

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

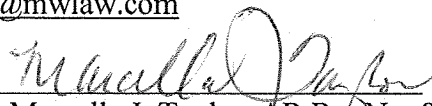
**IN RE: REQUEST BY THE SOUTHWESTERN)
ELECTRIC POWER COMPANY)
TO INITIATE RULEMAKING TO) DOCKET NO. 14-007-R
AMEND REGULATION NO. 2)**

REVISED EXHIBIT B

Petitioner, Southwestern Electric Power Company (SWEPCO) submits Revised Exhibit B which includes revised forms of the Legislative Questionnaire and Financial Impact Statement.

Respectfully submitted,

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By: 
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Allan Gates, AR Bar No. 72040

Counsel for Southwestern Electric Power Company

CERTIFICATE OF SERVICE

I hereby certify that on this 1st day of October, 2014, I served a copy of the foregoing Revised Exhibit B on the following by Electronic Delivery:

Tammy Harrelson, Esq.
Managing Attorney
Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118
harrelson@adeq.state.ar.us


Marcella J. Taylor

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
CONTACT PERSON Ellen Carpenter
ADDRESS 5301 Northshore Drive, North Little Rock, AR 72118
PHONE NO. 682-0665 FAX NO. 682-0880 E-MAIL carpenter@adeq.state.ar.us
NAME OF PRESENTER AT COMMITTEE MEETING Ellen Carpenter
PRESENTER E-MAIL carpenter@adeq.state.ar.us

INSTRUCTIONS

- A. Please make copies of this form for future use.
B. Please answer each question completely using layman terms. You may use additional sheets, if necessary.
C. If you have a method of indexing your rules, please give the proposed citation after "Short Title of this Rule" below.
D. Submit two (2) copies of this questionnaire and financial impact statement attached to the front of two (2) copies of the proposed rule and required documents. Mail or deliver to:

Donna K. Davis
Administrative Rules Review Section
Arkansas Legislative Council
Bureau of Legislative Research
One Capitol Mall, 5th Floor
Little Rock, AR 72201

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 Arkansas Water Quality Standards (WQS) for a segment of the Little River from Millwood Lake to the Red River and for the Red River from the mouth of the Little River to the Arkansas/Louisiana state line.
3. Is this rule required to comply with a federal statute, rule, or regulation? Yes ☐ No ☒
If yes, please provide the federal rule, regulation, and/or statute citation. _____
4. Was this rule filed under the emergency provisions of the Administrative Procedure Act? Yes ☐ No ☒
If yes, what is the effective date of the emergency rule? _____

When does the emergency rule _____

expire?

Will this emergency rule be promulgated under the permanent provisions of the Administrative Procedure Act?

Yes ☐

No ☐

5. Is this a new rule? Yes ☐ No ☒

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

Does this repeal an existing rule? Yes ☐ No ☒

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 ☒

No ☐

If yes, please attach a mark-up showing the changes in the existing rule and a summary of the substantive changes. **Note: The summary should explain what the amendment does, and the mark-up copy should be clearly labeled "mark-up."**

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 this proposed rule? Why is it necessary? The purpose of the proposed rule is to amend APCEC Regulation No. 2 to:

• modify the total dissolved solids ("TDS") water quality criterion and remove a designated, but not existing, drinking water use for a portion of the Red River from the mouth of the Little River to the Arkansas/Louisiana state line; and

• modify the TDS and temperature water quality criteria for a portion of the Little River from Millwood Lake to the Red River.

The rule is necessary to modify the TDS and temperature criteria to levels that reflect current and historic water quality conditions which are affected by naturally occurring conditions. The site-specific water quality criteria modifications will not adversely affect the aquatic life. 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 the Little and Red Rivers.

