

EXHIBIT E

DEPARTMENT OF ENVIRONMENTAL QUALITY, WATER DIVISION

SUBJECT: Regulation No. 2; Third-Party Rulemaking, City of Harrison and City of Yellville Wastewater Treatment Plants

DESCRIPTION: This rule amends Regulation No. 2 to:

1. Modify the water quality criterion for chloride, sulfate and total dissolved solids (TDS) for Crooked Creek from the outfall of Harrison's Wastewater Treatment Plan to ADEQ monitoring station WHI0193 as follows: chloride from 20 mg/L to 22.6 mg/L; sulfate from 20 mg/L to 24.4 mg/L; and TDS from 200 mg/L to 269 mg/L; and
2. Modify the TDS water quality standards for Crooked Creek from ADEQ monitoring station WHI0193 to the mouth of Crooked Creek as follows: TDS from 200 mg/L to 238 mg/L.

PUBLIC COMMENT: A public hearing was held in Harrison, Arkansas, on October 19, 2015. The public comment period expired on November 2, 2015.

The cities of Harrison and Yellville ("the Cities") state that ten (10) public comments were submitted. The commenters were:

- Carol Bitting,
- Friends of the North Fork & White Rivers,
- Arkansas Public Policy Panel,
- Beaver Water District,
- Arkansas Department of Environmental Quality (ADEQ),
- El Dorado Chemical Company,
- Huntsville Water Utilities,
- Martin Resource Management Corporation,
- Butterball, LLC, and
- The City of Siloam Springs.

In addition to the rulemaking request by the Cities for a change to the water quality standards for a portion of Crooked Creek, the Commission put two questions out for public comment: (a) whether proposed new criteria should be rounded up to the nearest whole number for chloride and sulfate and up to the nearest multiple of ten for total dissolved solids; and (b) whether proposed new criteria should be revised to correspond to the 99th percentile of relevant instream data.

All ten (10) of the public comments addressed the two questions raised by the Commission. However, of those ten (10), only four (4) commenters also addressed the rulemaking request by the Cities. Three of those commenters (Friends of the North Fork & White Rivers, Arkansas Public Policy Panel, Beaver Water District) did not oppose the Cities' rulemaking request. The fourth commenter, Carol Bitting, opposed the Cities' request citing opposition to the degradation of water quality in Crooked Creek. The commenter suggested that the Cities install equipment designed to increase water quality and that the public be educated to stop using products that are high in chlorides and sulfate.

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The Cities responded only to the one comment opposing the rulemaking request; i.e., the Cities did not respond to the three (3) commenters who stated that they did not oppose the Cities' request, and did not respond to the commenters who only addressed the Commission's two questions.

The Cities' response to the one comment opposing the rulemaking stated that requested changes will not result in degradation of the water quality of Crooked Creek. Rather, the Cities are seeking changes that reflect the historic concentrations of sulfate, chloride, and total dissolved solids in the affected reaches of Crooked Creek and to revise the water quality standards to be consistent with the already existing and historic concentrations in those reaches of Crooked Creek. Further, the Cities fully explored alternatives, including the installation of treatment technologies. The only available treatment technology is reverse osmosis, which generates a concentrated brine that is environmentally difficult and costly to dispose of and is economically infeasible. The approximate estimated capital cost of RO for Harrison's ratepayers is \$5,600,000 with annual operating costs of \$4,900,000. The approximate estimated capital cost of RO for Yellville's ratepayers is \$2,250,000 with annual operating costs of \$660,000.

The public comments on the two (2) questions raised by the Commission are summarized below:

Carol Bitting: round down, not up;

Friends of the North Fork & White Rivers: We urge that the questions be considered in a separate process due to the probable statewide application;

Arkansas Public Policy Panel: do not round up and do not revise criteria to correspond to the 99th percentile of relevant instream data;

Beaver Water District: Water quality standards should not be rounded up or based on the 99th percentile of relevant instream data; a separate public hearing should be held on these questions;

Arkansas Department of Environmental Quality (ADEQ): do not round up and do not revise criteria to correspond to the 99th percentile of relevant instream data;

El Dorado Chemical Company: We support rounding up and use of the 99th percentile, which is protective of aquatic life and reduces the possibility of a stream returning to the 303(d) list (list of impaired streams);

Huntsville Water Utilities: We support rounding up and use of the 99th percentile;

Martin Resource Management Corporation: We support rounding up and use of the 99th percentile, which is protective of aquatic life and reduces the possibility of a stream returning to the 303(d) list;

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Butterball, LLC: We support rounding up and use of the 99th percentile, which is protective of aquatic life and reduces the possibility of a stream returning to the 303(d) list; and

The City of Siloam Springs: We support rounding up and use of the 99th percentile, which is protective of aquatic life and reduces the possibility of a stream returning to the 303(d) list.

