Responsiveness Summary to Comments Concerning Arkansas's Draft 2014 303(d) List

The Arkansas Department of Environmental Quality (ADEQ) appreciates all of those individuals and entities who submitted comments concerning the draft 2014 Impaired Waters List (303(d) list). ADEQ would like to reiterate that this most recent request for public comments was for the draft 2014 List of Impaired Waterbodies (303(d) list). Several comments were received addressing other ADEQ documents or issues, such as Regulation No. 2, that are not open to public comment at this time. ADEQ encourages the authors to re-submit those comments when those documents or issues are opened for public review and comment. Comments were received from the following individuals and/or entities:

Ms. Alice B. Andrews 63 Robinwood Drive Little Rock, Ar 72227	Mr. Ed Brocksmith Secretary-Treasurer Save the Illinois River, Inc. 24369 E. 757 Rd. Tahlequah, OK 74464-1949	Ms. Sarah Clem, Branch Manager Arkansas Department of Environmental Quality 5301 Northshore Drive Little Rock, AR 72118
Mr. Alan Clingenpeel Email Address Only	Ms. Colene Gaston Staff Attorney Beaver Water District P.O. Box 400 Lowell, AR 72745	Mr. Alan Gates Mitchell, Williams, Selig, Gates, & Woodyard, P.L.L.C. 425 W. Capitol Ave., Suite 1800 Little Rock, AR 72201
Mr. Jake Rice, III, P.E. Assistant Manager Jonesboro City Water and Light Plant P.O. Box 1289 Jonesboro, AR 72403-1289	Mr. Randy Solomon Principal Environmental Specialist Water and Ecological Resources Services American Power and Light P.O. Box 660164 Dallas, TX 75266-0164	Mr. Jeff Stone, P.E. Director, Engineering Section Arkansas Department of Health 4815 West Markham Street Little Rock, AR 72205-3867

Below are public comments, as received by ADEQ, concerning the draft 2014 303(d) list followed by a response to each comment.

The following comments were received from Ms. Alice B. Andrews:

Ladies and Gentlemen,

I wish to make the following comments on the proposed 2014 list of impaired streams:

I have noted under ADEQ water quality monitoring goals "determine appropriate management strategies if designated uses are not being attained" - what are the specific strategies utilized to assure that designated uses will be attained so that impaired streams can then be delisted? What will be done to correct impairment?

It is my understanding that a thirteen year clock begins when a stream is listed as impaired, a timeframe in which the problems should be corrected. Why is this amount of time permitted? To be meaningful, it seems to me that 5 years might be more appropriate, particularly when I am told by an ADEQ water division staff member that no one has ever said "Your time is up after 13 years". Why are there no penalties or accountability for lack of correction?

I would ask that the Reg. 2 Anti-degradation policy be strictly enforced - that Arkansas Outstanding Resource Waters (2.203) be protected and maintained for beneficial uses and water quality for which the ORW designation was granted in the first place. This is a critically important factor when assessing impaired streams for the 303d list.

There should be a clear definition of acceptable levels of algae, especially in ERW streams.
The numeric criteria for nutrients, Phosphorus and Nitrogen, still seem shaky. The numeric criteria for phosphorus and nitrogen pollution should be maintained and strengthened for point source discharges for legislatively designated nutrient surplus watersheds and waterbodies on the 2014 303(d) list of impaired streams, as previously suggested.

I hopefully request that no rules, regulations, criteria will be developed that cause further degradation of any of Arkansas' waterbodies. Ideal goal should be No Impaired streams listed! No 303(d) list!

Thank you for all you do to protect our precious water resources. I am aware that with limited resources, it is tough but find a way to keep improving Arkansas water quality.

Last, is it possible to begin including quality of ground water? Could this not be a part of the updating of the Arkansas Water Plan, cooperating with ANRC to achieve this goal?

Thank you for your comments and suggestions concerning the State's water quality standards management strategies. ADEQ will take these suggestions under advisement.

The 13 year time frame to complete a total maximum daily load (TMDL) comes from an EPA guidance document. The time frame was placed in the guidance to encourage states to continue to work towards a process or plan to address water body segments listed as impaired. There is no statutory requirement to address impaired waters within any time frame. However, ADEQ and the other state and federal entities use this list to help prioritize water bodies for restoration activities. In some instances, a simple change in management of operational procedures corrects the issue. In most cases, however, long-term continued implementation of corrective actions is needed. A TMDL establishes waste load allocations (WLA) for point sources and load allocations (LA) for nonpoint sources with regard to specific pollutants and waters. These loads are calculated to be protective of water quality standards and the designated uses for the waters. Once the TMDL with WLAs and LAs is approved, implementation of the TMDL can occur.

