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Dear Ms. Stevens, Mr. Easterly, Mr. Pigott, and Ms. Mettler:

You have asked for comments on the April 8, 2009 draft antidegradation rule ("Draft Rule") prior to formal second notice. The Antidegradation Environmental Coalition offers the following comments pursuant to your request.

Part I begins with general comments. In Part II, we comment at least on each section of the draft rule – 327 IAC 2-1.3-1 through 327 IAC 2-1.3-8, and 327 IAC 5-2-11.2 – and often comment on individual provisions with rule sections. To help IDEM respond to our comments,

we follow each specific comment with one or more questions. Each question is prefaced by the following symbol: **Q→**.

GENERAL COMMENTS ON IDEM'S DRAFT ANTIDEGRADATION RULE

The basic purpose of a state antidegradation program, and the key principle of antidegradation policy, is to maintain and protect existing water quality, even where that water quality is better than applicable standards. The United States Environmental Protection Agency (EPA) Region VIII Guidance states this principle directly:

> Antidegradation recognizes that existing water quality has inherent value worthy of protection. Thus, unlike other aspects of water quality standards that are directed toward attainment of fully-protective levels of water quality (as defined by the applicable criteria), the purpose of antidegradation is to maintain and protect *existing* levels of water quality.[1]

Another way of stating this principle is with reference to the available assimilative (loading) capacity of a waterbody.[2] EPA views the assimilative capacity of a waterbody as "a valuable natural resource."[3] A strong antidegradation program ensures that this resource is not wasted.

Indiana's antidegradation rule must comply with Clean Water Act (CWA) statutes and regulations, with EPA's interpretations of antidegradation policy and implementation requirements, and with relevant sections of the Indiana Code. Indiana may provide more protections than the CWA, and indeed has decided that some waterbodies, such as Lake Michigan, deserve special protections not afforded to other high quality waters. Finally, Indiana's antidegradation rule must be readily implementable by IDEM, must be logical and comprehensible to the public and the regulated community, and must afford the public an opportunity to participate in the important choices made to implement antidegradation policy.

IDEM's Draft Rule is the culmination of a series of subgroup stakeholder working sessions held over the course of 2008 and early 2009. IDEM is to be commended for instigating and

[1] U.S. EPA Region VIII Guidance: Antidegradation Implementation (August 1993), Page iii (emphasis added).
[2] Assimilative capacity can be defined as the amount of loading that can be allowed while protecting existing conditions and assuring that the new or increased loading does not cause or contribute to a violation of water quality standards.
[3] Ephraim King, Director Office of Science and Technology, U.S. EPA, in guidance letter to Water Management Division Directors dated August 10, 2005.

implementing that valuable process of public participation. Some provisions of the Draft Rule reflect reasonable agreements and compromises made during those sessions. These provisions include the following:

- the applicability provision in Section 1;
- most of the definitions in Section 2;
- the categorization of antidegradation standards in Section 3;
- several of the "exemptions" in Section 4;
- the incorporation of some of the requirements in Ind. Code §13-18-3-2 regarding protection of OSRWs in Section 8.

Other provisions in the Draft Rule, however, are problematic from a legal or implementation standpoint. The Draft Rule contains provisions that may not be approvable by the EPA. Other provisions, although likely approvable by the EPA, contain problems with logic, clarity, or organization, and will likely frustrate effective implementation of the rule. These unacceptable or problematic provisions include, among others, the following:

- the definition of "Best Available Demonstrated Control Technology" in Section 2 does not in fact represent the best control technology that is available and arguably opens a loophole that would exempt increased loadings of nitrogen, phosphorus, and many other pollutants from antidegradation;
- the definition of "pollutant of concern" in Section 2 is ambiguous;
- the application of *de minimis* to Lake Michigan in Section 4 is problematic;
- the so-called exemptions from antidegradation review in Section 4(b)(4) raise a number of legal issues;
- the omission of factors in the importance test of the antidegradation demonstration and the confusing organization of the included factors in Section 6 are problematic;
- the options provided to the applicant in Section 6 appear to be inconsistent with other rule provisions and to bypass a full "necessary" test;
- the deference to "any applicable determinations by other governmental entities" in IDEM's approval or denial of the antidegradation demonstration in Section 7 is ambiguous and may lead to illegal applications;

- the omission in Section 8 of statutorily required criteria for using the watershed improvement fees to fund water quality improvement projects violates Indiana law.

We consider each section of the draft rule in order of appearance in the rule. We note where we agree with IDEM's choice, where IDEM's choice is likely to violate the Clean Water Act or Indiana law, and where IDEM's choice is ambiguous or unclear and can be improved by a modification of rule language.

SPECIFIC SECTION-BY-SECTION COMMENTS

I. SECTION 1: 327 IAC 2-1.3-1 APPLICABILITY OF ANTIDEGRADATION STANDARDS AND IMPLEMENTATION PROCEDURES.

327 IAC 2-1.3-1(b): Applicability of rule

The applicability provision states:

> (b) Except as provided under section 4 of this rule, the antidegradation implementation procedures established by this rule apply to a proposed new or increased loading of a pollutant of concern to a surface water of the state.

Comments: We agree with IDEM's choice for the applicability provision.

This provision reflects agreement by subgroup and is the proper language for the applicability provision.

