

**RESPONSIVENESS SUMMARY CONCERNING THE
EPA'S JUNE 26, 2008 PUBLIC NOTICE PROPOSING
TO APPROVE/DISAPPROVE THE ARKANSAS 2008 303(D) LIST**

Public Participation Process:

On June 28, 2008, EPA Region 6 published a notice in the legal advertising sections of the Arkansas Democrat-Gazette (Little Rock, AR) and the Morning News of Northwest Arkansas (Springdale, AR) notifying the public of the availability of the Environmental Protection Agency (hereinafter, "EPA") decisions identifying water quality limited segments and associated pollutants in Arkansas. Notice of availability was also published in the Federal Register, Vol. 73, Num. 124, page 36319 on June 26, 2008. Copies of documents which explain the rationale for the EPA's decisions were provided at the EPA Region 6 public website <http://www.epa.gov/region6/water/npdes/tmdl/index.htm> and were available on request. The public comment period closed on July 28, 2008.

Summary of Public Participation:

The following persons or entities provided written comments during the public comment period:

1. Steve Drown, Chief
Water Division
Arkansas Department of Environmental Quality
North Little Rock, Arkansas

2. Vince Bluebaugh, Principal
GBMc & Associates
Bryant, Arkansas

EPA's Specific Responses to Comments Made by the Public:

Comments received on water body pollutant pairs identified in Appendix I:

Appendix I listed twenty (20) water body pollutant pairs identified by EPA which appear to have been listed in error. There is sufficient data and/or information to refute the listing. EPA is taking neither an approval or disapproval action on these water body pollutant pairs.

Comment 1: *The TMDL development for these waterbodies occurred outside the period of record, July 1, 2002 to June 30, 2007. Therefore, these waterbodies will need to remain in Category 5 of the 2008 list.*

Stream Name	HUC	RCH	P-Seg	Miles	Station ID	Assess	Pollutant
Deep Bayou	8040205	005	2B	28.9	OUA0151	M	FC
Bayou Bartholomew	8040205	013	2B	33.9	BYB03	M	FC
Bearhouse Creek	8040205	901	2B	24.4	OUA0155	M	FC
Harding Creek	8040205	902	2B	4.6	OUA0145	M	FC

Melton's Creek	8040205	903	2B	8.7	OUA0148	M	FC
Cross Bayou	8040205	905	2B	2.4	OUA0152	M	FC
Chemin-A-Haut Cr	8040205	907	2B	30.5	OUA0012	M	FC
M. Fk. Little Red	11010014	027	4E	8.8	WHI0043	M	FC
M. Fk. Little Red	11010014	028	4E	12.0		E	FC

Response: The purpose of the period of record and data assessment cutoff date is to allow a State adequate time to make assessments and develop the list. In this particular case, the listings did not change in 2008, because no new data and information were collected to make an updated assessment. However, the TMDLs were established prior to April 1, 2008, when the IR submission was due; therefore, it is acceptable to delist these waterbody pollutant pairs to Category 4a to reflect that TMDLs are no longer needed.

Comment 2: *These waterbodies were not included on the 2008 303d list submitted by ADEQ and a justification for not listing this waterbody was supplied as part of the submittal.*

Stream Name	HUC	RCH	P-Seg	Miles	Station ID	Assess	Pollutant
Strawberry R.	11010012	006	4G	19.0	WHI0024	M	DO
Richland Creek	11010005	024	4J	28.7	BUFT09	M	Temp

Response: EPA respectfully disagrees. These two waterbodies are listed in Table IV-2, page 92 of the 2008 IR Report.

Comment 3: *ADEQ agrees that these waterbodies should not be listed.*

Stream Name	HUC	RCH	P-Seg	Miles	Station ID	Assess	Pollutant
Melton's Creek	8040205	903	2B	8.7	OUA0148	M	DO
Big Creek	8040203	904	2C	10.0	OUA0018	M	TP
Big Creek	8040203	904	2C	10.0	OUA0018	M	NO3
Days Creek	11010005	003	1B	11.0	RED0004A	M	Pb
Smackover Creek	8040201	006	2D	14.8	OUA0027	M	Pb
Smackover Creek	8040201	007	2D	29.1		E	Pb
St. Francis River	8020203	014	5A	22.8	FRA0008	M	Cu
St. Francis River	8020203	014	5A	22.8	FRA0008	M	Pb

Response: EPA agrees.

Comments received on water body pollutant pairs identified in Appendix II:

Appendix II is a list of fifty-seven (57) water body pollutant pairs delisted during the 2008 §303(d) List cycle along with the justification.

Comment 4: *ADEQ disagrees with the listing of waterbodies for the individual parameters of either FC (fecal coliform) or EC (E. coli), as these waterbodies were properly listed for pathogens as per the 2006 Integrated Report (“IR”) Guidance and the 2002 Consolidated Assessment and Listing Methodology (“CALM”). Additional pathogen data has been developed for these waters and they were all delisted based on the new data. Therefore, to list these waterbodies in Category 4a would be in error.*

Stream Name	HUC	RCH	P-Seg	Miles	Station ID	Assess	Pollutant
Overflow Creek	11010014	004	4E	21.7		E	FC
Overflow Creek	11010014	006	4E	21.7	OFC01	M	FC
Little Red River	11010014	007	4E	21.4	WHI0059	M	FC
Little Red River	11010014	008	4E	9.0		E	FC
Ten Mile Creek	11010014	009	4E	18.6	TMC01	M	FC
Little Red River	11010014	010	4E	2.9		E	FC
Little Red River	11010014	012	4E	8.0		E	FC
S. F. Little Red R.	11010014	038	4E	14.7	SRR01&02	M	FC
Data Creek	11010009	902	4G	21.8	WHI065	M	FC
Cooper Creek	11010012	003	4G	11.8	WHI0143S	M	FC
Strawberry River	11010012	008	4G	8.4		E	FC
L. Strawberry River	11010012	010	4G	16.0	WHI0143H+	M	FC
L. Strawberry River	11010012	010	4G	16.0	WHI0143H+	M	EC
Strawberry River	11010012	011	4G	20.4	SBR01	M	FC
Strawberry River	11010012	011	4G	20.4	WHI0143A		FC
Reed's Creek	11010012	014	4G	15.0	RDC01	M	FC
Caney Creek	11010012	015	4G	11.6	WHI0143Q&R	M	FC
Mill Creek	11010012	015	4G	9.9	WHI0143N	M	FC
Mill Creek	11010012	015	4G	9.9	WHI0143N	M	EC

Response: The State of Arkansas water quality standards Regulation 2.507 include definitions and numeric criteria for both fecal coliform and *Escherichia coli* bacteria. The terms “pathogen” or “pathogens” are not defined in the standards, nor do they appear anywhere in the standards. Available data for either fecal coliform or *E. coli*, or both, may be assessed to determine attainment of applicable standards. EPA recognizes that both fecal coliform and *E. coli* are indicators of potential risks associated with many other pathogens that may cause waterborne diseases, but the identification of the specific indicator in the Integrated Report is simply more informative and consistent with the water quality standards.