The following comments were received from Mr. Ed Brocksmith:

Dear Arkansas Department of Environmental Quality,

Save the Illinois River, Inc., STIR, a Tahlequah, Oklahoma-based not for profit organization chartered in 1984, objects to the draft Arkansas 303d list of impaired waters. STIR's mission is to protect and preserve the Illinois River, its tributaries, and Tenkiller Lake.

We believe you have erred by not including portions of the Illinois River and all of Osage Creek in the 2014 Draft Arkansas 303d list. STIR feels Arkansas is not justified in making the decision not to include the lower Illinois River and Osage Creek in the 2014 report.

The U.S. EPA is conducting a Total Maximum Daily Load (TMDL) study of the Illinois River watershed in cooperation with the State of Arkansas and the State of Oklahoma. Because a TMDL is required by the Clean Water Act for impaired waters of the states, is the current EPA study not an indication that the Illinois River and some of its tributaries in Arkansas are indeed impaired? STIR feels it is an indication of impairment.

Further, STIR points to the fact that the newest wastewater treatment facility in the Illinois River watershed (NACA) is removing phosphorus from its effluent at a limit of point-one mg/L. STIR believes this fact is further evidence that Osage Creek is impaired by phosphorus. Why else would this facility agree to meet this phosphorus limit?

Oklahoma and Arkansas are cooperating in the Scenic River Joint Study which may determine Oklahoma's instream phosphorus limit for the Illinois River. Arkansas' Governor appointed three members to this committee to help determine if Oklahoma's current .037 mg/L phosphorus limit will possibly be changed. The Oklahoma limit may be strengthened as result of this study. STIR believes that this is another demonstration that the State of Arkansas has acknowledged that the Illinois River is impaired at least to some degree.

Thank you for your comments and concerns about the water quality in the Illinois River. In accordance with the Clean Water Act, Regulation No. 2, and the current Assessment Methodology, ADEQ must determine the status of water quality standards attainment and designated use support on defensible scientific data and assessment protocol. ADEQ cannot list a stream because a study is being performed or assume a stream is impaired because a treatment facility is implementing advanced treatment techniques. The most recent list does indicate that seven stream segments in the Illinois River watershed, two of which are main-stem Illinois River segments, are indeed listed as impaired.

The following comments were received by Ms. Sarah Clem:

This letter serves to document ADEQ's comments on the Draft 2014 Impaired Waterbodies List.

The ADEQ Water Division submits the following comments for consideration:

Designated Uses
The Designated Uses for the following segments should be updated in the 2014 Impaired Waterbodies List to accurately reflect Fisheries Use not being supported, instead of Agriculture & Industrial Use as described in the public notice draft list:

STREAM NAME	COUNTY	HUC	RCH	PLNG SEG	MILES	MONITORING STATIONS	Designated Use Not Supported					
							FC	FSH	PC	SC	DW	AI
Red River	Hempstead	11140201	-011	1B	15.2	RED0046		x				
Red River	Little River	11140106	-025	1B	8	e		x				
Red River	Little River	11140106	-005	1B	25.3	RED0025		x				
Red River	Little River	11140106	-003	1B	9.8	e		x				
Red River	Little River	11140106	-001	1B	34.8	e		x				
Red River	Miller	11140201	-007	1B	40.1	RED0045		x				
Red River	Miller	11140201	-005	1B	12	e		x				
Red River	Miller	11140201	-004	1B	4	e		x				
Cove Creek	Hot Spring	8040102	-970	2F	7.8	OUA0100 OUA0159		x				
Caney Creek	Cross	8020205	-901	5B	9	FRA0034		x				

Attainment
The following segments are attaining water quality standards for the indicated parameters and should not be included on the 2014 Impaired Waterbodies List for the following parameters:

STREAM NAME	COUNTY	HUC	RCH	PLNG SEG	MILES	MONITORING STATIONS	ATTAINMENT
Elcc Tributary	Union	8040201	-606	2D	8.5	OUA0137A+	pH
Bayou Meto	Lonoke	8020402	-007	3B	44.8	ARK0050	Dissolved oxygen
Fourche LaFave R.	Scott	11110206	-008	3E	25.7	UWFLR01	pH
Bayou DeView	Poinsett	8020302	-007	4B	18.2	e	Lead
Bayou DeView	Poinsett, Cross	8020302	-006	4B	10.2	e	Lead
Bayou DeView	Woodruff	8020302	-005	4B	8.6	e	Lead
Bayou DeView	Woodruff	8020302	-004	4B	21.2	UWBDV02	Lead
Glaise Creek	Jackson, White	11010013	-021	4C	30.1	UWGSC01	Zinc

