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# ARKANSAS POLLUTION CONTROL AND ECOLOGY COMMISSION



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STATE OF ARKANSAS

## REGULATION NO. 2

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

Adopted by the Arkansas Pollution Control and Ecology Commission: August 25, 2017

# Exhibit A

Proposed Regulation

Arkansas Pollution Control and Ecology Commission  
Regulation No. 2, As Amended

**Regulation Establishing  
Water Quality Standards for Surface Waters  
of the State of Arkansas**

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grease shall be an average of no more than 10 mg/L or a maximum of no more than 15 mg/L. No mixing zones are allowed for discharges of oil and grease.

**Reg. 2.511 Mineral Quality**

**(A) Site Specific Mineral Quality Criteria**

Mineral quality shall not be altered by municipal, industrial, other waste discharges or instream activities so as to interfere with designated uses. The following criteria apply to the streams indicated.

<u>Stream</u>	<u>Concentration-mg/L</u>		
	<u>Chlorides</u> (Cl <sup>-</sup> )	<u>Sulfates</u> (SO <sub>4</sub> <sup>-2</sup> )	<u>TDS</u>
Arkansas River Basin			
Arkansas River (Mouth to Murray Lock and Dam [L&D #7])	250	100	500
Bayou Meto (Rocky Branch to Bayou Two Prairie)	64*	ER	ER
Bayou Meto (mouth to Pulaski/Lonoke county line)	95**	45**	ER
Bayou Two Prairie (Pulaski/Lonoke county line to Northern boundary of Smoke Hole Natural Area)	95**	45**	ER
Bayou Two Prairie (Southern boundary of Smoke Hole Natural Area to Mouth)	95**	45**	ER
Rocky Branch Creek	64*	ER	ER
Little Fourche Creek (Willow Springs Branch to Fourche Creek)	ER	ER	179
Willow Springs Branch (McGeorge Creek to Little Fourche Creek)	ER	112	247
McGeorge Creek (headwaters to Willow Springs Branch)	ER	250	432
Arkansas River (Murray Lock and Dam [L&D #7] to Dardanelle Lock and Dam [L&D #10])	250	100	500
Cadron Creek	20	20	100
Arkansas River (Dardanelle Lock and Dam [L&D #10] to Oklahoma state line, including Dardanelle Reservoir)	250	120	500
James Fork	20	100	275
Illinois River	20	20	300
Poteau River from Business US Hwy 71 to Oklahoma state line	120	60	500
Unnamed trib at Waldron	150	70	660
White River Basin			
White River (Mouth to Dam #3)	20	60	430
Big Creek	20	30	270
Unnamed trib from Frit Ind.	ER	48*	ER
Cache River	20	30	270
Bayou DeView (from Mouth to AR Hwy 14)	48	37.3	411.3
Bayou DeView (from AR Hwy 14 to Whistle Ditch)	48	38	411.3
Big Creek (from Whistle Ditch to mouth of	58	49	ER

<u>Stream</u>	<u>Concentration-mg/L</u>		
	<u>C1</u>	<u>SO<sub>4</sub></u>	<u>TDS</u>
Unnamed trib			
Unnamed trib 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	ER	ER	456*
South Fork Spring River	20	30	270
Myatt Creek	20	30	270
Current River	20	30	270
White River (Dam #3 to Missouri 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 line to headwaters, including Beaver Reservoir)	20	20	160
Kings River	20	20	150
West Fork White River	20	20	150
<u>Town Branch from Point of Discharge of the City of Huntsville WWTP downstream to the confluence with Holman Creek</u>	<u>223</u>	<u>61</u>	<u>779</u>
<u>Holman Creek from the confluence with Town Branch downstream to the confluence with War Eagle Creek</u>	<u>180</u>	<u>48</u>	<u>621</u>
<u>War Eagle Creek from the confluence with Holman Creek Downstream to Clifty Creek</u>	<u>39</u>	<u>17</u>	<u>248</u>
<u>Creek</u>			
St. Francis River Basin			
St. Francis River (Mouth to 36o 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 (36o N. Lat. to 36o 30' N. Lat.)	10	20	180
Ouachita River Basin			
Bayou Bartholomew	50	20	500
Chemin-A-Haut Creek	50	20	500
Overflow Creek	20	30	170
Bayou Macon	30	40	330
Boeuf River	90	30	460
Big Cornie Creek	230	30	500
Little Cornie Creek	200	10	400
Three Creeks	250	10	500
Little Cornie Bayou	200	20	500
Unnamed trib from GLCC 003	538*	35*	519*
Unnamed trib to Little Cornie Bayou	305*	ER	325*
Little Cornie Bayou from unnamed trib to State Line	215*	25*	500*
Walker Branch	180*	ER	970*
Gum Creek	104*	ER	311*
Bayou de L'Outre above Gum Creek	250	90	500