Both the 2006 Integrated Report Guidance and the 2002 CALM guidance use the term “pathogens” generally as a causative agent of disease. Listing a waterbody for “pathogens” is analogous to listing a waterbody as impaired by metals or minerals, rather than listing the specific metal or mineral for which the waterbody is impaired.

Comment 5: Likewise, ADEQ also disagrees with listing of the four lakes for NU. As fully detailed in ADEQ’s comments to EPA’s Record of Decision for the 2006 303(d) list, there are no water quality standards for nutrients or assessment methodologies for nutrients. Additionally, ADEQ notes that Big Creek and Lake Frierson are already listed in Category 4a.

Stream Name	HUC	RCH	P-Seg	Miles	Station ID	Assess	Pollutant
Horseshoe Lake	8020203	Lake	5A				NU
Bear Creek Lake	8020205	Lake	5A				NU
Old Town Lake	8020303	Lake	5A				NU
Mallard Lake	8020204	Lake	5C				NU

Response: EPA assessed data collected from these lakes based on ADEQ Regulation 2.509 which states “Materials stimulating algal growth shall not be present in concentration sufficient to cause objectionable algal densities or other nuisance aquatic vegetation or otherwise impaired any designed use of the waterbody. Impairment of a waterbody from excess **nutrients** [emphasis added] are dependent on the natural waterbody characteristics such as stream flow, residence time, stream slope, substrate type, canopy, riparian vegetation, primary use of waterbody, season of the year and ecoregion water chemistry. Because nutrient water column concentration do [does] not always correlate directly with stream impairments, impairments will be assessed by a combination of factors such as water clarity, periphyton or phytoplankton production, dissolved oxygen values, dissolved oxygen saturation, diurnal dissolved oxygen fluctuation, pH values, aquatic-life community structure and possibly others. However, when excess nutrients result in impairment, based upon Department assessment methodology, by an established, numeric water quality standard, the waterbody will be determined to be impaired by nutrients.”

Therefore, if a lake was not meeting one or more of the numeric water quality standards (i.e. pH, dissolved oxygen, turbidity) and also experienced excessive dissolved oxygen fluctuations, dissolved oxygen saturation greater than 125%, water clarity, etc. then it was considered impaired. All of the lakes listed above met one or more of these criteria. Please see EPA’s response to comments on the Arkansas 2006 section 303(d) list action for details.

ADEQ has reported these lakes in Category 4a (Table IV-1, page 86) in the 2008 Integrated Report. TMDLs were established by EPA during 2007; therefore, it is appropriate to delist these lakes to Category 4a for the 2008 listing cycle.

Comment 6: *ADEQ agrees that these waterbodies should not be listed.*

Stream Name	HUC	RCH	P-Seg	Miles	Station ID	Assess	Pollutant
Bayou Bartholomew	8040205	001	2B	60.1	OUA0013	M	Pb
Saline River	8040204	001	2C	2.8	OUA0010A	E	Zn
Saline River	8040204	002	2C	53.0	OUA0010A	M	Zn
Saline River	8040204	004	2C	16.4		E	Zn
Bayou De L'outre	8040202	006	2D	32.4	OUA0005	M	Pb
Bayou De L'outre	8040202	007	2D	6.9	OUA0005	E	Pb
Bayou De L'outre	8040202	008	2D	10.6	OUA0005	E	Pb
Fourche Creek	11110207	022	3C	9.2	ARK131+	M	Pb
Prairie Cypress	8020304	014	4A	26.1	WHI0073	M	Pb
Bayou DeView	8020302	009	4B	20.3	WHI0026	M	Pb
Bayou DeView	8020302	009	4B	20.3	WHI0026	M	Cu
Bayou DeView	8020302	009	4B	20.3	WHI0026	M	Zn
Lost Creek Ditch	8020302	909	4B	7.9	WHI0172	M	Cu
Lost Creek Ditch	8020302	909	4B	7.9	WHI0172	M	Pb
Lost Creek Ditch	8020302	909	4B	7.9	WHI0172	M	Zn

Response: EPA agrees.

Comment 7: *ADEQ notes that the following waterbodies are not listed for the parameters cited above: Saline River (8040204-006 & 010); Arkansas River (11110203-026, 027, 028, & 030); Days Creek (00040302-003); Cove Creek (8040102-970); Little Missouri River (8040103-001);*

Chickalah Creek (11110204-014), Middle Fork Little Red River (11010014-017 & 028); White River (11010004-014); Saline River (8040203-010). For Bayou Meto (8020402-007), ADEQ agrees that this waterbody should not be listed.

Stream Name	HUC	RCH	P-Seg	Miles	Station ID	Assess	Pollutant
Bayou Meto	8020402	007	3B	12.3	ARK0050	M	Zn
Saline River	8040204	006	2C	17.5	OUA0118	M	SO4
Arkansas River	11110203	026	3F	2.6	ARK0031	M	TDS
Arkansas River	11110203	027	3F	9.9	ARK0031	E	TDS
Arkansas River	11110203	028	3F	1.2	ARK0031	E	TDS
Arkansas River	11110203	030	3F	5.1	ARK0031	E	TDS
Saline River	8040204	010	2C	17.5	OUA26&41	M	SO4
Days Creek	11140302	003	1B	11.0	RED0004A	M	SI
Cove Creek	8040102	970	2F	9.6	OUA0159	M	Cu
Cove Creek	8040102	970	2F	9.6	OUA0159	M	pH
L. Missouri River	8040103	008	2G	19.6	OUA0035	M	SI
Chickalah Creek	11110204	002	3G	19.3	ARK0058	M	DO
M. Fk. Little Red	11010014	027	4E	8.8	WHI0043	M	DO
M. Fk. Little Red	11010014	028	4E	12.0		E	DO
White River	11010004	014	4F	4.7	WHI0046	M	Temp

Response: EPA agrees. As stated, Appendix II is a listing of waters with adequate justification to delist in 2008; therefore, they would not be included on the 2008 list. The Saline River (8040204-006) was proposed for listing in 2006 by EPA, but additional information provided during the comment period resulted in EPA's decision not to add this waterbody to the 2006 303(d) list. EPA did add Bayou Meto (8020402-007) to the Arkansas 2006 Section 303(d) list, but new data and information has resulted in a delisting for the 2008 listing cycle.