Corrected Impairments
The following table contains corrected impairments that should be updated in the 2014 Impaired Waterbodies List:

STREAM NAME	*COUNTY*	*HUC*	*RCH*	*PLNG SEG*	*MILES*	*MONITORING STATIONS*	*CORRECTED IMPAIRMENT*
White River	*Washington*	*11010001*	*-023*	*4K*	*6.2*	*WHI0052, UAA*	*Temperature*
St. Francis River	*Craighead, Poinsett*	*8020203*	*-014*	*5A*	*22.8*	*e*	*Copper*
Hicks Creek	*Baxter*	*11010004*	*-15*	*4F*	*9.1*	*WHI0065, WHI0139, WHI0140*	*Pathogens*

The White River in Washington County was inadvertently identified as having a turbidity impairment; however, the data indicate a temperature impairment, not a turbidity impairment, and this should be corrected.

The St. Francis River copper impairment was inadvertently omitted from the draft list and should be added.

Hicks Creek was inadvertently removed from the draft list for pathogens. There are no new data indicating the attainment of this water quality standard; therefore, Hicks Creek should remain on the list for pathogens.

Thank you for the opportunity to comment.

ADEQ will make these corrections.

The following comment was received from Mr. Alan Clingenpeel.

Please include Board Camp Creek as an additional listing for impairment.

The Forest Service completed a multi-year assessment looking at the effect of Off Highway Use on stream habitat and biota last year. This assessment compared Caney Creek and Brushy Creek as reference streams to Board Camp Creek and Gap Creek (a tributary to Board Camp Creek) (streams with OHV use).

The study found that a number of parameters were statistically significant (in an impaired condition) when compared to the reference watersheds.

While the Forest Service has made a limited attempt to improve the watershed condition, through some maintenance, the listing of Board Camp and Gap Creeks would allow them an advantage in acquiring additional funding for watershed restoration.

For your convenience I have attached the report.

Thank you for your comments and the attached stream survey report for Wolf Peg Gap OHV Road and Trail Complex. ADEQ has reviewed the report and agrees data presented indicates measures of physical and biological integrity were negatively influenced by elevated road density and OHV use within the Wolf Pen Gap Trail Complex. Data presented in the report adhere to necessary requirements outlined by ADEQ to be assessed, in that scientific rigor of technical components, spatial and temporal coverage, and data quality were satisfied (Table II-Hierarchy of Bioassessment Approaches for Fisheries Assessment, Table III-Hierarchy of Habitat Assessment Approaches for Fisheries Assessment); however, because no raw data were

included with the report, ADEQ Water Division staff is unable to assess physical and biological integrity per ADEQ's 2014 Assessment Methodology (Table VIII-Fish Community Structure Index Ecoregion Values). Due to the lack of raw data, i.e. insufficient data, Board Camp Creek and Gap Creek will be placed into Category 3 of the 2014 303(d) list. These streams will remain in Category 3 until adequate data is submitted by outside entities or collected by ADEQ Water Division to determine the status of biological integrity of these systems.

The following comment was received from Ms. Colene Gaston.

The following comments are respectfully submitted on behalf of Beaver Water District (BWD) in regard to the Arkansas Department of Environmental Quality (ADEQ) Proposed 2014 List of Impaired Waterbodies prepared pursuant to section 303(d) of the Clean Water Act (CWA) (hereinafter the "Proposed 2014 303(d) List").

