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From: Randy Easley
Sent: Friday, October 2, 2020 4:29:19 PM
To: CPP-antideg-comments
Subject: AIM and CPP Public Notice Comments - Attachments
Importance: Normal
Attachments: REasley AIM_CPP Comments 100120.pdf ;

Hello,

On behalf of Central Arkansas Water and the Arkansas Water and Wastewater Managers Association, I offer the attached comments on the draft CPP and AIM documents.

We appreciated the opportunity to participate in stakeholder meetings to provide comments about the proposed Antidegradation Implementation Methodology (AIM) and the Continuing Planning Process (CPP).

Attached you will find our comments for the AIM and CPP, respectively.

If you have any questions, please don't hesitate to contact me.

Sincerely,

Randy Easley
Water Resource Scientist
Central Arkansas Water & AR WWMA representative

REasley AIM_CPP Comments 100120.pdf

CPP/AIM Comments 10/01/20

The Arkansas Department of Energy and Environment, Division of Environmental Quality (DEQ) has proposed revision to the Continuing Planning Process (CPP) and a Draft Antidegradation Implementation Methodology (AIM). Both required under the Clean Water Act (CWA), however, the Arkansas CPP has not been updated since June 1999, and the AIM is a completely new process for the state, although it has been a requirement since 1987.

General Comments
Most water quality standards in Arkansas are currently in a narrative form, and EPA has required DEQ to move towards setting numeric WQ standards. DEQ has elected to address these standards based on Ecoregions. DEQ wants to collect data for each ecoregion before attempting to set any standards. There are six ecoregions in Arkansas. At present, the schedule to accomplish this may be in 2025. This presents a problem as both Regulations #2, #6, the CPP and Anti-degradation works will be completed prior to setting those standards. All these standards will be directly affected should numeric standards be derived. Additionally, as it currently stands, the CPP and AIM do not include provisions for revisiting them should numeric standards be developed.

Continuing Planning Process (CPP)

General Comments:
The Continuing Planning Process (CPP) is required by the Clean Water Act (CWA) § 303(e) [33 U.S.C. § 1313(e)], 40 C.F.R. § 130.5, and Ark. Code Ann. § 8-4-208(a). Arkansas developed and obtained approval of the CPP on January 24, 1983. Subsequent modifications were made in July 1989, November 1991, April 1993, January 1995, and June 1999. The general purpose of the CPP is to describe the principal operational procedures of the state of Arkansas water quality management programs and permits.

As you can see, it has been over 20 years since Arkansas has conducted a review of its CPP. EPA recommends that states consider review and updates should occur regularly but falls short of providing a schedule to follow. Typically, when Clean Water Act modifications are made, a state should review its CPP for implementation needs.

Since it had been over 20 years since its previous update, it was stated by DEQ staff that it was pretty much an entire document rewrite. The original document had only been amended in a piecemeal fashion. It was also stated that the updated CPP would primarily focus on meeting the minimum EPA 40 CFR Part 130.5 requirements. There have been changes to 130.5 since Arkansas originally adopted the CPP. One of these changes is to incorporate the Biotic Ligand Model (BLM) into setting standards.

The CPP does not provide process for future revisions (shouldn't wait another 20 years to review & update). DEQ should draft procedures for the systematic review of the CPP as well as when Clean Water Act modifications are made, a state should review its CPP for implementation needs.

AIM is not being incorporated into the CPP, but it is recommended by EPA to do so. DEQ should incorporate the provisions of the AIM into the CPP.

Chapter 1 Water Quality Management Program

1.3.2 Aquatic Life Verification Procedure

We recommended adding the following language for clarification purposes: "APC&EC Rule 2.505 includes several exceptions as to when the ecoregion dissolved oxygen criteria are not applicable and when other criteria apply to waterbodies as it is anticipated aquatic life would not persist. These exceptions include:"

Evaluation Process

The 2000 CPP provided a detailed outline for performing aquatic life use evaluations. The proposed evaluation process provides the minimum level of data required but offers little guidance. DEQ should consider providing guidance for the evaluation process.

Chapter 1.12.2 Non-point Source Controls

The website link should be updated to https://www.agriculture.arkansas.gov/natural-resources/ as the Arkansas Natural Resources Commission was merged with the Department of Agriculture under the Transformation and Efficiencies Act of 2019.

Chapter 3 Water Quality Management Plan (WQMP)

Please consider the adding to the WQMP a Tier 2 waterbody's baseline water quality and assimilative capacity whether determined prior to a NPDES or at the time of application.