Comment 8: *For Bayou De View (8020302-009), most recent data compiled by ADEQ indicates impairment for AL.*

Bayou DeView	8020302	009	4B	20.3	WHI0026	M	AL
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Response: Bayou DeView was not listed for aluminum impairment in the 2008 IR. Based upon ADEQ's comment, EPA will add it to the 2008 Section 303(d) list as it must have been omitted in error.

Comments received on water body pollutant pairs identified in Appendix III:

Appendix III is a listing of thirty-five (35) water bodies shown as impaired for Beryllium on the 2008 §303(d) List. Chamberlain Creek (HUC 8040102, reach 971) is the only segment proposed by EPA for inclusion on the 2008 §303(d) List. EPA is taking neither an approval nor disapproval action on all other Beryllium listings.

Comment 9: *It is anticipated that these waterbodies, except Chamberlain Creek, will be removed from the 303d list in 2010, after the 2007 triennial review of the state water quality regulations are fully approved and adopted.*

Stream Name	HUC	RCH	P-Seg	Miles	Station ID	Assess	Pollutant
Columbia Lake	11140203	Lake	1A			M	Be

Earling	11140205	Lake	1A			M	Be
DeQueen	1114109	Lake	1C			M	Be
Millwood	11140109	Lake	1C			M	Be
Ables Creek	8040205	911	2B	14.6	OUA0158	M	Be
Saline River	8040203	007	2C	3.8	OUA0042	M	Be
Big Creek	8040203	904	2C	10.0	OUA0018	M	Be
Saline River	8040204	002	2C	53.00	OUA0010A+	M	Be
Big Creek	8040204	005	2C	28.9	OUA0043	M	Be
Saline River	8040204	006	2C	17.5	OUA0118	M	Be
Big Cornie Creek	8040206	015	2E	15.0	OUA0002	M	Be
Ouachita Lake	8040101	Lake	2F			M	Be
Ouachita River	8040102	007	2F	14.5	OUA0006	M	Be
Caddo River	8040102	016	2F	13.5	OUA0023	M	Be
D.C. Creek	8040102	923	2F	5.0	OUA0044T	M	Be
Cove Creek	8040102	970	2F	9.6	OUA0159	M	Be
Chamberlain Creek	8040102	971	2F	2.5	OUA0104	M	Be
Lucinda Creek	8040102	975	2F	2.2	OUA0171B	M	Be
DeGray Lake	8040102	Lake	2F			M	Be
Arkansas River	11110207	01	3C	6.7	ARK0048	M	Be
Fourche Creek	11110207	024	3C	11.2	ARK0130+	M	Be
Beaverfork Lake	11110205	Lake	3D			M	Be
Atkins Lake	11110203	Lake	3F			M	Be
Overcup Lake	11110203	Lake	3F			M	Be
Petit Jean River	11110204	011	3G	21.6	ARK0034	M	Be
Lost Creek Ditch	8020302	909	4B	7.9	WHI0172	M	Be
Bear Creek	11010003	045	4I	25.9	WHI0174	M	Be
Crooked Creek	11010003	049	4I	36.2	WHI0067	M	Be
White River	11010001	027	4K	23.8	WHI0106	M	Be
War Eagle Creek	11010001	034	4K	22.2	WHI0116	M	Be
Kings River	11010001	042	4K	39.5	WHI0123	M	Be
Dry Fork Creek	11010001	043	4K	16.5	WHI0127	M	Be
Osage Creek	11010001	047	4K	13.4	WHI0130	M	Be
Yocum Creek	11010001	052	4K	16.2	WHI0137	M	Be
St. Francis River	8020203	014	5A	22.8	FRA0008	M	Be

Response: The new criterion for beryllium was adopted by the Arkansas Pollution Control and Ecology Commission (APC&EC) on September 28, 2007 and became effective under Arkansas Sate Law on October 10, 2007 (See Reg. 2.508, page 5-7). EPA approved the revision of the beryllium criterion on January 24, 2008, prior to the submittal of the 2008 Section 303(d) list; therefore, the listings may be removed from the 303(d) list at this time with the exception of Chamberlain Creek.

Comments received on water body pollutant pairs identified in Appendix IV:

Appendix IV is the list of seventy-three (73) water body pollutant pairs EPA is proposing to add to the 2008 §303(d) List.

Comment 10: ADEQ agrees and will add these waterbodies to the list.

Group	Stream Name	HUC	RCH	P-Seg	Station ID	Assess	Pollutant	Priority
a	Big Creek	11140203	923	1A	BIG01	M	Pb	L
a	Dorcheat Bayou	11140203	026L	1A	UWBBDT02		DO	L
a	Able's Creek	8040205	911	2B	OUA0158	M	SI	M
a	Bayou Bartholomew	8040205	013	2B	BYB03	M	DO	M
a	Overflow Creek	8040205	908	2B	OUA0012A	M	Cl	M
a	Wolf Creek	8040205	701	2B	OUA0156	M	DO	L
a	Big Creek	8040204	005	2C	OUA0043	M	pH	L
a	Ten Mile Bayou	8020203	006t	5A	FRA0029	M	DO	L
a	Prairie Creek	8020205	901	5B	FRA0035	M	Cl	L
a	Prairie Creek	8020205	901	5B	FRA0035	M	SO4	L
a	Prairie Creek	8020205	901	5B	FRA0035	M	TDS	L
b	Salt Creek	8040201	806	2D	OUA137D	M	pH	L
c	Smackover Creek	8040201	006	2D	OUA0027	M	Zn	L
c	Smackover Creek	8040201	007	2D		E	Zn	L
d	Saline River	11140109	014	1C	RED0032	M	DO	M
d	Prairie Creek	8040101	048	2F	OUA0040	M	DO	L
d	Ouachita River	8040102	007	2F	OUA0006A	M	Zn	L
d	Fourche Creek	11110207	024	3C	ARK0147H	M	Cu	L
d	Fourche La Fave R.	11110206	001	3E	ARK0036	M	DO	L
d	Chickalah Creek	11110204	002	3G	ARK0058	M	SI	L
d	Big Creek	11010005	027	4J	BUFT18	M	DO	L
d	Leatherwood Creek	11010001	?	4K	WHI0012B	M	DO	L

Response: In order for ADEQ to add these to the 2008 Section 303(d) list, the list would have to be taken out for public comment again and re-submitted to EPA for approval. To simplify matters, EPA will add these to the 2008 Section 303(d) list as proposed.

