



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 7

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JAN 19 2017

OFFICE OF THE  
REGIONAL ADMINISTRATOR

Mr. Jon Tack, Chief  
Iowa Department of Natural Resources  
Water Quality Bureau  
502 E. 9<sup>th</sup> Street  
Des Moines, IA 50319-0034

Dear Mr. Tack:

On December 12, 2016, the U.S. Environmental Protection Agency received the Iowa Department of Natural Resources revision of Iowa's water quality standards (Attachment A). The revisions to Iowa's rules at 567 IAC Chapter 61 WQS consist of revising the current antidegradation policy adopted in Chapter 61 by striking the Iowa Antidegradation Implementation Procedure incorporated by reference; and adopting new antidegradation implementation procedures, which are contained within a rule-referenced document titled *Iowa Antidegradation Implementation Procedure* in Chapter 64. These revisions to Chapters 61 and 64 were adopted by the State on August 12, 2016, and were certified by the Attorney General on October 14, 2016, as adopted pursuant to Iowa law. Today's letter addresses the EPA's referenced disapproval of that submittal and the enclosed CD contains the attachments.

### Background

On September 30, 2010, the EPA approved the Iowa Antidegradation Policy at 567 I.A.C. §61.2(2) and the *Antidegradation AIP* adopted by rule reference at 567 I.A.C. §61.2(2)e. [Attachment B] The AIP included a provision for assessing "economic efficiency" which was identified as being "appropriate when the applicant desires to optimize the balance between water quality benefits and project costs." The AIP described the state's approach to determining economic efficiency as follows:

"As a non-binding guideline, alternatives less than 115 percent of the base cost of the minimum level of pollution control are presumed to be economically efficient. **Alternatives greater than 115 percent of the base costs should also be considered if implementation of the alternative would produce a substantial improvement in the resulting discharge.** [emphasis added] Conditions that might warrant consideration of alternatives of greater cost (above 115 percent) are the effectiveness, reliability, and environmental factors identified above. The base cost of the minimum level of pollution control is the cost of the controls required



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to protect beneficial uses and/or technology-based effluent limits, whichever is more expensive.”

As noted, the 115% guideline was non-binding. IDNR has been using this economic efficiency test since 2010.

This economic efficiency provision set forth a test that was not required by the pertinent federal regulations in effect at the time the AIP was approved by the EPA; however, states may adopt rules that are more stringent than their counterpart federal rules (See 40 CFR §131.4). The IDNR has been implementing the approved AIP since 2010.

Subsequent to the approval of the Iowa Antidegradation Policy and AIP, the EPA proposed the *Water Quality Standards Regulatory Revisions Rule* on September 4, 2013.<sup>1</sup> The Final Rule was published August 21, 2015 and became effective October 20, 2015.<sup>2</sup>

Two main features of the *Water Quality Standards Regulatory Revisions Rule* were revisions to the regulations related to Antidegradation Policies and Antidegradation Implementation Methods. The antidegradation requirements provide a framework for maintaining and protecting water quality that has already been achieved. The Rule established stronger antidegradation requirements to enhance protection of high quality waters and to promote consistency in implementation.

On October 9, 2014, the IDNR approved a final antidegradation analysis submitted by the City of Clarion, IA regarding a proposed expansion of the City’s wastewater treatment facility. The Iowa Environmental Council (IEC) subsequently filed a Petition for Judicial Review in Iowa District Court challenging the IDNR’s approval of the Clarion antidegradation analysis. The petitioner’s key contention was that IDNR did not follow the procedures prescribed in the AIP document adopted by reference at 567 I.A.C. §61.2(2)(e). On March 17, 2016, the court held that IDNR had erroneously approved the Clarion antidegradation analysis by not following the prescribed procedures in the AIP related to the analysis of alternatives.<sup>3</sup> [Attachment C] Specifically, the court ruled that Iowa’s approved AIP required an “economic efficiency” analysis (project costs vs. environmental benefit) and that the IDNR had failed to require the environmental benefit portion of the economic efficiency analysis.

In a May 11, 2016, letter to EPA Region 7, IDNR informed EPA that the Iowa League of Cities, the Iowa Association of Business and Industry, and the Iowa Association of Municipal Utilities had filed a petition for rulemaking that proposed language for modifying Iowa’s approved Antidegradation Policy and AIP. [Attachment D] The IDNR further stated they were required to present the petition to their Environmental Protection Commission (EPC), and the EPC is required to either deny the petition or initiate a rulemaking within 60 days. The EPC unanimously approved the petition at their meeting on May 17, 2016.

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<sup>1</sup> See 78 FR 54518, September 4, 2013. <https://www.gpo.gov/fdsys/pkg/FR-2013-09-04/pdf/2013-21140.pdf>

<sup>2</sup> See 80 FR 51019, August 21, 2015. <https://www.epa.gov/wqs-tech/final-rulemaking-update-national-water-quality-standards-regulation>.

<sup>3</sup> Iowa Environmental Council vs. Iowa Department of Natural Resources, case no. CVCV 50224

On May 17, 2016, IDNR gave public notice of a hearing on the proposed modification of the Iowa Antidegradation Policy and AIP and the hearing was held on June 29, 2016 (Attachment E). The IDNR developed a response to comments received during the public comment period and at the hearing dated August 8, 2016 (Attachment F).

