

EXHIBIT E
LEGISLATIVE QUESTIONNAIRE

**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
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**NAME OR PRESENTER AT
COMMITTEE MEETING:** Allan Gates
PRESENTER EMAIL: agates@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

1. What is the short title of the 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?

Establish Arkansas Water Quality Criteria for (a) a segment of the Unnamed Tributary from Vulcan Outfall 001 to the confluence with Brushy Creek, for a segment of Brushy Creek from its confluence with the UT to its confluence with Stennitt Creek, and for a segment of Stennitt Creek from its confluence with Brushy Creek to its confluence with the Spring River, and also (b) remove the designated, but not existing, domestic water supply use for the UT and Brushy Creek.

3. Is this rule required to comply with a federal statute, rule, or regulation?

Yes ___ No X

If yes, please provide the federal rule, regulation, and/or statute citation. N/A

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? N/A

5. 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If yes, a copy of the repealed rule is to be included with your completed questionnaire.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.

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 substantive changes. **Note: This summary should explain what the amendment does, and the mark-up copy should be clearly labeled “mark-up.”**

See Attachments A (blackline of the affected pages of APC&EC 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.

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

The purpose of the proposed rule is to amend APC&EC Regulation No. 2, as follows:

- *Establish site-specific TDS and sulfate water quality criteria for the UT from Vulcan’s Outfall 001 to the confluence with Brushy Creek, as follows:*
 - *TDS - 725 mg/L*
 - *Sulfate - 260 mg/L*

- *Establish site-specific TDS and sulfate water quality criteria for Brushy Creek from the confluence with the UT to the confluence with Stennitt Creek, as follows:*
 - *TDS - 549 mg/L*
 - *Sulfate - 126 mg/L*
- *Establish a site-specific sulfate water quality criterion for Stennitt Creek from the confluence with Brushy Creek to the confluence with the Spring River, as follows:*
 - *Sulfate - 43.3 mg/L*
- *Remove the designated, but not existing, domestic drinking water use for the UT from Vulcan's Outfall 001 to its confluence with Brushy Creek, and for a segment of Brushy Creek from its confluence with the UT to its confluence with Stennitt Creek.*

The rule is necessary to establish dissolved minerals criteria for the above-listed stream segments to levels that reflect current and historic water quality conditions. The site-specific water quality criteria will not adversely affect the aquatic life. There are no economically feasible treatment technologies capable of reducing the dissolved mineral concentrations to levels of the current regulatory values in the affected segments of the UT, Brushy Creek, and Stennitt Creek.

8. Please provide the address where this rule is publicly accessible in electronic form via the Internet as required by Arkansas Code § 25-19-108(b).

https://www.adeg.state.ar.us/regs/draft_regs.aspx

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

Date: Week of August 19, 2019

Time: 6:00 P.M.

Place: Lawrence County, Arkansas at a location TBD

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

The period for receiving all written comments from the public shall conclude no sooner than ten (10) business days after the date of the public hearing pursuant to APC&EC Regulation No. 8, § 8.806(C).

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

The regulation becomes effective 20 days after filing of the final regulation, as adopted by the Commission, with the Secretary of State.

12. Do you expect this rule to be controversial? Yes ___ No X If yes, please explain.
13. Please give the names of persons, groups, or organizations that you expect to comment on these rules? Please provide their position (for or against) if known.

For or Neutral:

*Arkansas Department of Environmental Quality
Arkansas Natural Resources Commission
Arkansas Department of Health
Arkansas Natural Heritage Commission
Arkansas Game and Fish Commission
U.S. Environmental Protection Agency, Region VI*

Against:

Unknown

**ATTACHMENT A TO EXHIBIT E
BLACKLINE VERSION OF
REGULATION NO. 2 (MARK-UP)**

ARKANSAS POLLUTION CONTROL AND ECOLOGY COMMISSION



REGULATION NO. 2

REGULATION ESTABLISHING WATER QUALITY STANDARDS FOR SURFACE WATERS OF THE STATE OF ARKANSAS

MARK-UP DRAFT

Submitted to the Arkansas Pollution Control and Ecology Commission: May 20, 2019

Stream

	<u>Concentration-mg/L</u>		
	<u>Chlorides</u> (Cl ⁻)	<u>Sulfates</u> (SO ₄ ²⁻)	<u>TDS</u>
<u>Unnamed trib)</u>			
Unnamed trib to Big Creek	71	60	453
Lost Creek Ditch	20	30	270
Little Red River (including Greers Ferry Reservoir)	20	30	100
Black River	20	30	270
Strawberry River	20	30	270
Spring River	20	30	290
Eleven Point River	20	30	270
Stennitt Creek from Brushy Creek to Spring River	ER	ER	456*
<u>Brushy Creek from Unnamed Tributary to Stennitt Creek</u>	ER	<u>43.3†</u> <u>126†</u>	<u>549†</u>
<u>Unnamed Tributary from Vulcan Outfall 001 to Brushy Creek</u>	ER	<u>260†</u>	<u>725†</u>
South Fork Spring River	20	30	270
Myatt Creek	20	30	270
Current River	20	30	270
White River (Dam #3 to Missouri state line, including Bull Shoals Reservoir)	20	20	180
Buffalo River	20	20	200
Crooked Creek (Harrison WWTP outfall to Monitoring Station WHI0193)	22.6†	24.4†	269†
Crooked Creek (Monitoring Station WHI0193 to the mouth)	20	20	238†
White River (Missouri state line, including Beaver Reservoir)	20	20	160
White River from Noland WWTP to 0.4 miles downstream (WR-02)	44†	79†	362†
White River from WR-02 to WHI0052	30†	40†	237†
Kings River	20	20	150
West Fork White River	20	20	150
St. Francis River Basin			
St. Francis River (Mouth to 36° N. Lat.)	10	30	330
L'Anguille River	20	30	235
Tyronza River (headwaters to Ditch No. 6 confluence)	20	30	350
Ditch No. 27	ER	480	1200
Ditch No. 6 (mouth to Ditch No. 27 confluence)	ER	210	630
Tyronza River (mouth to Ditch No. 6 confluence)	20	60	350
Little River	20	30	365
Pemiscot Bayou	20	30	380
St. Francis River (36° N. Lat. to 36° 30' N. Lat.)	10	20	180
Ouachita River Basin			

Seasonal Ozark Highlands aquatic life use - all streams with watersheds of less than 10 mi² except as otherwise provided in Reg. 2.505

Perennial Ozark Highlands aquatic life use - all streams with watersheds of 10 mi² and larger and those waters where discharges equal or exceed 1-cfs

*As designated in the National Wild and Scenic Rivers System

**Except for those waters with designated use variations supported by Use Attainability Analysis or other investigations.

Site Specific Designated Use Variations Supported by Use Attainability Analysis or Other Investigations

- Railroad Hollow Creek - no fishable/swimmable uses (OH-1, #1)
- Columbia Hollow Creek - seasonal aquatic life use March-June (OH-1, #2)
- Curia Creek - below first waterfall, perennial aquatic life use (OH-4, #3)
- Moccasin Creek – below Arkansas Highway 177, perennial aquatic life use (OH-3, #4)
- Stennitt Creek- from Brushy Creek to Spring River, no domestic water supply use (OH-4, #6)
- Brushy Creek - from Unnamed Tributary to Stennitt Creek, no domestic water supply use (OH-4, #11) †
- Unnamed Tributary – from Vulcan Outfall 001 to Brushy Creek, no domestic water supply use (OH-4, #12) †

SPECIFIC STANDARDS: OZARK HIGHLANDS ECOREGION
(Plates OH-1, OH-2, OH-3, OH-4)

	<u>Streams</u>	<u>Lakes and Reservoirs</u>
Temperature °C (°F)*	29 (84.2)	32 (89.6)
Trout waters	20 (68)	
Turbidity (NTU) (base/all)	10/17	25/45
Minerals	see Reg. 2.511	see Reg. 2.511
Dissolved Oxygen**	<u>Pri.</u> <u>Crit</u>	see Reg. 2.505
<10 mi ² watershed	6 2	
10 to 100 mi ²	6 5	
>100 mi ² watershed	6 6	
Trout waters	6 6	

All other standards (same as statewide)

Site Specific Standards Variations Supported by Use Attainability Analysis

- Railroad Hollow Creek: from headwaters to Spavinaw Creek - year-round dissolved oxygen - 2 mg/L (OH-1, #1)
- Curia Creek - below first waterfall, critical season dissolved oxygen 6 mg/L (OH-4, #3)
- Moccasin Creek - below Highway 177, critical season D.O. 5mg/L (OH-3, #4)
- SWEPCO Reservoir - maximum temperature 54°C (limitation of 2.8°C above natural temperature does not apply) (OH-1, #5)
- Stennitt Creek - from Brushy Creek to Spring River, total dissolved solids = 456 mg/L , sulfate = 43.3 mg/L (OH-4, #6) †

Brushy Creek from Unnamed Tributary to Stennitt Creek, sulfate = 126 mg/L, total dissolved solids = 549 mg/L (OH-4, #11) †

Unnamed Tributary from Vulcan Outfall 001 to Brushy Creek, sulfate = 260 mg/L, total dissolved solids = 725 mg/L (OH-4, #12) †

Crooked Creek – from Harrison WWTP outfall to ADEQ Monitoring Station WHI0193; chloride 22.6 mg/L, sulfate 24.4 mg/L; TDS 269 mg/L (OH-2, #7) †

Crooked Creek – from ADEQ Monitoring Station WHI0193 to mouth: TDS 238 mg/L (OH-3, #8) †

White River – from Noland WWTP to 0.4 miles downstream (WR-02), chloride = 44 mg/L, sulfate = 79 mg/L, TDS = 362 mg/L (OH-1, #7) †

White River – from WR-02 to WHI0052, chloride = 30 mg/L, sulfate = 40 mg/L, TDS = 237 mg/L (OH-1, #8) †

† Not applicable for clean water act purposes until approved by EPA.