II. SECTION 2: 327 IAC 2-1.3-2 DEFINITIONS.

1. 327 IAC 2-1.3-2(3): Definition of "BADCT"

> (3) "Best available demonstrated control technology" or "BADCT" means a wastewater treatment capable of meeting the following effluent limitations or design criteria: . . .

Comments: This provision does not address nitrogen and phosphorus; also, current permits contain stricter requirements.

The definition lists a number of effluent limits for pollutants that are commonly associated with sewage treatment plants and states limits for those pollutants that are lower than is frequently now required. These limits, however, are not close to those that can be met by the

best available control technology that has been shown to be feasible. Many plants are now meeting limits that are lower.

More critically, the definition does not include limits for phosphorus although many Indiana dischargers are already meeting a phosphorus limit of 1 mg/L. The definition also fails to contain limits on many other pollutants, for which there are feasible control technologies and that are known to impair Indiana waterbodies and waterbodies downstream from Indiana dischargers.

Additional discussion on the problems potentially created by the definition of BADCT is contained in the discussion below for Section 6(c) of the Draft Rule.

Furthermore, the Draft Rule does not, but should, include a procedure for updating BADCT when control technology improves. Such a procedure will clarify the rule and improve its implementation.

Q→ Why did IDEM omit nitrogen and phosphorus standards from the Draft Rule and the BADCT definition?

Q→ Is the definition of BADCT at least as strict as limitations included in any current NPDES permit?

Q→ Why did IDEM omit a procedure for updating BADCT when control technology improves?

2. 327 IAC 2-1.3-2(45): Definition of "pollutant of concern"

(45) "Pollutant of concern" means a pollutant that is reasonably expected to:
(A) be present in a discharge based on the source and nature of the discharge; and
(B) adversely affect the designated uses of the receiving water.

Comments: ***This ambiguous definition will be difficult to implement; a modification in rule language is warranted.***

The first part of the definition in (45)(A) reflects the discussion and agreement of the subgroup in the stakeholder meetings. The subgroup accepted this language as long as IDEM clarifies the process for identifying new pollutants of concern. But (45)(B) adds a second component, "adversely affect the designated uses of the receiving water," not considered in the subgroup meetings. This latter clause (45)(B) makes the definition ambiguous.

We believe that IDEM is attempting to express the idea that for a pollutant to be a pollutant of concern there must be evidence that the pollutant will affect designated uses at some loadings and concentrations, regardless of whether a water quality standard has been promulgated for that pollutant. Those physical, chemical, and biological substances where insufficient evidence exists of their harmful qualities would not fall under the definition.

The main problem with (45)(B) is that Tier 2, Tier 2.9, and Tier 3 antidegradation policy is concerned with maintaining assimilative capacity for a pollutant even before the pollutant reaches a concentration sufficient to produce an adverse effect on designated uses. The missing piece in (45)(B) is reference to pollutant loading or concentration. A substance currently found at relatively small concentrations in discharges and waterbodies (*e.g.*, hormone disrupters and pharmaceuticals) should not escape regulation under antidegradation simply because the likely concentrations are currently too low to adversely affect designated uses. IDEM should begin to maintain the assimilative capacity for these substances well before they reach harmful concentrations, given that evidence exists of their harmful properties at foreseeable loadings and concentrations.

To more accurately reflect what we believe is IDEM's intended concept for this definition, (45)(B) should state as follows:

(B) adversely affect at least one of the designated uses of the receiving water if present in the receiving water at a sufficient concentration or volume.

Q→ Why did IDEM add 327 IAC 2-1.3-2(45)(B) to the definition of pollutant of concern and what purpose does it serve?

Q→ Would changing 327 IAC 2-1.3-2(45)(B) to state, "adversely affect at least one of the designated uses of the receiving water if present in the receiving water at a sufficient concentration or volume" better serve this purpose?

III. SECTION 3: 327 IAC 2-1.3-3 ANTIDEGRADATION STANDARDS.

327 IAC 2-1.3-3(c): Tier 2.9 standard

The Draft Rule divides the Tier 2.9 standard into three categories:

1. 327 IAC 2-1.3-3(c)(1) applies to BCCs in OSRW/EUW waterbodies and portions of their tributaries within the Great Lakes Basin (includes Lake Michigan). No new or increased loading of a BCC is allowed unless the loading is exempted as nonsignificant under Section 4 of the rule.
2. 327 IAC 2-1.3-3(c)(2) applies to BCCs in OSRW/EUW waterbodies and portions of their tributaries outside the Great Lakes Basin. The standard applied is the same as the Tier 2 standard with its necessary and importance tests, with the additional requirement under Ind. Code §§ 13-18-3-2, 13-18-3-14, and 13-11-2-50.5 that the applicant implement or fund a water quality improvement project.
3. 327 IAC 2-1.3-3(c)(3) applies to non-BCC pollutants in OSRW/EUW waterbodies and portions of their tributaries within or outside the Great Lakes Basin (includes Lake Michigan). The standard is the same as in 327 IAC 2-1.3-3(c)(2).

Comments: The reasonableness of the Tier 2.9 standard will depend on remedying the associated provisions in Section 4 and 8.