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). http://www.adeq.state.ar.us/regs/drafts/draft_regs.htm

9. Will a public hearing be held on this proposed rule? Yes ☒ No ☐

If yes, please complete the following:

Date: November 17, 2014

Time: 6:00 p.m

Washington Suite in Hempstead Hall,
University of Arkansas Community
College at Hope, 2500 South Main
Place: Street, Hope, Arkansas 71802

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

December 3, 2014

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

April, 2015

12. Do you expect this rule to be controversial? Yes ☐ No ☒

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

Against:

Unknown

FINANCIAL IMPACT STATEMENT

PLEASE ANSWER ALL QUESTIONS COMPLETELY

DEPARTMENT Arkansas Department of Environmental Quality
DIVISION Water Division
PERSON COMPLETING THIS STATEMENT Marcella Taylor
TELEPHONE NO. 688-8851 **FAX NO.** 918-7851 **EMAIL:** mtaylor@mwlaw.com

To comply with Ark. Code Ann. § 25-15-204(e), 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 water quality standards for the Little River from Millwood Lake to the Red River and for the Red River from the mouth of the Little River to the Arkansas/Louisiana state line (in Hempstead, Little River, Miller and Lafayette Counties).

1. Does this proposed, amended, or repealed rule have a financial impact? Yes ☐ No ☒
2. Is the rule based on the best reasonably obtainable scientific, technical, economic, or other evidence and information available concerning the need for, consequences of, and alternatives to the rule? Yes ☒ No ☐
3. In consideration of the alternatives to this rule, was this rule determined by the agency to be the least costly rule considered? Yes ☒ No ☐

If an agency is proposing a more costly rule, please state the following:

- (a) How the additional benefits of the more costly rule justify its additional cost;

- (b) The reason for adoption of the more costly rule;

- (c) Whether the more costly rule is based on the interests of public health, safety, or welfare, and if so, please explain; and;

- (d) Whether the reason is within the scope of the agency's statutory authority; and if so, please explain.

4. If the purpose of this rule is to implement a federal rule or regulation, please state the following:

- (a) What is the cost to implement the federal rule or regulation?

Current Fiscal Year

Next Fiscal Year

General Revenue _____

General Revenue _____

Federal Funds	_____
Cash Funds	_____
Special Revenue	_____
Other (Identify)	_____

Federal Funds	_____
Cash Funds	_____
Special Revenue	_____
Other (Identify)	_____

Total \$ 0 _____

Total \$ 0 _____

(b) What is the additional cost of the state rule?

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 _____

5. What is the total estimated cost by fiscal year to any private individual, entity and business subject to the proposed, amended, or repealed rule? Identify the entity(ies) subject to the proposed rule and explain how they are affected.

Current Fiscal Year

\$ 0 _____

Next Fiscal Year

\$ 0 _____

6. What is the total estimated cost by fiscal year to state, county, and municipal government to implement this rule? Is this the cost of the program or grant? Please explain how the government is affected.

Current Fiscal Year

\$ 0 _____

Next Fiscal Year

\$ 0 _____

7. With respect to the agency's answers to Questions #5 and #6 above, is there a new or increased cost or obligation of at least one hundred thousand dollars (\$100,000) per year to a private individual, private entity, private business, state government, county government, municipal government, or to two (2) or more of those entities combined?

Yes ☐ No ☒

If YES, the agency is required by Ark. Code Ann. § 25-15-204(e)(4) to file written findings at the time of filing the financial impact statement. The written findings shall be filed simultaneously with the financial impact statement and shall include, without limitation, the following:

- (1) a statement of the rule's basis and purpose;
- (2) the problem the agency seeks to address with the proposed rule, including a statement of whether a rule is required by statute;
- (3) a description of the factual evidence that:
 - (a) justifies the agency's need for the proposed rule; and

- (b) describes how the benefits of the rule meet the relevant statutory objectives and justify the rule's costs;
- (4) a list of less costly alternatives to the proposed rule and the reasons why the alternatives do not adequately address the problem to be solved by the proposed rule;
- (5) a list of alternatives to the proposed rule that were suggested as a result of public comment and the reasons why the alternatives do not adequately address the problem to be solved by the proposed rule;
- (6) a statement of whether existing rules have created or contributed to the problem the agency seeks to address with the proposed rule and, if existing rules have created or contributed to the problem, an explanation of why amendment or repeal of the rule creating or contributing to the problem is not a sufficient response; and
- (7) an agency plan for review of the rule no less than every ten (10) years to determine whether, based upon the evidence, there remains a need for the rule including, without limitation, whether:
 - (a) the rule is achieving the statutory objectives;
 - (b) the benefits of the rule continue to justify its costs; and
 - (c) the rule can be amended or repealed to reduce costs while continuing to achieve the statutory objectives.