Comment 11: ADEQ notes that these sites are listed on the 2008 list.

Group	Stream Name	HUC	RCH	P-Seg	Station ID	Assess	Pollutant	Priority
a	Bayou Bartholomew	8040205	006	2B	OUA0033	M	Pb	M

Response: EPA respectfully disagrees. The 2008 IR shows that Bayou Bartholomew, reach 006, is listed only for DO.

Comment 12: ADEQ notes that these sites are listed on the 2008 list.

Group	Stream Name	HUC	RCH	P-Seg	Station ID	Assess	Pollutant	Priority
a	Smackover Creek	8040201	006	2D	OUA0027	M	SI	L
a	Smackover Creek	8040201	007	2D		E	SI	L

Response: EPA agrees. Smackover Creek is listed for SI in Table IV-2 of the IR on lines 9 and 10. EPA will remove the Smackover Creek listings for SI from EPA's proposed additions to the list.

Comment 13: *ADEQ disagrees with the listing of this segment because it is inappropriate to evaluate reach 024 with data collected in Reach 022. There is no data available from Reach 024. Reach 024 is directly upstream of Reach 022 but a tributary with numerous potential sources enters the waterbody between these two reaches, thus making data collected from Reach 022 inapplicable to Reach 024.*

Group	Stream Name	HUC	RCH	P-Seg	Station ID	Assess	Pollutant	Priority
b	Dorcheat Bayou	11140203	024	1A		E	Pb	L

Response: At the top of the Segeval Report for Dorcheat Bayou it states that data from Reach 22 can be used to make an evaluated assessment for Reaches 20 and 24. ADEQ has made an evaluated assessment for Reach 24 using Reach 22 data for the pH listing. EPA based its decision using the same approach as that was applied by ADEQ.

Comment 14: *EPA misapplied the geometric mean criteria in 2006 and listed this waterbody in error. As per EPA guidance, the geometric mean is based on a statistically sufficient number of samples (generally not less than 5 samples equally spaced over a 30-day period). None of the data collected above meet this criteria.*

b	Blue Bayou	8020301	009	1C	BLB0001	M	FC	L
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Response: As stated EPA’s Responsiveness Summary for the 2006 303(d) list, neither Reg. 2.507 (April 23, 2004) or the 2006 Assessment Methodology address how to apply the geometric mean criteria. Bacteria data were provided to EPA in Excel format. In the spreadsheets the geometric mean was calculated using all the available monthly data for the primary contact season and the secondary contact season. Therefore, EPA followed the same method as was used by ADEQ for calculating the geometric means.

EPA added this waterbody pollutant combination to the Arkansas 2006 Section 303(d) list. There is no new data to support a delisting; therefore, the waterbody pollutant combination is being carried forward to the Arkansas 2008 Section 303(d) list.

Comment 15: *ADEQ disagrees with the listing of this waterbody because the sample size was not large enough to determine percent exceedance. According to the assessment methodology, there must be a minimum of 12 samples available to calculate the percent exceedance rate. Waterbody segments with a greater than ten percent exceedance rate are considered impaired. For this waterbody segment only six samples were available during the period of record. The TDS standard for the Cossatot River is 70 mg/L. There were only two exceedances of this standard during the period of record (39, 60, 73, 67, 70, and 83 mg/L).*

b	Little Cossatot R.	11140109	?	1C	LCO01	M	TDS	L
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Response: As pointed out in EPA’s Responsiveness Summary for the 2006 Section 303(d) list, there seems to be a disparity in one of the data values, 70 vs. 73.5. The table below shows the TDS data that was assessed by Segeval (automated assessment program). Based on these data there are three exceedances of the 70 mg/l criterion. Based on a sample size of 12, three exceedances are required to list. Since there are already 3 exceedances, an additional 6 data points will not alter the outcome of the analysis. Therefore, the water is considered impaired for

TDS. Please refer to the EPA Responsiveness Summary for the Arkansas 2006 Section 303(d) list for discussion on small sample sizes.

StationID	LogNumber	DateCollected	TDS
LCO001	101026	8/20/2002	83
LCO001	91828	8/1/2000	73.5
LCO001	93534	1/8/2001	39
LCO001	94274	3/12/2001	60
LCO001	95532	6/18/2001	73
LCO001	96741	9/4/2001	67.0

EPA added this water to the Arkansas 2006 Section 303(d) list. Since there is no new data to support a delisting, the waterbody pollutant combination must remain on the 303(d) list. Therefore, EPA is adding it to the Arkansas 2008 Section 303(d) list.

Comment 16a: *ADEQ disagrees with the listing of this waterbody because there is only one exceedance of the acute copper criteria using the 25 mg/l hardness value. Based on the assessment methodology, listing is only warranted when there is more than one exceedance in the three-year period of record.*

b	Bearhouse Creek	8040205	901	2B	OUA0155	M	Cu	L
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Comment 16b: *ADEQ disagrees with the listing of this segment because there are only 9 samples (32, 5.4, 6.8, 3.3, 15, 50, 100, 100, and 24 NTU) in the database and 3 exceedances. Two samples were recorded for 6/5/2000; one is a duplication error. In addition, in accordance with Regulation No. 2.503, 24 samples are needed to assess for turbidity, thus requiring 6 exceedances to list.*

b	Melton's Creek	8040205	903	2B	OUA0148	M	SI	L
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Comment 16c: *ADEQ disagrees with the listing of this segment because EPA does not present any additional data that supports this listing of this segment for turbidity. In the ROD for the 204 list, EPA stated "ADEQ shows a new listing for this segment as being impaired for turbidity (SI). The 2006 Segeval report is in disagreement with this decision." At that time, ADEQ reviewed the listing and agreed with EPA that the segment should not be listed. The ROD for the 2008 list does not present any additional data that would support this change.*

b	M. Fk. Little Red	11010014	030	4E	UWMFK01	M	SI	H
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Comment 16d: *ADEQ disagrees with the listing of this segment because OUA0012A is not on Bayou Bartholomew; it is located on Overflow Creek. This mistake has been noted to EPA on previous occasions. In addition, there are 60 samples from Bayou Bartholomew (OUA0013) and only one exceedance. Overflow Creek has been properly listed on the 200(d) list.*

c	Bayou Bartholomew	8040205	001	2B	OUA13 & OUA12A	M	CI	M
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Response (comments 16a-16d): Based on information provided by ADEQ during the public comment period for the 2006 Section 202(d) list, EPA did not add these four waterbody pollutant combinations to the Arkansas 2006 Section 303(d) list. Since there is no new information or data to be considered for the 2008 listing cycle, EPA is removing these from the list of proposed additions.