1. BWD commends ADEQ on the steps that it has taken to make review of the Proposed 2014 303(d) List more "reviewer friendly," such as the "State Maps of the Category 5 and Category 4a waters" and the "Maps by County for Impaired Waterbodies" that are available in ADEQ's website. In other ways, however, the review process is more problematical. ADEQ's website also provides the following under the heading for the Proposed 2014 303(d) List:

1. *"Draft Impaired Waterbodies List (303(d)) by county"*
2. *"New Listings for 2014 (New!)"*
3. *"Removed Listings from 2012 (New!)"*
4. *"ADEQ Revisions after Initial Public Notice (NEW!)"*
5. *"Designated Use Updates After Public Notice (New!)"*

None of these documents is dated, however, and the information in the documents is confusing, if not contradictory. For example, is reach -023 of the White River in Washington County on the Proposed 2014 303(d) list of for turbidity? Yes, according to document 1, above. Document 2 is not applicable. Yes, according to document 3, above. Unclear, by reference to Document 4 (the turbidity box is shaded, but there is no "x" in it; the temperature box is shaded and contains an "x"). Document 5 is not applicable. BWD's review of the water quality data for the period of record and the 2014 Assessment Methodology for turbidity indicates that this reach of the White River remains impaired.

2. In the future, BWD request that ADEQ date the 303(d) list and related documents posted on ADEQ's website and that it consolidate any revisions into a single document so that the public does not have to consult multiple documents in order to attempt to ascertain what is on the list during the public notice and comment period.

3. BWD additionally requests that in the future ADEQ provide a brief justification for the proposed delisting of a stream segment or the removal of an individual water quality parameter along with the proposed 303(d) list. As BWD has commented regarding ADEQ's previous proposed 303(d) lists, the Oklahoma Department of Environmental Quality (ODEQ) has for years included a table of delisting justifications with the public notice of its proposed 303(d) list. See: http://www.deq.state.ok.us/WQDnew and http://www.deq.state.ok.us/WQDNew/305b_303d/index.html.

4. BWD further requests that in the future when ADEQ releases its proposed 303(d) list for public review, it be included as a part of a draft Integrated Report prepared pursuant to CWA sections 303(d) and 305(b). As BWD also has previously commented, this is the approach taken by ODEQ, and it allows

the public to be much better informed when making comments on the 303(d) list. See: http://www.deq.state.ok.us/WQDnew and http://www.deq.state.ok.us/WQDNew/305b_303d/index.html. ADEQ stated on page 1 of its "Responsiveness Summary to Comments Concerning Arkansas 2008 303(d) Listing"that "the Draft 305(b) Report cannot be completed until after the public comment period on the List of Impaired Waterbodies, therefore, the report cannot be made available until after the list has been reviewed." BWD still does not understand why a draft 305(b) report could not be released at the same time as the draft 303(d) list. It would greatly facilitate review by the public and would be much appreciated.

5. In the proposed 2014 303(d) List, the upper portion of Beaver Lake is listed as a high priority, category 5 waterbody for pathogens and turbidity due to surface erosion. Additionally, reach -023 of the White River and reach -024 of the West Fork in Washington County are listed as high priority, category 5 waterbodies for various pollutants. Reach -959 of Town Branch and reach -059 of Holman Creek in Madison County are also listed as category 5 waterbodies, but no prioritization is given. All of these streams are tributaries of Beaver Lake. Because Beaver Lake is the source of drinking water for one in eight Arkansans, we believe that the Lake and all of the listed streams in its watershed should be given the highest possible priority rankings.

Please contact me if you have any questions about these comments. Thank you for your consideration.

Thank you for your comments concerning Beaver Reservoir and the difficulty understanding the different lists on the web site. We will take your first sets of comments into consideration when developing the 2016 List of Impaired Waterbodies.

In response to Comment 5 – Neither Town Branch nor Holman Creek were listed as a high priority because: they are both headwater streams of War Eagle Creek, 25 plus river miles upstream of Beaver Lake; War Eagle Creek at Hwy 45 (WHI0116), just above Beaver Lake is meeting all standards. The water quality impairments in Holman Creek and Town Branch are associated with a state regulated point source discharge and are being addressed through the development of site specific criteria; therefore, no prioritization is given as the impairments are being addressed and water quality recovers prior to entering Beaver Lake. In contrast, the upper portion of Beaver Lake itself is impaired; the White River and West Fork White River are direct tributaries to Beaver Lake; however, the source of the White River and West Fork White River impairment is non-regulated nonpoint source pollution.

The following comments were received from Mr. Alan Gates:

COMMENT OF THE CITY OF SHERIDAN, ARKANSAS
ON THE PROPOSED 2014 IMPAIRED WATERBODIES LIST

The City of Sheridan, Arkansas submits this comment on the Proposed 2014 Impaired Waterbodies List. Sheridan owns and operates a wastewater treatment facility which discharges into Big Creek in Planning Segment 2C of the Ouachita River Basin.

The draft 2014 Impaired Waterbodies List includes an entry for Big Creek under Planning Segment 2B. This entry is mistaken in several respects. First, Big Creek is not in Planning Segment 2B. The correct Planning Segment is 2C.