On August 10, 2016, the EPC approved the amendments to the Antidegradation Policy and AIP. The EPC declared the rule effective as of August 12, 2016, under the Emergency Rule provisions of Iowa Code 17A.5(2)b(1)(b) (Attachment G).

### Today's Decision

Today's decision comes after numerous substantive discussions between the IDNR, the EPA Region 7 staff, the EPA Headquarters (EPA HQ) staff, and Iowa stakeholders.

Below is a summary of the most significant of those meetings and discussions. The summary of those meetings and discussions demonstrates that the parties had an open dialogue. The EPA sought to work with IDNR to identify potential solutions that would address both IDNR's reasons for adopting the 115% hard cap and EPA's concerns that IDNR's hard cap was inconsistent with the EPA's recently promulgated antidegradation regulations. Despite the parties frequent discussions, no resolution was reached that would allow the EPA to conclude that IDNR's hard cap could be approved as consistent with federal regulations. The EPA remains willing to continue discussions with IDNR to explore further whether any of the options discussed below or other options might allow IDNR to adopt a provision that would accomplish IDNR's programmatic goals and be consistent with current antidegradation regulations.

Date	Parties Involved	Synopsis
05/11/16	IDNR and EPA R7	Email – IDNR forwarded a petition for rulemaking, and a proposed rulemaking to revise the AIP to EPA R7. IDNR requested any input EPA R7 might have.
05/23/16	Iowa Environmental Council (IEC), Environmental Law and Policy Center (ELPC), and EPA R7	Teleconference - EPA R7 staff listened to issues raised by IEC and ELPC in regard to the petition for rulemaking that would revise the AIP.
06/01/16	IDNR and EPA R7	Teleconference – <ul style="list-style-type: none"> <li>• EPA R7 discussed issues with the antidegradation analysis performed for the City of Council Bluffs.</li> <li>• IDNR explained how Iowa's Antidegradation Policy and Nutrient Reduction Strategy were complementary in improvement of water quality.</li> <li>• Agenda was discussed for June 13, 2016 call between IDNR and EPA R7 regarding the Iowa petition for rulemaking that would revise the Iowa AIP.</li> </ul>
06/02/16	Iowa League of Cities (ILC), Iowa Association of Business and Industry (IABI), Iowa Association of Municipal Utilities (IAMU), and EPA R7.	Teleconference - <ul style="list-style-type: none"> <li>• EPA R7 staff listened to ILC, IABI, and IAMU explain why they filed the petition for rulemaking regarding the modification of the Iowa AIP. The primary focus was on the 115% "bright line" cap.</li> <li>• EPA R7 stated it understood the cap was in response to the Clarion lawsuit which dealt with Iowa's "economic efficiency" test and the</li> </ul>

Date	Parties Involved	Synopsis
		<p>fact that no water quality benefit analysis was performed. ILC, IABI, and IAMU agreed.</p> <ul style="list-style-type: none"> <li>• EPA R7 staff explained “economic efficiency” – essentially a cost/benefit analysis – was not required by federal rule, so eliminating the “economic efficiency” test in the AIP might be a better, more approvable approach than establishing a bright line cap. EPA R7 staff suggested an “economic efficiency” test could be replaced with a “cost effectiveness” test which is common in environmental analyses.</li> </ul>
06/13/16	IDNR, EPA R7	<p>Teleconference -</p> <ul style="list-style-type: none"> <li>• EPA R7 stated the AIP was a WQS subject to approval as long as IDNR adopted it as rule or by rule reference. If not legally binding in rule, there was no requirement for EPA to take an action.</li> <li>• 115% Economic Efficiency cap was discussed by both parties. <ul style="list-style-type: none"> <li>○ EPA R7 raised issues regarding the approvability of a “hard cap,” voicing concern that such a cap would preclude the consideration of any alternative costing 115% or more despite public comment.</li> <li>○ IDNR identified other states for which EPA had approved hard caps. EPA R7 noted those approvals had occurred prior to the latest <i>WQS Regulatory Revisions Rule</i> which revised antidegradation requirements. IDNR also pointed out characteristics of IDNR’s implementation that were more stringent than the federal requirements – requiring the <u>least</u> degrading alternative less than 115%, use of <i>de minimis</i> provisions, and requiring antidegradation analyses for any new or expanding discharge, or change in pollutant.</li> <li>○ Potential issue – EPA R7 noted that a hard cap might encourage permittees to drive alternatives costs above 115% to avoid any costs above the base case costs.</li> </ul> </li> <li>• Possible options in lieu of the proposed modifications: <ul style="list-style-type: none"> <li>○ IDNR discussed the possibility of removing the AIP from regulation since adoption by state rule was not required by the federal rule. IDNR expressed it was not something they wanted to do, but would evaluate.</li> <li>○ EPA R7 discussed replacing “economic efficiency” with “cost effectiveness.” That would avoid the monetizing of water quality benefits that the petitioners identified as an obstacle. IDNR stated that as they understood “cost effectiveness,” it would always require an option be selected that cost more than the base case cost, where “economic efficiency” with a hard cap would not. That could lead to significant additional expense by permittees.</li> </ul> </li> <li>• IDNR expressed a desire to meet with EPA HQ staff to discuss the proposed modifications to the AIP. EPA R7 offered to arrange a teleconference.</li> </ul>
06/24/16	IDNR, EPA HQ, and EPA R7	<p>Teleconference –</p> <ul style="list-style-type: none"> <li>• IDNR explained the proposed AIP modifications to EPA HQ and R7 staff. <ul style="list-style-type: none"> <li>○ Explained other features of the IDNR antidegradation program that made the program more stringent than the federal rule.</li> <li>○ Explained why IDNR believed the 115% hard cap described the point at which benefits to water quality began to diminish.</li> </ul> </li> <li>• EPA HQ indicated a 115% hard cap might be acceptable if: <ul style="list-style-type: none"> <li>○ Iowa could demonstrate that alternatives costing in excess of 115% were not economically viable in Iowa and thus not</li> </ul> </li> </ul>