Comment 17: *ADEQ listed Town Branch in Category 4b on the 2008 list.*

b	Town Branch	11110103	901	3J	ARK0056	M	TP	H
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Response: EPA did not receive a justification from ADEQ to include Town Branch in Category 4b for the 2008 listing cycle. There are no tables in the 2008 IR Report to show Town Branch was listed in Category 4b, in fact, Town Branch is missing altogether from the 2008 Section 303(d) list submission and IR.

Comment 18: *ADEQ disagrees with the addition of this waterbody to the list because all exceedances were outside the period of record.*

d	Saline River	8040204	002	2C	OUA0117	M	Pb	L
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Response: EPA respectfully disagrees. The 3 exceedances occurred between January 25, 2005 and January 2, 2007. The period of record for the 2008 list is July 2002 through June 2007. The dates of exceedance are within the dates for the period of record.

Comment 19: *ADEQ disagrees with the listing of these waterbodies because the sample size was not large enough to determine percent exceedance. According to the assessment methodology, there must be a minimum of 12 samples available to calculate the percent exceedance rate. Waterbody segments with a greater than ten percent exceedance rate are considered impaired. For this waterbody segment only six samples available during the period of record.*

Group	Stream Name	HUC	RCH	P-Seg	Station ID	Assess	Pollutant	Priority
d	Marzan Creek	8040101	045	2F	MZC0001	M	pH	L
d	Cadron Cr., E. Fk	11110205	002	3D	ARK0158	M	SI	L
d	Cedar Cr.	11110206	011	3E	CED0001	M	pH	L
d	Gafford Creek	11110206	012	3E	GAF0001	M	pH	L

Response: According to the 2006 Integrated Report Guidance “a methodology may provide for an initial sample size screen, but should also provide for a further assessment of sample sets that do not meet the target sample size.” EPA believes that even the smallest data sets should be evaluated and in appropriate circumstances, used in assessment decisions. A “non-support” decision can be made with less than 12 samples if the WQS for the samples collected is equal to or greater than the number of exceedances needed to list if there were 12 samples. For example; based on a > 10% exceedance (using the “rounding” to calculate number of samples needed for support) 2 exceedances out of 12 would be supporting. However, if only 3 samples have been collected and all of them exceed water quality standards, the water body should be listed as “non-support” because the number of exceedances for such a decision based on a minimum of 12 samples has already been met.

Comment 20: *ADEQ disagrees with the listing of these waterbodies for E. coli or FC. These are listed as impaired for pathogens as per the 2006 Integrated Report (“IR”) Guidance and the 2002 Consolidated Assessment and Listing Methodology (“CALM”). Both of those documents stated that EPA recommends the use of E. coli for the assessment of bacteria. Also, additional data for these sites have been developed as per the 1986 Ambient Water Quality Criteria for Bacteria. This additional data supports delisting from the list of impaired waterbodies.*

Group	Stream Name	HUC	RCH	P-Seg	Station ID	Pollutant	Priority
b	Big Piney Creek	11110202	018	3H	ARK105	FC	L
b	Hurricane Creek	11110202	022	3H	ARK119	FC	L
b	Little Piney Creek	11110202	024	3H	ARK104	FC	L
b	Little Piney Creek	11110202	025	3H	ARK126	FC	L
b	Mill Creek	11110202	901	3H	ARK110	FC	L
b	Walnut Creek:	11110202	902	3H	ARK125	FC	L
b	Cache River	8020302	028	4B	CHR04	FC	L
b	Glaise Creek	11010013	021	4C	GSC01	FC	L
b	Village Creek	11010013	012	4C	VGC02	FC	L
b	Bull Creek	8020301	009	4D	UWBLB01	FC	L
b	Big Creek	11010014	018	4F	WHI0164	FC	L
b	Greenbrier Creek	11010014	017	4F	WHI0167	FC	L
b	South Big Creek	11010012	013	4G	WHI0143J	FC	L
b	Strawberry R.	11010012	009	4G	SBR02	FC	L
c	Holly Creek	11140109	013	1C	RED34A&B	FC	M
c	Mine Creek	11140109	033	1C	RED0048B+	FC	M
c	Mine Creek	11140109	033	1C	RED0048A & 18B	EC	M
c	Cypress Bayou	8020301	010	4D	CPB01	FC	M
c	Cypress Bayou	8020301	011	4D		FC	M
c	Cypress Bayou	8020301	012	4D		FC	M
e	S. Fork Ouachita R.	8040101	043	2F	UWSF001	EC	L
e	Fourche Creek	11110207	024	3C	ARK0147D+	FC	L
e	Baron Fork	11110103	013	3J	ARK0007A	EC	H
e	Illinois River	11110103	023	3J	ILL04	EC	H
e	Illinois River	11110103	024	3J	ARK0040	EC	H
e	Illinois River	11110103	028	3J	ILL01	EC	H
e	Little Osage Creek	11110103	930	3J	ARK0155	EC	H
e	Muddy Fork	11110103	025	3J	MFI0004	EC	H
e	Osage Creek	11110103	030	3J	ARK0041	EC	H
e	Spring Creek	11110103	931	3J	SPG03	EC	H

Response: The State of Arkansas water quality standards Regulation 2.507 include definitions and numeric criteria for both fecal coliform and Escherichia coli bacteria. The terms “pathogen” or “pathogens” are not defined in the standards, nor do they appear anywhere in the standards. Available data for either fecal coliform or E. coli, or both, may be assessed to determine attainment of applicable standards. EPA recognizes that both fecal coliform and E. coli are indicators of potential risks associated with many other pathogens that may cause waterborne diseases, but the identification of the specific indicator on the section 303(d) list is simply more informative and consistent with the water quality standards.

Both the 2006 Integrated Report Guidance and the 2002 CALM guidance use the term “pathogens” generally as a causative agent of disease. Listing a waterbody for “pathogens” is analogous to listing a waterbody as impaired by metals or minerals, rather than listing the specific metal or mineral for which the waterbody is impaired.