The reasonableness of the Tier 2.9 standard will depend on remedying the associated provisions in Sections 4 and 8 of the Draft Rule. In 327 IAC 2-1.3-3(c)(1), IDEM applies a relatively weak standard to BCCs in the Great Lakes Basin: *i.e.*, a new or increased loading is allowed if the applicant meets one of the exemptions in Section 4 of the Draft Rule. Because several of the exemptions in Section 4 are not appropriate, specifically the Section 4(b)(4) exemptions, the Tier 2.9 standard is unreasonably weakened. The problems with the Section 4(b)(4) exemptions also apply to the standards in 327 IAC 2-1.3-3(c)(2) (BCCs outside the Great Lakes Basin) and 327 IAC 2-1.3-3(c)(3) (non-BCCs).

Moreover, the strength of the Tier 2.9 standard in 327 IAC 2-1.3-3(c)(2) applied to BCCs outside the Great Lakes Basin and in 327 IAC 2-1.3-3(c)(3) applied to non-BCCs depends on whether Section 8 of the Draft Rule properly incorporates the statutory requirements in Ind. Code § 13-18-3-2. Because Section 8 does not properly incorporate all of the statutory requirements, the Tier 2.9 standard is inappropriately weakened.

IV. SECTION 4: 327 IAC 2-1.3-4 EXEMPTIONS FROM THE ANTIDEGRADATION DEMONSTRATION REQUIREMENTS.

1. 327 IAC 2-1.3-4(a): Exemption for ONRWs

(a) For ONRWs, an exemption from the antidegradation demonstration requirements included in section 6 of this rule shall be allowed only for short term, temporary, new, or increased discharges of non-BCCs if the following conditions are met:

(1) The discharge will last less than twelve (12) months or three hundred sixty five (365) days.

(2) A proposed new or existing discharger applies for and receives authorization from the commissioner.

(3) The discharge will result only in a short term, temporary (not to exceed twelve (12) months) lowering of water quality.

Comments: ***The exemption for short-term and temporary loadings to ONRWs must include a limitation on the magnitude of effect to be consistent with EPA guidance.***

EPA Region VIII guidance speaks directly to the issue of an exemption for short-term loading of pollutants into ONRWs.[4] The EPA views this exemption as requiring both a time component and a magnitude component. EPA uses the term "temporary and limited effect":

> A direct or upstream source that would result in a temporary *and* limited effect on ONRW water quality may be authorized. . . . As a *non-binding* rule of thumb, activities with durations less than one month *and* resulting in less than a 5% change in ambient concentration will be deemed to have temporary and limited effects.

(Emphasis in original).[5] The EPA guidance also sets forth several other factors that may be considered when deciding to grant this exemption:

> Decisions on individual proposed activities may be based on the following factors: (a) length of time during which water quality will be lowered, (b) percent change in ambient concentrations, (c) parameters affected, (d) likelihood for long-term water quality benefits to the segment . . . , (e) degree to which achieving applicable water quality standards during the proposed activity may be at risk, and (f) potential for any residual long-term influences on existing uses.[6]

IDEM's exemption for ONRWs in the Draft Rule addresses the time component only, and not the magnitude of effects component or any other factor listed in the EPA guidance.

Q→ Why does 327 IAC 2-1.3-4(a) substantially deviate from EPA guidance on this exemption by omitting a limitation on the magnitude of the allowable effect as well as other applicable factors recommended by EPA?

[4] See U.S. EPA Region VIII Guidance: Antidegradation Implementation (August 1993), Part IV(D), Page 11.
[5] *Id.*
[6] *Id.*

2. 327 IAC 2-1.3-4(b)(1): De minimis lowering of water quality

The *de minimis* exemption contains two components: (1) a maximum percentage of the unused loading capacity that may be allocated to each applicant ("applicant *de minimis*"); and (2) a percentage of the total loading capacity, established at the time of the permit issuance for the initial increase in the loading of the pollutant of concern, that must remain after loading capacity is allocated to all applicants cumulatively ("cumulative cap").

For waters not designated as ONRW, OSRW, or EUW (*i.e.*, for Tier 2 protected waters), the Draft Rule divides the *de minimis* exemption into three categories:

1. 327 IAC 2-1.3-4(b)(1)(A)(i)(AA) applies to <u>non-BCC</u> pollutants To be deemed *de minimis*, a net increase in the loading of a pollutant must use less than or equal to 10 percent of the existing unused loading capacity of the waterbody, mixing zone, or other delineated area.
2. 327 IAC 2-1.3-4(b)(1)(A)(i)(BB) applies to <u>non-BCC</u> <u>toxic</u> substances, with no water quality criterion, in waters <u>outside</u> the Great Lakes Basin. To be deemed *de minimis*, a net increase in the loading of a pollutant must use less than 20 percent of the existing unused loading capacity of the waterbody, mixing zone, or other delineated area.
3. 327 IAC 2-1.3-4(b)(1)(A)(i)(CC) applies to <u>non-BCC</u> <u>toxic</u> substances, with no water quality criterion, in waters <u>within</u> the Great Lakes Basin. To be deemed *de minimis*, a net increase in the loading of a pollutant must use less than 20 percent of the existing unused loading capacity of the waterbody, mixing zone, or other delineated area. This is the same *de minimis* as in 4(b)(1)(A)(i)(BB).