Date	Parties Involved	Synopsis
		<p>“practicable” consistent with EPA’s federal definition at §131.3(n); or</p> <ul style="list-style-type: none"> <li>○ The 115% hard cap was used not to narrow what is considered “practicable” but to choose from amongst the practicable alternatives already identified since EPA’s requirements do not require selection of the least degrading alternative but give state’s discretion to choose any alternative from the range of practicable alternatives identified.</li> </ul>
06/29/16	IDNR, EPA HQ, and EPA R7	<p>Teleconference –</p> <ul style="list-style-type: none"> <li>• A follow up to the 06/24/16 meeting was held to verbally cover EPA’s written comments that would be submitted prior to IDNR’s public hearing later on 06/29/16. Key items discussed included: <ul style="list-style-type: none"> <li>○ IDNR planned to take the rule to their EPC in August for final adoption.</li> <li>○ EPA HQ reiterated the federal rule required that if one or more less degrading practicable alternatives existed, one must be selected. <ul style="list-style-type: none"> <li>▪ If IDNR wanted to use a hard cap, IDNR would need to explain how 115% defines what is practicable in all situations. Specifically, EPA HQ stated that “economic viability” is a factor in the federal rule’s “practicability” analysis. IDNR could show that the 115% hard cap demonstrates the limit of economic viability in Iowa.</li> <li>▪ IDNR’s definition of “practicable” and explanation of the 115% coupled with “economic efficiency” could be used to define “practicability” as it pertains to the federal rule.</li> </ul> </li> <li>○ Alternatively, EPA reiterated that the 115% cap could be used to choose from amongst the practicable alternatives already identified since EPA’s requirements do not require selection of the least degrading alternative but give states discretion to choose any alternative from the range of practicable alternatives identified.</li> </ul> </li> <li>• IDNR explained that: <ul style="list-style-type: none"> <li>○ Their desire was to use 115% to narrow the alternatives considered “practicable.”</li> <li>○ From their perspective, EPA did not provide them a mechanism for demonstrating how the 115% hard cap could be approvable.</li> <li>○ IDNR believed that other characteristics of the AIP made a strong antidegradation program when coupled with the hard cap.</li> </ul> </li> <li>• EPA HQ stated that if IDNR still wanted to use the 115% as a hard cap to narrow what alternatives are considered “practicable” they would need to demonstrate the fact-specific issues that made the 115% hard cap appropriate for Iowa. The federal rule’s definition of “practicable” allowed IDNR the flexibility to make such a demonstration based on specific, unique circumstances in Iowa but such an explanation of how the state viewed 115% as the right threshold to define “practicable” was necessary. EPA HQ also stated that the explanation could not rely on the facts that other states currently have cost caps since EPA has not yet worked with those states following EPA’s revised antidegradation requirements.</li> </ul>
06/29/16	EPA R7 and IDNR	Written comments were submitted to IDNR as a part of the public comment period for the proposed AIP rule change in Iowa.
08/02/16	IDNR and EPA R7	Email –