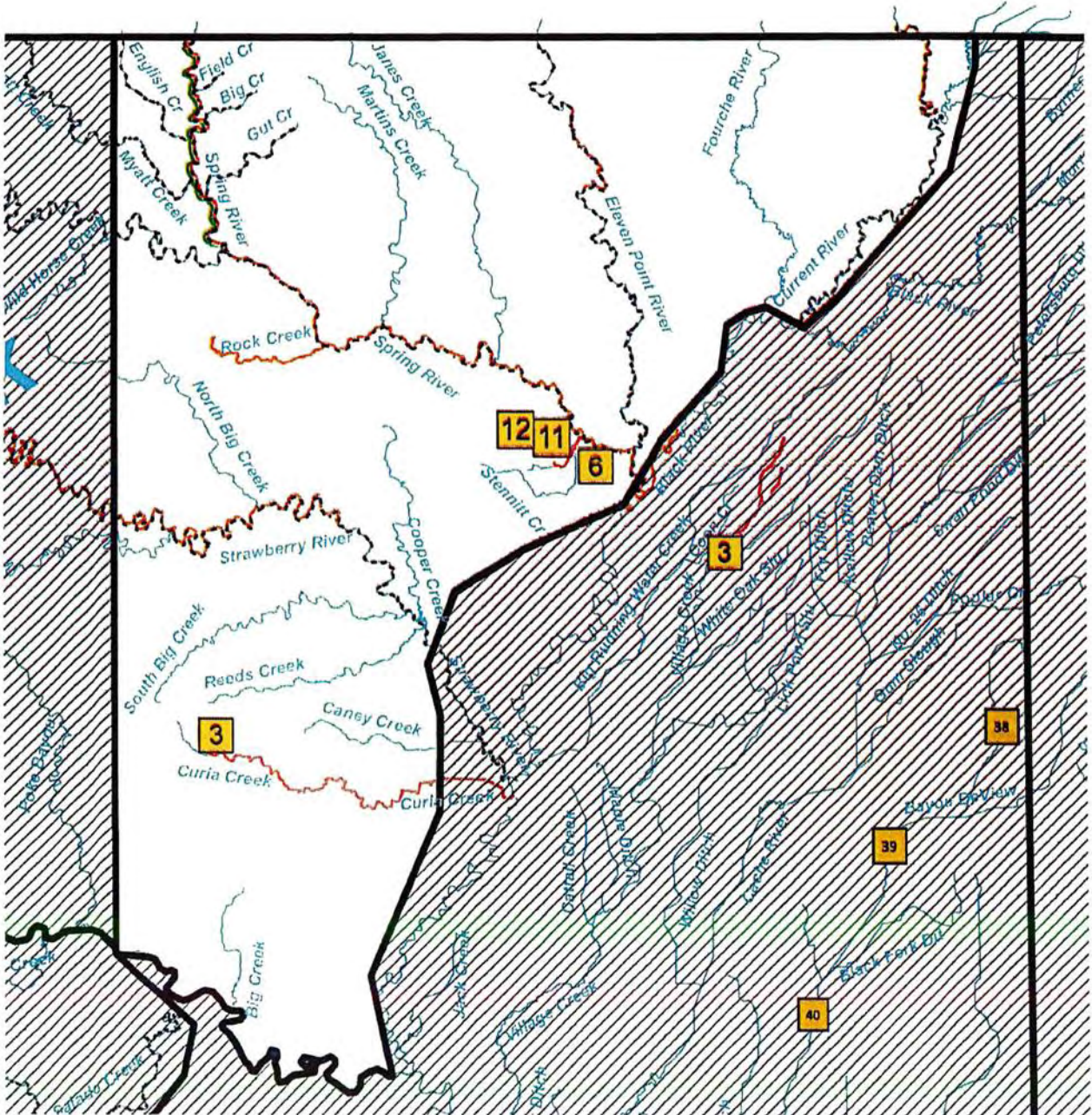
*Increase over natural temperatures may not be more than 2.8°C (5°F).

**At water temperatures $\leq 10^{\circ}\text{C}$ or during March, April and May when stream flows are 15 cfs and greater, the primary season dissolved oxygen standard will be 6.5 mg/L. When water temperatures exceed 22°C , the critical season dissolved oxygen standard may be depressed by 1 mg/L for no more than 8 hours during a 24-hour period.