For every request after the time of the permit issuance for the initial increase in the loading of a pollutant of concern, the unused loading capacity remaining after the net increase in the loading of a pollutant of concern must be greater than or equal to the benchmark unused loading capacity, which is equal to 75 percent of the unused loading capacity established at the time of the permit issuance for the initial increase in the loading of a pollutant of concern..

For waters designated as OSRW or EUW (*i.e.*, for Tier 2.9 protected waters), the Draft Rule divides the *de minimis* exemption into three categories:

1. 327 IAC 2-1.3-4(b)(1)(B)(i)(AA) applies to non-BCC pollutants To be deemed *de minimis*, a net increase in the loading of a pollutant must use less than or equal to 1 percent of the existing unused loading capacity of the waterbody, mixing zone, or other delineated area.
2. 327 IAC 2-1.3-4(b)(1)(B)(i)(BB) applies to non-BCC toxic substances, with no water quality criterion, in waters outside the Great Lakes Basin. To be deemed *de minimis*, a net increase in the loading of a pollutant must use less than 2 percent of the existing unused loading capacity of the waterbody, mixing zone, or other delineated area.
3. 327 IAC 2-1.3-4(b)(1)(B)(i)(CC) applies to non-BCC toxic substances, with no water quality criterion, in waters within the Great Lakes Basin. To be deemed *de minimis*, a net increase in the loading of a pollutant must use less than 2 percent of the existing unused loading capacity of the waterbody, mixing zone, or other delineated area. This is the same *de minimis* as in 4(b)(1)(B)(i)(BB).

For every request after the time of the permit issuance for the initial increase in the loading of a pollutant of concern, the unused loading capacity remaining after the net increase in the loading of a pollutant of concern must be greater than or equal to the benchmark unused loading capacity, which is equal to 97.5 percent of the unused loading capacity established at the time of the permit issuance for the initial increase in the loading of a pollutant of concern.

Comments: ***Some of the exemptions for de minimis lowering of water quality may be a reasonable compromise and synthesis of perspectives, but some remain unwarranted, unexplained, or unjustified.***

For Tier 2 protected waters where the pollutant has a calculated water quality criterion, the applicant *de minimis* is 10% and the cumulative cap is 75%. For Tier 2.9 protected waters (OSRWs and EUWs) where the pollutant has a calculated water quality criterion, the applicant *de minimis* is 1% and the cumulative cap is 97.5%. Except as applied to Lake Michigan, these appear to be reasonable choices and reflect a compromise between different views expressed by the subgroup.

Lake Michigan is a special case. The loading capacity applied to discharges into the Indiana waters of Lake Michigan cannot be based on the capacity of the entire Lake. Pollutants

discharged into Lake Michigan are not uniformly dispersed into the Lake. Instead, pollutants are often transported up or down the shoreline depending on the direction of wind driven shore-parallel currents. A calculation of the loading capacity for discharges into Lake Michigan based on the flow within an alternate mixing zone is a crude approximation. In short, the *de minimis* as conceived by IDEM is inappropriate for discharges into Lake Michigan. An acceptable *de minimis* for discharges into Lake Michigan is one in which the water quality criterion is met at the end of the pipe, if this *de minimis* is more stringent than the 1% *de minimis* proposed by IDEM in the Draft Rule.

Furthermore, for toxic substances with no water quality criteria in waters within and outside the Great Lakes Basin, an increase in loading, to be deemed *de minimis* in the Draft Rule, must use less than 20% for Tier 2 waters, and 2% for Tier 2.9 waters, of the existing unused loading capacity of the waterbody, mixing zone, or other delineated area. These choices do not reflect subgroup discussions and must be explained and justified. There is no basis in the law for allowing more than a 20% loss of assimilative capacity as insignificant or *de minimis*.

Also, it is our understanding that it is intended that there is no *de minimis* as to pollutants for which there is no Tier 1 or Tier 2 criterion. This must be explained more clearly in the rule or in the documents submitted to USEPA and any documents created that implement the rule.

Q→ How will IDEM calculate the loading capacity and *de minimis* for new and increased loadings into Lake Michigan, and what are the assumptions and limitations of this calculation?

Q→ Why did IDEM not establish a *de minimis* for discharges into Lake Michigan that requires meeting the water quality criterion at the end of the pipe?

Q→ How does IDEM justify choosing 20 percent and 2 percent *de minimis* rather than 10 percent and 1 percent for 327 IAC 2-1.3-4(b)(1)(A)(i)(AA), 327 IAC 2-1.3-4(b)(1)(A)(i)(BB), 327 IAC 2-1.3-4(b)(1)(B)(i)(AA), and 327 IAC 2-1.3-4(b)(1)(B)(i)(BB)?

3. 327 IAC 2-1.3-4(b)(2)(D): Exemption for POTWs

> 4(b)(2) The following exemptions from the antidegradation demonstration requirements included in section 6 of this rule do not require the submission of information beyond what is required to comply with the discharger's existing applicable permit:
>
> * * *
>
> (D) A new or increased loading of a pollutant of concern at an outfall discharging to a water of the state due to increasing the sewered area, connection of new sewers and users, or acceptance of trucked-in wastes, such as septage and holding tank wastes, by a POTW, provided that there is no:
>
> (i) increase in the existing NPDES permit limits;
> (ii) increase beyond the treatment capacity of the facility; or
> (iii) significant change expected in the characteristics of the wastewater discharged.

