

# **Exhibit E**

Economic Impact/Environmental Benefit Analysis

**ARKANSAS POLLUTION CONTROL & ECOLOGY  
COMMISSION  
ECONOMIC IMPACT/ENVIRONMENTAL BENEFIT  
ANALYSIS**

**Rule Number & Title:** *Regulation No. 2. Establishing Water Quality Standards for Surface Waters of the State of Arkansas.*

**Petitioner:** *City of Huntsville ("Huntsville")*

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**Date Analysis Prepared:** July 25, 2017

**2A. 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 this proposed rule.

*The proposed rule will remove the domestic water supply use in Town Branch and Holman Creek, and revise the chloride, sulfate, and total dissolved solids ("TDS"), water quality criteria in Town Branch, Holman Creek and part of War Eagle Creek.*

*Assuming the proposed rule is approved by the Commission and the U.S. Environmental Protection Agency ("EPA"), the Arkansas Department of Environmental Quality ("ADEQ") will be able to rely on the revised criteria to issue a National Pollutant Discharge Elimination System ("NPDES") permit to Huntsville that reflects historical levels of chloride, sulfate, TDS in its effluent. Huntsville and its residential and industrial users will therefore be positively impacted by the rule. No entities would suffer negative economic impact as a result of the proposed rule.*

*Sources and Assumptions: To approve the proposed rule, the Commission and EPA will rely on a technical documents prepared by Huntsville, the City of Huntsville, Arkansas Section 2.306 Site Specific Water Quality Study: Town Branch, Holman Creek, and War Eagle Creek ("the Revised Study") (June, 2017).*

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.

*The economic effects of the proposed rule are significant and beneficial for Huntsville. Huntsville has undertaken considerable efforts to investigate technologies and alternatives to amending the chloride, sulfate, and TDS criteria. The alternative analysis is summarized in Section 8 of the Study. As briefly explained below, the historical levels of minerals in the Huntsville effluent do not have any adverse impact on water quality, and reasonably available control technology does not exist that would allow Huntsville to consistently meet permit limits that are based on the existing minerals criteria. Approval of the proposed rule to change the criteria is the only reasonable approach, so that the permit limits can be developed to reflect historical levels of minerals in the Huntsville effluent.*

*The alternative analysis demonstrates that the lowest cost pollution control technology that could conceivably reduce chloride, sulfate and TDS in the facility's wastewater to the levels that achieve the current minerals criteria involves ultra-filtration, reverse osmosis and concentration/crystallization of the facility effluent in addition to ancillary storage and equipment. This technology would cost over \$30 million in capital and over \$4.5 million in annual operating costs, which would have disastrous economic consequences for Huntsville and the community.*

*By contrast, the proposed rule to change the criteria is the only reasonable alternative to address Huntsville's discharges to Town Branch. As noted, ADEQ would be able to rely on the revised criteria to issue an NPDES Permit to Huntsville that is fully protective of the designated fishery uses, and that reflects historical levels of chloride, sulfate, and TDS in its effluent.*

Sources and Assumptions: *Section 8 of the Study (alternative analysis).*

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

*No changes to fees are proposed or anticipated for the proposed rule.*

4. What is the probable 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?

*Huntsville anticipates that ADEQ will administer and enforce the proposed rule with the same number of staff and resources it currently relies on to implement the permitting program.*

Sources and Assumptions: *not applicable*

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 state agency and/or rule.

*ADEQ would rely on the proposed rule to renew or modify Huntsville's NPDES permit. There is no known impact to another state agency nor is there another state agency's rule that could address any of the proposed changes. The rule is not in conflict with any other relevant state agency rule. To Huntsville's knowledge, the rule does not have any nexus to any other relevant state agency's rule.*

Sources and Assumptions: *not applicable*

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

*No.*

Sources and Assumptions: *not applicable*

## **2B. ENVIRONMENTAL BENEFIT**

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

*The proposed rule will remove the domestic water supply use in Town Branch and Holman Creek, and revise the chloride, sulfate, and total dissolved solids (“TDS”), water quality criteria in Town Branch, Holman Creek and War Eagle Creek. As explained below, these changes will not adversely impact the environment.*

*Domestic water supply use removal. The proposed rule will not remove an existing use, and due to the small watershed size neither Town Branch nor Holman Creek have sufficient flow to be capable of being developed as a domestic water supply*

*Dissolved minerals criteria. The proposed rule will not result in an increase in dissolved minerals discharged to Town Branch because the rule establishes criteria that will allow a permit to be issued that reflects historical levels of chlorides, sulfates and TDS in the facility effluent.*

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

*The Revised Study demonstrates that the criteria proposed in the rule are protective of the fisheries in Town Branch, Holman Creek and War Eagle Creek. To approve the rule, the Commission and EPA will also confirm that the proposed criteria are protective of these fisheries and the environment.*

Sources and Assumptions: *Revised Study*

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

*Without the proposed rule, Huntsville would not be able to obtain a permit that includes limits for minerals that it can consistently meet, even though the discharge does not adversely impact the environment, public health, or safety.*

Sources and Assumptions: *Revised Study.*

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

*ADEQ would be able to rely on the criteria proposed in the rule to issue a permit to Huntsville that includes chloride, sulfate and TDS limits that are fully protective of existing uses, and that Huntsville can meet consistently.*

Sources and assumptions: *not applicable*