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Jon Tack, Bureau Chief
Water Quality Bureau
Iowa Department of Natural Resources
Via email: jon.tack@dnr.iowa.gov

Dear Mr. Tack:

On behalf of the Iowa Environmental Council (the Council), an alliance of over sixty Iowa environmental organizations, I am offering comments on the proposed revisions of Iowa's Antidegradation Implementation Procedure (AIP). Our members use waters throughout the state for paddling, fishing, swimming, and drinking. The Council was actively involved in the development of the current AIP, and opposes revising its provisions as proposed by the petitioners, because these changes would weaken protections for water quality and are inconsistent with the goals of the Clean Water Act and with new federal antidegradation requirements.

Comment 1: The Economic Efficiency analysis at issue in the petition for rulemaking is a separate test with a separate purpose from the Affordability analysis, and the two should not be conflated during this rulemaking.

A strong Antidegradation policy is crucial for achieving the goals of the Clean Water Act. As US EPA stated in its 2015 rulemaking concerning certain requirements of the Act, Antidegradation fulfills one of the principle objectives of the Clean Water Act: to “maintain the chemical, physical and biological integrity of the Nation’s waters.”¹ The purpose of an antidegradation policy is to prevent any unnecessary lowering of water quality. According to Iowa’s Antidegradation rules, lowering water quality is only necessary when there is no reasonable, less polluting alternative to the proposed degradation.² The Antidegradation

¹ 80 Fed. Reg. 51020 (2015) at 51029.

² DNR, *Iowa Antidegradation Implementation Procedure*, Glossary, at page 1: “Necessary:’ No reasonable alternative(s) exist to prevent degradation.”

Implementation Procedure (AIP) provides that an alternative is “reasonable” when it is practicable, economically efficient, and affordable.³ As the Iowa Department of Natural Resources (DNR) and the Environmental Protection Commission (EPC) consider revising the existing antidegradation procedure, it is important to clarify the fact that the proposed changes pertain only to the economic efficiency portion of the analysis, and to distinguish between the purposes of each of these assessments.

As explained in the Antidegradation Implementation Procedure, the purpose of the affordability test is to ensure that no alternative is deemed “reasonable” that is beyond the means of a community or private discharger to implement:

“Following an analysis of practicability and economic efficiency, the affordability of the least degrading alternative may be assessed at the applicant’s discretion. This assessment may be used to determine if the alternative is too expensive to reasonably implement.

This approach results in the selection of the least degrading alternative, while maintaining affordability to the public or private entity.”⁴

The economic efficiency test, on the other hand, is designed not to assess the affordability of an alternative but rather, to ensure that practicable, cost-effective alternatives that would be less polluting than the base pollution control alternative (BPCA) are considered for implementation. Page 15 of the AIP provides that only “alternatives that impose a cost that is disproportionate to the possible environmental gain may be eliminated from further consideration.” EPA Region 7, in its review and approval of Iowa’s anti-degradation rules, described the economic efficiency test as follows:

“This step in the Iowa AIP provides an opportunity for applicants to compare the cost-effectiveness of the available alternatives. If the incremental cost of a less degrading alternative under consideration substantially outweighs the incremental pollution benefits, the applicant may attempt to make the case that the least-degrading alternative is not reasonable.”⁵

In other words, before an alternative may be eliminated from further consideration *on economic efficiency grounds*, there must be a basis for that elimination that goes beyond the fact

³ DNR, *Iowa Antidegradation Implementation Procedure*, Sec. 3.2 “Evaluating and Selecting Alternatives,” at 14.

⁴ DNR, *Iowa Antidegradation Implementation Procedure*, Sec. 3.2 “Evaluating and Selecting Alternatives,” at 16.

⁵ EPA Region 7 Review of Iowa’s February 17, 2010 Rule Revisions to Iowa’s Water Quality Standards, at page 29. Available online at https://archive.epa.gov/region07/newsevents/legal/web/pdf/ia_wqs_antideg_pkg_9_30_10.pdf.

that a less degrading alternative (LDA) is more expensive than the base pollution control alternative (BPCA), and considers instead whether or not the increased cost would be justified by a corresponding environmental benefit. The AIP specifically provides that even when the implementation cost of an LDA would be greater than the 115% non-binding guideline, such alternatives “should also be considered if implementation of the alternative would produce a substantial improvement in the resulting discharge.”⁶ However, any less-polluting alternative that is determined to be economically efficient under this analysis would not be required to be implemented *unless it is reasonable*, i.e., practicable, economically efficient, and affordable.