<u>Stream</u>	<u>Concentration-mg/L</u>		
	<u>Chlorides</u> (Cl <sup>-</sup> )	<u>Sulfates</u> (SO <sub>4</sub> <sup>=</sup> )	<u>TDS</u>
Boeuf River	90	30	460
Big Cornie Creek	230	30	500
Little Cornie Creek	200	10	400
Three Creeks	250	10	500
Little Cornie Bayou	200	20	500
Walker Branch	180	ER	970
Gum Creek	104*	ER	311*
Bayou de L'Outre above Gum Creek	250	90	500
Bayou de L'Outre below Gum Creek	250	90	750
Ouachita River (Louisiana state line to Camden)	160	40	350
Saline River	20	40	120
Saline River east bifurcation at Holly Creek	ER	250	500
Hurricane Creek above Hurricane Lake Dam	20	250	500
Hurricane Creek from Hurricane Lk. Dam to Ben Ball Bridge	125	730	1210
Hurricane Creek from Ben Ball Bridge to US Hwy.270	125	700	1200
Hurricane Creek from Hwy 270 to Saline River	100	500	1000
Alcoa unnamed tribs to Hurricane Creek	125	700	1100
Dry Lost Creek and tribs	ER	560	880
Lost Creek to Little Lost Creek	ER	510	820
Lost Creek below Little Lost Creek	ER	300	550
Holly Creek	30	860	1600
Moro Creek	30	20	260
Smackover Creek	250	30	500
Unnamed trib A to Flat Creek from mouth of EDCC 001 ditch to confluence with Flat Creek	16*†	80*†	315*†
Confluence with unnamed trib A to Flat Creek	23*†	125*†	475*†
Boggy Creek - from the discharge for Clean Harbors El Dorado LLC to the confluence of Bayou de Loutre	631	63	1360
Ouachita River (Camden to Carpenter Dam)	50	40	150
Town Creek below Acme tributary	ER	200	700
Unnamed trib from Acme	ER	330	830
Little Missouri River	10	90	180
Muddy Fork Little Missouri	ER	250	500
Bluff Creek and unnamed trib.	ER	651*	1033*
Garland Creek	250	250	500
South Fork Caddo	ER	60	128
Back Valley Creek	ER	250	500
Wilson Creek from its mouth upstream approx. 1.7 miles at the UMETCO property line	56	250	500
Ouachita River (Carpenter Dam to Headwaters, including Lake Ouachita tributaries)	10	10	100



<u>Stream</u>	<u>Concentration-mg/L</u>		
	<u>Chlorides</u> (Cl <sup>-</sup> )	<u>Sulfates</u> (SO <sub>4</sub> <sup>-</sup> )	<u>TDS</u>
Red River Basin			
Bayou Dorcheat	100	16*	250
Albemarle unnamed trib (AUT) to Horsehead Creek	137*	ER	383*
Horsehead Creek from AUT to mouth	85*	ER	260*
Cypress Creek	250	70	500
Crooked Creek	250	10	500
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 Arkansas/Oklahoma state line to mouth of the Little River	250	250†	940†
Red River from mouth of the Little River to the Arkansas/Louisiana State Line	250	225†	780†
Sulphur River	120	100	500
Days Creek	250	250	500
McKinney Bayou	180	60	480
Little River	20	20	100
Little River from Millwood Lake to the Red River	20	20	138†
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<sup>-</sup>) and sulfates (SO<sub>4</sub><sup>=2</sup>) 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 SO<sub>4</sub>. Such criteria may be developed only in accordance with Regs. 2.306 and 2.308. The values listed in the table below are not intended nor will these values be used by the Department to evaluate attainment of the water quality standards.