Date	Parties Involved	Synopsis
		<ul style="list-style-type: none"> <li>• IDNR provided EPA R7 with a copy of their antidegradation rulemaking, revised AIP, and response to comments received during the public comment period on the proposed Antidegradation rulemaking.</li> <li>• IDNR stated the proposed rule would go before their EPC on 08/10/16 for approval.</li> <li>• IDNR offered to have a teleconference to discuss the proposed rule.</li> </ul>
08/03/16	EPA HQ, EPA R7, Iowa Environmental Council (IEC), and Environmental Law and Policy Center (ELPC)	<p>Teleconference – IEC-requested meeting with EPA HQ</p> <ul style="list-style-type: none"> <li>• IEC/ELPC had a list of questions regarding antidegradation and in particular the proposed revisions to Iowa AIP.</li> <li>• EPA HQ stated EPA could not discuss details or thinking on Iowa AIP since it was still a proposed rule and EPA was still in discussions with IDNR.</li> <li>• EPA HQ answered general antidegradation questions.</li> </ul>
08/05/16	EPA R7 and IDNR	<p>Email – EPA R7 provided IDNR thoughts on how to highlight the unique facets of IDNR’s Antidegradation Program.</p>
11/09/16	IDNR, EPA HQ, EPA R7	<p>Teleconference –</p> <ul style="list-style-type: none"> <li>• IDNR explained the final rule did not equate a 115% hard cap solely to “Economic Efficiency.” The Iowa AIP provided a three-part test: <ul style="list-style-type: none"> <li>○ Practicable/technologically doable</li> <li>○ Affordable</li> <li>○ Economically efficient</li> </ul> </li> <li>• EPA HQ explained that the federal rule tried not to limit state flexibility in defining practicability, but there did not seem to be any state-specific justification for Iowa’s hard cap of 115%. <ul style="list-style-type: none"> <li>○ IDNR asked what justification would be acceptable.</li> <li>○ EPA HQ explained that as had been stated previously, justification would be difficult, but it could not be an arbitrary number.</li> <li>○ EPA HQ also reiterated that a hard cap could lead to excluding all alternatives if there are none less than 115%. This approach would be inconsistent with §131.12(a)(2)(ii) unless the state was able to justify why no alternative above 115% not “practicable”.</li> <li>○ EPA HQ asked if IDNR could identify something unique about Iowa water resources that would allow exclusion of any discharger alternative in excess of 115% because it was not “practicable” based on the federal definition. For example, could IDNR identify commonality among the several hundred antidegradation analyses performed in the state that would justify a binding 115% cap by showing that alternatives rarely, if ever, exceed 115% or that there is almost always at least one alternative less than 115% of base costs. This, in addition to the other stringent components of the Iowa’s antidegradation program, could be sufficient for EPA to base an approval on.</li> </ul> </li> <li>• IDNR noted that EPA had approved binding caps in several other states and questioned why those states were allowed to have binding caps.</li> </ul>

Date	Parties Involved	Synopsis
		<ul style="list-style-type: none"> <li>○ EPA HQ explained all of the states identified had binding caps approved prior to the <i>Water Quality Standards Regulatory Clarifications Rule</i>. Those states would be expected to review their Antidegradation Policies and AIPs at their next triennial reviews and either justify the binding cap or replace it.</li> <li>• EPA HQ asked whether IDNR would consider including a provision whereby a range of practicable alternatives would be evaluated, but the range would be capped at costs up to 115% of the base cost as long as there is a provision that would require evaluation of practicable alternatives in excess of 115% in the event that no practicable alternatives exist below 115% in order to remain consistent with §131.12(a)(2)(ii).</li> <li>• IDNR stated if EPA disapproved the AIP, IDNR would likely look at adopting a non-rule referenced AIP that would fall outside of EPA purview to approve. <ul style="list-style-type: none"> <li>○ EPA HQ stated that was IDNR's prerogative, but EPA would still have the option of objecting to individual permits that authorized a lowering inconsistent with the state's antidegradation policy and EPA's implementing regulation.</li> </ul> </li> </ul>
11/21/16	IDNR and EPA R7	<p>Face to face meeting – Lamoni, IA –</p> <ul style="list-style-type: none"> <li>• IDNR and EPA R7 each explained their understanding of the other's position. <ul style="list-style-type: none"> <li>○ EPA expressed: <ul style="list-style-type: none"> <li>▪ Appreciation for the manner in which IDNR had put their Antidegradation Program into practice.</li> <li>▪ The previous AIP with a non-binding 115% cap was acceptable. However, Iowa's final rule changed the non-binding cap to a binding cap, thus precluding any discharge alternative with a cost exceeding 115% of the base cost.</li> <li>▪ The 115% seemed arbitrary, and there could be instances where an alternative exceeding 115% could provide significant water quality improvement, but would automatically be excluded from consideration.</li> <li>▪ There appeared to be ways for IDNR to utilize "cost effectiveness" as a tool for evaluating alternatives that avoided monetizing benefits.</li> </ul> </li> <li>○ IDNR expressed: <ul style="list-style-type: none"> <li>▪ Understanding there could be instances where alternatives exceeding 115% of the base cost could produce significant water quality benefit, but the probability of identifying such instances was minimal.</li> <li>▪ A belief the Iowa Antidegradation Program – taken in its entirety – was robust and applied in a manner that was more protective than the majority of other state Antidegradation Programs.</li> <li>▪ They would include additional information in their submittal cover letter based on recent discussion between EPA and IDNR. However, they would submit the final rule with the binding 115% cap within the next week or two.</li> </ul> </li> </ul> </li> </ul>

As the Regional Administrator of the EPA Region 7, I am charged with the responsibility of reviewing and approving or disapproving new and revised water quality standards under Section 303(c) of the Clean Water Act. Despite the concerted effort by IDNR and the EPA to reach consensus on an approvable rule, the EPA is disapproving the revised Rules. Pursuant to 40 C.F.R. 131.21, the Antidegradation Rules and AIP approved by the EPA on September 30, 2010 remain in effect for CWA purposes.

The EPA's rationale for the disapproval is provided below.

#### Generally Applicable Federal Regulation

Under Section 303(c) of the Clean Water Act (CWA or the Act), the Administrator of the United States Environmental Protection Agency (EPA) is charged with reviewing and approving or disapproving state-adopted new or revised water quality standards (WQS)<sup>4</sup>. In order to make an approval/disapproval decision, the EPA must determine if new or revised antidegradation requirements are consistent with the CWA and the EPA's implementing regulations at 40 CFR §131, specifically 40 CFR §131.5, §131.6, and §131.12.