ARKANSAS POLLUTION CONTROL AND ECOLOGY COMMISSION



REGULATION NO. 2

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

Submitted to the Arkansas Pollution Control and Ecology Commission: September 26, 2014

CHAPTER 5: SPECIFIC STANDARDS

Reg. 2.501 Applicability

Unless otherwise indicated in this Chapter or in Appendix A, the following specific standards shall apply to all surface waters of the state at all times except during periods when flows are less than the applicable critical flow. Streams with regulated flow will be addressed on a case-by-case basis to maintain designated instream uses. These standards apply outside the applicable mixing zone. Waters may, on occasion, have natural background levels of certain substances outside the limits established by these criteria, in which case these criteria do not apply to the naturally occurring excursions.

Reg. 2.502 Temperature

Heat shall not be added to any waterbody in excess of the amount that will elevate the natural temperature, outside the mixing zone, by more than 5°F (2.8°C) based upon the monthly average of the maximum daily temperatures measured at mid-depth or three feet (whichever is less) in streams, lakes or reservoirs. The following standards are applicable:

Waterbodies	Limit °C (°F)
Streams	
Ozark Highlands	29 (84.2)
Boston Mountains	31 (87.8)
Arkansas River Valley	31 (87.8)
Ouachita Mountains	30 (86.0)
Springwater-influenced Gulf Coastal	30 (86.0)
Typical Gulf Coastal	30 (86.0)
Least-Altered Delta	30 (86.0)
Channel-Altered Delta	32 (89.6)
White River (Dam #1 to mouth)	32 (89.6)
St. Francis River	32 (89.6)
Mississippi River	32 (89.6)
Arkansas River	32 (89.6)
Ouachita River (L. Missouri R. to Louisiana state line)	32 (89.6)
Red River	32 (89.6)
Lakes and Reservoirs	32 (89.6)
(applicable at 1.0 meter depth)	
Trout waters	20 (68.0)

Temperature requirements shall not apply to off-stream privately-owned reservoirs constructed primarily for industrial cooling purposes and financed in whole or in part by the entity or successor entity using the lake for cooling purposes.

<u>Stream</u>	<u>Concentration-mg/L</u>		
	<u>Chlorides</u> (Cl ⁻)	<u>Sulfates</u> (SO ₄ ⁼²)	<u>TDS</u>
Dismukes Creek	26*	ER	157*
Big Creek from Dismukes to Bayou Dorcheat	20*	ER	200*
Bois d'Arc Creek from Caney Creek to Red River	113*	283*	420*
Caney Creek	113*	283*	420*
Bodcau Creek	250	70	500
Poston Bayou	120	40	500
Kelley Bayou	90	40	500
Red River from Oklahoma to confluence with Little River	250	200	850
<u>Red River from mouth of the Little River to the Arkansas/Louisiana State Line</u>	250	200	<u>860</u>
Sulphur River	120	100	500
Days Creek	250	250	500
McKinney Bayou	180	60	480
Little River	20	20	100
<u>Little River from Millwood Lake to the Red River</u>	20	20	<u>138</u>
Saline River	20	10	90
Mine Creek from Hwy 27 to Millwood Lake	90	65	700
Cossatot River	10	15	70
Upper Rolling Fork	20	20	100
Rolling Fork from unnamed trib A to DeQueen Lake	130	70	670
Unnamed tribs A and A1 at Grannis	135	70	700
Mountain Fork	20	20	110
Mississippi River (Louisiana state line to Arkansas River)	60	150	425
Mississippi River (Arkansas River to Missouri state line)	60	175	450

ER - ecoregion value

* - developed using background flow of 4 cfs

** - These limits shall apply to all tributaries of Bayou Meto and Bayou Two Prairie listed in Appendix A
Any modification of these values must be made in accordance with Reg. 2.306.

