

**ARKANSAS POLLUTION CONTROL
AND ECOLOGY COMMISSION**



REGULATION NO. 2

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

INITIAL DRAFT

Submitted to the Arkansas Pollution Control and Ecology Commission on September 24, 2010

DESIGNATED USES: GULF COASTAL ECOREGION
(Plates GC-1, GC-2, GC-3, GC-4)

Extraordinary Resource Waters

Saline River (GC-3, GC-4)

Moro Creek - adjacent to natural area (GC-3)

Natural and Scenic Waterways

Saline River from the Grant-Saline County line to mouth (GC-3)

Ecologically Sensitive Waterbodies

Little River above Millwood Reservoir - location of Ouachita rock pocketbook and pink mucket mussels (GC-1)

Grassy Lake and Yellow Creek below Millwood Reservoir - unique ecosystem and biota (GC-1) Lower Little

Missouri River - location of peppered shiner and longnose darter (GC-2)

Lower Saline River - location of peppered shiner, crystal darter and goldstripe darter (GC-3)

Ouachita River near Arkadelphia - location of flat floater, Ouachita rock pocketbook and pink mucket mussels (GC-2)

Streams with Substantial Springwater Influence

L'Eau Frais (GC-4)

Cypress Creek (GC-4)

East and West Fork Tulip Creeks (GC-4)

Others to be determined

Primary Contact Recreation - all streams with watersheds greater than 10 mi² and all lakes/reservoirs

Secondary Contact Recreation - all waters

Domestic, Industrial and Agricultural Water Supply - all waters

Fisheries

Trout

Little Missouri River from Narrows Dam to confluence with Muddy Fork (GC-1)

Lakes and Reservoirs - all

Streams

Seasonal Gulf Coastal fishery - all streams with watersheds of less than 10 mi² except as otherwise provided in Reg. 2.505

Perennial Gulf Coastal fishery - all streams with watersheds of 10 mi² or larger and those waters where discharges equal or exceed 1 CFS

Use Variations Supported by UAA

Loutre Creek - perennial fishery, 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 fishery (GC-4, #5)

Jug Creek - perennial fishery (GC-2, #6)

Lick Creek - seasonal fishery; 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 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)

Use Variations Supported by UAA

- 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)
- Bayou de Loutre from Gum Creek to 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 State line - no domestic water supply use(GC-2,#18)
- Alcoa unnamed trib to Hurricane Cr.and Hurricane Cr. - 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
- Boggy Creek from the discharge from Clean Harbors El Dorado LCC downstream to the confluence of Bayou de Loutre - no domestic water supply use

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

Variations Supported by UAA

Loutre Creek - from headwaters to railroad bridge, critical season D.O. standard - 3 mg/l; primary season - 5 mg/l;
from railroad bridge to mouth, critical season D.O. - 2 mg/l (GC-2, #1)

Unnamed tributary to Smackover Creek - headwaters to Smackover Creek, year round D.O. criteria - 2 mg/l
(GC-2, #2)

Unnamed tributary to Flat Creek - from headwaters to Flat Creek, year round D.O. criteria - 2 mg/l (GC-2, #4)

Dodson Creek - from headwaters to confluence with Saline River, critical season D.O. standard - 3 mg/l (GC-4, #5)

Jug Creek - from headwaters to confluence with Moro Creek, critical season D.O. standard - 3 mg/l (GC-2, #6)

Lick Creek - from headwaters to Millwood Reservoir, critical season D.O. 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 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; TDS - 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; dissolved solids 420
mg/l(GC-1,#13)

Town Creek below Acme tributary - sulfates 200 mg/l; TDS 700 mg/l(GC-4,#14)

Unnamed trib. from Acme - sulfates 330 mg/l; TDS 830 mg/l(GC-4,#14)

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

Bayou de Loutre from Gum Creek to State line - Chlorides 250 mg/l; TDS 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 D.O.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; TDS 383 mg/l (GC-2,#27)

Horsehead Creek from AUT to mouth - chlorides 85 mg/l; TDS 260 mg/l(GC-2,#27)

