk Assessment (DRA), which uses national averages. While Arkansas-specific 90th percentile values may differ from national figures, state specific data (body weight, drinking water intake, and fish consumption) is currently unavailable. Nevertheless, the national criteria developed under the DRA remain conservative and applicable to Arkansas.

Additionally, tribal exposure estimates are not factored in Arkansas due to the absence of delegated tribal water quality standards programs in the state. Ultimately, the values for the toxics proposed are those that best protect human health in Arkansas.

Commenters **Jonesboro City Water and Light, Springdale Water Utilities**

Comment: Revised effluent limitations resulting from the change in bacteria and ammonia WQS should be incorporated into NPDES permits only during the routine permit renewal cycle following the U.S. Environmental Protection Agency's approval of the revised WQS.

Response: DEQ will incorporate new limits for bacteria and ammonia, as applicable, during the permit renewal cycle, unless the permittee requests new limits be incorporated by modification of the permit prior to the next renewal cycle in accordance with 40 C.F.R. § 122.62.

Comment: Revised effluent limitations resulting from the change in bacteria and ammonia WQS should include all appropriate compliance schedules to allow municipal

wastewater treatment facilities to implement necessary changes, *e.g.* development of operational changes, implementation of training and analytical procedures, or acquisition of new equipment.

Response: In accordance with the CPP and 8 CAR § 21-104 (Rule 2.104), DEQ will allow “a reasonable time for an existing facility to comply with new or revised water quality standards. Compliance schedules may be included in NPDES permits at the time of renewal to require compliance with new water quality standards at the earliest practicable time; but not to exceed three years from the effective date of the permit.”

Comment: DEQ’s review of revised effluent limitations resulting from the change in bacteria and ammonia WQS should include all due consideration toward flexibility - *e.g.*, use of recalculation procedure, variances, dilution allowances, and similar tools - where appropriate.

Response: The Division’s procedures allow for flexibility in implementation of WQS. According to 8 CAR § 21-309 (Rule 2.309), “A water quality standards temporary variance shall be developed in accordance with and meet the requirements of 40 C.F.R. §131.14 and must be approved by the Arkansas Pollution Control and Ecology Commission and the United States Environmental Protection Agency.”

The Division acknowledges that EPA has provided guidelines on flexible application of ammonia criteria in the form of EPA’s guidelines on flexible application of criteria for ammonia, Flexibilities for States Applying EPA’s Ammonia Criteria Recommendations (EPA-820-F-13-001).

Respectfully Submitted,

By: 

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