Comments: ***This provision lacks key prohibition on loading of BCCs from nondomestic wastes.***

A fourth requirement under 4(b)(2)(D) appears in the current interim anitidegradation rules at 327 IAC 5-2-11.3(b)(1)(C)(iii)(FF) and 327 IAC 5-2-11.7(b)(4):

> (i) increase in the existing NPDES permit limits;
> (ii) increase beyond the treatment capacity of the facility;
> (iii) significant change expected in the characteristics of the wastewater discharged; or
> (iv) increased loading of BCCs from nondomestic wastes.

IDEM obviously considered this fourth requirement to be important when the agency promulgated the interim antidegradation rules. This exemption applies to both BCCs and non-BCCs, so it is important to prohibit increased loading of BCCs from nondomestic wastes. Moreover, during the subgroup discussions, the municipality representatives agreed that this fourth requirement was appropriate.

Q→ Why did IDEM omit the requirement of no "increased loading of BCCs from nondomestic wastes" from Exemption 4(b)(2)(D) even though that requirement is set forth in the interim rules?

4. 327 IAC 2-1.3-4(b)(3)(C): The short-term exemption for non-ONRW waters

> 4(b)(3) The following exemptions from the antidegradation demonstration requirements included in section 6 of this rule require the submission of information that sufficiently demonstrates that the proposed discharge satisfies the exemption description along with the application for an NPDES permit:
>
> * * *
>
> (C) A new or increased loading of a pollutant of concern that will result only in a short term, temporary (not to exceed twelve (12) months) lowering of water quality.

Comments: The short-term loading exemption must include limitation on magnitude of effect to be consistent with EPA guidance.

The subgroup that considered this exemption agreed that "short-term" should refer to both loading and effect; that both should be limited in time and magnitude.[7] See comments above on Exemption 4(a) for ONRWs. Moreover, the interim rules at 327 IAC 5-2-11.7(c)(1) require the applicant to demonstrate that the increased loadings are necessary before a short-term exemption is granted.

Q→ Why did IDEM not include in Exemption 4(b)(3)(C) a limitation on the time period of the discharge, a limitation on the allowable magnitude of the short-term and temporary lowering of water quality, and a requirement that the applicant examine reasonable alternatives for reducing or avoiding the lowering of water quality?

[7] See Antidegradation Stakeholders' Subgroup Meeting Summary, July 15, 2008, page 8; Antidegradation Stakeholders' Subgroup Meeting Summary, August 12, 2008, page 5. See also Environmental Groups' Responses of Environmental Groups to IDEM's Antidegradation Subgroup Homework Assignments posed by IDEM following the September 16, 2008 meeting. The environmental groups proposed the following language to the subgroup, based partly on EPA Region VIII model procedure:

> A new or increased loading of a pollutant of concern only if:
> (A) The new or increased loading will last less than twelve (12) months;
> (B) The new or increased loading will result only in a short-term and temporary (not to exceed the time period of the new or increased loading) lowering of water quality;
> (C) The new or increased loading and its effect on water quality will be limited in magnitude; and
> (D) The applicant demonstrates that all reasonable and cost-effective methods for avoiding the new or increased loading have been taken.
> The commissioner's decision regarding whether the loading and effects will be both temporary and limited will be handled on a case-by-case basis, and shall be based on the following information provided by the applicant: (a) length of time during which water quality will be lowered, (b) percent change in loadings and ambient concentrations, (c) parameters affected, (d) likelihood for long-term water quality benefits to the segment resulting from the proposed activity (e.g., as may result from dredging of contaminated sediments), (e) degree to which achieving applicable water quality standards during the proposed activity may be at risk, and (f) potential for any residual long-term influences on existing uses.

5. 327 IAC 2-1.3-4(b)(3)(E): Exemption for non-contact cooling water

> 4(b)(3) The following exemptions from the antidegradation demonstration requirements included in section 6 of this rule require the submission of information that sufficiently demonstrates that the proposed discharge satisfies the exemption description along with the application for an NPDES permit:
>
> * * *
>
> (E) A new or increased discharge of noncontact cooling water that will not do the following:
>
> (i) Increase the temperature of the receiving water or waters outside of the designated mixing zone, where applicable.
>
> (ii) Increase the loading of BCCs.
>
> (iii) Require numeric water quality-based effluent limitations (WQBELs) for toxic substances or WET as determined under 327 IAC 5-2-11.5.

Comments: This provision requires a change in rule language to clarify its meaning.

Since "or" is not used in the list E(i) through E(iii), the sentence in 4(b)(3)(E) should be changed to the following to clarify the provision:

> A new or increased discharge of noncontact cooling water that will not do <u>any of</u> the following: . . .

6. 327 IAC 2-1.3-4(b)(4)(A)-(D): Exemptions for offsets and trading

Section 4(b)(4) sets forth four exemptions based on pollution offsets and trading.

General Comments: The "Exemptions" under 4(b)(4) are not appropriate as an exemption under the Clean Water Act and EPA guidance, and even if they were appropriate as exemptions, they should not apply to BCCs.

An "exemption" from the antidegradation demonstration, to be consistent with the perspectives of EPA and the courts, must be associated with one of two types of situations: (1) a situation that will produce either no decrease or a *de minimis* decrease in water quality in the receiving waterbody over the range of likely discharges; and (2) a situation where an outside procedure that sufficiently substitutes for antidegradation review is applied (*e.g.*, CERCLA cleanup).