The Cities' statement as to the questions raised by the Commission was: "The Cities recognize the reasoning behind the questions posed by APCEC and acknowledge and appreciate the statements by the Commissioners that the questions are not intended to affect the Cities' requested criteria. The criteria requested by the Cities are based on the Use Attainability Analysis (UAA) documentation and on statistical analysis previously approved by APCEC and EPA over several years of criteria establishment. The Cities did not request the rounding up of the proposed new criteria and the rounding down of the requested criteria would result in permit limits which could not be achieved by the Cities. The Cities take no position on the second question raised by APCEC."

The Department acknowledged the comments received.

The effective date of this rule is pending legislative review and approval.

CONTROVERSY: This is not expected to be controversial.

FINANCIAL IMPACT: There is no financial impact.

LEGAL AUTHORIZATION: This amendment to Regulation No. 2, Water Quality Standards, stems from a third party rulemaking request made to the Arkansas Pollution Control and Ecology Commission ("Commission") by the City of Harrison and the City of Yellville, both of which own and operate wastewater treatment plants ("WWTP"). The City of Harrison seeks modification of the chloride, sulfate, and total dissolved solids ("TDS") water quality criteria for Crooked Creek from the outfall of the Harrison WWTP to the monitoring station WHI0193 of the Arkansas Department of Environmental Quality ("ADEQ"). The City of Yellville seeks modification of the TDS water quality criterion for Crooked Creek from ADEQ monitoring station WHI0193 to the mouth of Crooked Creek. Arkansas Code Annotated § 8-4-202(c)(1) bestows upon any person the right to petition the Commission for the issuance, amendment, or repeal of any rule or regulation. Pursuant to Ark. Code Ann. § 8-4-202(a), the Commission is given and charged with the power and duty to adopt, modify, or repeal, after notice and public hearings, rules and regulations implementing or effectuating the powers and duties of the Commission and the ADEQ. It is further given and charged with the power and duty to promulgate rules and regulations including water quality standards. *See* Ark. Code Ann. § 8-4-201(b)(1)(A). *See also* Ark. Code Ann. § 8-4-202(b)(3).

**QUESTIONNAIRE
FOR FILING PROPOSED RULES AND REGULATIONS
WITH THE ARKANSAS LEGISLATIVE COUNCIL
AND JOINT INTERIM COMMITTEE**

DEPARTMENT/AGENCY: Arkansas Department of Environmental Quality

DIVISION: Water Division

DIVISION DIRECTOR: Ellen Carpenter, Chief

CONTACT PERSON: Ellen Carpenter, Chief

ADDRESS: 5301 Northshore Drive, North Little Rock, AR 72118

PHONE NO.: 501/682-0655 **FAX NO.:** 501/682-0910

E-MAIL: carpenter@adeq.state.ar.us

NAME OF PRESENTER AT COMMITTEE MEETING: Marcella Taylor

PRESENTER E-MAIL: mtaylor@mwlaw.com

TO: Donna K. Davis
Subcommittee on Administrative Rules and Regulations
Arkansas Legislative Council
Bureau of Legislative Research
Room 315, State Capitol
Little Rock, AR 72201

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1. What is the short title of this rule?
Arkansas Pollution Control and Ecology Commission, Regulation No. 2, Regulation Establishing Water Quality Standards for Surface Waters of the State of Arkansas
 2. What is the subject of the proposed rule?
Modification of the dissolved mineral standards of the Arkansas Water Quality Standards (WQS) for a segment of Crooked Creek from the outfall of Harrison's Wastewater Treatment Plant to the mouth of Crooked Creek.
 3. Is this rule required to comply with federal statute or regulations?
Yes ___ No X
 4. Was this rule filed under the emergency provisions of the Administrative Procedure Act?
Yes ___ No X
- If yes, what is the effective date of the emergency rule? N/A
- When does the emergency rule expire? N/A

Will this emergency rule be promulgated under the permanent provisions of the Administrative Procedure Act? Yes _____ No _____ N/A

Is this a new Rule? Yes _____ No X

If yes, please provide a brief summary explaining the regulation.

