

# **EXHIBIT B**

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## **ADEQ'S RESPONSIVE SUMMARY**

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BEFORE THE ARKANSAS POLLUTION CONTROL AND ECOLOGY COMMISSION

IN THE MATTER OF AMENDMENTS TO )  
REGULATION NO. 2, REGULATION )  
ESTABLISHING WATER QUALITY ) DOCKET NO. 15-002-R  
STANDARDS FOR SURFACE WATERS )  
OF THE STATE OF ARKANSAS )

**ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY'S**  
**RESPONSIVE SUMMARY**

Pursuant to Minute Order 15-18, the Arkansas Department of Environmental Quality (“ADEQ” or “Department”) submits the following Responsive Summary regarding proposed changes to Regulation No. 2, Regulation Establishing Water Quality Standards for Surface Waters of the State of Arkansas.

On August 28, 2015, the Arkansas Pollution Control and Ecology Commission (“APCEC” or “Commission”) granted the Petition filed by the Cities of Harrison and Yellville (“the Cities”) to Initiate Rulemaking to amend Regulation No. 2. The third-party petition was filed pursuant to APCEC Reg.8.809. The Cities request to modify Arkansas Water Quality Standards in Crooked Creek from the outfall of the Harrison Wastewater Treatment Plant (WWTP) to the mouth of Crooked Creek. The City of Harrison requests modification of Crooked Creek chloride criteria from 20mg/L to 22.6 mg/L; sulfate from 20 mg/L to 24.4 mg/L; TDS from 200 mg/L to 269 mg/L from the Harrison WWTP outfall to ADEQ monitoring station WHI0193. The City of Yellville requests modification of Crooked Creek TDS criterion from 200 mg/L to 238 mg/L from the ADEQ monitoring station WHI0193 to the mouth of Crooked Creek.

One public hearing was held in Harrison on Monday, October 19, 2015. The final day to submit written comments was November 23, 2015. The Commission received four written comments during the public comment period. There were no oral comments received during the public hearing.

**Written Comments (in part) received on or before November 23, 2015.**

**Comment 1: Beaver Water District**

The following comments are submitted on behalf of Beaver Water District (BWD) in regard to the public notice regarding the third-party rulemaking of the Cities of Harrison and Yellville (hereinafter, the “Cities”) that proposes changes to the Arkansas water quality standards for minerals in Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 2 (hereinafter, “Reg. 2”). The City of Harrison seeks to increase the site-specific water quality criteria (WQC) for the minerals sulfate, chloride, and total dissolved solids (TDS) at Reg.2.511(A) that apply to a segment of Crooked Creek immediately downstream from its wastewater treatment plants (WWTP) discharge. The City of Yellville seeks to increase the site-specific WQC at Reg.2.511(A) for TDS only for a segment of Crooked Creek in the vicinity of its discharge

Crooked Creek is not in the Beaver Lake watershed, which is the source of water used by Beaver Water District and three other public water utilities to provide drinking water for most of Northwest Arkansas. The Cities’ rulemaking petition and related documents are typical of what has been filed previously in other, but not all, municipal WWTP rulemakings to change the WQC for minerals. The Cities’ petition generally does not present issues of unusual precedent. BWD, therefore, is not commenting on *the Cities’* petition or their related documents. We do, however, offer the following comments related to the two questions in the public notice for the Cities’ proposed rulemaking for which the APCEC invited public comment:

1. Whether the proposed new criteria should be rounded up to the nearest whole number Chloride and Sulfate and up to the nearest multiple of ten for Total Dissolved Solids?
2. Whether the proposed new criteria should be revised to correspond to the 99<sup>th</sup> percentile of relevant instream data?

In general and as discussed below, BWD believes that the answer to the two questions posed by the APCEC should be “NO”. In responding to these questions, BWD makes reference to the Cities’ petition and related information only for the purpose of illustration. Again, these are not comments on the specific requests *made by the Cities*.

**Comment 1:** The purpose of the WQC is to protect the designated uses. WQC should not be rounded up or be based on the 99<sup>th</sup> percentile of relevant instream data without a clear showing that doing so will be protective of the designated uses.

**Comment 2:** Any change from the standard procedure by which the WQC are set in a third-party rulemakings will set a precedent that could apply not only to minerals but also to other parameters and pollutants. This could result in changes that are inappropriate, scientifically unsupported, and not protective of the designated uses.

