

**BEFORE THE ARKANSAS POLLUTION CONTROL
AND ECOLOGY COMMISSION**

**IN RE: REQUEST BY THE CITY OF HARRISON)
AND THE CITY OF YELLVILLE)
TO INITIATE RULEMAKING TO) DOCKET NO. _____
AMEND REGULATION NO. 2)**

**PETITION TO INITIATE THIRD-PARTY
RULEMAKING TO AMEND REGULATION NO. 2**

Petitioners, the City of Harrison and the City of Yellville, for their Petition to Initiate Third-Party Rulemaking to Amend Regulation No. 2 (“Petition”) state:

1. This Petition is submitted pursuant to Arkansas Pollution Control and Ecology Commission (“APCEC” or “the Commission”) Regulation No. 2, §§ 2.308 and 2.303, APCEC Regulation No. 8, § 8.809, and the Arkansas Department of Environmental Quality (“ADEQ” or “the Department”) Continuing Planning Process. As set forth more fully below in paragraph 11, the City of Harrison (“Harrison”) and the City of Yellville (“Yellville”) are requesting site-specific modifications of the minerals water quality criteria for a portion of Crooked Creek in Boone and Marion Counties. Specifically, Harrison seeks modification of the chloride, sulfate and total dissolved solids (“TDS”) criteria for Crooked Creek from the outfall of Harrison’s Wastewater Treatment Plant (“the Harrison WWTP”) to ADEQ Monitoring Station WHI0193. Yellville seeks a modification of TDS criteria from ADEQ Monitoring Station WHI0193 to the mouth of Crooked Creek.

2. The City of Harrison owns and operates the Harrison WWTP which has a design flow capacity of 2.6 million gallons per day (“mgd”) and discharges treated municipal wastewater under the provisions of NPDES Permit No. AR0034321 issued by ADEQ.

Harrison's NPDES permit was scheduled for renewal in October, 2012 and Harrison timely submitted its renewal application. The renewal permit is currently pending at ADEQ. The Harrison WWTP discharges through a single outfall into Crooked Creek which flows approximately 73.4 miles to the White River at the Marion-Baxter county line. The segment of Crooked Creek into which the Harrison WWTP discharges is listed as impaired for exceedences of chloride, sulfate, TDS and beryllium in the Arkansas 2008 303(d) list with the source listed as unknown. The segment is also listed for TDS on the Arkansas 2014 303(d) list which ADEQ has submitted for review to EPA.

3. The City of Yellville owns and operates the Yellville WWTP which has a design flow of 0.75 mgd and discharges treated municipal wastewater under the provisions of NPDES Permit No. AR0034037 issued by ADEQ. Yellville's NPDES permit was scheduled for renewal in March, 2015. Yellville timely submitted its permit renewal application to ADEQ on July 15, 2014 and the matter is currently pending before ADEQ. The Yellville WWTP also discharges through a single outfall into Crooked Creek. The segment of Crooked Creek into which the Yellville WWTP discharges is listed as impaired for exceedence of TDS in the Arkansas 2008 303(d) list with the source listed as unknown and on the Arkansas 2014 303(d) list which ADEQ has submitted for review to EPA.

4. Crooked Creek is located within the Ozark Highlands Ecoregion. The applicable water quality criteria for Crooked Creek set forth in APCEC Regulation No. 2 are:

Chorides – 20 mg/L
Sulfates – 20 mg/L
TDS – 200 mg/L

5. The designated uses for Crooked Creek set forth in Regulation No. 2 are: perennial Ozark Highland fisheries, primary and secondary contact recreation, and domestic,

agricultural, and industrial water supplies. Harrison and Yellville are **not** seeking the removal of any designated use for Crooked Creek.

6. An initial analysis of the discharge of chloride, sulfate and TDS for the Harrison WWTP and the Yellville WWTP revealed that both discharges meet the current chloride and sulfate criteria for Crooked Creek (20 mg/L) and that neither discharge meets the current TDS criterion of 200 mg/L. Further analysis however showed that if ADEQ uses the current instream criteria to set permit limits for chloride and sulfate, neither city would consistently meet such limits because of the inclusion of the segments in the 2008 303(d) List. Harrison and Yellville therefore undertook a Use Attainability Analysis (“UAA”) to: (a) determine the existing and attainable uses in the waterbodies downstream of the Harrison WWTP and the Yellville WWTP discharges (Crooked Creek and the White River); (b) determine if the existing direct discharges from the Harrison WWTP and the Yellville WWTP support the existing and attainable uses in the downstream waterbodies; and (c) evaluate the options for permit compliance, including treatment, alternative discharge location, and site specific minerals criteria.

7. On August 13, 2013, the UAA, entitled *Use Attainability Analysis Report, Crooked Creek, Boone and Marion Counties, Arkansas* was submitted to ADEQ. After consultation with ADEQ, a revised UAA was submitted to ADEQ on June 8, 2015. The revised UAA is attached hereto as Exhibit E.

8. The UAA included field studies to evaluate the physical, chemical and biological characteristics of the affected stream segments, toxicity testing, engineering analysis of alternatives for discharge and treatment, and an analysis of designated uses for Crooked Creek and the White River.