- Under 40 CFR §131.5, the EPA must review the water quality standards and determine, among other items whether the State has adopted an antidegradation policy that is consistent with §131.12, and whether any State adopted antidegradation implementation methods are consistent with §131.12.
- Under 40 CFR §131.6, the EPA must review the minimum requirements for water quality standards submissions and determine whether the following elements (among other items) are included in each State's WQS submitted to EPA for review:
  - An antidegradation policy consistent with §131.12.
  - Certification by the State Attorney General or other appropriate legal authority within the State that the WQS were duly adopted pursuant to State law.
  - General information which will aid the Agency in determining the adequacy of the scientific basis of the standards which do not include the uses specified in section 101(a)(2) of the Act as well as information on general policies applicable to State standards which may affect their application and implementation.
- Under 40 CFR §131.12(b) states must develop methods for implementing the antidegradation policy that are, at a minimum, consistent with the State's policy and with §131.12(a).

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<sup>4</sup> EPA provided an FAQ discussing how it determines whether a provision is a new or revised WQS that EPA is authorized to approve or disapprove. See <https://www.epa.gov/sites/production/files/2014-11/documents/cwa303faq.pdf>.

## Iowa Antidegradation Implementation Procedures

The IDNR accurately stated in its submittal letter that the EPA must determine which parts of the Iowa submission constitute water quality standards (WQS).

The EPA considers documents incorporated by reference into state or tribal law to be legally binding provisions adopted or established pursuant to state or tribal law. The Iowa AIP was adopted by reference into state regulation, thus a provision of state law. Antidegradation provisions are considered one of the key components of a state's WQS under 40 CFR §131.6(d). The specific provisions of the AIP that have been revised establish instream levels of protection for Tier 2 (high quality) waters and directly relate to the EPA's antidegradation provisions found in 40 CFR §131.12, as described below.

More specifically, the requirements for an analysis of alternatives, which is the basis for the EPA's disapproval, are found at 40 CFR §131.12(a)(2)(ii). The rule states:

“Before allowing any lowering of high water quality, pursuant to [40 CFR § 131.12(a)(2)], the State shall find, after an analysis of alternatives, that such a lowering is necessary to accommodate important economic or social development in the area in which the waters are located. The analysis of alternatives shall evaluate a range of practicable alternatives that would prevent or lessen the degradation associated with the proposed activity. When the analysis of alternatives identifies one or more practicable alternatives, the State shall only find that a lowering is necessary if one such alternative is selected for implementation.” 40 CFR § 131.12(a)(2)(ii).

Thus, the analysis of alternatives hinges on identifying whether *practicable* alternatives exist.

Revisions to the analysis of alternatives in the Iowa Antidegradation Implementation Procedure (AIP) were adopted by reference at 567 I.A.C. §64.7(2)f(5). The key change to the revised AIP is the conversion of what was non-binding guidance for evaluating “economic efficiency” against a rule-of-thumb 115% of the base cost for a new or expanding discharge to a binding, hard cap of 115%. In simple terms, the “base cost” used in the Iowa AIP is the proposed cost for a project that would **just** meet water quality criteria for new or expanding discharges. Under the federal and state antidegradation provisions, the owner proposing a new or expanded discharge in a high quality water is obligated to look at alternatives to the proposed activity that would produce less degradation to the high quality water. From that list of less degrading alternatives (if at least one exists), one of those less degrading alternatives must be selected for implementation. By establishing a binding 115% cap, Iowa is guaranteeing any discharger will always pay less than 115% of the base case cost regardless of the improvement in water quality for alternatives costing 115% or more. In other words, if a proposed discharge had a base case cost of \$100,000, an alternative that would produce lesser or no additional degradation of water quality costing \$115,000 or more would not even be considered as part of the alternatives analysis. Under the

existing non-binding 115% cap, those alternatives costing \$115,000 or more, would still be considered and potentially selected for implementation.

As noted in the IDNR's cover letter submitting the revised AIP, identifying *practicable* alternatives is a key step in the analysis of alternatives. The EPA and IDNR had multiple conversations regarding the word "practicable" – noting it carried a specific definition in 40 CFR 131.3(n):

"Practicable, in the context of §131.12(a)(2)(ii), means technologically possible, able to be put into practice, and economically viable."

Further discussion between the EPA and IDNR followed in regard to one of the three factors that defines practicable – "economic viability." The EPA recommended Iowa provide a rationale explaining why alternatives that exceed 115% do not meet the definition of "practicable." As noted during those discussions, there were numerous comments submitted to the EPA during the public comment period on the *Water Quality Standards Regulatory Revisions Rule* regarding the same term, thus the EPA provided significant explanation regarding the term "economically viable" in its response to comments on the rule.<sup>5</sup> [Attachment I] Pertinent portions of the responses follow:

"EPA's intention with the term "economically viable" is that the alternative can be achieved and any additional costs to implementing the alternative can be afforded. EPA agrees with a comment suggesting that **to be economically viable, an alternative must be one that can be implemented at a reasonable cost to the regulated entity in light of that entity's finances or without causing a substantial hardship to the entity or its customers.** If a private entity proposes an activity that would lower water quality and conducts an analysis of alternatives, EPA would not expect the entity to consider alternatives that would preclude any profit.

