

**APC&EC Rule 2,
Rule Establishing Water Quality Standards for Surface Waters of the State of Arkansas
Proposed Amendments – Executive Summary**

The Arkansas Department of Energy and Environment, Division of Environmental Quality (DEQ), proposes this rulemaking before the Arkansas Pollution Control and Ecology Commission (APC&EC or Commission) to amend Rule 2, (the Rule) to fulfill Arkansas' responsibilities under the federal Clean Water Act. The Clean Water Act requires states to review the applicable water quality standards at least once every three years to determine whether any modifications are appropriate ("Triennial Review").¹ This rulemaking proposes to modify Rule 2 to clarify several provisions, add certain new criteria, revise certain criteria, remove certain criteria, make stylistic and formatting corrections throughout the Rule, and update the Rule to be consistent with the Code of Arkansas Rules (CAR) which changes Rule 2 to 8 CAR Part 21.

Any changes to water quality standards adopted by a state during the Triennial Review² must be submitted to the Environmental Protection Agency (EPA) for review and approval or disapproval. The standards adopted by the state are submitted to EPA along with any supporting information³ and a certification that the standards were adopted pursuant to state law.⁴ This submittal is to be provided to EPA within thirty (30) days of the final state action to adopt and certify the revised standards.⁵ After the state submits its revised water quality standards, EPA must approve or disapprove the revisions.⁶ If EPA approves the new state standards, then those standards can be used for purposes of implementing the federal Clean Water Act, including such actions as listing water quality impairments, calculating Total Maximum Daily Loads (TMDLs), and developing effluent limits for National Pollutant Discharge Elimination System (NPDES) permits.⁷

If the revised water quality standards are disapproved by EPA, then the standards are not applicable water quality standards for purposes of implementing the Clean Water Act. If the water quality standards adopted by a state are disapproved by EPA, then those standards cannot be used to implement the provisions of the Clean Water Act until the standards have been revised through a new rulemaking and re-submitted to EPA for review and approval.

The Commission's authority for amending Rule 2 is found in Arkansas Code Annotated §§ 8-1-203(b)(1)(A), 8-1-201(b), 8-4-202(a), and 8-4-202(b)(3)). DEQ's authority to propose these amendments to Rule 2 is found in Ark. Code Ann. §§ 8-1-202 and 8-4-206.

Proposed changes to Rule 2 include:

- **Amendments to Provide Clarification and Minor Corrections.** Clarification of sections of the rule that were otherwise unclear, and minor corrections to make the rule more illustrative of the legislative and regulatory intent.

¹ Section 303(c) of the Clean Water Act.

² The review of water quality standards at least once every three years is commonly called the Triennial Review.

³ 40 C.F.R. § 131.20 (c).

⁴ 40 C.F.R. § 131.6(e).

⁵ 40 C.F.R. § 131.20(c).

⁶ 40 C.F.R. § 131.21.

⁷ 40 C.F.R. § 131.21(d).

- **Stylistic and Formatting Corrections.** Make minor, non-substantive stylistic and formatting corrections throughout the Rule.
- **Amendments to be consistent with the Code of Arkansas Rules.** In the Code of Arkansas Rules (CAR), Rule 2 will become 8 CAR Part 21.
- **Amendments to Incorporate Revised Criteria.** Revise primary contact season recreation dates. Revise *E. coli* geometric mean criteria for “All Other Waters.” Revise criteria for cadmium and ammonia. Revise pH criteria to include site specific pH criteria to five waterbodies. Revise dissolved oxygen criteria to include site specific dissolved oxygen criteria to three waterbodies. Revise ecoregion boundaries. Add threatened and endangered species names to existing Ecologically Sensitive Waterways waters.
- **Amendments to Incorporate New Criteria.** Add five human health criteria to ensure protection of human health.
- **Amendments to Remove Criteria.** Remove fecal coliform criteria. Remove trout water use from three lakes. Remove site specific temperature criteria from one waterbody. Remove exception of “no fishable/swimmable uses” from three waterbodies.

Significant Proposed Revisions for 2024 Rule 2 Triennial Revision

8 CAR § 21-507 (Rule 2.507) – Extension of the primary contact recreation season.

Justification: Expanding the primary contact recreation season to include April and October will ensure human health protection for Arkansas citizens and tourists.

8 CAR § 21-507 (Rule 2.507) – Revise *E. coli* geometric mean criteria for “All Other Waters.”

Justification: Provide clarification for permitting and TMDLs.

8 CAR § 21-508 (Rule 2.508) – Revision of cadmium criteria.

Justification: Current Rule 2 cadmium criteria are from 1986. EPA updated the cadmium criteria in 2016. EPA’s 2016 criteria are supported by current science and DEQ has determined that these revisions will be more protective of aquatic life.

8 CAR § 21-508 (Rule 2.508) – Addition of human health criteria for benzene, toluene, ethylbenzene, xylene, and phenol.

Justification: Current Rule 2 does not contain criteria for these five parameters. These parameters are known to have negative health effects for humans: benzene – carcinogen; toluene - nervous system, kidney, or liver problems; ethylbenzene - blood, liver, and kidney damage; xylene - impaired lung function, memory, and breathing; phenol – digestive, blood, and liver effects. DEQ has determined that adoption of these criteria will be more protective of human health.

8 CAR § 21-512 (Rule 2.512) – Ammonia – Revision of ammonia criteria.

Justification: Current Rule 2 criteria are from 1999, EPA updated the ammonia criteria in 2013. The 2013 criteria take into account the sensitivity of freshwater mussels, which are common in Arkansas’s waters.