Second, the entry proposes to list Big Creek as impaired for dissolved oxygen and assign it to Category 4a. The monitoring data for the relevant period of record have only three exceedance for dissolved oxygen out of a total

of 45 monitoring events. Under the 2014 Assessment Methodology, Big Creek should be placed in Category 1 for dissolved oxygen, i.e. in attainment of the relevant dissolved oxygen criterion.

Third, the entry proposes to list Big Creek as impaired for lead and assign it to Category 4a. The monitoring data for the relevant period of record have only one exceedance for lead out of ten monitoring events. Under the 2014 Assessment Methodology, Big Creek should be placed in Category 1 for lead, i.e. in attainment of the relevant dissolved lead criterion. This conclusion was expressly articulated by ADEQ in a pre-draft permit that ADEQ sent to EPA for review in January of this year.

The relevant lead and dissolved oxygen monitoring data for Big Creek are as follows:

Parameter	*2014 assessment period*	*Number of values*	*Allowable number of values not meeting standards*	*Actual number of values not meeting standards*	*2014 assessment result*
Dissolved lead	*April 2010 – March 2013*	*10*	*1*	*1*	*Meets standards*
DO	*April 2008 – March 2013*	*45*	*5*	*3*	*Meets standards*

The City of Sheridan requests that the proposed listings for Big Creek for lead and dissolved oxygen be corrected, and that Big Creek be assigned to Category 1 for lead and dissolved oxygen.

Thank you for your comments concerning Big Creek. You are correct. The web site had the stream depicted in the wrong planning segment under the Category 4a listing.

The assessment method for determining attainment of the dissolved oxygen criterion is to divide the samples based on critical season, when water temperatures exceed 22 degrees Celsius, and primary season, when water temperatures are less than 22 degrees Celsius. There were 35 samples collected during the primary season with only one exceedance. There were ten samples collected during the critical season with two exceedances. Nonetheless, there is a TMDL for dissolved oxygen for the stream. Stream segments listed in Category 4a are those with approved TMDLs.

There is also an approved TMDL for lead on Big Creek. Stream segments listed in Category 4a are those with approved TMDLs. As such, Big Creek will remain in Category 4a for lead due to the approved TMDL for lead on this stream.

COMMENTS OF THE CITIES OF FAYETTEVILLE, HARRISON, JONESBORO, SHERIDAN, SPRINGDALE, AND YELLVILLE ON ADEQ'S PROPOSED 2014 IMPAIRED WATERBODIES LIST

The Cities of Fayetteville, Harrison, Jonesboro, Sheridan, Springdale, and Yellville (Bentonville added by separate email) jointly offer this comment in response to ADEQ's Public Notice regarding the Proposed 2014 Impaired Waterbodies List.

The Proposed 2014 Impaired Waterbodies List was developed using a 2014 Assessment Methodology. This Assessment Methodology was published as part of the administrative record for the Proposed 2014 Impaired Waterbodies List. The Assessment Methodology includes a new procedure for determining whether a waterbody

meets the State's existing narrative water quality criteria for nutrients, Reg. 2.509. See 2014 Assessment Methodology at pages 44-47, reproduced as Attachment A.

The new procedure for assessing nutrients differs significantly from the methodology used for assessing nutrients in prior years. The summary spreadsheet published by ADEQ indicates that no waterbodies were listed by the Department as impaired for nutrients based on the new assessment procedure, but the Cities still feel there are important questions regarding the new procedure that merit serious discussion. In particular, it is unclear how much (or how little) change in a biological assemblage is needed for the Department to conclude that the biological assemblage is "impaired" within the meaning of the new assessment procedure. Similarly, regardless of how ADEQ might interpret or apply the new assessment procedure, it is unclear how the Department will be able to assure that EPA will not interpret or apply the procedure in a manner that was never intended by ADEQ and is not adequately connected to the narrative nutrient criteria the procedure purports to implement.

Given the regulatory importance of the assessment methodology for nutrients, the Cities believe the Department should actively engage all affected stakeholders, and particularly municipal NPDES permit holders, in a discussion regarding the technical basis and proposed application of the new assessment procedure before it is put to any further use beyond the Proposed 2014 Impaired Waterbodies List. The Cities recognize the environmental importance of regulating nutrient discharges to the State's streams, rivers, and lakes, and they are anxious to have an opportunity to engage more proactively with the Department on this important subject.