**Comment 3:** Conservative assumptions should be applied in order to ensure that designated uses are protected. If there is a concern about numerical precision, perhaps the numbers should be rounded down instead of up.

**Comment 4:** WQC often are numbers with decimals (*see, e.g.* Reg. 2.508 regarding toxic substances). Existing analytical methods and accuracy to decimal places support such WQC. Perhaps the more appropriate arenas for addressing any concerns about fractional numbers are when permit limits are set or enforcement decisions are made.

**Comment 5:** Setting the WQC to correspond to the 99<sup>th</sup> percentile of relevant instream data means raising the standards to conditions that are rarely seen in the stream. This could create scenarios where the actual instream levels increase significantly over current levels. The impact on designated uses could be real and detrimental.

**Comment 6:** Third-party rulemaking petitions for minerals often include language that the petitioners “are not seeking a change from historical water quality regulations” (*see, e.g.* the Cities’ Petition to Initiate Rulemaking to Amend Regulation No. 2). Setting the WQC to reflect the 95<sup>th</sup> percentile of instream data already allows stream conditions to change to what is currently seen only 5% of the time. Setting the WQC to reflect the 99<sup>th</sup> percentile of data means those levels may represent “historic” conditions in the sense that they have occurred, they are conditions that are *extremely rare* and may not be reflective of conditions necessary to support the designated uses.

**Comment 7:** The current assessment methodology by which the Arkansas Department of Environmental Quality (ADEQ) determines waterbody impairment allows exceedance of the Reg. 2.511(A) site-specific WQC for minerals criteria twenty-five percent (25%) of the samples, rather than in ten percent (10%) of the samples as historically allowed. If the WQC are set at the 99<sup>th</sup> percentile of relevant instream data *and* the numbers are rounded up, the 25% allowable exceedance rate further increases the permissible levels of instream pollutant concentrations. This multiplier effect could allow for pollutant concentrations never before experienced instream that impact the designated uses.

**Comment 8:** BWD understands the desire of municipal WWTP dischargers to set the WQC at levels that will not put their discharge at risk of causing violations of the water quality standards that will result in NPDES permit limits, if any, that they can readily meet. Again, though, the purpose of any water quality criterion is to protect the designated uses, and that is what must be clearly established. Instead of mathematical manipulations geared to set the WQC so that dischargers are assured of a cushion against violations, perhaps permitting and enforcement policies should be modified to accommodate rare exceedences.

**Comment 9:** As BWD has noted in other public comments related to minerals, a conservative approach needs to be taken when considering drinking water, as well as aquatic life, designated uses. Conventional drinking water treatment plants cannot remove minerals, and may even add

to the minerals concentration produced in the finished water. Therefore, it is too late and the designated drinking water use cannot be maintained if the instream minerals concentrations are allowed to reach the levels set forth in the Reg. 2.511(C) Domestic Water Supply Criteria. Rounding up and the use of the 99<sup>th</sup> percentile of relevant instream data increases the opportunity for this to occur.

**Comment 9:** If the APCEC is inclined to adopt or otherwise utilize an approach to the minerals WQC that involves setting the WQC at the 99<sup>th</sup> percentile and rounding up the numbers, BWD requests that a separate public hearing or hearings be held. First, the Cities did not request that WQC be set at the 99<sup>th</sup> percentile or that their proposed numbers be rounded up, so the Cities' documentation does not indicate what the numbers so calculated would be and does not include studies related to the impact of such levels on the designated uses. It is, therefore, difficult for the public to assess the implications of such an approach. Second, the application of this approach to other dischargers and data sets could produce much different results. The public should be multiple examples to consider when evaluating the questions posed by the APCEC. Third, the APCEC's questions are of statewide importance in relation to minerals, but members of the public may have overlooked these issues if they were not specifically interested in the Cities of Harrison or Yellville or Crooked Creek. Last, the use of the 99<sup>th</sup> percentile of instream data and of rounding up numbers has WQC ramifications beyond minerals that deserve a separately announced opportunity for public input.

Thank you for your consideration of these comments.

**Response 1:** The Department acknowledges these comments.

#### **Comment 2: Friends of the North Fork and White Rivers**

Based on the information made public, and the statement by the cities that they are not seeking a change from historical water quality conditions in Crooked Creek and that they are seeking standards that reflect actual water quality, allowing them to be compliant with their permit; and, based on the statement that TDS concentrations upstream of the wastewater treatment facility already exceed the current site-specific standard of 200mg/L, we, Friends of the North Fork and White Rivers (Friends) does not oppose the amendment as originally proposed by the cities.

