

**Exhibit E to City of Huntsville Petition to Initiate Third Party Rulemaking
Economic Impact / Environmental Benefit Analysis**

ATTACHMENT 1

ECONOMIC IMPACT/ENVIRONMENTAL BENEFIT ANALYSIS

Answer to best of the proponent's ability, as required by APC&EC Regulation 8.812

STEP 1: DETERMINATION OF ANALYSIS REQUIREMENT (to be included in petition to initiate rulemaking)
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The Arkansas Pollution Control and Ecology Commission's (Commission) Regulation No. 8 requires the Commission to duly consider the economic impact and the environmental benefit of any rule or regulation prior to promulgation. By Act 143 of 2007, the Governor has directed that impacts to small businesses be analyzed prior to adoption of regulations. Furthermore, the Arkansas Legislative Council requires the submission of a Financial Impact Statement and Questionnaire for Filing Proposed Rules and Regulations with the Arkansas Legislative Council and Joint Interim Committee with proposed regulation changes. The following procedures are outlined to provide clarity in the requirements of these various impact statements.

1. Prepare and submit the Financial Impact Statement and Questionnaire for Filing Proposed Rules and Regulations with the Arkansas Legislative Council and Joint Interim Committee required by the Arkansas Legislative Council for all proposed rulemakings.
2. The following analysis is necessary for the Commission to consider the economic impact and environmental benefit of any proposed rule or regulation. This Economic Impact/ Environmental Benefit Analysis ("Analysis") must be prepared by the proponent of the rulemaking initiated before the Commission based upon information reasonably available. If a rulemaking proposes to alter or amend an existing Commission rule, the Analysis shall be restricted to the economic impact and environmental benefits of the proposed changes. This Analysis must be included in the Petition to Initiate Rulemaking before the Commission for all regulatory changes, unless the proposed rule is exempt for one or more of the following reasons:
 - The proposed rule incorporates or adopts the language of a federal statute or regulation without substantive change;*
 - The proposed rule incorporates or adopts the language of an Arkansas state statute or regulation without substantive change;
 - The proposed rule is limited to matters arising under Regulation No. 8 regarding the rules of practice or procedure before the Commission;
 - The proposed rule makes only de minimis changes to existing rules or regulations, such as the correction of typographical errors or the renumbering of paragraphs or sections; or

- The proposed rule is an emergency rule that is temporary in duration.

If the proposed rulemaking does not require the following Analysis due to one or more of the exemptions listed above, state in the Petition to Initiate Rulemaking which exemptions apply and explain specifically why each is applicable.

**If a proposed rule incorporates or adopts the language of a state or federal statute or regulation but does include one or more substantive change, then the Analysis shall address only the substantive changes.*

<p style="text-align: center;">STEP 2: THE ANALYSIS (to be included in petition to initiate rulemaking, if required)</p>
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Directions for Analysis Completion:

1. Answer all questions, unless an exemption applies, using information reasonably available.
2. List source(s) for any data used in an answer. If a response cannot be provided to any question because information is not reasonably available, describe the sources consulted or steps taken in an effort to obtain the information in question.
3. Describe any assumptions used.
4. Complete the Economic Impact Statement, if applicable, as required by Act 143 of 2007.
5. Highlight on the attached map the boundary of the geographical area impacted by the proposed rule, unless the proposed rule applies to the entire state.

This Analysis shall be available for public review along with the proposed rule in the public comment period. The Commission shall compile a response to comments demonstrating a reasoned evaluation of the relative economic impact and environmental benefits.

**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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Analysis Prepared by: *Charles R. Nestrud*

Date Analysis Prepared: June 10, 2013

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 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 Study").

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, 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.

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 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: *Section 3 of the Study (fisheries use designation and modification), Section 2 of the UAA (significant findings and recommendations).*

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: *Sections 2 and 4 of the 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 Huntsville can meet consistently.

Sources and assumptions: *not applicable*