The Cities wish to thank the Department for this opportunity to comment.

Thank you for your comments and interests in ADEQ's assessment procedures for assessing nutrient criteria. ADEQ will take these suggestions into consideration when developing the 2016 assessment methodology. In addition, Table VII - Macroinvertebrate Community Structure Analysis, Table VIII - Fish Structure Index Ecoregion Values, and Table IX - Biological Assemblage Assessment Determination outline the values used to make attainment decisions.

The following comments were received from Mr. Jake Rice:

The purpose of this letter is to provide comments on the Draft 2014 Impaired Waterbodies List provided for public comment on January 31, 2014. City Water and Light Plant and the City of Jonesboro (CWL) appreciates the opportunity to provide comments and the efforts by the Arkansas Department of Environmental Quality (ADEQ) Water Division to promote participation in the process.

CWL would like to respectfully submit the following comments for ADEQ consideration:

1. *Several reaches of Bayou DeView were added to the 2014 303(d) list as impaired due to sulfates based on data collected at station UWBDV02 (Bayou DeView near Morton, AR). Based on data that we downloaded from ADEQ's web site, it appears that only 12 samples were collected at this station during the 2014 assessment period. Our plot of the sulfate data for this station going back to the 1990's (see below) shows much more variability during the 2014 assessment than during earlier periods. Also, the ratio of sulfate to TDS at this station was more variable during the 2014 assessment period (0.035 to 0.250) than during earlier periods (0.033 to 0.128). We request that ADEQ review the sulfate data at UWBDV02 more closely as it pertains to the inclusion of thee reaches for Bayou DeView on the draft 303(d) list and correct any potential errors in the data.*

NOTE: ADEQ was unable to copy this letter into this responsiveness summary, therefore, the chart has been omitted.

2. *ADEQ's "2014 Assessment Methodology" for Nutrients, Listing Methodology (Section 6.9, page 46) states that "Monitoring segments will be listed as non-support for total phosphorus or total nitrogen if two (2) of the four (4) water quality translators are exceeded and one (1) or both biological assemblages are*

impaired." The assessment listing protocol does not define 'impairment' with regard to biological assemblages. Also, important details relating to 'non-support' of water quality translators (e.g. the timing, duration, portion of a waterbody that is involved in the monitoring, what stream reach is represented by the waterbody that is involved in the monitoring, what stream reach is represented by the monitoring, and others) must be better defined because of the significant implications of potential 'false positive' listings on municipal and industrial discharges across the state. We specifically request that the proposed nutrient listing methodology be the subject of a series of technical discussions between the ADEQ and interested parties to properly consider, discuss, develop, and agree upon the necessary details and technical justification of an appropriate assessment/listings methodology that properly evaluates nutrient effects on waterbodies yet does not result in unnecessary regulation of dischargers.

We greatly appreciate the opportunity to submit these comments and thank ADEQ for their consideration of these issues. If you have any questions or more information is required, please contact my office at xxx-xxxx.

Thank you for your comments concerning Bayou DeView. Station UWBDV02 shows 4 exceedances of the site specific sulfate standard of 37.3 mg/L. There are 12 total samples collected during the period of record indicating a 33% rate of exceedance. The Assessment Methodology specifies a greater than 25% exceedance of the standard indicates impairment. ADEQ can only consider data collected during the period of record.

ADEQ will take these suggestions into consideration when developing the 2016 assessment methodology for nutrients. In addition, Table VII - Macroinvertebrate Community Structure Analysis, Table VII - Fish Structure Index Ecoregion Values, and Table IX - Biological Assemblage Assessment Determination outline the values used to make attainment decisions.

The following comments were received from Mr. Randy Solomon

Southwestern Electric Power Company and American Electric Power (AEP/SWEPCO) is requesting that SWEPCO lake be removed from ADEQ's Draft 2014 Impaired Waterbodies List (303(d) list). Since the 2012 draft of the 303(d) list was published for comments, AEP/SWECO collected and analyzed water samples from two locations in SWEPCO Lake, and analyzed them for several parameters, including turbidity. Upon review of this data, AEP/SWEPCO does not believe that SWEPCO Lake is impaired by turbidity.

From February through November 2012, AEP/SWEPCO collected water samples from two locations in SWEPCO Lake. These locations were near the dam structure, and west of the intake structure in SWEPCO Lake (Attachment A). Samples were taken at a depth of five feet in the epilimnion and at a depth approximately five feet from the bottom of the lake in the hypolimnion.