**ECOREGION REFERENCE STREAM VALUES (mg/L)**

Ecoregion	Chlorides (Cl <sup>-</sup> )	Sulfates (SO <sub>4</sub> <sup>=2</sup> )	TDS
Ozark Highlands	13	17	240
Boston Mountains	13	9	85
Arkansas River Valley	10	13	103
Ouachita Mountains	6	15	128
Gulf Coastal Plains	14	31	123
Delta	36	28	390

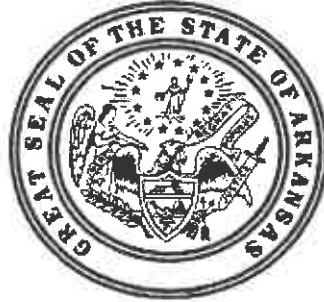
**(C) Domestic Water Supply Criteria**

In no case shall discharges cause concentrations in any waterbody to exceed 250, 250 and 500 mg/L of chlorides, sulfates and total dissolved solids, respectively, or cause concentrations to exceed the applicable criteria, except in accordance with Regs. 2.306 and 2.308. For lakes and reservoirs applicable at 1.0 meter depth.

**Reg. 2.512 Ammonia**

The total ammonia nitrogen (N) criteria and the frequency of occurrence are as follows:

ARKANSAS POLLUTION CONTROL AND ECOLOGY COMMISSION



# **REGULATION NO. 2**

## **APPENDIX A**

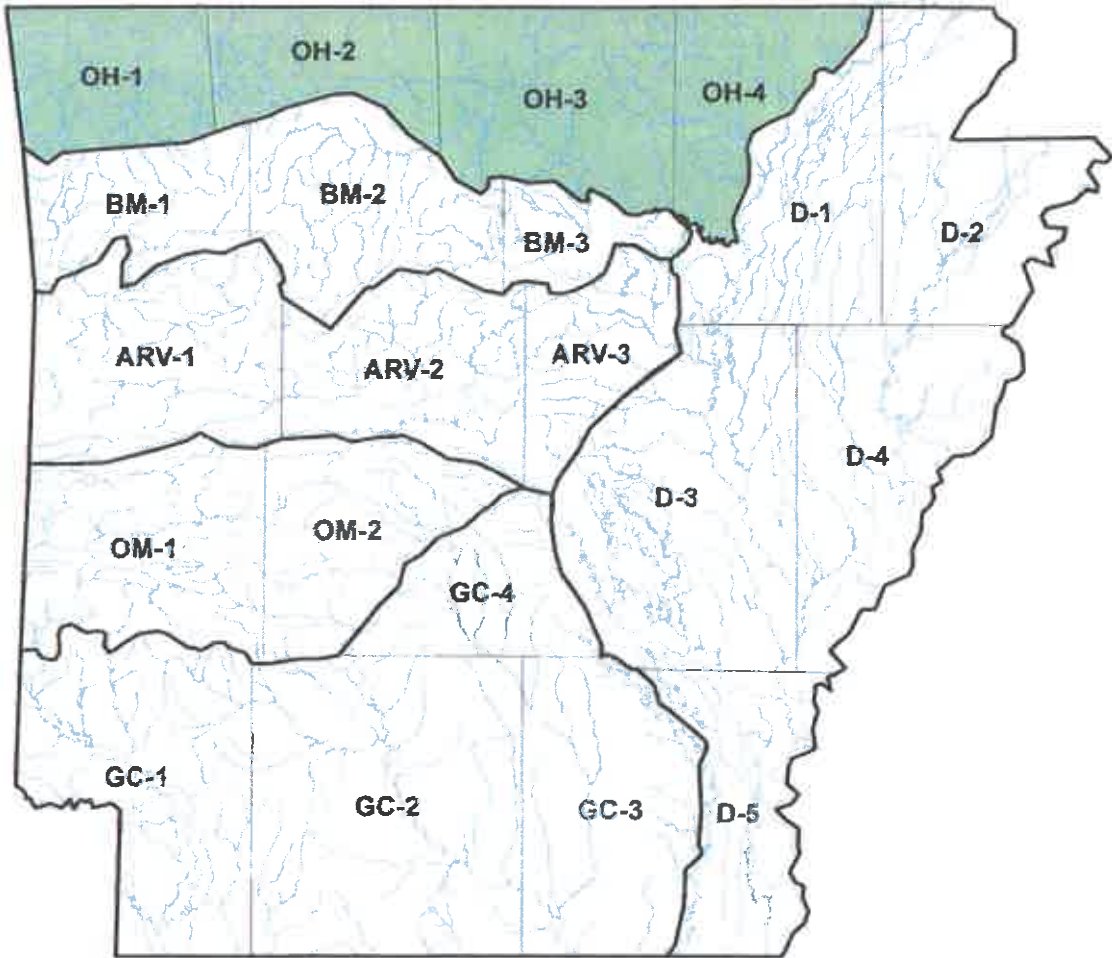
**Designated Uses, Specific Standards and Maps of Waters of  
the State by Ecoregions**