EPA also agrees with commenters that **dischargers, states and authorized tribes need not undertake unnecessarily costly actions that produce nominal additional environmental benefit; however the final rule does not require them to do so.** The final rule allows the entity conducting an analysis of alternatives to choose among a range of practicable (definition of which includes "economically viable") alternatives. **When choosing among them, they may consider costs and benefits, as well as other considerations. They may also choose not to consider cost-benefit calculations.**" [emphasis added]

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<sup>5</sup> CHAPTER 3 Issue Category: Antidegradation Response to Public Comments Water Quality Standard Regulatory Revisions. August, 2015. 40 CFR Part 131 Docket #: EPA-HQ-OQ-2010-060  
<https://www.regulations.gov/contentStreamer?documentId=EPA-HQ-OW-2010-0606-0344&attachmentNumber=22&disposition=attachment&contentType=pdf>

Clearly, it is the EPA's stated intention that identifying practicable alternatives in an analysis of alternatives need not unnecessarily burden a permittee only to produce nominal environmental improvement. However, the expectation is that a range of alternatives be evaluated for cost and effectiveness.

When the cap was non-binding, exceptions to the cap were allowed in instances where the benefits to water quality greatly outweighed the added cost of pollution control. IDNR pointed to this fact in their evaluation of the Clarion, IA antidegradation review. In the previously referenced Clarion, IA lawsuit (see footnote 3), the judge quoted a response IDNR provided to the petitioners in the suit during the antidegradation review of the Clarion permit:

**"The intent of the 115% criterion was to ensure that a facility did not fail to choose an alternative that resulted in a slightly greater cost over the 115% threshold but yielded significant environmental benefit. For example, a facility may have determined that a NDA (non-degrading alternative) was 117% of the BPCA [base pollution control alternative]. In this case, the environmental benefit greatly outweighs the slight increase in cost."** [emphasis added]

Thus, under a non-binding cap, the IDNR noted that there could be cases where it would be appropriate to spend in excess of 115% of the base cost where significant benefits to water quality could be attained.

The revised AIP creates a binding cap of 115% that would preclude evaluation and selection of any alternative costing equal to or greater than 115% of the base case cost. The IDNR stated in its cover letter submitting the revised AIP that the department could have discussions with an entity presenting an alternative that was just over the 115% cap if significant environmental benefit was possible:

**"Iowa anticipates that further scrutiny and discussion would occur in unique circumstances such as a non-degrading alternative which is asserted to be close to the 115% threshold or another situation in which the specific conditions warrant implementation of an alternative that initially does not appear to be "practicable" (as federally defined)..."**

While the IDNR might question alternatives in excess of 115% of base cost, the AIP would preclude IDNR from being able to require that any alternative in excess of 115% of base cost be considered in the analysis of alternatives. Additionally, such a cap would preclude the consideration of any alternative costing 115% or more despite public comment.

The IDNR provided a rationale for the binding cap in their document *Amended Public Participation Responsiveness Summary for Rulemaking on Chapters 61 and 64* [(Attachment F)] and in their cover letter submitting the revised AIP (Attachment A). That rationale is summarized as follows:

## 1. IDNR Response to Comments:

The rationale provided for the 115% binding cap was that EPA had accepted similar binding caps in other states. Specifically, IDNR stated:

“A comparison with the range of [other states’] adopted economic efficiency criteria provides a per se basis for the reasonableness of Iowa’s criteria, particularly in light of the difficulties inherent in a specific cost-benefit analysis...”

IDNR provided no Iowa-specific rationale to demonstrate there would not be instances where Iowa citizens may wish to accrue additional water quality benefit for project costs greater than or equal to 115% of the base cost.

## 2. Cover Letter

IDNR stated the following:

“All economic efficiency tests, such as the test proposed in EPA Region 8’s original antidegradation policy guidance, assume that there are environmental and human health benefits to reduced pollutant loadings and pair that assumption with a reasonable upper limit for the costs to be expended to achieve those benefits. Iowa’s original AIP and adopted revisions are consistent with that methodology. At all times prior to the 2016 rulemaking, Iowa interpreted its antidegradation policy and implementation procedure to be based upon this assumption, but allowed for the possibility that an individual antidegradation alternatives analysis could present a scenario in which the environmental benefits of a project may be sufficiently disproportionate to the costs to create an exception to the non-binding economic efficiency standard. No such exception was identified in the more than 6 years of implementation (approximately 300 alternatives analyses) and no contrary comments were received from EPA Region 7 on any antidegradation analysis reviewed and approved by Iowa DNR.”

The reference to the EPA Region 8 Guidance, dated August 1993, effectively became moot on the effective date of the *Water Quality Standards Regulatory Revisions Rule* on October 20, 2015. [Attachment H] However, Iowa’s cover letter does contain some items and discussions that remain pertinent. Of those pertinent portions, some may have been taken out of context. For instance, the IDNR cover letter stated the referenced Region 8 policy addresses an “economic efficiency test.” To be clear, the Region 8 policy never references “economic efficiency.” The policy states in pertinent part:

“As a non-binding rule of thumb, nondegrading or less-degrading pollution control alternatives with costs that are less than 110% of the costs of the pollution control measures associated with the proposed activity shall be considered reasonable.”