Chapter 4 Water Quality Based Effluent Limitations

Statistical Methods

The draft CPP utilizes geometric means for the purpose of averaging (Chapter 4.5) effluent samples or in some instances available upstream data (Chapter 4.9). However, for minerals (Chapter 4.15.11) the arithmetic mean is used for averaging upstream data. Preference should be given to use of the arithmetic mean as the geometric mean will consistently provide less conservative output for the same range of values. DEQ should review statistical methodology when applying towards analysis of data sets and should consistently apply compatible statistical methods.

Chapter 4.15.6 Total Phosphorus

Note that specific discharge requirements were removed from Rule 2.509 and proposed in Rule 6.404(F). The AGFC encourages DEQ to also consider adding monitoring and reporting requirements to all new facilities or expanding activities discharging to a waterbody that is currently identified as Category 3 (Insufficient Data) for nutrients. Additional nutrient loads on a system that already exceeds the 75th percentile for its ecoregion will only exacerbate nutrient related water quality issues, particularly as the waterbody has not been fully assessed to be attaining water quality criteria. DEQ should consider adding monitoring and reporting requirements to new and expanding activities discharging to a waterbody identified as Category 3 for nutrients.

Chapter 5 Monitoring and Sampling Requirements

Chapter 5.1 Monitoring Location

DEQ should add language requiring the permit engineer to consult with trained scientists from the Office of Water Quality Planning Branch to determine the best monitoring locations.

Chapter 7 Public Participation and Notice

As outlined for interagency coordination, the ADA respectfully requests any advance notice to provide input on permitting actions.

Draft Antidegradation Implementation Methodology

General Comments
In addition to the CPP, a draft of Arkansas' Antidegradation Implementation Methodology, as required by 40 CFR § 131.12, will also be made available for review and comment. This is the implementation methodology for Arkansas' Antidegradation Policy in Chapter 2 of APC&EC Rule No. 2. The Antidegradation Implementation Methodology details how the tiers of water quality protection are applied to waters and the process to allow lowering of water quality in a high-quality water.

This is a new process for DEQ, as they have not previously had a similar document. The initial focus workgroup of Arkansas stakeholders (I participated in all these meetings) met several times in 2018 to initiate the antidegradation planning process. Afterwards in 2019, DEQ staff met with Missouri Water staff to discuss their implementation methodology. After this, DEQ staff began to draft an antidegradation policy for the state.

Some Issues with the draft AIM
Counter to the "Antidegradation" methodology, the newly draft AIM actually provides a mechanism for the lowering of water quality (degradation). In practice, the policy primarily affects Tier 2 waters (Reg 2 designates these) which NPDES permits wish to discharge. This focus on NPDES permitting does not address non-point source contributions. For example, if poultry wastes were spread on pastures in the watershed so that excess nutrients could enter waterways (like Northwest Arkansas), there is no mechanism in the new methodology to prevent the resultant water quality degradation.

Additionally, non-point sources (NPS) become important in establishing baseline water quality and assimilative capacity. These determinations are important in establishing "significant degradation" and what additional loadings are allowed in a waterbody. It should be noted that EPA recommends NPS be used to inform the waterbody designated use and their impact on assimilative capacity.

Antidegradation Implementation Methodology Specific Comments

The following comments are organized under the following:

1. Definitions
3. Tier Protection Levels
4. Tier Protection Levels and Antidegradation Evaluation
5. Assigning Tier Protection
6. Revising Tier Protection Levels
7. Activities Eligible for Antidegradation Review
8. Antidegradation Review Procedure
9. Implementation of Controls for Nonpoint Pollution Sources

1. Definitions
Baseline Water Quality (BWQ)
The current language is problematic because BWQ needs to be determined to track the use of assimilative capacity by nonsignificant degradation. "Nonsignificant" degradation needs to be tracked so that it is clear when over 10% of the assimilative capacity has been cumulatively utilized in the water body and a Tier 2 review is needed for the next activity. It is also recommended to replace "For an

expanding discharge" with "For an expansion of the last authorized prior discharge" so that it is clear this is only accounting for the expansion of a discharge that was approved prior to the establishment of the AIM.

Existing Activity:
Recommend clarifying how the phrase "…results in significant degradation…" would be determined. If the phrase "significant degradation" is referring to AIM's current definition of significant lowering of water quality, we recommend replacing "…results in significant degradation" with "…results in significant lowering of water quality…" to maintain consistency.

If this is not the case, DEQ should include a definition of "significant degradation" in the document. Additionally, DEQ should provide procedures as to how it plans to determine if an activity results in significant degradation where BWQ has not been established.