This distinction between the economic efficiency and affordability tests is important to emphasize because of claims being made by some commenters about the need for the proposed rule revisions. For example, the General Counsel for the Association of Municipal Utilities, one of the petitioners, asserted in his May 17 comments to EPC that “the purpose of the Environmental Council’s lawsuit is to exploit the flexibility of this guideline and to characterize as reasonable, treatment alternatives for nutrient removal that cost 143% of the base cost, far higher than the 115% standard in the nonbinding guideline.” This commenter also stated, “The Environmental Council has clearly taken the position that all measures should be taken no matter what the cost or who pays it.” Both of these statements are demonstrably untrue and a mischaracterization of the AIP’s provisions and the Iowa Environmental Council’s position.

The provision of the AIP at issue in the Clarion lawsuit was the economic efficiency portion of the analysis; specifically, the AIP’s requirement that environmental benefits *be considered* before an alternative is eliminated on economic efficiency grounds.⁷ Again, the economic efficiency analysis is just one of three criteria that define whether an alternative is “reasonable.” When the criteria of practicability and economic efficiency have been met, the AIP instructs the applicant to proceed to an analysis of the affordability of the alternative being evaluated:

“If the applicant determines that the least degrading remaining alternative is affordable, then it is the preferred alternative. If it is not affordable, then the affordability of the next

⁶ DNR, *Iowa Antidegradation Implementation Procedure*, Sec. 3.2 “Evaluating and Selecting Alternatives,” at 15.

⁷ See *Iowa Environmental Council v. Iowa Department of Natural Resources*, Ruling on Petition for Judicial Review (March 17, 2016), at 10. (“Specifically, the issue is whether the applicant ‘provide[d] the basis for its selection’ as concerns the criterion for ‘economic efficiency,’ and what is required to clear that hurdle.”)

[least degrading] alternative should be evaluated until an alternative is chosen that is practicable, economically efficient, *and affordable*. [emphasis added].”⁸

Simply requiring that environmental benefits be considered before an alternative is eliminated on economic efficiency grounds does not alter the definition of what is a reasonable alternative under the AIP, or result in a policy that “all measures should be taken no matter what the cost or who pays it.” The Council would never advocate for such an unreasonable approach. The purpose of the lawsuit over DNR’s approval of Clarion’s alternatives analysis was to ensure that DNR implements the AIP as written, not to change its requirements.

The AIP currently requires that the cost-effectiveness of less degrading treatment alternatives be analyzed, an analysis that requires comparing the costs of additional treatment to the resulting environmental benefit. This cost-benefit analysis did not appear in the alternatives analysis submitted by the City of Clarion “even at a rudimentary level,” according to the Court’s ruling.⁹ There is no reason that simply requiring applicants to perform such an analysis would result in their being forced to select and implement alternatives the costs of which “would be beyond the means of the citizens” of these communities, as the City Administrator of Clarion stated in his May 17 comments to EPC. The economic efficiency analysis does not address the issue of whether an alternative is too costly to implement, which is why the AIP includes a separate assessment procedure for affordability. It is important to note that the nutrient removal alternative at issue in IEC’s lawsuit against DNR had been deemed affordable by the City of Clarion’s own analysis.¹⁰ If being required to implement that alternative would, as Clarion’s City Administrator claimed, “literally bankrupt our citizens,” then it is the procedure for assessing an alternative’s affordability that needs to be changed.

Comment 2: Antidegradation inherently recognizes the harm of any increased pollution and the benefit of preventing it.

Another objection that the petitioners and some commenters have to the economic efficiency analysis is that environmental benefits are difficult to quantify, and that determining whether an alternative is cost-effective or not requires an analysis that is not completely objective. The Iowa

⁸ DNR, *Iowa Antidegradation Implementation Procedure*, Sec. 3.2 “Evaluating and Selecting Alternatives,” at 16.

⁹ *Iowa Environmental Council v. Iowa Department of Natural Resources*, Ruling on Petition for Judicial Review (March 17, 2016), at 12.

¹⁰ See City of Clarion, *Antidegradation Alternative Analysis, Wastewater Treatment Facility Improvements Project*, at 8.

Water Environment Association commented to EPC on May 17 that there is no uniform approach to quantify environmental benefits, and that this is “because of the difficulty in proving a direct correlation between an environmental improvement and resulting environmental benefit.” Environmental benefit is difficult to quantify in the case of any single applicant, because it is “the cumulation of environmental improvements that combine to provide the tangible environmental benefit.”