† Not applicable for Clean Water Act purposes until approved by EPA.

(B) Ecoregion Reference Stream Minerals Values

The following values were determined from Arkansas' least-disturbed ecoregion reference streams are considered to be the maximum naturally occurring levels. For waterbodies not listed above, any discharge which results in instream concentrations more than 1/3 higher than these values for chlorides (Cl⁻) and sulfates (SO₄⁼²) or more than 15 mg/L, whichever is greater, is considered to be a significant modification of the maximum naturally occurring values. These waterbodies should be considered as candidates for site specific criteria development in accordance with Regs. 2.306 and 2.308. Similarly, site specific criteria development should be considered if the following TDS values are exceeded after being increased by the sum of the increases to Cl and SO₄. Such criteria may be developed only in accordance with Regs. 2.306 and 2.308. The values listed in

Site Specific Designated Use Variations Supported by Use Attainability Analysis

Loutre Creek - perennial aquatic life use, except seasonal from railroad bridge to mouth (GC-2, #1)
Unnamed tributary to Smackover Creek - no fishable/swimmable uses (GC-2, #2)
Unnamed tributary to Flat Creek - no fishable/swimmable uses (GC-2, #4)
Dodson Creek - perennial aquatic life use (GC-4, #5)
Jug Creek - perennial aquatic life use (GC-2, #6)
Lick Creek - seasonal aquatic life use; no primary contact (GC-1, #7)
Coffee Creek and Mossy Lake - no fishable/swimmable or domestic water supply uses (GC-3, #8)
Red River from Oklahoma state line to confluence with Little River - No domestic water supply use (GC-1, #9)
Bluff Creek and unnamed tributary - no domestic water supply use (GC-1, #10)
Mine Creek from Highway 27 to Millwood Lake - no domestic water supply use (GC-1, #11)
Caney Creek - no domestic or industrial water supply use (GC-1, #12)
Bois d'Arc Creek from Caney Creek to Red River - no domestic or industrial water supply use (GC-1, #13)
Town Creek below Acme tributary - no domestic water supply (GC-4, #14)
Unnamed trib. from Acme - no domestic water supply (GC-4, #14)
Gum Creek - no domestic water supply use (GC-2, #15)
Loutre Creek from Highway 15 S. to the confluence of Bayou de Loutre - no domestic water supply use (GC-2, #41)
Unnamed trib 002 (UT002) - no domestic water supply use (GC-2, #31)
Unnamed trib 003 (UT003) - no domestic water supply use (GC-2, #34)
Unnamed trib 004 (UT004) - no domestic water supply use (GC-2, #32)
Bayou de Loutre from mouth of UT004 to Louisiana state line - no domestic water supply use (GC-2, #16)
Walker Branch - no domestic water supply use (GC-2, #17)
Little Cornie Bayou from Walker Branch to Arkansas/Louisiana state line - no domestic water supply use (GC-2, #18)
Unnamed trib to Little Cornie Bayou (UTLCB-2) - no domestic water supply use (GC-2, #18)
Alcoa unnamed trib to Hurricane Creek and Hurricane Creek - no domestic water supply use (GC-4, #19)
Holly Creek - no domestic water supply use (GC-4, #20)
Dry Lost Creek and Tribs. - no domestic water supply use (GC-4, #21)
Lost Creek - no domestic water supply use (GC-4, #22)
Albemarle unnamed trib (AUT) to Horsehead Creek - no domestic water supply use (GC-2, #27)
Horsehead Creek from AUT to mouth - no domestic water supply use (GC-2, #27)
Dismukes Creek and Big Creek to Bayou Dorcheat - no domestic water supply (GC-2, #28)
Boggy Creek from the discharge from Clean Harbors El Dorado LCC downstream to the confluence of Bayou de Loutre - no domestic water supply use (GC-2, #51)
Unnamed tributary to Flat Creek from EDCC Outfall 001 d/s to confluence with unnamed tributary A to Flat Creek - no domestic water supply use (GC-2, #37)
Unnamed tributary A to Flat Creek from mouth of EDCC 001 ditch to confluence with Flat Creek - no domestic water supply use (GC-2, #38)
Flat Creek from mouth of UTA to confluence with Haynes Creek - no domestic water supply use (GC-2, #39)
Haynes Creek from mouth of Flat Creek to confluence with Smackover Creek - no domestic water supply use (GC-2, #40)
Red River from the mouth of the Little River to the Arkansas/Louisiana state line - no domestic drinking water supply use (GC-1, #55)