Region 6 staff discussed the use of only E. coli for assessment purposes with Regional Counsel to determine if it is in agreement with Reg. 2.507 as written. Regional Counsel's response was "The assessment methodology states "primary and secondary contact uses will be assessed based on Escherichia coli." Arkansas water quality standards (Regulation 2) provide water quality criteria for both fecal coliform and E. coli. The opinion is that since both criteria are in the standards, then both need to be used for assessment purposes for the 2006 listing cycle. Using only one is not consistent with the standards." Regional Counsel's decision to assess for both E. coli and fecal coliform was emailed to ADEQ on February 2, 2006.

Comment 21: *ADEQ finds that the ROD is conclusory, without adequately detailed justifications that explain the defects that EPA found with ADEQ's assessment methodology or the methods that EPA found to be more appropriate. For example, in one part of the ROD, EPA states that ADEQ properly gathered "all existing and readily available data and information" related to waterbodies in the state. However, EPA then goes on to state that, for seventy-three(73) waterbodies, ADEQ did not consider "other types" of data, that being data other than that included in ADEQ's assessment methodology. ADEQ develops its assessment methodology in order to identify reliable indicators of impaired waterbodies. EPA reviews this methodology, and in the absence of any negative comment, ADEQ follows its assessment methodology in evaluating the state's waterbodies. EPA acknowledges that DEQ followed its assessment methodology and then, without notice or rational justification, selects "other types" of data to support adding stream segments to the 303(d) list.*

Response: EPA acknowledges that ADEQ provided a draft assessment methodology for EPA's review and comment. ADEQ was informed by letter, December 20, 2007 identifying unresolved issues in the final assessment methodology used to develop the Arkansas 2008 Section 303(d) list. While ADEQ did meet the minimum requirement under 40 CFR130.7(b)5 with regards to gathering "all existing and readily available data and information", it was not evident that "other types" of data were gathered and considered such as bioassessments, physical integrity and fish kills for §303(d) listing purposes. ADEQ's statement implies that EPA based its decision to add seventy-three waterbody pollutant combinations only on "other types" of data, which is incorrect. The majority of the waterbody pollutant combinations EPA is adding to the Arkansas 2008 Section 303(d) list are based solely on water chemistry data and numeric water quality criteria found in Arkansas standards. In the case of Muddy Fork (reach 027), Osage Creek (reaches 030 and 930), and Spring Creek (reach 931) in the Illinois River watershed (HUC 11110103), EPA used biological data in addition to the water chemistry data in a weight of evidence approach as described in EPA's 2004 and 2006 Responsiveness Summaries.

Comment 22: *"ADEQ again disagrees with the addition of 4 segments on Muddy Fork, Osage Creek, and Spring Creek as impaired for total phosphorus ("TP"). EPA first proposed, and ADEQ first objected to, listing these streams on the 2004 303(d) list. EPA refers to their 2004 ROD in supplying justification for the continued listing of these waterbodies. In the 2004 ROD, EPA concluded "that Arkansas did not provide a reasonable rationale for not considering listing due to potential exceedances of narrative standards absent approved implementation procedures." ADEQ finds several problems with this assessment and listing methodology." The same three flaws stated in the comments received during the 2006 public comment period are re-*

stated. Because of the length of the comment, refer to EPA's 2006 Responsiveness Summary for the complete comment.

"In addition, the recommendations of the 2004 report on Water Quality in the Illinois River and Kings River Basins relied upon by EPA for their listing decision point out the same problems that ADEQ finds with EPA using this data and the weight of evidence approach for making listing decisions for the Muddy Fork, Osage Creek and Spring Creek. The conclusions and recommendations listed in the 2004 report include, but are not limited to:

- USEPA Region 6 and Region 6 states should develop and make available more definitive assessment procedures and translators for assessing narrative criteria and aquatic life use attainment.*
- The most common and potentially dramatic stressor for these streams, sediment, was not explicitly considered in this assessment. Total suspended solids, sediment oxygen demand, and other sediment related parameters should be investigated throughout both river basins.*
- USEPA Region 6 should work with the states to develop a consistent, quantitative methodology for a weight-of-evidence approach when using chemical, physical and biological data to determine beneficial use attainment status.*

The 2004 report states that, "The results summarized in this report combined with other existing water quality data will allow USEPA to confer with ADEQ in making a decision on whether the aquatic life uses of the water bodies within the Illinois and Kings River basins are impaired and warrant placement on the...303(d) list." ADEQ seeks to confer with EPA and to work together to appropriately assess total phosphorus and to find an appropriate strategy for addressing associated water quality problems.

Response: EPA acknowledges that ADEQ has never been in agreement with EPA's listing of Muddy Fork, Osage Creek (2 reaches) and Spring Creek for total phosphorus. EPA has provided a rationale for listing as well as addressed the same and/or similar comments in the Record of Decision and Responsiveness Summaries for the 2002, 2004, 2006 and 2008 listing cycles. All of these documents can be located at <http://www.epa.gov/region06/water/npdes/tmdl/index.htm>.

In response to the latter part of the comment above, EPA awarded a Section 104(b)3 grant to ADEQ in October 2005 to conduct a project in the Upper Saline Watershed to field test ADEQ's proposed methodology to interpret ADEQ's narrative nutrient criterion. The proposed methodology uses a "weight-of-evidence" approach that takes into account both water quality and biological data; similar to the approach applied by EPA. During its review of the work plan and quality assurance project plan, EPA provided comments to ADEQ regarding the proposed nutrient assessment methodology. The project should be completed by September 2010. EPA understands that once the nutrient assessment methodology is finalized, it will be used throughout the state. EPA will continue to work with ADEQ in this arena. Also, other efforts to develop and adopt numeric nutrient criteria for causal and response variables would significantly aid the water quality assessment process.