## APPENDIX A: MAP OF ECOREGIONS OF ARKANSAS



Ozark Highlands	A-3	Ouachita Mountains	A-36
Boston Mountains	A-16	Gulf Coastal	A-45
Arkansas River Valley	A-26	Delta	A-61

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**DESIGNATED USES: OZARK HIGHLANDS ECOREGION**  
(Plates OH-1, OH-2, OH-3, OH-4)

**Extraordinary Resource Waters**

Current River (OH-4)  
Eleven Point River (OH-4)  
Strawberry River (OH-3, OH-4)  
Little Strawberry River (OH-3)  
Spring River, including its tributaries: Field Creek, Big Creek, English Creek, Gut Creek and Myatt Creek (OH-4)  
South Fork Spring River (OH-3, OH-4)  
North Sylamore Creek (OH-3)  
Buffalo River (OH-2, OH-3)  
Kings River (OH-2)  
Bull Shoals Reservoir (OH-2, OH-3)

**Natural and Scenic Waterways**

Strawberry River from headwaters to Sharp-Izard County Line (OH-3, OH-4)  
Kings River - that segment in Madison County (OH-2)  
Buffalo River (OH-2, OH-3)  
North Sylamore Creek (OH-3)\*

**Ecologically Sensitive Waterbodies**

Cave Springs Cave, Logan Cave and numerous springs and spring-fed tributaries which support southern cavefish, Ozark cavefish, Arkansas darter, least darter, Oklahoma salamander, cave snails, cave crawfish and unique invertebrates (OH-1, OH-2, OH-3)  
Strawberry River - location of Strawberry River darter (OH-3, OH-4)  
Little Strawberry River - location of the Strawberry River darter (OH-3)  
Spring River - snuffbox and pink mucket mussels; Ozark hellbender (OH-4)  
Rock Creek - snuffbox and pink mucket mussels; Ozark hellbender (OH-4)  
Eleven Point River - location of Ozark hellbender (OH-4)  
Current River - location of flat floater and pink mucket mussels (OH-4)  
Illinois River - Neosho mucket (OH-1)

**Primary Contact Recreation** - all streams with watersheds of greater than 10 mi<sup>2</sup> and all lakes/reservoirs\*\*

**Secondary Contact Recreation** - all waters\*\*

**Domestic, Industrial and Agricultural Water Supply** - all waters\*\*

**Aquatic Life\*\***

**Trout**

Bull Shoals Reservoir - lower portion (OH-2)  
White River from Bull Shoals Dam to Dam #3 (OH-3)  
North Fork White River (OH-3)  
Spring River from Mammoth Springs to South Fork Spring River (OH-4)  
Upper White River from Beaver Dam to Missouri state line (OH-1)

**Lakes and Reservoirs - all**

**Streams**

Seasonal Ozark Highlands aquatic life use - all streams with watersheds of less than 10 mi<sup>2</sup> except as otherwise provided in Reg. 2.505

Perennial Ozark Highlands aquatic life use - all streams with watersheds of 10 mi<sup>2</sup> 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)
- Removal of the Domestic Water Supply use for Town Branch beginning at Latitude 36.112330° Longitude- 93.732833° and extending downstream to its confluence with Holman Creek at Latitude 36.0118158° Longitude- 93.736039° (OH-1, #6) and for Holman Creek beginning at its confluence with Town Branch at Latitude 36.118158° Longitude -93.736039° and extending downstream to its confluence with War Eagle Creek at Latitude 36.140824° Longitude -93.729594° (OH-1, #7)