However, on the two questions regarding the consideration of rounding the specified criteria between the 95<sup>th</sup> and 99<sup>th</sup> percentile, Friends respectfully and strongly urges this subject be considered in a separate process due to the probable statewide application.

Additionally, Friends encourages the cities to continue to strive to operate at the highest level of regulatory requirements and to seek feasible means of improving water quality rather than

pursuing, in the future, a downgrade of the underlying water quality. Friends desires to be a partner with the cities in maintaining the integrity of Crooked Creek waters

**Response 2:** The Department acknowledges this comment.

**Comment 3: Carol Bitting**

The cities of Harrison and Yellville both rely on tourism dollars for a percentage of support. (see Arkansas Tourism Visitor Center north on Hwy 65) The quality of the air and water are important to visitors and their recommendations to new and returning visitors, not to mention the health of Arkansas residents.

I recently took a walk around the lake in Harrison, Ar. I would have liked to have spent more time and canoed Crooked Creek on down to Yellville and beyond to get a visual of the water quality of this stream. I was recently told by a friend of mine it had given him the best fishing trip of his life.

Walking along the lake trail I sensed the air for odors (recently Harrison friends had told me the smell of hogs prevailed throughout the whole city). The water continued to draw my attention gently flowing and glistening between the banks. Teenage boys were catching fish, the kids on the playground are our future, are those ducks and geese receiving the right nutrition in these waters, what are the attractions that I am enjoying that would make me want to come again? The air was actually clear this day, the sky had blue to it and the only noticeable odor was when I circled to the northwest side of the creek and approached the concrete drainage inlets. Here a rank odor emerged. Runners and walkers passed me by as a took photos of the algae and its noticeable entrance to the stream from the city. The algae was floating on the surface and increased growth was noticed below the water's surface.

Going back in time a few years here is some of my experience in the Harrison area. In the past Harrison has had to churn the lake to reduce algae and hire someone to pick up the trash.

The stream is located near the Jr High School and the football field is located along the stream edge (pollution contributor due to need to grow a perfect grass and sits right over a spring that emerges along Crooked Creek just north of the field).

When I first moved to this community I was appalled at the people, students etc who walked past trash cans and threw their trash on the ground. At football games I was overwhelmed and embarrassed with the lack of respect due to lack of education by this community, people just throwing trash on the ground bypassing trash receptacles. The evenings brought mountains of trash as local youth congregated near the stream and Sonic cups, McDonald bags, etc. are blown into the stream. I had never witnessed this abuse anywhere before. I spoke with someone hired to clean the football stadium, this was an ongoing year after year abuse. The same with the city hired lake personnel. I lived in this community for 8 years, walked the lake daily, it didn't change.

You think, trash is not the question here...you are right, but it is about education and the educated "can make necessary changes".

Today the city wants to change the stream permit requirements so it can come into compliance with permit regulations. Do we really want to change stream quality to make a sewer treatment plant comply? Why not fix the problem? The chlorides and sulfate are high elements in bleach, soaps and laundry detergents....correct? Why not appeal to the people first and ask them to reduce before we change standards? Has this been tried? I know when I speak with people about this no one has any idea and no one wants the quality standards for Crooked Creek reduced. Wal Mart has expressed going more "green". Wal Mart is a major contributor to the elements of stream degradation by the products they sell. Why not approach Wal-Mart, Home Depot, Miller's, Hudson's etc and inform them of the problem, let them re-organize the products they sell for the needs of the community?

Recently the NPS asked for 3 streams to be added to the 303-D list in a letter sent to ADEQ. The streams are Mill Creek (runs thru Dogpatch community), Big Creek (runs thru Mt. Judea) and Bear Creek (near Snowball). This is a serious issue. These streams are adding large amounts of degradation to the Buffalo River. Crooked Creek enters the White River a major trout fishing stream in Arkansas. Should we reduce the quality standards of these streams so that the Buffalo River is degraded and these streams are in compliance? Do we want to loose the Buffalo River's water quality?