SPECIFIC STANDARDS: GULF COASTAL ECOREGION

(Plates GC-1, GC-2, GC-3, GC-4)

	<u>Typical Streams</u>	<u>Spring Water Streams</u>	<u>Lakes and Reservoirs</u>
Temperature °C (°F)*	30 (86)	30 (86)	32 (89.6)
Ouachita River			
(state line to Little Missouri River)	32 (89.6)		
Red River	32 (89.6)		
Little River			
<u>(from Millwood Lake to the Red River)</u>	32 (89.6)		
Turbidity (NTU) (base/all)	21/32	21/32	25/45
Red River (base/all)	50/150		
Minerals	see Reg. 2.511		see Reg. 2.511
Dissolved Oxygen (mg/L) **	<u>Pri.</u>	<u>Crit.</u>	see Reg. 2.505
<10 mi ² watershed	5	2	
10 mi ² - 500 mi ²	5	3	
>500 mi ² watershed	5	5	
All sizes (springwater influenced)		6	5
All other standards	(same as statewide)		

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

**At water temperatures ≤10°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

Site Specific Standards Variations Supported by Use Attainability Analysis

Loutre Creek - from headwaters to railroad bridge, critical season dissolved oxygen standard - 3 mg/L; primary season - 5 mg/L; from railroad bridge to mouth, critical season dissolved oxygen - 2 mg/L (GC-2, #1)

Unnamed tributary to Smackover Creek - headwaters to Smackover Creek, year round dissolved oxygen criteria - 2 mg/L (GC-2, #2)

Unnamed tributary to Flat Creek - from headwaters to Flat Creek, year round dissolved oxygen criteria - 2 mg/L (GC-2, #4)

Dodson Creek - from headwaters to confluence with Saline River, critical season dissolved oxygen standard - 3 mg/L (GC-4, #5)

Jug Creek - from headwaters to confluence with Moro Creek, critical season dissolved oxygen standard - 3 mg/L (GC-2, #6)

Lick Creek - from headwaters to Millwood Reservoir, critical season dissolved oxygen standard - 2 mg/L (GC-1, #7)

Coffee Creek and Mossy Lake - exempt from Reg. 2.406 and Chapter Five (GC-3, #8)

Red River from Oklahoma state line to confluence with Little River - total dissolved solids - 850 mg/L (GC-1, #9)

Bluff Creek and unnamed trib. - sulfates 651 mg/L; total dissolved solids 1033 mg/L (GC-1, #10)

Muddy Fork Little Missouri River - sulfates 250 mg/L; total dissolved solids 500 mg/L (GC-1, #24)

Little Missouri River - sulfates 90 mg/L; total dissolved solids 180 mg/L (GC-1, #25)

Mine Creek from Highway 27 to Millwood Lake - chlorides - 90 mg/L; sulfates - 65 mg/L; total dissolved solids - 700 mg/L (GC-1, #11)

Caney Creek - chlorides 113 mg/L; sulfates 283 mg/L; total dissolved solids 420 mg/L (GC-1, #12)

Bois d'Arc Creek from Caney Creek to Red River - chlorides 113 mg/L; sulfates 283 mg/L; total dissolved solids 420 mg/L (GC-1, #13)

Town Creek below Acme tributary - sulfates 200 mg/L; total dissolved solids 700 mg/L (GC-4, #14)

Unnamed trib. from Acme - sulfates 330 mg/L; total dissolved solids 830 mg/L (GC-4, #14)