Appendix A – Addition of site-specific dissolved oxygen (DO) criteria for three waterbody assessment units (AUs).

Justification: It has been demonstrated the observed DO range, which is lower than current criteria, can be described as natural and capable of supporting aquatic life in the Alum Fork Saline River (AR_08040203_014), South Fork Ouachita River (AR_08040101_043), and Saline River (Red River Basin) (AR_11140109_014) AUs.

Appendix A – Addition of site-specific pH criteria for five waterbody AUs.

Justification: It has been demonstrated the observed pH range, which is lower than current criteria, can be described as natural and capable of supporting aquatic life in Dry Fork Creek (AR_11110206_914), Irons Fork Creek (AR_08040101_838), Barren Creek (AR_11140108_907), Short Creek (AR_11140109_719), and Caney Creek (AR_11140109_921).

Appendix A – Remove the exceptions of “no fishable/swimmable or domestic water supply uses” and “exempt from Rule 2.406 and Chapter 5” from Coffee Creek.

Justification: A 2007 study by Parsons and a 2013 study by AquAeTer both noted the existence of aquatic life in Coffee Creek. Removal of these exceptions will add Aquatic Life, Primary Contact Recreation, Secondary Contact Recreation, and Domestic Water Supply designated uses and the criteria to protect those uses. This revision will make the uses of Coffee Creek consistent with all other waterbodies in the ecoregion.

Appendix A – Ecoregion boundary line updates.

Justification: Revised Arkansas ecoregion boundaries have higher resolution to better reflect the true geographical boundaries of our distinct ecoregions. These revised ecoregion boundaries are recognized by other state agencies and the scientific community.

Appendix A – Species additions to Ecologically Sensitive Waterbodies (ESW) – stakeholder input from Arkansas Game and Fish Commission (AGFC).

Justification: Updated list of species documented in currently designated ESWs supporting protecting of these threatened and endangered species. No additional ESW stream or stream reaches are being proposed for addition.

Appendix A – Remove trout water designated use from three lakes (Bull Shoals, Greers Ferry, and Ouachita).

Justification: AGFC no longer stocks trout in Bull Shoals Reservoir, Greers Ferry Reservoir, and Lake Ouachita. AGFC does not manage these lakes for trout.

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

Justification: Entergy Couch plant closure was complete December 7, 2017. The associated NPDES permit AR0000493 was voided December 18, 2017.

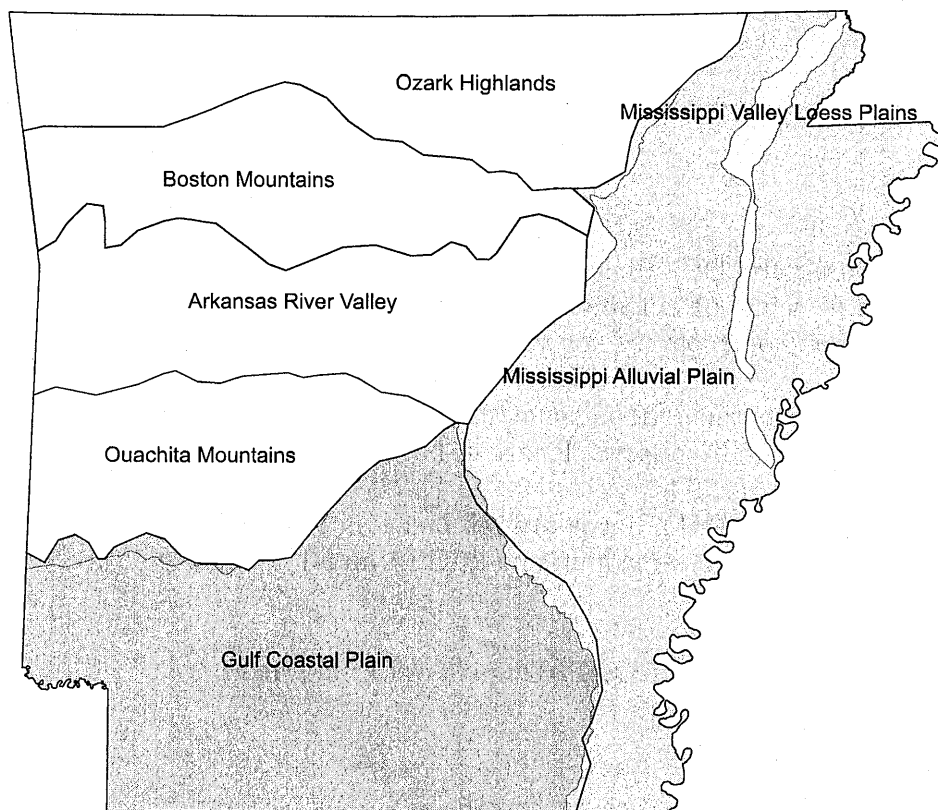
Appendix A – Remove current Rule 2 language “Unnamed tributary to Flat Creek – no fishable/swimmable uses (GC2, #4).” Add seasonal aquatic life and secondary contact recreation designated uses.

Justification: The removal of these uses and the site-specific DO criteria occurred in 1986. The revision was in consideration for an NPDES facility that is no longer in operation. These revisions will add seasonal aquatic life and secondary contact recreation designated uses.

Appendix A – Remove current Rule 2 language “Unnamed tributary to Smackover Creek - no fishable/swimmable uses (GC2, #2).” Add seasonal aquatic life and secondary contact recreation designated uses.

Justification: The removal of these uses and the site-specific DO criteria occurred in 1981. The revision was in consideration for an NPDES facility that is no longer in operation.

Ecoregion Line Proposed Revisions



Black lines are current Rule 2 depictions.