Does this repeal an existing rule: Yes _____ No X If yes, a copy of the repealed rule is to be included with your completed questionnaire. If it is being replaced with a new rule, please provide a summary of the rule giving an explanation of what the rule does.

5. Is this an amendment to an existing rule? Yes X No _____ If yes, please attach a mark-up showing the changes in the existing rule and a summary of the substance changes.

See Attachments A (blackline of the affected pages of APCEC Regulation No. 2) and B (executive summary).

6. Cite the state law that grants the authority for this proposed rule. If codified, please give the Arkansas Code citation.

Act 472 of 1949, as amended, ARK. CODE ANN. § 8-4-101, et seq. and Ark. Act 401 of 1997, ARK. CODE ANN. § 8-5-901 et seq.

7. What is the purpose of the rule? Why is it necessary?

The purpose of the proposed rule is to amend APCEC Regulation No. 2 to:

- *modify the water quality criterion for chloride, sulfate and total dissolved solids (TDS) for Crooked Creek from the outfall of Harrison's Wastewater Treatment Plant to ADEQ monitoring station WHI0193 as follows: chloride from 20 mg/L to 22.6 mg/L; sulfate from 20 mg/L to 24.4 mg/L; and, TDS from 200 mg/L to 269 mg/L; and*
- *modify the TDS water quality standards for Crooked Creek from ADEQ monitoring station WHI0193 to the mouth of Crooked Creek as follows: TDS from 200 mg/L to 238 mg/L.*

The rule is necessary to modify the dissolved mineral criteria to levels that reflect current and historic water quality conditions, appropriate for the City of Harrison's and the City of Yellville's wastewater treatment operations, and are protective of the designated uses. The site-specific water quality criteria modifications will not adversely affect the aquatic life or the designated uses of the receiving waters. There are no economically feasible treatment technologies capable of reducing the dissolved mineral concentration to levels of the current standards in the affected segments of Crooked Creek.

8. Will a public hearing be held on this proposed rule? Yes X No _____ If yes, please complete the following:

Date: Monday, October 19, 2015

Time: 6:00 p.m.

Place: North Arkansas College, Durand Conference Center B, 1515 Pioneer Drive,
Harrison, AR 72601

9. When does the public comment period expire for permanent promulgation? (Must provide a date.)

The period for receiving all written comments by the public shall conclude ten (10) business days after the date of the public hearing pursuant to Arkansas Pollution Control and Ecology Commission Regulation No. 8, Section 8.806(C), unless an extension of time is granted. Thus, the public comment period will expire November 2, 2015 unless an extension of time is granted.

10. What is the proposed effective date of this proposed rule? (Must provide a date.)

The regulation becomes effective twenty days after filing of the final regulation as adopted by the Commission with the Secretary of State.

11. Do you expect the rule to be controversial? Yes _____ No If yes, please explain.

12. Please give the names of persons, groups, or organizations that you expect to comment of these rules? Please provide the position (for or against) if known.

For or Neutral:

*Arkansas Department of Environmental Quality
Arkansas Department of Health
Arkansas Natural Resources Commission
Region VI, US Environmental Protection Agency
Arkansas Game and Fish Commission*

Against:

Unknown

EXECUTIVE SUMMARY

The City of Harrison owns and operates the Harrison Wastewater Treatment Plant (“HWWTP”) which discharges treated municipal wastewater under the provisions of NPDES Permit No. AR0034321 issued by ADEQ. The City of Yellville owns and operates the Yellville Wastewater Treatment Plant (“YWWTP”) which discharges treated municipal wastewater under the provisions of NPDES Permit No. AR0034037 issued by ADEQ. Both Cities discharge the treated wastewater to Crooked Creek in Boone and Marion Counties.

Because the Cities’ permits contain, or will contain, final discharge limits for chloride (Cl) sulfate (SO₄) and total dissolved solids (TDS) based upon Arkansas water quality standards (“WQS”) for Crooked Creek, the Cities evaluated alternatives through a Use Attainability Analysis (UAA) which included field studies, toxicity testing, mass balance modeling, engineering analysis of alternatives for discharge and treatment, and an analysis of designated uses for Crooked Creek.