Gum Creek - chlorides 104 mg/L; total dissolved solids 311 mg/L (GC-2, #15)

Bayou de Loutre from Gum Creek to State line - Chlorides 250 mg/L; total dissolved solids 750 mg/L (GC-2, #16)

Walker Branch - chlorides 180 mg/L; total dissolved solids 970 mg/L (GC-2, #17)

Ouachita River - from Ouachita River mile (ORM) 223 to the Arkansas-Louisiana border (ORM 221.1), site specific seasonal dissolved oxygen criteria: 3 mg/L June and July; 4.5 mg/L August; 5 mg/L September through May. These seasonal criteria may be unattainable during or following naturally occurring high flows; (i.e., river stage above 65 feet measured at the lower gauge at the Felsenthal Lock and Dam, Station No. 89-o, and also for the two weeks following the recession of flood waters below 65 feet), which occurs from May through August. Naturally occurring conditions which fail to meet criteria should not be interpreted as violations of these criteria (GC-3, #26)

Alcoa unnamed trib. to Hurricane Cr. and Hurricane Cr. - see Reg. 2.511 (CG-4, #19)

Holly Creek - See Reg. 2.511 (CG-4, #20)

Saline River bifurcation - see Reg. 2.511 (GC-4, #23)

Dry Lost Creek and tributaries - see Reg. 2.511 (GC-4, #21)

Lost Creek - see Reg. 2.511 (GC-4, #22)

Albemarle unnamed trib (AUT) to Horsehead Creek - chlorides 137 mg/L; total dissolved solids 383 mg/L (GC-2, #27)

Horsehead Creek from AUT to mouth - chlorides 85 mg/L; total dissolved solids 260 mg/L (GC-2, #27)

Bayou Dorcheat - sulfates 16 mg/L (GC-2, #27)

Dismukes Creek - chlorides 26 mg/L; total dissolved solids 157 mg/L (GC-2, #28)

Big Creek from Dismukes to Bayou Dorcheat - chlorides 20 mg/L; total dissolved solids 200 mg/L (GC-2, #28)

Bayou de Loutre from Chemtura outfall to Loutre Creek - maximum water temperature 96°F (GC-2, #29)

Unnamed tributary of Lake June below Entergy Couch Plant to confluence with Lake June - maximum water temperature 95 degrees F (limitation of 5 degrees above natural temperature does not apply) (GC-1, #30).

Unnamed tributary to Flat Creek from EDCC Outfall 001 d/s to confluence with unnamed tributary A to Flat Creek Chloride 23 mg/L, Sulfate 125 mg/L, TDS 475 mg/L (GC-2, #37) †

Unnamed tributary A to Flat Creek from mouth of EDCC 001 ditch to confluence with Flat Creek, Chloride 16 mg/L, Sulfate 80 mg/L, TDS 315 mg/L (GC-2, #38) †

Boggy Creek from the discharge from Clean Harbors El Dorado LCC downstream to the confluence of Bayou de Loutre. Chloride, 631 mg/L; Sulfate, 63 mg/L; total dissolved solids, 1360; Selenium, 15.6 u/L

McGeorge Creek (headwaters to Willow Springs Branch) Sulfate, 250 mg/L; total dissolved solids, 432 mg/L (GC-4, #52)

Willow Springs Branch (McGeorge Creek to Little Fourche Creek) Sulfate, 112 mg/L; total dissolved solids 247 mg/L (GC-4, #53)

Little Fourche Creek (Willow Springs Branch to Fourche Creek) total dissolved solids, 179 mg/L (GC-4, #54)

Red River from mouth of the Little River to the Arkansas/Louisiana state line, TDS 860 mg/L (GC-1, #55)

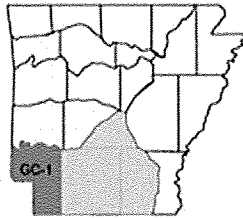
Little River from Millwood Lake to the Red River, TDS 138 mg/L (GC-1, #56); temperature 32°C/89.6°F