Comment 23: *GBMc & Associates believes the comments they submitted to ADEQ during its public comment period were erroneously addressed. “The most significant mistake made [by ADEQ] in assessing our [GBMc]comment to the 2008 303(d) List was that the regulatory actions and technical information provided to ADEQ during the public participation process did not fall within the period of record for the 2008 assessment cycle (October 1, 2002 to September 30, 2007). The noted aquatic life study was conducted, and the regulatory changes to the Arkansas Water Quality Standards were made within the 2008 303(d) assessment cycle.” GBMc’s “contention is that the continued listing of these waterbodies (ELCC Tributary, Flat Creek, and Salt Creek) is not appropriate because the regulatory strategy for addressing the historical impairments has been accomplished; specifically the data used to support the listings is dated and does not reflect current instream conditions or the effluent improvements achieved by the El Dorado Chemical Company (EDCC). Based upon the information presented..., we request that the 2008 303(d) list be amended by removing the listings for the ELCC Tributary (HUC-Reach No. 08040201-606), Flat Creek (HUC-Reach No. 08040201-706) and Salt Creek (HUC-Reach No. 08040201-806) under Category 5e and 4a.”*

Response: The period of record reported by ADEQ in its responsiveness summary is not in agreement with that reported in the Assessment Methodology found in the Arkansas 2008 Integrated Report. The period of record from which most evaluations will be made for all the data used will be from July 1, 2002 through June 30, 2007. Metals and ammonia nitrogen toxicity evaluations will be based on a period of record from July 1, 2004 to June 30, 2007.

ADEQ included on the 2008 Section 303(d) list ELCC Trib for copper, zinc, and nitrate; Flat Creek for copper and zinc; and Salt Creek for copper. These listings were approved by EPA on June 18, 2008. As a result of the comments provided (above) by GBMc & Associates, EPA has re-assessed the data used for the copper and zinc listings for these waterbodies. The assessment methodology for metals has changed since the original 2004 listings. The 2004 listings were based on criteria calculated using the Gulf Coast Ecoregion hardness value. In 2006, ADEQ changed its assessment for metals such that the ambient hardness value is used in the calculation of the criterion. Using the revised assessment methodology, ELCC Trib (HUC-Reach No. 08040201-606) remains impaired for copper, but not for zinc; Salt Creek (HUC-Reach No. 08040201-806) is not impaired for copper; and Flat Creek (HUC-Reach No. 08040201-706) is not impaired for copper or zinc. Therefore, EPA is reversing its approval decision and delisting Salt Creek for copper, Flat Creek for copper and zinc, and ELCC Trib for zinc.

EPA agrees that the data used to support the continued listing of ELCC Trib for copper is dated; however, no new instream data for copper has been collected to support a delisting. The effluent data from EDCC does not reflect the instream conditions, but rather the conditions at the outfall. The benthic macroinvertebrate data submitted as an enclosure to the GBMc & Associates comment letter were reviewed by EPA as part of a third-party UAA submitted by ADEQ on August 17, 2007 for EPA’s review and approval. Several issues of concern were identified regarding toxicity testing and analysis; supporting documentation for benthic macroinvertebrate community analysis and conclusions; and exclusion of outfalls (other than Outfall 001) from mass balance calculations utilized in the derivation of site-specific minerals criteria. It is

recommended that new data be collected from ADEQ’s Stations OUA0137A and OUA0137B for assessment during the 2010 list cycle.

Likewise, on June 18, 2008, EPA took an approval action on the listing of ELCC Trib for nitrate. As pointed out by GBMc & Associates, EPA did approve the removal of the domestic water supply designated uses for ELCC Trib on November 9, 2007. The EPA approval date for the removal of the domestic water supply use is outside of the 2008 Section 303(d) list period of record. The purpose of the period of record and data assessment cutoff date is to allow a State adequate time to make assessments and develop the list. The removal of the domestic water supply use was approved by EPA prior to April 1, 2008, when the IR submission was due; therefore, it is acceptable to delist ELCC Trib for nitrate.

The Arkansas Pollution Control and Ecology Commission adopted site specific chloride, sulfate and TDS criteria for four waterbodies identified in the table below as amendments to the Arkansas surface water quality standards via a third party rulemaking in Minute Order 07-19 on Jun 22, 2007. In accordance with the *Code of Federal Regulations* (CFR) at 40 CFR Section 131.20, the Arkansas Department of Environmental Quality (ADEQ) then submitted the water quality standards revision and supporting documentation to EPA for review and approval. The submittal package was received by EPA on September 17, 2007. In a letter dated January 3, 2008, EPA notified ADEQ that it was unable to take action on these site-specific criteria revisions because the submission did not provide adequate supporting documentation to demonstrate that the revised site-specific criteria are appropriately protective. EPA encouraged ADEQ to work with the third party, El Dorado Chemical Company, in responding to the issues identified in the letter so that EPA may have the necessary supporting documentation to take action on the adopted revisions. Salt Creek, Flat Creek and ELCC Trib will need to remain in Category 4a until such time as EPA approves site specific minerals criteria.

Stream Segment Descriptions of waters for which site specific chloride, sulfate, and TDS criteria are proposed.

Stream Segment Descriptions
Unnamed tributary to the unnamed tributary to Flat Creek (UTB) from the El Dorado Chemical Company to outfall 001 discharge to the confluence with unnamed tributary of Flat Creek (UTA)
Unnamed tributary to Flat Creek (UTA) from the confluence of UTB to the confluence with Flat Creek (the ELCC tributary on the 2006 and 2008 303(d) list)
Flat Creek from the mouth of UTA tributary to the mouth of Haynes Creek
Haynes Creek from the confluence of Flat and Salt Creeks downstream to the confluence with Smackover Creek.

Final Decision Summary Based on Comments Received from the Public

Below is a summary of the decisions EPA has made in this responsiveness summary based on the additional information received from the Arkansas Department of Environmental Quality (ADEQ) and GBMc & Associates.

1. Based on additional information provided by ADEQ, EPA has decided to remove six waterbody pollutant combinations (Table 1) identified in EPA's Final Action on Arkansas' 2008 Section 303(d).

Table 1. List of waterbody pollutant combinations EPA is removing from its proposed additions to the Arkansas 2008 Section 303(d) list.

Stream Name	HUC	RCH	P-Seg	Station ID	Pollutant
Bayou Bartholomew	8040205	001	2B	OUA13	Cl
Bearhouse Creek	8040205	901	2B	OUA0155	Cu
Melton's Creek	8040205	903	2B	OUA0148	SI
M. Fork Little Red	11010014	030	4E	UWMFK01	SI
Smackover Creek	8040201	006	2D	OUA0027	SI
Smackover Creek	8040201	007	2D		SI

2. Based upon ADEQ's comment, EPA will add Bayou DeView for Aluminum to the Arkansas 2008 Section 303(d) list as it must have been omitted in error (Table 2). ADEQ commented that Bayou DeView is impaired for AL based on the most recent data compiled by ADEQ. Bayou DeView was not listed for aluminum impairment in the 2008 IR.