Based upon the UAA, Harrison seeks modification to APCEC Regulation No. 2 WQS for Cl, SO₄ and TDS for Crooked Creek from the outfall of the HWWTP to ADEQ Monitoring Station WH10193 as follows: Cl from 20 mg/L to 22.6 mg/L; SO₄ from 20 mg/L to 24.4 mg/L; and TDS from 200 mg/L to 269 mg/L. Based on the UAA, Yellville seek modification to Regulation No. 2 WQS for TDS from 200 mg/L to 238 mg/L for Crooked Creek from ADEQ Monitoring Station WH10193 to the mouth of Crooked Creek.

The Cities’ proposed site-specific modifications are supported by the following:

- Harrison and Yellville are not seeking a change from historical water quality conditions in Crooked Creek; rather the Cities seek WQS that reflect current water quality and allow them to continue to be compliant with their NPDES Permits while protecting the designated uses for Crooked Creek;
- TDS concentrations upstream of both the HWWTP and the YWWTP discharges exceed the current site-specific standard of 200 mg/L;
- UAA data established that the requested changes should have no adverse effect on the aquatic life;
- Toxicity testing on *Ceriodaphnia dubia* using HWWTP and YWWTP effluent indicate that there is a low potential for toxicity due to mineral concentrations;
- Setting the Cl, SO₄ and TDS at the site-specific levels requested in these segments of Crooked Creek should not cause acute or chronic toxicity;
- There is no current economically feasible treatment technology for the removal of the minerals. Reverse osmosis treatment technology does exist; however, it is not cost effective, it generates a concentrated brine which is environmentally difficult to dispose of, is not required to meet the designated uses, and would produce no significant additional environmental protection.
- 40 CFR 131.11(b)(1)(ii) provides states with the opportunity to adopt water quality standards that are “modified to reflect site-specific conditions.”

- The basis for site-specific standards is set forth in 40 CFR 131.10(g)(6) which provides that the state may establish less stringent criteria if controls more stringent than those required by section 301(b) and 306 of the Clean Water Act would result in substantial and widespread economic and social impact.

FINANCIAL IMPACT STATEMENT

[PLEASE ANSWER ALL QUESTIONS COMPLETELY]

Department: Arkansas Department of Environmental Quality

Division: Water Division

Person completing this Statement: Marcella Taylor, representing third-party petitioners, City of Harrison and City of Yellville Wastewater Treatment Plants

Telephone No.: 501-688-8851 **Facsimile No.:** 501-918-7851 **e-mail:** mtaylor@mwlaw.com

To comply with Act 1104 of 1995, please complete the following Financial Impact Statement and file two copies with the questionnaire and proposed rules.

Short Title of this Rule: A proposed change to Arkansas Pollution Control and Ecology Commission Regulation No. 2, Regulation Establishing Water Quality Standards for Surface Waters of the State of Arkansas, to modify the chloride, sulfate and total dissolved solids water quality criteria Crooked Creek from the outfall of Harrison's Wastewater Treatment Plant to the mouth of Crooked Creek (in Boone and Madison Counties).

1. Does this proposed, amended or repealed rule or regulation have a financial impact?
Yes _____ No X

2. If you believe that the development of a financial impact statement is so speculative as to be cost prohibited, please explain.
N/A

3. If the purpose of this rule or regulation is to implement a federal rule or regulation, please give the incremental cost for implementing the regulation. Please indicate if the cost provided is the cost of the program.

Current Fiscal Year

General Revenue _____
Federal Funds _____
Cash Funds _____
Special Revenue _____
Other (Identify) _____
Total \$ 0

Next Fiscal Year

General Revenue _____
Federal Funds _____
Cash Funds _____
Special Revenue _____
Other (Identify) _____
Total \$ 0

4. What is the total estimated cost by fiscal year to any party subject to the proposed, amended, or repealed rule or regulation? Identify the party subject to the proposed regulation, and explain how they are affected.

Current Fiscal Year

\$ 0

Next Fiscal Year

\$ 0

The Cities of Harrison and Yellville are seeking a site-specific modification to amend Arkansas Pollution Control and Ecology Commission Regulation No. 2, Regulation Establishing Water Quality Standards for Surface Waters of the State of Arkansas, to modify the chloride, sulfate and total dissolved solids water quality criteria for a portion of Crooked Creek from the outfall of Harrison's Wastewater Treatment Plant to the mouth of Crooked Creek.

5. What is the total estimated cost by fiscal year to the agency to implement this regulation?

Current Fiscal Year

\$ 0

Next Fiscal Year

\$ 0