EPA Region 7, for example, has stated its position on exemptions as follows:

> [A]ny exemptions from the antidegradation review process must be based upon a well-founded determination that the pollution discharges permitted under such

> exemptions will have a truly *de minimis* impact upon the water quality of such impacted waters.[8]

The four "exemptions" in Section 4(b)(4) of the Draft Rule are not appropriate as exemptions from antidegradation review because IDEM has not made any showing that they meet either of the above criteria.

First, IDEM has presented no evidence that any of the four "exemptions," as a class of loadings, will have a truly *de minimis* impact upon the water quality of the impacted waters. In order for a class of new or increased loadings to be exempted from antidegradation review, IDEM must be able to show that all situations in that class will have a *de minimis* impact. As we argue below for each of the four Section 4(b)(4) exemptions individually, that showing has not and cannot be made.

Second, the Exemption Justification in Section 5 of the Draft Rule does not sufficiently substitute for the antidegradation demonstration requirements in Sections 6 and 7 of the Draft Rule for significant loadings. Primarily, compared to the antidegradation demonstration requirements, the Exemption Justification has a much diluted "necessary" test to analyze alternatives to the proposed new or increased loading. Compare Section 5(c)(3) of the Draft Rule, which states as follows,

> (c) An exemption justification shall include the following:
> (1) An identification of all pollutants of concern for which the exemption justification is required.
> (2) An estimate of the concentration of all pollutants of concern proposed to be discharged.
> (3) An explanation of how the proposed new or increased discharge of pollutants of concern qualifies for an exemption that includes:
> (A) the provision or provisions listed in section 4(b)(4) of this rule that applies to the proposed new or increased discharge;
> (B) substantiation that the proposed new or increased discharge qualifies for the provision identified in clause (A); and
> (C) a demonstration that:
> (i) the proposed action will minimize the proposed lowering of water quality; and
> (ii) the discharger will use appropriate cost-effective pollution prevention and treatment techniques.

[8] Region 7 EPA letter dated March 25, 2009 to the general counsel of the Iowa Department of Natural Resources, in response to a legislative bill setting forth exemptions to antidegradation review.

with the much more extensive "necessary" test set forth in Section 6 of the Draft Rule, which states as follows,

(b) An antidegradation demonstration application shall include the following information:
(1) The pollutants of concern for which the antidegradation application is required.
(2) The estimated mass and concentration of all pollutants of concern proposed to be discharged.
(3) The receiving water or waters that would be affected by the new or increased discharge.
(4) The physical, biological, and chemical conditions of the receiving water or waters as determined by:
(A) available information; or
(B) additional information, including the results of additional water quality:
(i) chemical;
(ii) biological; or
(iii) both (i) and (ii);
analysis, if requested by the department.
(5) The estimated magnitude of the proposed lowering of water quality.
* * *
(12) The availability, reliability, cost-effectiveness, and technical feasibility of:
(A) nondegradation;
(B) minimal degradation; or
(C) degradation mitigation techniques or alternatives.
(13) An analysis of the effluent reduction benefits and water quality benefits associated with the degradation mitigation techniques or alternatives required to be assessed under subdivision (12)(C), including the following:
(A) A review of pollution prevention alternatives and techniques that includes the following:
(i) A listing of alternatives and techniques, including new and innovative technologies.
(ii) A description of how the alternatives and techniques available to the applicant would minimize or prevent the proposed significant lowering of water quality.
(iii) The effluent concentrations attainable by employing the alternatives and techniques.
(iv) The costs associated with employing the alternatives and techniques.
(v) An identification of the pollution prevention alternatives and techniques selected to be employed and an explanation of why those selections were made.
(B) An evaluation of the feasibility and costs of connecting to an existing POTW or privately owned treatment works, within the vicinity of the proposed new or increased discharge, that will effectively treat the proposed discharge and is willing to accept wastewater from other entities.
(C) For POTWs, if the proposed significant lowering of water quality is a result of a proposed new or increased discharge from one (1) or more indirect dischargers, the analysis shall also include the following:
(i) The requirements of clause (A) shall be completed for the indirect discharger or dischargers as well as for the POTW. The POTW may require the indirect dischargers to prepare this information.
(ii) If one (1) or more of the indirect dischargers proposes or does discharge to a:
(AA) combined sewer; or
(BB) sanitary sewer that is connected to a combined sewer;
all combined sewer overflows (CSOs) between the point of discharge to the sewer and the POTW shall be identified.
(14) The availability, cost-effectiveness, and technical feasibility of central or regional sewage collection and treatment facilities, including long range plans outlined in:
(A) state or local water quality management planning documents; and
(B) applicable facility planning documents.
* * *
(c) The discharger may either:

(1) accept effluent limits for mass and concentration based on the BADCT, when available, as established by the department; or
(2) include as part of its antidegradation demonstration application a request for the commissioner's review and approval of an alternative treatment technique analysis that includes submission of the following information:
(A) The available alternative or enhanced treatment techniques, including new and innovative technologies.
(B) A review of how the alternative or enhanced treatment techniques available to the applicant would minimize or prevent the proposed significant lowering of water quality.
(C) The effluent concentrations attainable by employing the alternative or enhanced treatment techniques.
(D) The costs associated with employing the alternative or enhanced treatment techniques relative to the cost of treatment necessary to achieve effluent limitations based on the de minimis lowering of water quality.
(E) The alternative or enhanced treatment techniques selected to be employed and an explanation of why those selections were made.
(F) The reliability of the selected treatment alternative or alternatives, including, but not limited to, the possibility of recurring operational and maintenance difficulties that would lead to increased degradation.
(d) Upon the commissioner's approval of an alternative treatment technique analysis, the discharger shall accept effluent limits for mass and concentration based on the alternative treatment techniques analysis.