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

Variations Supported by Environmental Improvement Project

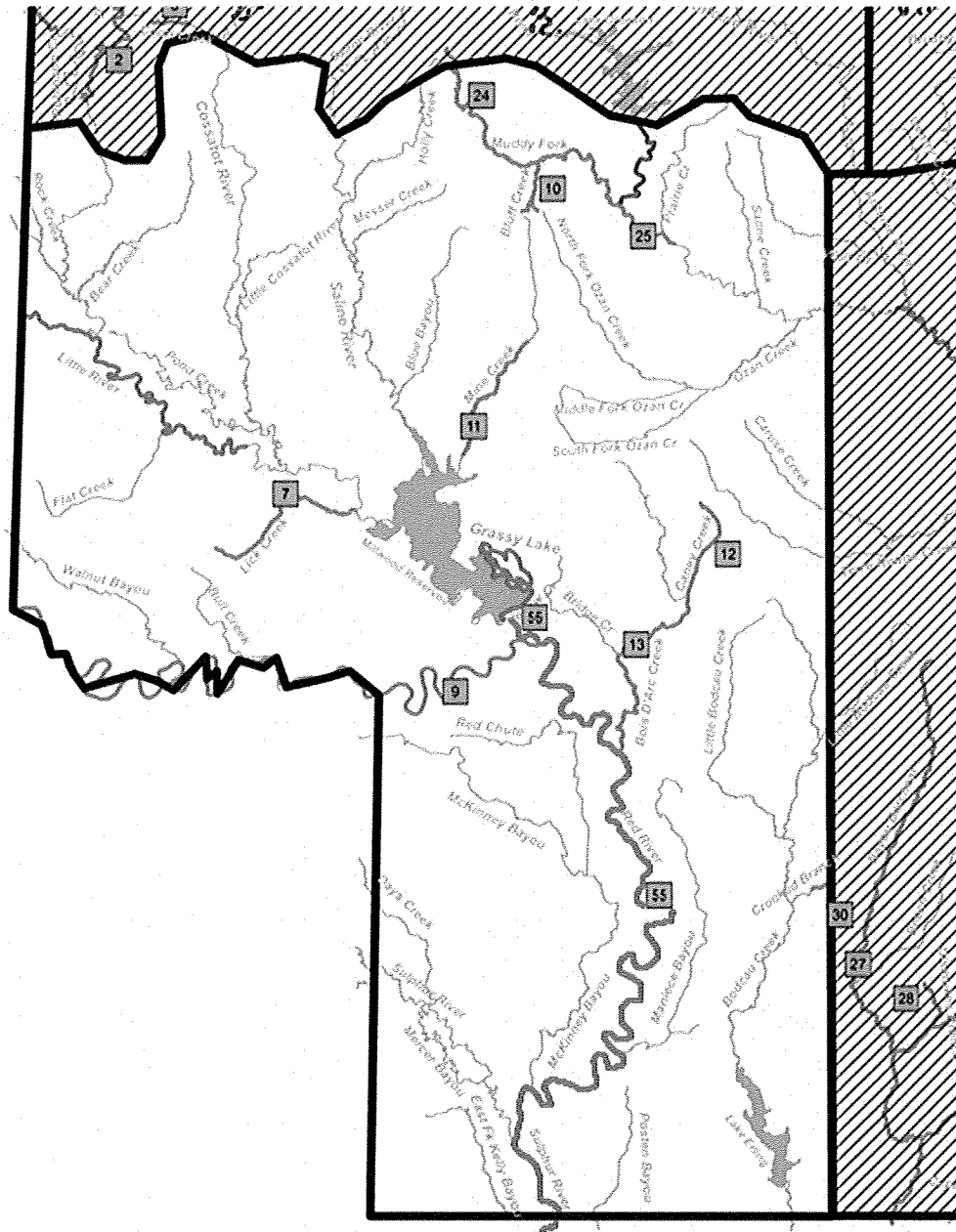
Holly Creek; Selenium, Chronic Standard, 17 µg/L (GC-4, #1)

Plate GC-1 (Gulf Coastal Plain)



LEGEND

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



EXECUTIVE SUMMARY

Southwestern Electric Power Company ("SWEPCO") owns and operates the John W. Turk, Jr. Power Plant which discharges treated wastewater from a single outfall to the Little River under the provisions of NPDES Permit No. AR0051136 issued by ADEQ. The Little River flows approximately 2 miles from the facility's discharge to the Red River.