The Region 8 guidance explicitly states that a 110% cap is applicable as a “*non-binding rule of thumb*” [emphasis added]. The guidance also states that a cost less than 110% of the base cost is “reasonable.” It does not say that costs greater than or equal to 110% are unreasonable, whereas the revised Iowa AIP states that “Alternatives greater than or equal to 115 percent of the base costs are not considered economically efficient.” Also note, a cost/benefit analysis similar to Iowa’s “economic efficiency” test is not mentioned in the Region 8 document.

The EPA also notes that the Region 8 guidance does not solely address the non-binding rule of thumb reasonableness test. Other parts of the guidance give insight into the fact that it intended the public have a voice in the alternatives analysis process by stating:

“(5) Role of Public

Based upon comments and information received during the public comment period, the Division may reverse its preliminary determination regarding the availability of reasonable alternatives to allowing the degradation.”

The Region 8 guidance indicates the public should have a voice in the ultimate outcome of the alternatives analysis by providing the regulator the opportunity to require a lesser or higher cost alternative based on public comment. As stated earlier, the revised IDNR AIP would not allow the public to have any such input as is anticipated by the federal antidegradation rules – both pre- and post- *Water Quality Standards Regulatory Revisions Rule* - if project costs were greater than or equal to 115% of the base case cost.

Also in support of the 115% binding cap, the IDNR’s cover letter submitting the revised AIP stated that other states had approved binding caps of various percentages:

“Based upon our review, Alabama (110%), Arizona (110%),<sup>6</sup> Mississippi (110%) and Wisconsin (115%) have adopted bright line economic efficiency standards as proposed in the Iowa rulemaking.”

The EPA HQ staff are aware of all approved antidegradation policies nationwide. As the EPA HQ discussed multiple times with the IDNR, the referenced state binding caps were approved prior to the effective date of the *Water Quality Standards Regulatory Revisions Rule* on October 20, 2015. The *Water Quality Standards Regulatory Revisions Rule* significantly strengthened

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<sup>6</sup> Upon further review, the EPA has found that Arizona’s antidegradation policy does not contain a binding cap, but rather a “nonbinding reference.”

antidegradation requirements and provided more detail than the previous rule. Thus, previously approved policies and implementation procedures will need to be reviewed by states for conformance with the *Water Quality Standards Regulatory Revision Rule* during their routine triennial review. As stated in 40 CFR §131.20 *State review and revision of water quality standards*:

“The State shall from time to time, but at least once every 3 years, hold public hearings for the purpose of reviewing applicable water quality standards adopted pursuant to §§131.10 through 131.15 and Federally promulgated water quality standards and, as appropriate, modifying and adopting standards.”

Therefore, all states will be expected to re-evaluate their antidegradation policies and implementation procedures at the next triennial review. Binding caps on permittee expenditures will be expected to be a part of that review. Those states will have the opportunity to identify factors unique to their individual state water resources that would justify preclusion of all discharger alternatives in excess of a binding cap in a manner consistent with the EPA regulations.

Lastly, the IDNR states that the EPA R7 never provided contrary comments over 6 years of the IDNR antidegradation approvals. Again, we need to look at pre- and post- *Water Quality Standards Regulatory Revisions* rule. Prior to the rule, the Iowa AIP was approved based on the federal antidegradation rules in effect at the time.<sup>7</sup> As EPA stated on page 30 of the referenced decision letter, it interpreted the 2010 AIP to mean that IDNR would analyze various treatment options and only eliminate those where the costs were disproportionately high in comparison to reduced pollution:

“EPA interprets this [explanation of the 115% economic efficiency threshold] to mean that applicants performing this step would evaluate the treatment options for each of the primary pollutants of concern. Further, in order to justify the elimination of an alternative, the applicant should demonstrate to the satisfaction of IDNR that the additional costs of the pollutant control alternative are disproportionately high when compared to the pollution allowed by the next least degrading alternative for a pollutant of concern.”

Thus, the EPA’s understanding was that the IDNR was applying their state rule in a manner consistent with federal rule. Post-*Water Quality Standards Regulatory Revisions Rule*, the EPA R7 has commented on antidegradation analyses.<sup>8</sup> Those comments dealt directly with an

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<sup>7</sup> Flournoy, Karen A. Decision Letter on Iowa Water Quality Standards Submission. Decision Letter to Gieselman, W, Director Environmental Protection Division, IDNR. August 19, 2010. Letter. [https://archive.epa.gov/region07/newsevents/legal/web/pdf/ia\\_wqs\\_antideg\\_pkg\\_9\\_30\\_10.pdf](https://archive.epa.gov/region07/newsevents/legal/web/pdf/ia_wqs_antideg_pkg_9_30_10.pdf)

<sup>8</sup> Curtis, Glenn. “Re: Antidegradation Alternatives Evaluation.” Message to Worden, M City Clerk, Council Bluffs, IA. June 2, 2016. Email

alternatives analysis. As noted previously, the IDNR went beyond federal rules in 2010 by requiring an “economic efficiency” test in its alternatives analysis that included a cost/benefit analysis, which an Iowa court found to be inadequately applied. That is a local issue brought about by Iowa choosing to establish a test that is not required by the federal rules.