**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 <sup>2</sup> watershed	6          2	
10 to 100 mi <sup>2</sup>	6          5	
>100 mi <sup>2</sup> 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 (OH-4, #6)
- Crooked Creek- from Harrison WWTP outfall to ADEQ Monitoring Station WH10193: 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 (OH-3, #8) †  
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) †  
Town Branch from Point of Discharge of the City of Huntsville WWTP  
Downstream to the confluence with Holman Creek chloride= 223 mg/L, sulfate = 61 mg/L, TDS = 779 mg/L (OH-1, #6)  
Holman Creek from the confluence with Town Branch  
Downstream to the confluence with War Eagle Creek chloride = 180 mg/L, sulfate = 48mg/L, TDS = 621 mg/L(OH-1, #7)  
War Eagle Creek from the confluence with Holman Creek to  
Clifty Creek = 39 mg/L, TDS = 248 mg/L (OH-1, #8)

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† 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  $\leq$  °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.

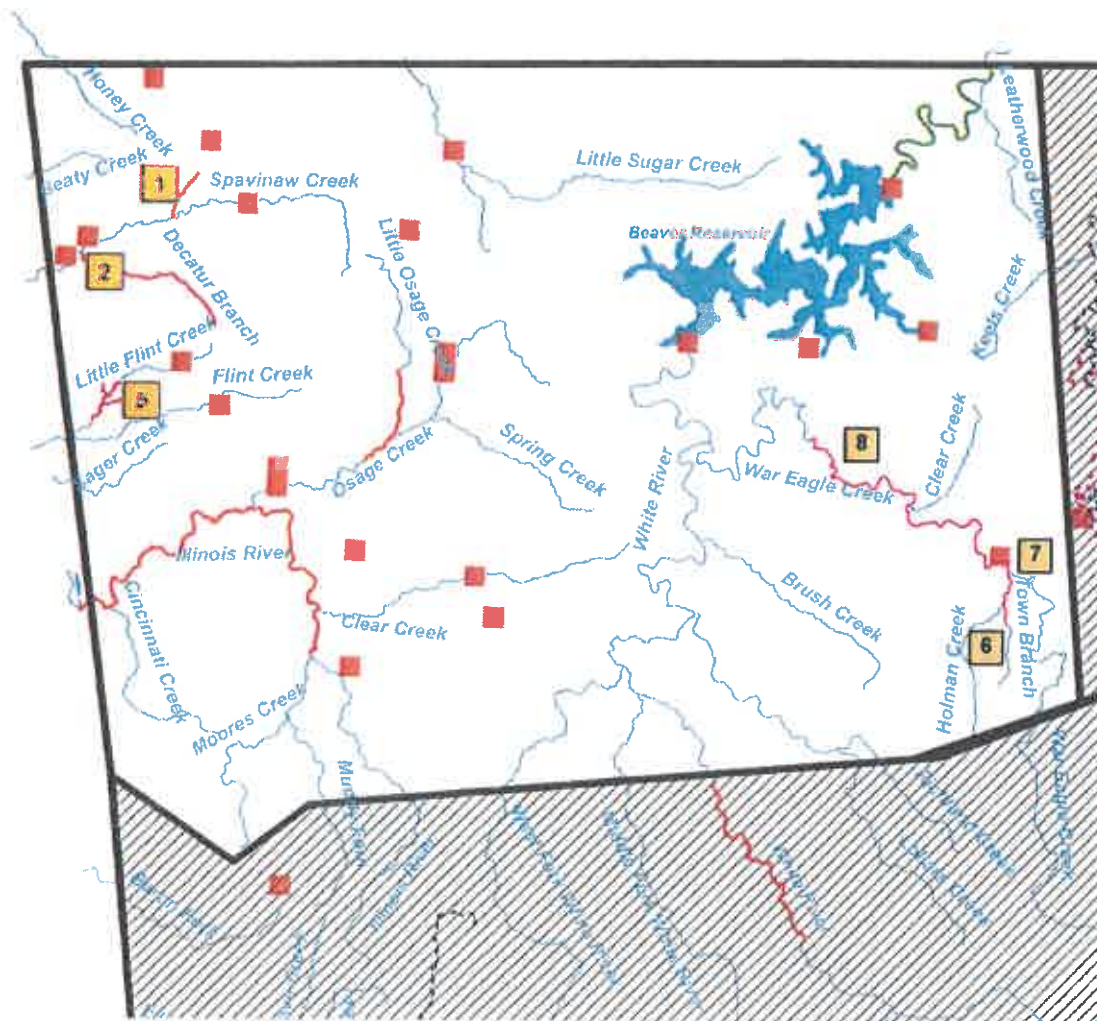


# Plate OH-1 (Ozark Highlands)



**LEGEND**

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

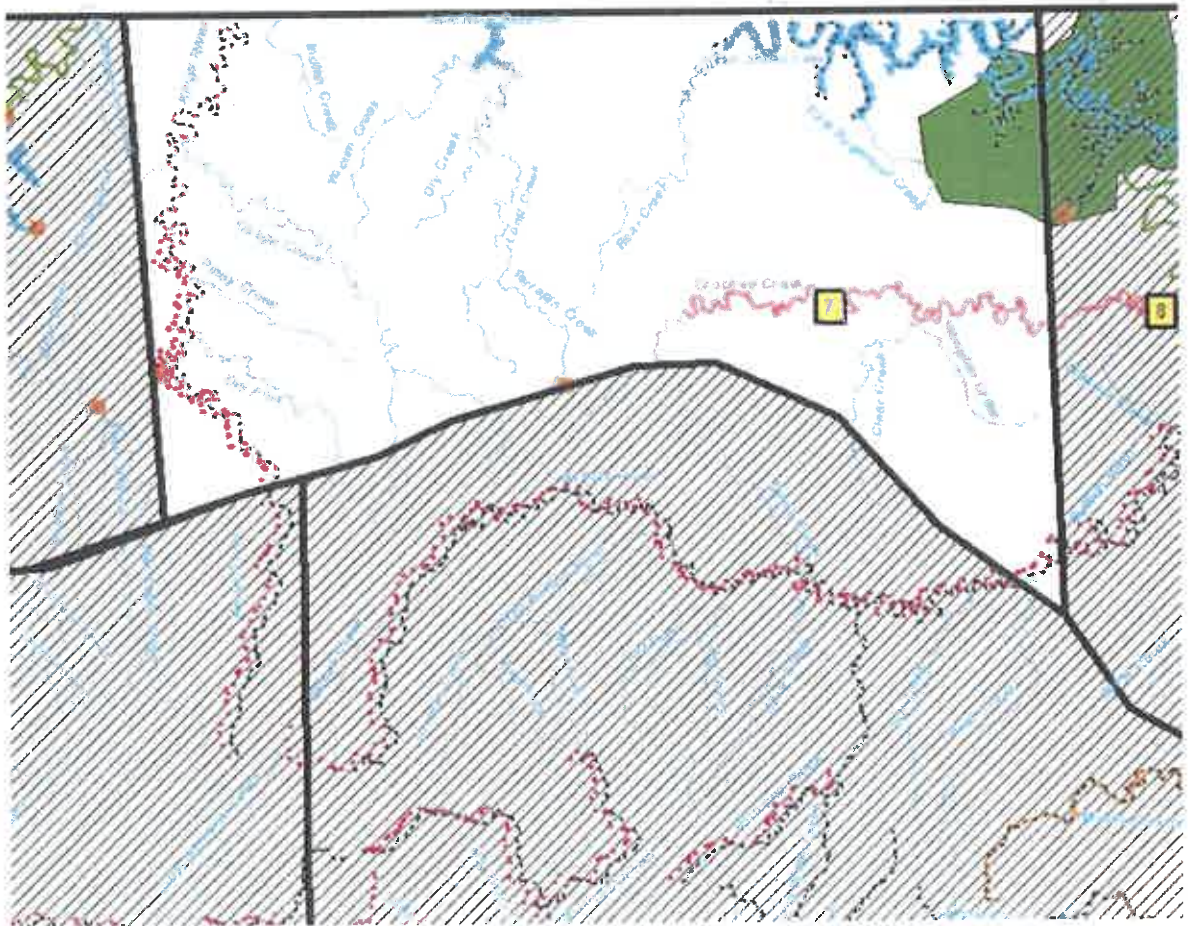


# Plate OH-2 (Ozark Highlands)



**LEGEND**

- - - Extraordinary Resource Waters
- Natural and Scenic Watersheds
- Variation by LAA
- Ecologically Sensitive Watersheds
- ESR: Caves, Springs and Seeps
- Trout Waters