Existing Use Protection (EUP):
This definition does not define what existing use protection is but rather refers to Rule 2.302 that describes designated uses that may apply to specific waters and Rule 2.306 that describes the procedures for removing those uses. The definition should be revised to include: Maintenance and protection of existing instream water uses and the level of water quality necessary to protect existing uses.

High Quality Protection (HQP):
DEQ should revise the definition to clarify how the state intends to apply antidegradation protections to CWA Sec. 101(a)(2) uses. DEQ should describe how protection for high quality waters includes a review process for using assimilative capacity. In certain cases, any significant lowering of water quality requires the completion of a Tier 2 review prior to authorization. DEQ should also incorporate those provisions which would trigger a Tier 2 review.

Parameter-by-Parameter Basis:
DEQ should expand this definition to add: "When an activity is proposed, the state determines which parameters represent water quality that is more stringent than the applicable criteria developed to protect the CWA section 101(a)(2) uses." If it is proposed that a water body has tiered parameters, an antidegradation review should be triggered and would make determinations of protection.

Water Quality Criteria (WQC):
DEQ should replace this definition with the definition of water quality criteria from federal regulation: "Criteria are elements of State water quality standards, expressed as constituent concentrations, levels, or narrative statements, representing a quality of water that supports a particular use. When criteria are met, water quality will generally protect the designated use."

Waterbody-by-Waterbody Approach:
DEQ should consider more than pollutant concentrations when evaluating any water body for degradation. An approach for determining whether a water body or segment is high quality, is often based on a judgment of the overall quality of the water body when considering a variety of factors. A judgment of quality is made on a weighted assessment of chemical, physical, biological, and other applicable information. Waters can be identified as high quality even if criteria for certain pollutants are not attained or if some designated uses are not fully supported. The presence of a water body on the CWA section 303(d) list for one CWA 101(a)(2) use should not exclude it from potentially being

identified as a Tier 2 water. The quality of the water body can either be determined before or at the time of the antidegradation review.

Waters of the State:
DEQ should delete the last sentence in this definition. Federal regulations do not limit the state's to protecting only those waters defined as waters of the U.S. Arkansas Code Annotated (A.C.A. § 8–4–102 et seq.)) states that "waters of the state" means all streams, lakes, marshes, ponds, watercourses, waterways, wells, springs, irrigation systems, drainage systems, and all other bodies or accumulations of water, surface and underground, natural or artificial, public or private, which are contained within, flow through, or border upon this state or any portion of the state." Arkansas's Water Quality Act provides a broader definition of "waters of the state,". As written, many waters of the state that may be critical to maintaining biological integrity and preserving water quality throughout the state that were previously protected would be excluded from protections in conflict with 40 CFR 131.12 and the provisions in Rule 2.102, and 2.501 referring to applicability to all waters at all times.

3. Tier Protection Levels
Arkansas designates waterbodies in a 3 Tier system. Existing Instream Uses (Tier I) - Those uses listed in Section 303(c)(2) of the Clean Water Act, 33 U.S.C. § 1313(c)(2) (i.e., public water supplies, propagation of fish and wildlife, recreational uses, agricultural and industrial water supplies, and navigation), which were actually attained in the waterbody on or after November 28, 1975, whether or not they are included in the water quality standards. High Quality Waters (Tier II) - For the uses listed in CWA 101(a)(2), all parameters of waters that are not defined as Tier 1 or 3 and have water quality that is better than water quality criteria. Outstanding Resource Waters (Tier III) - Waters designated in APC&EC Rule 2 as Extraordinary Resource Waters (ERW), Ecologically Sensitive Waterbodies (ESW), and Natural and Scenic Waterways (NSW). These high-quality waters constitute an outstanding state resource, with significant aesthetic, recreational, or scientific value.

Most drinking water supplies in Arkansas fall under either Tier I or Tier II and are therefore subject to potential water quality degradation. One of my (and others) arguments has been that drinking water sources, particularly those specifically designed for public water supply should be afforded the higher Tier III classification. This classification states that there can be no degradation of water quality.

4. Tier Protection Levels and Antidegradation Evaluation
As drafted, the AIM is only applicable for numeric criteria. Most water quality standards in Arkansas are currently in a narrative form, and EPA has required DEQ to move towards setting numeric WQ standards. Rule 2 currently identifies 11 narrative criteria between Chapter 4 (General Standards) and Chapter 5 (Specific Standards). Most Chapter 4 narrative criteria are intended to limit the deleterious effects of effluent on receiving waters. The AIM does not include any methods for the determination of BWQ or assimilative capacity for narrative criteria. DEQ should calculate both BWQ and assimilative capacity with the screening criteria as an upper limit to be avoided to prevent possible impairment unless narrative criteria are established.