9. The Cities prepared a technical and economic evaluation of possible alternatives to amendment of the water quality criteria. The alternatives for management of effluent with elevated dissolved minerals are limited and include reverse osmosis (RO), pumping the wastewater to a larger stream with the potential for dilution of the minerals, and treatment via a constructed wetland. Use of a constructed wetland was excluded because it would reduce only the sulfate and the production of bicarbonate results in no net TDS reduction. Wetland construction has little to no effect on the other constituents of TDS which comprise 54% of the TDS discharged by the Harrison WWTP and 79% of the TDS discharged by the Yellville WWTP. Building a pipeline and pumping the Cities' discharges to a larger stream was evaluated. The only large river which could potentially serve as a receiving stream is the White River which is 30 miles away from Harrison and 8 miles away from Yellville. This alternative would involve an initial cost of \$24,000,000 for Harrison which annual operating cost of \$150,000. The cost for Yellville would be an initial outlay of \$3,400,000 with annual operating cost of \$100,000. Use of RO was likewise evaluated. Aside from the fact that the technology generates a concentrated brine of which it is environmentally difficult and costly to dispose, RO is economically infeasible. The approximate estimated capital cost of RO for the City of Harrison and its ratepayers is \$5,600,000 with annual operating costs of \$4,900,000. The approximate estimated capital cost of RO for the City of Yellville and its ratepayers is \$2,250,000 with annual operating costs of \$660,000.

10. Following submission of the UAA to ADEQ, Harrison and Yellville received correspondence from ADEQ dated June 4, 2015, authorizing the cities to move forward with the third-party rulemaking.

11. Through this Petition, and based upon the UAA, Harrison is requesting the following amendment to APCEC Regulation No. 2:

- modification of the chloride, sulfate and TDS water quality criteria for Crooked Creek from the outfall of the Harrison WWTP 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
 - TDS from 200 mg/L to 269 mg/L

Through this Petition, and based upon the UAA, Yellville is requesting the following amendment to APCEC Regulation No. 2:

- modification of the TDS water quality criterion 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

A blackline version of APCEC Regulation No. 2 showing the proposed change is attached hereto as Exhibit A and incorporated herein by reference.¹

12. A copy of the Legislative Questionnaire is attached hereto as Exhibit B and incorporated herein by reference.

13. A copy of the Financial Impact Statement is attached hereto as Exhibit C and incorporated herein by reference.

14. A copy of the Economic Impact/Environmental Benefit Analysis required by APCEC Regulation No. 8, § 8.812 is attached hereto as Exhibit D and incorporated herein by reference.

¹ The blackline version attached as Exhibit A is a blackline of the version of APCEC Regulation No. 2 adopted by the Commission February 28, 2014, but which, as of the date of this filing has not been formally approved by EPA. Should action taken by EPA affect any of the blackline pages attached hereto as Exhibit A, a substituted Exhibit A will be filed with the Commission.

15. A copy of UAA supporting the requested modifications is attached hereto as Exhibit E and incorporated herein by reference.

16. On May 28, 2014, a copy of the Economic Impact Statement of Proposed Rules or Regulations/EO 05-04: Regulatory Flexibility form setting forth the absence of any effect or impact on any small business was submitted to the Arkansas Economic Development Commission (AEDC) in compliance with Act 143 of 2007. A copy of the submission to AEDC is attached hereto as Exhibit F. More than ten (10) days have elapsed since submission of the information to AEDC. The letter of review regarding the applicability of Act 143 of 2007 from AEDC will be submitted when and if it is received.

17. A copy of the June 4, 2015 correspondence from ADEQ is attached hereto as Exhibit G.

18. A copy of the proposed Minute Order to initiate rulemaking is attached as Exhibit H and incorporated herein by reference.

19. This Petition is supported by the following:

- Harrison and Yellville are not seeking a change from historical water quality conditions in Crooked Creek; rather the Cities seek standards that reflect current water quality and which 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 Harrison and the Yellville discharge exceed the current site-specific standard of 200 mg/L;
- UAA data established that all sampling locations influenced by Harrison and Yellville's discharges show the presence of ecoregion key and indicator species and species composition consistent with the attainment of Ozark Highlands Ecoregion aquatic life designated use. The requested changes should have no adverse effect on the aquatic life communities;
- Toxicity testing on *Ceriodaphnia dubia* using Harrison and Yellville effluent indicate that there is a low potential for episodes of toxicity due to mineral concentration;

- Setting the chloride, sulfate and TDS at the site-specific levels requested in paragraph 11, above 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, this technology is not cost effective and generates a concentrated brine which is environmentally difficult to dispose of. The technology 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.

WHEREFORE, the Cities of Harrison and Yellville request that the Commission initiate a rulemaking to amend APCEC Regulation No. 2 in the manner requested in paragraph 11, above.

Respectfully submitted,

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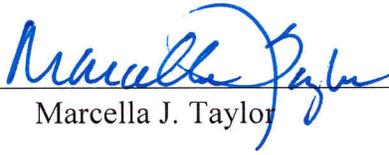
Marcella J. Taylor, AR Bar No. 82156
Allan Gates, AR Bar No. 72040

Counsel for the Cities of Harrison and Yellville

CERTIFICATE OF SERVICE

I hereby certify that on this 5th day of August, 2015, I served a copy of the foregoing Petition to Initiate Third-Party Rulemaking to Amend Regulation No. 2 on the following by United States Postal Service, postage prepaid and by electronic service:

Lorielle Gutting, Esq.
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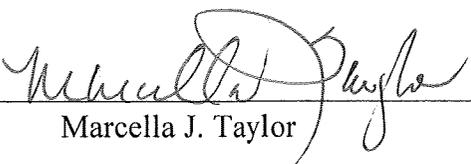


Marcella J. Taylor

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