We now comment on each 4(b)(4) exemption individually.

4(b)(4)(A): Exemption for watershed offset

4(b)(4) The following exemptions from the antidegradation demonstration requirements included in section 6 of this rule require the submission of an exemption justification according to section 5 of this rule:
(A) A change in loading of a pollutant of concern:
(i) where there is a voluntary, simultaneous, enforceable decrease in the actual loading of the pollutant of concern from sources contributing to the same ten (10) digit watershed; and
(ii) with the result that there is a net decrease in the loading of the pollutant of concern to the same ten (10) digit watershed**.**

Comments: Exemption 4(b)(4)(A) is not appropriate as an exemption under EPA guidance, and even if it were appropriate, it should not apply to BCCs.

Exemption 4(b)(4)(A) is not appropriate as an exemption from antidegradation review because although the exemption requires a *de minimis* loading of the pollutant over a HUC-10 watershed, it neither requires nor can ensure with any degree of certainty a *de minimis* lowering of water quality in the receiving waterbody. This exemption thus is contrary to EPA's guidance that exemptions should be granted only for truly *de minimis* loadings.

Exemption 4(b)(4)(A) allows, without antidegradation review, a significant increase in loading of pollutant into a lake or stream segment as long as there is a corresponding decrease in the net loading of the pollutant somewhere within the entire HUC-10 watershed. This is presumably accomplished by reducing the loading of the same pollutant in a stream segment or lake different from the receiving waterbody. For this scenario to likely produce a truly *de minimis* impact upon the water quality of the impacted water, one must assume that biological impacts and risks resulting from a significant increase in loading into a particular stream segment or lake will be entirely offset by a decrease in loading in other stream segments or lakes within the same HUC-10 watershed. And because IDEM is proposing this scenario as an exemption from an antidegradation demonstration, this assumption must hold over the range of discharges and circumstances likely encountered.

IDEM cannot assure that this assumption will hold for all discharges *a priori*, however, due to differences in localized communities of aquatic organisms as well as differences in absorption and reactions of pollutants across different locations of the same watershed. For example, a significant lowering of water quality in a biologically diverse stream segment or lake (a biological hotspot) may pose an increased risk to the local ecological community (even if water quality is still above the biological criterion). This increased local risk, however, would not necessarily be offset by improving water quality further downstream in a different stream segment or lake. Also, for a pollutant that is locally sequestered soon after discharge, reducing loadings upstream may not offset the local impacts of loadings downstream. Because different locations in the watershed may react differently to the discharge of a pollutant, the locations are not fungible, and IDEM cannot generalize that all discharges falling under Exemption 4(b)(4)(A) will likely be nonsignificant in impact.[9]

[9] Application of pollution trading at the watershed scale must be done with care. See U.S. EPA, Water Quality Trading Toolkit for Permit Writers, pages 12-13 ("In general, the geographic scope of a trade should be no larger than necessary to encompass the universe of sources that contribute to a specific water quality problem that is to be addressed through trading."); U.S. EPA, Water Quality Trading Assessment Handbook, chapter II, pages 16-17 ("some potential trades that could result in a general water quality improvement in a broad area may also result in acute or chronic localized impacts"). Also, U.S. EPA, Water Quality Trading Assessment Handbook, chapter II, page 6:

> There should be an ability to establish water quality equivalence between the location where a pollutant reduction is made and the location where that reduction is purchased or used. This ensures that the water quality impact of trading will be equivalent to, or better than, the pollutant reductions that would have occurred without trading. In addition to ensuring that overall pollutant

These problems with Exemption 4(b)(4)(A) are especially troublesome because the exemption applies to all OSRWs and EUWs, all HQWs in the Great Lakes Basin, and all loadings of BCCs. Exemption 4(b)(4)(A) is inconsistent the intent of Ind. Code §§ 13-18-3-2(m)(2) to offset significant loadings into OSRWs and EUWs with water quality improvements "that will result in an overall improvement of the water quality of *the [OSRW] or [EUW]*." (emphasis added). That is, the project, although implemented in the watershed, must have offsetting effects in the waterbody receiving the new or increased loading. Moreover, attempting to offset a new or increased loading of a BCC with a decrease in the loading of the BCC somewhere else in the watershed is highly risky due to the likelihood of creating hotspots of BCC pollution.[10]

Furthermore, Exemption 4(b)(4)(A) is a deviation from the policy reflected in IDEM's interim antidegradation rules. The analogous exemptions in the interim rules 327 IAC 5-2-11.3(b)(1)(C)(iii)(DD) and 327 IAC 5-2-11.7(c)(2)(A), unlike Exemption 4(b)(4)(A), do not apply to BCCs. Also, the interim rules require that the pollution transfer result in no net increase in the loading of the pollutant in the receiving waterbody, as opposed to the watershed.[11] The

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reduction impacts are equivalent, trades must not create locally high loadings of pollutants or "hotspots."