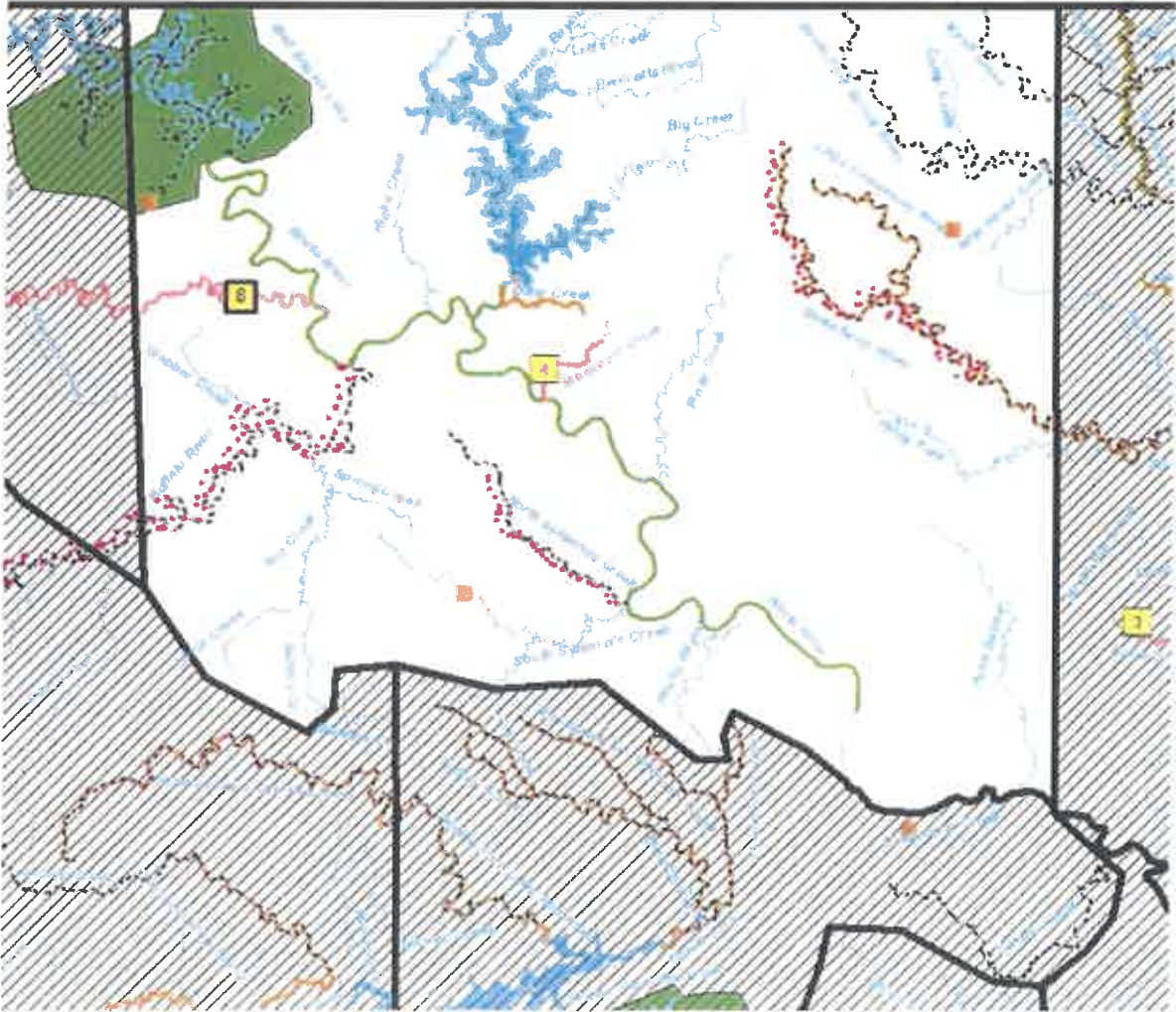


# Plate OH-3 (Ozark Highlands)

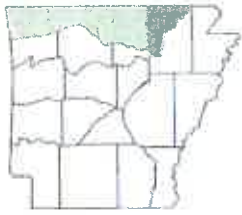


**LEGEND**

- - - Extraordinary Resource Waters
- Natural and Scenic Watersheds
- ▭ Variation of UAA
- Ecologically Sensitive Watersheds
- ESA Cave Springs and Seeps
- Trout Waters



# 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