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

Dismukes Creek – chlorides 26 mg/L; TDS 157 mg/L (GC-2, #28)

Big Creek from Dismukes to Bayou Dorcheat – chlorides 20 mg/L; TDS 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 from Great Lakes Chemical Company Outfall 002 to Bayou de Loutre-chloride 65, sulfate 35 mg/L,
TDS 141 mg/L (GC-2, #31)

Unnamed tributary from Great Lakes Chemical Company Outfall 004 to Bayou de Loutre-chloride 239 mg/L.,
TDS 324 mg/L (GC-2, #32)

Bayou de Loutre from mouth of UT004 to mouth of Loutre Creek, chloride 278 mg/L (GC-2, #33)

Unnamed tributary from Great Lakes Chemical Company Outfall 003 (UT003) downstream to unnamed tributary
to Little Cornie Bayou – chloride 538 mg/L, sulfate 35 mg/L, and TDS 519 mg/L (GC-2, #34)

Unnamed tributary of Little Cornie Bayou to confluence with Little Cornie Bayou – chloride 305 mg/L and TDS

325 mg/L (GC-2, #35)
Little Cornie Bayou from mouth UTA to state line- chloride 215mg/L,sulfate 25mg/L and TDS 500mg/L. (GC-2, #36)

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)

Flat Creek from mouth of UTA to confluence with Haynes Creek,
Chloride 165 mg/L, Sulfate 67 mg/L, TDS 560 mg/L (GC-2, #39)

Haynes Creek from mouth of Flat Creek to confluence with Smackover Creek, Chloride 360 mg/L, Sulfate 55 mg/L,
TDS 855 mg/L (GC-2, #40)

Loutre Creek from Hwy 15 South to the confluence of Bayou de Loutre Chloride, 256mg/l; Sulfate 997mg/l, TDS,
1756* (GC-3. #41)

Bayou de Loutre from Loutre Creek to the discharge for the City of El Dorado South facility Chloride, 264mg/l;
Sulfate 635mg/l, TDS, 1236* (GC-3. #42)

Bayou de Loutre from the discharge from the City of El Dorado-South downstream to the mouth of Gum Creek. Chloride,
250mg/l; Sulfate 431mg/l, TDS, 966 (GC-3. #43)

Bayou de Loutre from the mouth of Gum Creek downstream to the mouth of Boggy Creek Chloride, 250mg/l;
Sulfate 345mg/l, TDS, 780 (GC-3. #44)

Bayou de Loutre from the mouth of Boggy Creek downstream to the mouth of Hibank Creek Chloride, 250mg/l; Sulfate
296mg/l, TDS, 750 (GC-3. #45)

Bayou de Loutre from the mouth of Hibank Creek downstream to the mouth of Mill Creek Chloride, 250mg/l; Sulfate
263mg/l, TDS, 750 (GC-3. #46)

Bayou de Loutre from the mouth of Mill Creek downstream to the mouth of Buckaloo Branch Chloride, 250mg/l; Sulfate
237mg/l, TDS, 750 (GC-3. #47)

Bayou de Loutre from the mouth of Buckaloo Branch downstream to the mouth of Bear Creek Chloride, 250mg/l; Sulfate
216mg/l, TDS, 750 (GC-3. #48)

Bayou de Loutre from the mouth of Bear Creek to the final segment of Bayou de Loutre. Chloride, 250mg/l; Sulfate
198mg/l, TDS, 750(GC-3. #49)

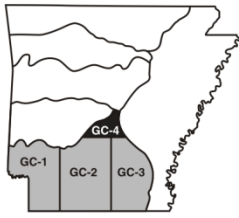
Bayou de Loutre (Final Segment) to the Arkansas / Louisiana State Line. Chloride, 250mg/l; Sulfate 171 mg/l, TDS,
750(GC-3. #50)

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







Variations Supported by EIP

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

Plate GC-4 (Gulf Coastal Plain)



LEGEND

-  - Ecologically Sensitive Waterbodies
-  * Trout * - Trout Waters
-  - Extraordinary Resource Waters
-  - Natural and Scenic Waterways
-  - Variation by UAA
-  - Variation by EIP