There is allot to be added to education in Arkansas. It is time to require Arkansas students to have an environmental course designed to protect our future. This course could bring awareness to the cost of the "cleanup". We require hunters to take an education course and get a license. Why not allow state drivers to take a basic environmental course to get their license? It could be done at the time of renewal and take only a few minutes as they wait holding their "number".

#1. I suggest that no modifications be made to the water quality requirements or regulations and that the treatment plants of these two cities install the equipment designed and needed to increase water quality not degrade it. Round down.

#2. There is industrial growth such as chicken, turkey houses located south of Harrison that could be contributing to the degradation of this stream. It might be important to note that fertilization and water degradation should be paid for by the source. This is ADEQ's job to find the source and enforce actions to correct it. We as citizens pay for ADEQ to protect our environment and we would like to see it upheld to the highest standards.

Revalent stream data....humm, such as Mill Creek which runs south of Crooked Creek into the Buffalo River, note would ADEQ be planning to degrade the quality of this stream's criteria for compliance? This stream is highly degraded and as today my letters of complaints to ADEQ have not shown any action.

This raises many many questions and will allow for degradation throughout the state, we are already losing the battle to larger industrial business' who take the money from locals and turn

our downtown shopping into mass Chinese merchandised items or second hand thrift stores where local people try to compete for a living.

**Response 3:** The Department acknowledges these comments.

**Comment 4: Arkansas Public Policy Panel**

Thank you for the opportunity to comment on the proposed changes to APC& EC Regulation 2, the Arkansas Water Quality Standards, for Crooked Creek and the additional questions posed by the Commission. These comments focus on the two questions posed by the Commission and the potential for such changes to set a precedent that would degrade water quality statewide.

The request of the City of Harrison and the City of Yellville to amend Regulation 2 for chloride, sulfate and total dissolved solids for Crooked Creek while not ideal, is a calculated and reasonable amendment based in best science and technology that is currently available.

**Commission Question One: Whether the proposed new criteria should be rounded up to the nearest whole number for Chloride and Sulfate and up to the nearest multiple of ten for Total Dissolved Solids?**

The proposed new criteria should **not** be rounded up to the nearest whole number for chloride and sulfate and up to the nearest multiple of ten for dissolved solids. Rounding up to the nearest whole number or nearest multiple of ten would not address the Commission's interest in avoidance of giving the public a misleading perception of accuracy. Rounding up would permit higher levels of chloride, sulfate and total dissolved solids in waters of our state and would not advance the goal of the Water Quality Criteria which is to protect designated uses.

If the Commission determines that rounding would be a better way to communicate the standards to the public then the Commission should elect to round down, rather than round up, in order to the state's water quality and protect designated uses.

**Commission Questions Two: Whether the proposed new criteria should be revised to correspond to the 99th percentile of relevant instream data?**

The proposed new criteria should **not** be revised to correspond to the 99th percentile of relevant instream data. The purpose of the Water Quality Criteria is to protect designated uses. Revising the new criteria to correspond to the 99th percentile of relevant instream data would allow discharges at levels streams may have rarely before been subjected and may not support designated uses. Such a change could have longterm effects on the waters of our state leading to significant degradation of our waters.

Arkansans value our abundant water supply and the high water quality that allow us to work, drink, fish and recreate all over the state. Our high quality water resources fuel the tourism industry that accounted for \$6,698,501,022 in travel expenditures in 2014 and brought more than \$10 million to 66 of Arkansas's 75 counties.<sup>1</sup> Arkansas's \$16 billion agriculture sector is also dependent on our abundant high quality waters.<sup>2</sup> Each Arkansan values the clean water they drink and streams they cool off in or catch dinner and rely on the Department of Environmental Quality and APC&EC to protect the designated uses of our waters. If the questions raised by the

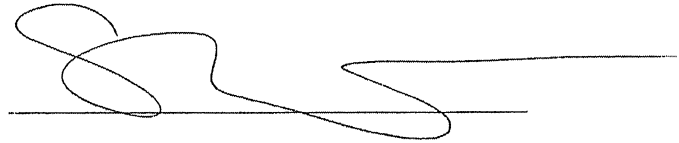


Commission are implemented the results could be lower water quality across the state. If the Commission determines to take action on the questions it has proposed a separate public comment period and hearing should be held to provide the public with adequate notice, information and opportunity to comment on the proposed changes.

Thank you for the opportunity to comment and your consideration of these comments.

**Response 4:** The Department acknowledges these comments.

Submitted by:

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