Turbidity Analytical Results of Water Samples for West of the Intake Structure

The analytical results from the turbidity data from the epilimnion collected west of the intake structure ranged from 1.0 NTU to 3.1 NTU. Analytical results from the water samples collected from the hypolimnion ranged from 3.0 NTU to 7.0 NTU. This data and other analytical data are contained in Attachment B.

Turbidity Analytical Results of Water Samples from Near the Dam

The analytical results for the turbidity data from the epilimnion collected near the dam ranged from 1.0 NTU to 3.0 NTU. Analytical results from the four water samples collected from the hypolimnion ranged from 1.0 NTU to 4.0 NTU. One sample collected on July 10, 2012, yielded a result of 31 NTU. AEP/SWEPCO believes this higher result was due to dissolved oxygen being introduced into the sample during the holding time. This analytical data is contained in Attachment C.

ADEQ Analytical Results from 1989 through 2004

ADEQ's records indicate four samples were collected during the period of 1989-2004. The turbidity analytical results for the epilimnion water samples ranged from 1.00 NTU to 3.62 NTU. Water samples collected from the

hypolimnion ranged from 32 NTU to 109 NTU. The holding time for turbidity water samples is 48 hours. While AEP/SWEPCO does not have any information regarding the length of time these samples were held by ADEQ prior to being analyzed, AEP/SWEPCO has noted that samples collected from the hypolimnion will show an increase in dissolved oxygen in the water samples. Please see Attachment D for testing performed by chemist at the Flint Creek Power Plant showing an increase in turbidity over time.

Section 6.2 of the Draft 2014 Impaired Waterbodies List indicates lakes will be delisted from the 303(d) list if twenty percent of the turbidity values from water samples taken from the epilimnion are below the base flow values of 25 NTU. This section also states lakes will be delisted if twenty-five percent of the turbidity results from the water samples taken from the epilimnion are below the all flow value of 45 NTU. The analytical data collected by ADEQ and AEP/SWEPCO in the epilimnion indicates that SWEPCO Lake is below these criteria in the epilimnion, and that the lake is not impaired by turbidity. In addition, very little aquatic life exist in the fresh water lakes at depths where there is little to no dissolved oxygen necessary to support life. As a result, AEP/SWEPCO does not believe that any of the hypolimnion water samples collected by ADEQ or the plant supports that SWEPCO is impaired by turbidity.

Should you have any questions regarding our comments, please call me at xxx-xxxx.

Thank you for your comments concerning Lake SWEPCO. ADEQ is very interested in the water quality data you have collected from the lake. However, the period for data submission for the 2014 303(d) list has passed. ADEQ encourages you to continue with the data collection and to submit the data for the 2016 303(d) list development.

The following comments were received from Mr. Jeff Stone, P.E.

Attached is a table listing 40 of the proposed impaired stream segments and the 29 public water systems-serving a total population of 1,121,924 Arkansans-who may be potentially impacted by them. This table was compiled by comparing the recently issued ADEQ draft 303(d) impaired waterbodies list and GIS geodatabase to surface water intake locations and their respective watersheds for public water systems in the state. The table includes specific stream or lake information compiled by ADEQ, the affected public water systems with an intake or source assessment zone immediately in or within 2 miles downstream of the impaired segment, and the population served by the water system. Turbidity, pH, pathogens, sulfates, and total dissolved solids have been highlighted in the table, as they are of particular concern for drinking water supplies.

The Arkansas Department of Health has primacy in the state for implementation of the federal Safe Drinking Water Act and ADEQ implements the federal Clean Water Act. The primary mission of the Arkansas Department of Health is the protection of public health, and the strong link between safe public drinking water and public health drives our program. We recognize ADEQ shares this goal and we request your continued partnership is this worthwhile endeavor. To that end, ADH requests that drinking water sources be a priority when determining the final 2014 303(d) Impaired Water Bodies listings.

Waterbodies impaired by minerals or turbidity can significantly increase the cost of treatment required to meet Safe Drinking Water Act standards. They can also increase the risk of exposure to regulated pathogenic contaminants. For example, high sediment in a stream increases the cost for the water utility to meet the drinking water standard for turbidity, and sediment is one indicator of the increased presence of microbiological contaminants in the source water, including E. coli, Giordio lomblio and Cryptosporidium.

We request your assistance in placing a priority on these drinking water sources - which serve 41% of public drinking water users - when evaluating and addressing the 2014 list of impaired water bodies. Listed below are several recommended actions that your agency and other Clean Water Act partners could take that would reflect that priority.