This interpretation turns the purpose of Antidegradation on its head. The principle of Antidegradation is that even where water quality is better than necessary to meet water quality standards, any unnecessary lowering of water quality should be prevented. It is the protection and maintenance of “high quality” (Tier 2) waters—that is, lakes, rivers, and streams where water quality is better than the minimum level required to support designated uses—that provides antidegradation’s tangible environmental benefits. US EPA described the tangible environmental and economic benefits of protecting these waters in its recent rulemaking concerning antidegradation requirements:

“Maintaining high water quality is critical to supporting economic and community growth and sustainability. Protecting high water quality also provides a margin of safety that will afford the water body increased resilience to potential future stressors, including climate change. Degradation of water quality can result in increased public health risks, higher treatment costs...and diminished aquatic communities, ecological diversity, and ecosystem services.”¹¹

US EPA emphasized the fact that preserving high water quality, rather than degrading it through repeatedly allowing an incremental lowering of water quality, is actually a cost-saving measure for communities:

“Conversely, maintaining high water quality can lower drinking water costs, provide revenue for tourism and recreation, support commercial and recreational fisheries, increase property values, create jobs and sustain local benefit.”¹²

In other words, antidegradation standards inherently recognize the harm of increased pollution and the benefit of maintaining high water quality. Any additional pollution that can be prevented is considered to confer an environmental benefit. In addition, because Iowa does not

¹¹ 80 Fed. Reg. 51020 (2015) at 51029.

¹² *Id.*

have numeric water quality criteria for nitrogen and phosphorus, or assess its waters for impairments caused by excessive levels of nutrients (with the exception of assessing the nitrate levels of drinking water sources), antidegradation standards play a particularly important role in minimizing and preventing additional nutrient pollution loading of Iowa's surface waters from point sources.

Comment 3: The AIP's current economic efficiency analysis procedure is not vague or "amorphous."

The AIP as it is currently written provides a clearly outlined procedure for evaluating the cost-effectiveness of less-degrading alternatives, on pages 15-16 of the AIP. The applicant is directed to begin its economic efficiency analysis by identifying the "primary pollutants of concern" that it will be discharging. (Further guidance on this step is provided in the AIP.) Next, the applicant is instructed to compare the costs of additional treatment for every pollutant of concern (POC). In other words, the applicant should assess how much more additional loading would be prevented for each POC, and compare this additional reduction to the additional cost of removal for that POC. If the cost of additional treatment is disproportionate when compared with the reduced loading it provides, then the alternative is not cost-effective. Although there may be some judgment required to determine when additional treatment costs are "disproportionate" when compared to the resulting improvement in effluent quality, the AIP lists factors to be considered in the analysis on page 14: these include the nature of the pollutants discharged; sensitivity of stream uses; and sensitivity of groundwater uses in the area.

Evaluating the cost-effectiveness of a treatment alternative is not an impossible concept to implement. Iowa DNR performed just such an analysis when it evaluated nutrient removal processes for Iowa's Nutrient Reduction Strategy to determine which treatments "offer the most 'bang for the buck' at reducing loading of nitrogen (N) and phosphorus (P)," an assessment that took into account both environmental benefits and the related costs of the nutrient removal practices DNR studied.¹³ We are confident that DNR can assist municipalities and private entities in devising a similar approach for implementing the AIP's economic efficiency analysis

¹³ Iowa Department of Agriculture and Land Stewardship, Iowa Department of Natural Resources, Iowa State University College of Agriculture and Life Sciences. *Iowa Nutrient Reduction Strategy: A science and technology-based framework to assess and reduce nutrients in Iowa waters and the Gulf of Mexico*. Updated Sept. 2014. Available online at: <http://www.nutrientstrategy.iastate.edu/documents>. See "Executive Summary," at pages 2; Section 3, at pages 1-3.

that will serve the purposes of Antidegradation while also providing a fair and predictable administrative process to regulated entities.

Comment 4: DNR and EPC should consider reconvening the original stakeholder group for the 2010 AIP rulemaking before approving such a drastic change.

If DNR and EPC believe that additional guidance is needed for entities performing the economic efficiency analysis, then we respectfully request that EPC reconvene the parties of the original AIP stakeholder group for the purpose of developing these additional procedures. Revising the AIP to provide more detailed guidance to applicants that choose to perform the economic efficiency analysis is more reasonable than allowing applicants to eliminate from further consideration any less-polluting alternative that would cost 115% or more than the cost of the BPCA to implement. An evaluation of an alternative's cost-effectiveness cannot be reduced to a mathematical formula, and creating a test that determines economic efficiency based solely on a pre-determined percentage of the BPCA ignores any consideration of such factors as the condition of the receiving water and the pollutants being discharged. Such an approach does not result in a meaningful for assessment of cost-effectiveness, because it considers only costs. The fact that it requires no professional judgment and is "predictable" does mean it is reasonable.

Comment 5: The proposed revisions to Iowa's Antidegradation Implementation Procedure are inconsistent with federal law.