Plate OH-4 (Ozark Highlands)



LEGEND	
---	Extraordinary Resource Waters
•	Natural and Scenic Waterways
—	Variation by UAA
—	Ecologically Sensitive Waterbodies
—	ESW Caves, Springs, and Seeps
—	Trout_Waters



**ATTACHMENT B TO EXHIBIT E
EXECUTIVE SUMMARY OF
PROPOSED RULEMAKING**

Executive Summary

Vulcan Construction Materials, LLC (“Vulcan”) owns and operates the Black Rock Quarry, a limestone quarry facility in Lawrence County, Arkansas, pursuant to NPDES Permit No. AR0046922. The Black Rock Quarry facility discharges groundwater and stormwater pumped from the quarry pit to Outfall 001 into a farm stock pond (at the request of the landowner), thence by an overflow weir to the UT, thence to Brushy Creek, and thence to Stennitt Creek.

Because Vulcan’s permit contains, or will contain, final discharge effluent limits for total dissolved solids (TDS) and sulfate (SO₄) based on Arkansas water quality standards (“WQS”) and ecoregion values for an Unnamed Tributary, Brushy Creek and Stennitt Creek, Vulcan evaluated alternatives through a Use Attainability Analysis (“UAA”) which included field studies to evaluate the physical, chemical and biological characteristics of the affected stream segments, toxicity testing, an engineering analysis of alternatives for discharge and treatment, evaluation of five separate methods for potential criteria development, and an analysis of designated uses for the UT, Brushy Creek and Stennitt Creek.

Based on the UAA, Vulcan is requesting the following amendments to APC&EC Regulation No. 2:

- Establish site-specific TDS and sulfate water quality criteria for the UT from Vulcan’s Outfall 001 to the confluence with Brushy Creek, as follows:
 - TDS - 725 mg/L
 - Sulfate - 260 mg/L
- Establish site-specific TDS and sulfate water quality criteria for Brushy Creek from the confluence with the UT to the confluence with Stennitt Creek, as follows:
 - TDS - 549 mg/L
 - Sulfate - 126 mg/L
- Establish a site-specific sulfate water quality criterion for Stennitt Creek from the confluence with Brushy Creek to the confluence with the Spring River, as follows:
 - Sulfate - 43.3 mg/L
- Remove the designated, but not existing, domestic drinking water use for the UT from Vulcan’s Outfall 001 to its confluence with Brushy Creek, and for a segment of Brushy Creek from its confluence with the UT to its confluence with Stennitt Creek.

Vulcan's proposed modifications to APC&EC Regulation No. 2 are supported by the following:

- The site-specific TDS and sulfate criteria requested by Vulcan reflect current conditions and allow Vulcan's Black Rock Quarry facility to operate as designed while protecting the aquatic life use, primary and secondary contact recreation use, and industrial and agriculture water designated uses for the UT, Brushy Creek and Stennitt Creek.
- Sulfate concentrations measured instream indicate that sulfate concentrations exceed 22.7 mg/L in the UT and Brushy Creek, which represents a "significant modification" of the water quality as compared to the Ozark Highlands ecoregion value for sulfate (17 mg/L).
- Mass balance calculations carried out for 7Q10 flow conditions, using TDS concentrations at Outfall 001 (95th percentile) and upstream concentrations from recent monitoring, indicate potential exceedance of the DWS criteria for TDS (500 mg/L) in the UT and Brushy Creek.
- The DWS use for the UT and Brushy Creek is not an existing or attainable use, and the Arkansas Department of Health has no current or future plans for using them as public water supplies.
- Water quality in the UT, Brushy Creek, and Stennitt Creek supports aquatic life uses based on ADEQ's assessment methodology.
- Vulcan's existing discharge supports the aquatic life uses, industrial and agricultural water supply uses, as well as primary and secondary contact recreation uses.
- Evaluation of TDS and sulfate in the Vulcan discharge indicates that the dissolved minerals will not reach concentrations that will cause acute or chronic toxicity.
- The proposed criteria are based on the preferred methodology, *i.e.* based on the reference macroinvertebrate community tolerance values from published field studies using EPA methodology and using a conservative assumption regarding the relationship between conductivity and dissolved minerals in the receiving streams.
- The recommended criteria are consistent with existing effluent and instream concentrations which support fish and benthic macroinvertebrate communities.
- There is no current economically feasible treatment technology for the removal of minerals to meet the current criteria.

- 40 C.F.R. 131.11(b)(1)(ii) authorizes states to adopt water quality standards that are “modified to reflect site-specific conditions.”
- The basis for removal of the designated use and the establishment of site specific criteria is set forth in 40 C.F.R. 131.10(g).