1. Higher priority in protecting any in-use drinking water source.

2. Increased monitoring to better identify the temporal and spatial areas of impairment especially for the Category 4A waterbodies-which may impact public water supplies.
3. Higher priority in identifying and correcting the sources of impairment.
4. Increased compliance scrutiny on the monitoring and operational reports of wastewater, stormwater, resource extraction, and other applicable permittees.
5. Stricter effluent standards for new and renewed permits, or a ban on new permits, when warranted.
6. The establishment of TMDLs, where applicable.
7. Increased emphasis and coordination on controlling nonpoint pollution sources.
8. Preferential funding of assessment, restoration, and mitigation projects for nonpoint pollution sources.

The protection of drinking water sources and the protection of public health require the active involvement of all levels of government. The Department of Health will continue to pursue these goals through its public water system oversight program. Other agencies - federal, state, and local – must also contribute. Your collaborative efforts are appreciated.

Should you wish to discuss these matters further, please call me or Darcia Routh, Geology Supervisor, at xxx-xxxx.

Thank you for your comments and concerns about protecting the State's drinking water resources. The protection of Arkansas' drinking water sources is a top priority for ADEQ.

In your letter, you listed several recommendations you feel that ADEQ could take to place a priority on drinking water sources. ADEQ can assure you that protecting all of the designated uses, including the drinking water use is a high priority and program mandate for this agency. One of the primary tenets of the Antidegradation Policy found in the Arkansas Pollution Control and Ecology Commission (APC&EC) Regulation No. 2 and in the Act is the directive to maintain and protect existing in-stream water uses, which includes the domestic drinking water use. One of the ways we use to protect the domestic drinking water use is by assuring that all waters are "Fishable and Swimmable". Whether or not a water body has a thriving and diverse aquatic community (fishery) and is safe for primary human contact is a prime indicator of its suitability for domestic water use. All surface waters of the state have been designated for specific uses. In those instances where waters are classified for multiple uses and different criteria are specified for each use, the criteria to protect the most sensitive use is applicable. In most cases, if the criterion to protect the most sensitive water use is applied, the other uses should be protected as well. These uses include the designation of a domestic water supply use in all streams, unless this specific designated use has been removed through an appropriate use attainability analysis and a change in the water quality standards adopted by the APC&EC and approved by EPA.

ADH suggests increased water quality monitoring. ADEQ currently monitors over 144 fixed ambient stations where samples are collected once per month. In addition, the State is broken in quadrants and another 48 site-specific sampling locations (our roving monitoring network) are sampled for water quality and biological parameters as well. In calendar year (CY) 2013, ADEQ collected and analyzed 2534 samples around the State. Without additional resources, ADEQ cannot increase this effort. ADEQ seeks and solicits water quality data from local, state and federal agencies as well as other entities as part of our evaluation of the water resources of the State and any qualified data you can collect and provide during the development of future 303(d) lists will be appreciated.

ADH also suggests identifying and correcting sources of any impairment. These have always been a high priority of ADEQ. The most significant water quality impairment around the state is due to sediment. In most cases, it is difficult to determine the sources of this impairment. Sources may include unpaved county roads, erosion from disturbed areas, stream bank erosion and erosion from changes in land use patterns. Because these sources are not discrete pollutant sources, identifying and correcting the issue is often difficult. Correcting sources of impairment requires implementing proper controls, both for point sources and nonpoint sources of pollution. Controls are frequently expensive and often controversial. Point source controls are used where applicable water quality standards support the controls. Nonpoint source controls are difficult to implement because requiring such controls generally falls outside the jurisdiction of ADEQ. ANRC controls the coordination and funding of nonpoint source pollution controls in Arkansas. However, ADEQ and ANRC maintain close communication in the implementation of Section 319 program actions.

With reference to suggestions for permits, one recommendation was for "stricter effluent standards". ADEQ strives to issue permits with effluent limits and conditions that protect all the designated uses of a water body. ADEQ provides ADH a link to every draft permit prior to issuance. ADH has provided, and hopefully will continue to provide, ADEQ with information concerning source waters that may be impacted by proposed permitted facilities. ADH also suggests heightened scrutiny of permitted facilities' operation and monitoring reports. Water Division staff performed 1822 inspections and 594 complaint investigations during CY 2013 and this significant level of effort was accomplished with a staff of 17-21 inspectors.