The proposed changes to Iowa's Antidegradation Implementation Procedure are revisions to a water quality standard, which EPA has the statutory duty to review, and approve or disapprove, under § 303(c)(3) of the Clean Water Act (CWA).¹⁴ As indicated above, US EPA has promulgated new federal antidegradation regulations. The purpose of revising federal antidegradation requirements was "to enhance protection of high quality waters and to promote consistency in implementation." The new provisions are intended to provide "a more structured process" that states and tribes are required to follow when making decisions about permitting activities that will lower water quality.¹⁵ The preamble to the final rule states that when EPA reviews a revised state water quality standard following the new rule's publication, the revised

¹⁴ See also US EPA guidance document, *What is a New or Revised Water Quality Standard Under CWA 303(c)(3) Frequently Asked Questions* (EPA-820-F-12-017, October 2012).

¹⁵ 80 Fed. Reg. 51020 (2015) at 51030.

provisions will be reviewed “to determine whether they are consistent with the CWA and regulation applicable at the time of EPA’s review.”¹⁶ The petitioners’ proposed changes are not consistent with the new federal antidegradation regulation, published on August 21, 2015.¹⁷

Under the regulation’s new requirements, a state cannot allow a lowering of high water quality unless it finds, “after an analysis of alternatives,” that the lowering is “necessary.”¹⁸ A finding that such a lowering is necessary can only be made if (1) it is necessary “to accommodate important economic or social development in the area in which the waters are located; and (2) any “practicable” alternative that is identified through the analysis of alternatives is selected for implementation.¹⁹ These are two independent requirements that both must be met (and can therefore be satisfied in any order) before a state may find that a lowering of water quality is necessary.²⁰ The final rule defines a “practicable” alternative for the purposes of this requirement as one that is “technologically possible, able to be put into practice, and economically viable.”²¹ The rule “requires that states’ and authorized tribes’ antidegradation policies must be consistent with new requirements.”²²

The revisions to Iowa’s AIP that the petitioners propose are not consistent with the new requirements, because the bright line economic efficiency test is inconsistent with the federal definition of “practicable.” Under the federal requirements, a less degrading alternative must be selected if it is technologically feasible and “economically viable.” Although US EPA has not provided guidance to further explain the meaning of “economically viable,” the plain meaning of the term suggests a meaning synonymous with “affordable;” that is, an alternative that an entity could implement and continue to be economically self-sustaining. This is the meaning ascribed to “economically viable” by the State of Minnesota when it recently revised its antidegradation rules, which it did so with assistance and support from US EPA.²³ Clearly, whether an alternative costs more than 115% of the BPCA bears no relation to the question of whether an

¹⁶ 80 Fed. Reg. 51020 (2015) at 51022.

¹⁷ 80 Fed. Reg. 51020 (August 21, 2015).

¹⁸ 80 Fed. Reg. 51020 (2015) at 51032.

¹⁹ *Id.*

²⁰ *Id.*

²¹ *Id.* (This definition is codified at 40 CFR § 131.3(n).)

²² 80 Fed. Reg. 51020 (2015) at 51032.

²³ *Attachment 1 MPCA Detailed Responses to Comments 4/2016*, at page 30; *Transcript of March 31, 2016 Hearing* at page 26 (“MPCA has requested and received input from the EPA. EPA has submitted comments in support of the proposed rules.”) Documents available online under “Rulemaking Documents” tab at <https://www.pca.state.mn.us/water/nondegradation-rulemaking>.

alternative is affordable. The 115% bright line test would allow an applicant to eliminate from further consideration an affordable, technologically feasible, less degrading alternative that would be considered “practicable” under the federal rule.

If DNR and EPC determine that the current AIP requirement applicable to entities seeking to eliminate alternatives on economic efficiency grounds is simply too “burdensome and expensive” for applicants to comply with, then EPC should remove economic efficiency altogether from the AIP. Doing so would not be inconsistent with the federal rule; however, revising the AIP to allow applicants to eliminate affordable, less degrading alternatives because they cost 15% more than the cost of the BPCA is clearly not consistent with the new federal requirements.

Conclusion

Iowa’s existing Antidegradation Implementation Procedure, developed through the efforts of a diverse group of stakeholders working together over the course of several years, produced a balanced approach that seeks to prevent unnecessary degradation of our water quality, while at the same time providing regulated entities with more flexibility than exists under current federal antidegradation standards. We oppose petitioners’ proposed changes that would reduce the economic efficiency analysis to an arbitrary, bright line test, and encourage DNR and EPC to either take the alternative approach of reconvening the original AIP stakeholder group if it determines additional guidance is necessary, or eliminate the AIP’s provisions related to economic efficiency altogether, so that less degrading alternatives are considered reasonable when they are technologically feasible and affordable, an approach that is aligned with current federal requirements.

Sincerely,

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