The Red River contains elevated levels of dissolved solids caused by input from natural salt springs and seeps in Oklahoma and Texas. The states of Texas, Oklahoma, Arkansas and Louisiana each have established total dissolved solids ("TDS") criterion for the river which are spatially inconsistent. Even within Arkansas the TDS criterion is inconsistent: 850 mg/L upstream of the confluence with the Little River; 500 mg/L downstream of the Little River. The segment of the Red River into which the Little River flows is listed as impaired for TDS and chlorides in the Arkansas 2008 303(d) list¹. The consequence of the listing is that the limitations set in the facility's NPDES permit adversely impacts the operations of the facility preventing it from operating as designed despite the fact that the facility's discharge at full operation will have no effect on the concentration of dissolved minerals in the Red River or on the aquatic life in the river.

The temperature water quality criterion on the Little River between Millwood Lake and the Red River is also spatially inconsistent with Millwood Lake and the Red River. The temperature criterion for Millwood Lake and for the Red River is 89.6°F while the Little River between Millwood Lake and the Red River has a lower temperature criterion of 86°F, however the Little River exceeds the 86°F criterion often enough to be placed on the 303(d) list as impaired.

SWEPCO evaluated alternatives through a Use Attainability Analysis (UAA) and a Site-Specific Temperature Study which included field studies, toxicity testing, mass balance modeling, engineering analysis of alternatives for discharge and treatment, and an analysis of designated uses for the Red River and the Little River.

Based upon the UAA and the Site-Specific Temperature Study, SWEPCO is requesting:

modification of the TDS and temperature water quality criteria for the Little River from Millwood Lake to the mouth of the Little River as follows: TDS from 100 mg/L to 138 mg/L; Temperature from 86° F to 89.6° F;

modification of the TDS water quality criterion for the Red River from the mouth of the Little River to the Arkansas/Louisiana state line from 500 mg/L to 860 mg/L; and

Removal of the designated, but not existing, domestic drinking water use from the Red River from the mouth of the Little River to the Arkansas/Louisiana state line.

SWEPCO's proposed site-specific modifications are supported by the following:

- SWEPCO seeks site-specific TDS and temperature criteria which reflect current conditions, bring consistency to the criteria on the Red and Little Rivers, and allow the

¹ The 2008 Arkansas 303(d) list is the last such list approved by EPA. The Arkansas draft 2010 and 2012 303(d) lists did not include the chloride impairment and the draft 2014 lists removed the TDS impairment because of the completion of a TMDL in 2013.

Turk facility to operate as designed while protecting the attainment of the aquatic life, primary and secondary contact recreation, and industrial and agriculture water designated uses for Little River and Red River;

- Adjusting the temperature criterion for the Little River downstream of Millwood Lake to reflect current ambient conditions during the critical summer conditions will prevent the Little River from being inappropriately listed as impaired.
- TDS concentrations in the Red River historically exceed the TDS criterion due to elevated levels of dissolved solids caused by input from natural salt springs and seeps in Oklahoma and Texas.
- UAA data established that the requested changes should have no adverse effect on the aquatic life communities;
- The toxicity threshold based on tests of *Ceriodaphnia dubia* using the facility's effluent indicates that toxicity due to minerals is well above the anticipated mineral concentration in the effluent at the critical dilution;
- Setting the TDS and temperature criteria at the site-specific levels requested by SWEPCO in these segments of the Little River and the Red River 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 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 naturally occurring pollutant concentrations, dams or other types of hydrologic modifications limit the use or if controls more stringent than those required by section 301(b) and 306 of the Clean Water Act if would result in substantial and widespread economic and social impact.