As described above, the “fix” proposed by the IDNR for this issue is inconsistent with federal requirements as it narrows the definition of “practicable” without a justification for that narrowing and does not provide an assurance that a range of practicable alternatives will be evaluated, consistent with 40 CFR 131.12(a)(2)(ii). The federal rules do not dictate which “practicable” alternative is ultimately chosen, but the regulations do require that alternative analyses evaluate a range of “practicable” alternatives. The IDNR has not provided EPA with a sufficient rationale that justifies how limiting the scope of alternatives to only those costing less than 115% of the cost of base pollution controls will ultimately ensure that a range of practicable alternatives will be evaluated. Specifically, Iowa’s submission does not explain why alternatives costing 115% or more of the cost of base pollution controls are not practicable.

### Summary Findings

While the EPA appreciates the effort the IDNR has put into implementing its antidegradation policy over the past several years and understands the difficulty of monetizing water quality benefits generated by particular activities, we are disapproving the AIP revision that the IDNR submitted to the EPA on December 12, 2016. As stated by the IDNR and the drafters of the petition for rulemaking (the Iowa League of Cities, the Iowa Association of Business and Industry, and the Iowa Association of Municipal Utilities), the basis for the revision in the AIP is because of the difficulty in monetizing water quality benefits as called for in IDNR’s use of “economic efficiency” as a portion of the alternatives analysis in antidegradation implementation. As discussed in this letter, the economic efficiency test and its reliance on monetizing costs of treatment and benefits to water quality is an Iowa-specific issue. The federal rules have never required economic efficiency be evaluated and this was reiterated in the support documents for the recently adopted *Water Quality Standards Regulatory Clarifications Rule* (see footnote 4).

The AIP does not define the term “economic efficiency.” The AIP simply states “economic efficiency” is used to “optimize the balance between water quality benefits and project costs.” The EPA does not find that the 115% hard cap in the revised AIP ever requires any estimate of water quality benefit – it unilaterally mandates that any project cost equal to or exceeding 115% of the base case cost is not economically efficient. In other words, it mandates that water quality benefits and project costs are always *optimally balanced* as long as the project cost is not greater than or equal to 115% of the base case cost.

The IDNR's main rationale for the “bright line cap” was that the EPA approved binding caps in other states, stating:

“A comparison with the range of [other states’] adopted economic efficiency criteria provides a per se basis for the reasonableness of Iowa’s criteria, particularly in light of the difficulties inherent in a specific cost-benefit analysis ... .”

By setting a binding cap of 115% of base cost as the definition of “economic efficiency,” the petitioners are seeking to establish a one-size-fits-all rule that only project costs less than 115% of base costs optimize “the balance between water quality benefits and project costs.” Further, since the petitioners go on to provide binding regulatory language that “Alternatives greater than or equal to 115 percent of the base costs are not considered economically efficient,” it will be difficult, if not impossible, for the public to request a less degrading alternative that costs 115% or more of the base case cost as a part of the analysis of alternatives. Thus, by regulatory definition there could never be an instance in Iowa where water quality benefits outweigh project costs greater than or equal to 115% of base case costs. The revised description of “economic efficiency” essentially becomes moot on the issue of water quality benefit, and only evaluates project cost. Again, we find no Iowa-specific evidence (and the IDNR has provided no valid justification) that a 115% cap is consistent with the EPA’s definition of “practicable.”

Eliminating alternatives above the 115% efficiency cap based solely on project cost conflicts with 40 CFR §131.12(a)(2)(ii) which requires an analysis of alternatives that evaluates a range of practicable alternatives that would prevent or lessen the degradation associated with the proposed activity. When the analysis of alternatives identifies one or more practicable alternatives, the State shall only find that a lowering is necessary if one such alternative is selected for implementation. IDNR has not demonstrated that their regulation is consistent with 40 CFR § 131.12(a)(2)(ii). IDNR has not provided either a justification for why project costs above 115% of the base cost are not practicable in all instances, or an assurance that a range of practicable alternatives will be evaluated if there are no practicable alternatives below 115% but there are practicable alternatives above that cap.

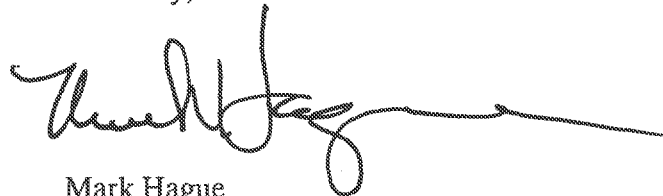
## **Remedy**

One remedy to our disapproval would be to return to a non-binding cap in the Iowa AIP. A non-binding cap would continue to provide both IDNR and the citizens of Iowa a mechanism to allow for lesser degradation of water quality in waters by selecting an alternative that exceeds 115% of base cost. Other remedies may also be workable; we would be happy to discuss possible options.

We stand ready to meet and work with IDNR to identify remedies that would make the AIP consistent with the Clean Water Act and its implementing regulations. If you would like to

pursue a meeting or should you have any questions or comments regarding today's action, please contact John DeLashmit, Chief, Water Quality Management Branch, at (913) 551-7821.

Sincerely,

A handwritten signature in black ink, appearing to read 'Mark Hague', with a long horizontal flourish extending to the right.

Mark Hague  
Regional Administrator

Enclosures