DEQ has elected to address these standards based on Ecoregions and wants to collect data for each ecoregion before attempting to set any standards. There are six ecoregions in Arkansas. At present, the schedule to accomplish this may be in 2025. This presents a problem as both Regulations #2, #6, the CPP and Anti-degradation will be completed prior to setting those standards. All these standards will be directly affected should numeric standards be derived. Additionally, as it currently stands, the CPP and AIM do not include provisions for revisiting them should numeric standards be developed. DEQ should

develop procedures that include additional evaluation of anti-degradation status should numeric criteria be developed for any parameter.

7. Activities Eligible for Antidegradation Review

DEQ states that a review is only triggered by significant degradation of a waterbody (~10% of the assimilative capacity) or if a new permitted discharge was requested. This could be an issue when determining assimilative capacity.

8. Antidegradation Review Procedure

Baseline Water Quality

DEQ indicated that baseline water quality (BWQ) will be established at the time of a NPDES permit application and will be required by the applicant to determine. DEQ maintains a long-term ambient monitoring network which collects important water quality data. This information should be evaluated by DEQ staff to help establish BWQ for pending NPDES applications where possible.

9. Implementation of Controls for Nonpoint Pollution Sources

The focus on NPDES permitting does not adequately address non-point source contributions. For example, if poultry wastes were spread on pastures in the watershed so that excess nutrients could enter waterways (like Northwest Arkansas), there is no mechanism in the new methodology to prevent the resultant water quality degradation. Additionally, non-point sources (NPS) become important in establishing baseline water quality and assimilative capacity. These determinations are important in establishing “significant degradation” and what additional loadings are allowed in a waterbody. It should be noted that EPA recommends NPS be used to inform the waterbody designated use and their impact on assimilative capacity. The Arkansas Department of Agriculture is the lead Nonpoint Source Pollution agency. DEQ should incorporate language that better integrates this agency.

Other AIM Comments

Tier 3 Rivers, Streams, and Reservoirs

Rule 2.302(A) defines Extraordinary Resource Water (ERWs) as "a combination of chemical, physical and biological characteristics of a waterbody and its watershed ... " How will DEQ apply Outstanding Resource Water (Tier 3) antidegradation review at the watershed scale? The draft Continuing Planning Process (CPP) lacks any clear procedures for permit calculations and implementation for Outstanding Resource Waters. Rule 6.401(B) only applies a 10/15 CBOD5 and TSS threshold and case-by-case determinations for Ecological Sensitive Waterbodies. The AGFC requests clearer antidegradation procedures and permit review and issuance procedures for the protection of aquatic life in Outstanding Resource Waters.

Exclusion of Reservoirs

The proposed AIM does not clearly provide antidegradation procedures for reservoirs. Reservoirs still must meet all applicable water quality standards [Rule 6.401(C)] which states for dischargers to reservoirs, "In all cases, applicable water quality standards must be met". DEQ should expand reservoir water quality monitoring and to continue to review appropriate models and permitting strategies for the protection of reservoir water quality for all designated uses.

Applicability of Waters

DEQ should not narrow the scope of applicable waters to the federal definition of a Water of the United States (WOTUS). Ephemeral streams (and other excluded bodies of water) should be applicable to antidegradation review because they are critical to the physical, chemical, and biological integrity of downstream waters. Federal regulations do not limit the state's to protecting only those waters defined as waters of the U.S. Arkansas Code Annotated (A.C.A. § 8–4–102 et seq.)) states that "waters of the state" means all streams, lakes, marshes, ponds, watercourses, waterways, wells, springs, irrigation systems, drainage systems, and all other bodies or accumulations of water, surface and underground, natural or artificial, public or private, which are contained within, flow through, or border upon this state or any portion of the state." Arkansas's Water Quality Act provides a broader definition of "waters of the state,". As written, many waters of the state that may be critical to maintaining biological integrity and preserving water quality throughout the state that were previously protected would be excluded from protections in conflict with 40 CFR 131.12 and the provisions in Rule 2.102, and 2.501 referring to applicability to all waters at all times.

Economic Analysis

During the stakeholder discussions, DEQ engineers stated they would be responsible for conducting Socio-economic analyses to determine the need and public interest of projects seeking to significantly degrade high quality waters. It is recommended that an environmental economist be added to the review process and utilized to conduct the costs and benefits associated with instances of significant degradation.