Table 2. List of waterbody pollutant combination EPA is adding at the request of ADEQ (also included in Table 4 below).

Stream Name	HUC	RCH	P-Seg	Station ID	Pollutant	Priority
Bayou DeView	8020302	009	4C	WHI026	AL	H

3. Based on comments received from GBMc & Associates, EPA has reversed its June 18, 2008 approval decision approving the five waterbody pollutant combinations (Table 3) listed by ADEQ on the Arkansas 2008 Section 303(d) list. Therefore, EPA is taking a delisting action on these.

Table 3. List of waterbody pollutant combinations for which EPA is reversing its June 18, 2008 approval decision in favour of delisting on the Arkansas 2008 Section 303(d) list.

Stream Name	HUC	RCH	P-Seg	Station ID	Pollutant
ELCC Trib.	8040201	606	2D	OUA137A&B	Zn
ELCC Trib.	8040201	606	2D	OUA137A&B	NO3
Flat Cr.	8040201	706	2D	OUA137C	Cu
Flat Cr.	8040201	706	2D	OUA137C	Zn
Salt Creek	8040201	806	2D	OUA137D	Cu

4. EPA has revised its decision to disapprove Arkansas' decisions not to list 67 water body pollutant combinations instead of the 73 waterbody pollutant combinations identified in the Record of Decision for the 2008 303(d) list. These 67 water body pollutant combinations plus the listing for Bayou DeView along with priority rankings for inclusion on the 2008 Section 303(d) List are provided in Table 4.

Table 4. List of 6 waterbody pollutant combinations EPA is adding to the Arkansas 2008 Section 303(d) list.

Stream Name	HUC	RCH	P-Seg	Station ID	Pollutant	Priority
Dorcheat Bayou	11140203	024	1A		Pb	L
Dorcheat Bayou	11140203	026L	1A	UWBBDT02	DO	L
Big Creek	11140203	923	1A	BIG01	Pb	L
Blue Bayou	8020301	009	1C	BLB0001	FC	L
Little Cossatot R.	11140109	?	1C	LCO01	TDS	L
Holly Creek	11140109	013	1C	RED34A&B	FC	M
Saline River	11140109	014	1C	RED0032	DO	M
Mine Creek	11140109	033	1C	RED0048B+	FC	M
Mine Creek	11140109	033	1C	RED0048A & 18B	EC	M
Bayou Bartholomew	8040205	006	2B	OUA0033	Pb	M
Bayou Bartholomew	8040205	013	2B	BYB03	DO	M
Wolf Creek	8040205	701	2B	OUA0156	DO	L
Overflow Creek	8040205	908	2B	OUA0012A	Cl	M
Ables Creek	8040205	911	2B	OUA0158	SI	M
Saline River	8040204	002	2C	OUA0117	Pb	L
Big Creek	8040204	005	2C	OUA0043	pH	L
Smackover Creek	8040201	006	2D	OUA0027	Zn	L
Smackover Creek	8040201	007	2D		Zn	L
Salt Creek	8040201	806	2D	OUA137D	pH	L
S. Fork Ouachita R.	8040101	043	2F	UWSFO01	EC	L
Marzan Creek	8040101	045	2F	MZC0001	pH	L
Prairie Creek	8040101	048	2F	OUA0040	DO	L
Ouachita River	8040102	007	2F	OUA0006A	Zn	L
Fourche Creek	11110207	022	3C	ARK0147A+	FC	L
Fourche Creek	11110207	024	3C	ARK0130+	Cu	L
Fourche Creek	11110207	024	3C	ARK0147E+	FC	L
Cadron Cr., E. Fk	11110205	002	3D	ARK0158	SI	L
Fourche La Fave R.	11110206	001	3E	ARK0036	DO	L
Cedar Cr.	11110206	011	3E	CED0001	pH	L
Gafford Creek	11110206	012	3E	GAF0001	pH	L
Chickalah Creek	11110204	002	3G	ARK0058	SI	L
Big Piney Creek	11110202	018	3H	ARK105	FC	L
Hurricane Creek	11110202	022	3H	ARK119	FC	L
Little Piney Creek	11110202	024	3H	ARK104	FC	L
Little Piney Creek	11110202	025	3H	ARK126	FC	L
Mill Creek	11110202	901	3H	ARK110	FC	L
Walnut Creek	11110202	902	3H	ARK125	FC	L
Town Branch	11070208	901	3J	ARK0056	TP	H
Baron Fork	11110103	013	3J	ARK0007A	EC	H
Illinois River	11110103	023	3J	ILL04	EC	H
Illinois River	11110103	024	3J	ARK0040	EC	H
Muddy Fork	11110103	025	3J	MFI0004	EC	H
Muddy Fork	11110103	027	3J		TP	H
Illinois River	11110103	028	3J	ILL01	EC	H
Osage Creek	11110103	030	3J	ARK0041	TP	H

Osage Creek	11110103	030	3J	ARK0041	EC	H
Osage Creek	11110103	930	3J	ARK041 (eval)	TP	H
Little Osage Creek	11110103	930	3J	ARK0155	EC	H
Spring Creek	11110103	931	3J	SPG03+	TP	H
Spring Creek	11110103	931	3J	SPG03	EC	H
Cache River	8020302	028	4B	CHR04	FC	L
Village Creek	11010013	012	4C	VGC02	FC	L
Bayou DeView	8020302	009	4C	WHI026	AL	H
Glaise Creek	11010013	021	4C	GSC01	FC	L
Cypress Bayou	8020301	010	4D	CPB01	FC	M
Cypress Bayou	8020301	011	4D		FC	M
Cypress Bayou	8020301	012	4D		FC	M
Bull Creek	8020301		4D	UWBLB01	FC	L
Greenbrier Creek	11010014	017	4F	WHI0167	FC	L
Big Creek	11010014	018	4F	WHI0164	FC	L
Strawberry River	11010012	009	4G	SBR02	FC	L
South Big Creek	11010012	013	4G	WHI0143J	FC	L
Big Creek	11010005	027	4J	BUFT18	DO	L
Leatherwood Ck	11010001	?	4K	WHI0012B	DO	L
Ten Mile Bayou	8020203	006t	5A	FRA0029	DO	L
Prairie Creek	8020205	902	5B	FRA0035	CI	L
Prairie Creek	8020205	902	5B	FRA0035	SO4	L
Prairie Creek	8020205	902	5B	FRA0035	TDS	L