[10] See U.S. EPA, Water Quality Trading Assessment Handbook, chapter II, page 6.

[11] 327 IAC 5-2-11.7(c)(2)(A) states in relevant part:

> (2) The commissioner may allow the following proposed new or increased discharges to occur if the applicant demonstrates that the increases are necessary and that they will result in a net environmental improvement:
>
> (A) New or increased discharges of a pollutant or pollutant parameter that is not a BCC where there is a contemporaneous enforceable decrease in the actual loading of the pollutant or pollutant parameter from sources contributing to the OSRW or to the tributaries to the OSRW such that there is no net increase in the loading of the pollutant or pollutant parameter to the OSRW. The commissioner may approve such an action only if:
>
> (i) the reduction in the discharge of the pollutant or pollutant parameter exceeds the new or increased discharge of the pollutant or pollutant parameter;
>
> (ii) the applicant demonstrates that all reasonable and cost-effective methods for avoiding the new or increased discharge have been taken[.]

327 IAC 5-2-11.3(b)(1)(C)(iii)(DD) states:

> (C) Notwithstanding clauses (A) and (B), the following do not constitute a significant lowering of water quality:
>
> (iii) The following actions:
>
> (DD) New or increased discharges of a pollutant that is not a BCC, where there is a contemporaneous enforceable decrease in the actual loading of the pollutant from sources contributing to the same body of water such that there is no net increase in the loading of the pollutant to the same body of water.

interim provisions thus recognize that the proposed activity, to be exempted, must discharge non-BCCs and be likely to produce a *de minimis* loading in the receiving waterbody, not the receiving watershed.

Q→ Does IDEM have any evidence that, in general for the range of likely circumstances falling under this exemption, biological impacts and risks resulting from a significant increase in loading into a particular lake or stream segment will be entirely offset by a decrease in loading from sources in other stream segments and lakes in the same watershed? If so, please disclose that evidence to the public.

Q→ Why has IDEM applied Exemption 4(b)(4)(A) to BCCs, especially given that the analogous exemptions in the current interim rules do not apply to BCCs?

Q→ Why has IDEM not required, as it required in the analogous exemptions in the current interim rules, that Exemption 4(b)(4)(A) apply only where a voluntary, simultaneous, enforceable reduction in the loading of the pollutant from other sources results in a net decrease in the loading of the pollutant of concern in the receiving stream segment or lake rather than the entire HUC-10 watershed?

4(b)(4)(B): Exemption for cross-pollutant trading

4(b)(4) The following exemptions from the antidegradation demonstration requirements included in section 6 of this rule require the submission of an exemption justification according to section 5 of this rule:

* * *

(B) A new or increased loading of a pollutant of concern if the discharger demonstrates the following:

(i) The new or increased loading is necessary to accomplish a reduction in the loading of another pollutant of concern.

(ii) All reasonable and cost-effective methods for minimizing or preventing the new or increased loading have been taken.

(iii) There will be an improvement in water quality in the receiving water or waters. An improvement in water quality will occur if the new or increased loading of the pollutant of concern is:

(AA) less bioaccumulative; and

(BB) less toxic than the reduced pollutant or pollutant parameter.

In making these determinations regarding bioaccumulation, the bioaccumulation factor methodology under 327 IAC 2-1.5-13 will be used.

Comments: Exemption 4(b)(4)(B) is not appropriate as an exemption under EPA guidance, and even if it were appropriate, it should not apply to BCCs.

Although Exemption 4(b)(4)(B) is superficially similar to Exemption 4(b)(4)(A) and is also not appropriate as an exemption, its problems are somewhat different. Unlike in Exemption 4(b)(4)(A), the spatial scale of Exemption 4(b)(4)(B) is appropriate because it requires an improvement in water quality in "the receiving water or waters."[12]

But Exemption 4(b)(4)(B) has a problem that Exemption 4(b)(4)(A) does not have: Exemption 4(b)(4)(B) trades an increase in one pollutant for a reduction in another pollutant (Exemption 4(b)(4)(A) transfers the location of the same pollutant). EPA has issued voluminous guidance on pollutant trading schemes, and recommends that such schemes be applied with caution.[13]

In Exemption 4(b)(4)(B), IDEM attempts to ensure that any situation covered by the exemption will result in a nonsignificant impact by requiring that the new or increased loading of pollutant X be necessary to reduce a more bioaccumulative and more toxic pollutant Y. Although IDEM may have specific applications of this exemption in mind, and these specific applications may be appropriate as exemptions, IDEM errs by attempting to set forth a generalized pollutant trading scheme without any evidence that the scheme will produce nonsignificant impacts across a range of pollutants, discharges, and circumstances. IDEM cannot ensure generally a nonsignificant impact simply by requiring that the reduced pollutant be more bioaccumulative and toxic than the increased pollutant. For example, Exemption 4(b)(4)(B) says nothing about the magnitude of the changes in loading of each pollutant. It is conceivable that the increase in the less harmful pollutant X is of such a high magnitude and the reduction of the more harmful pollutant Y is of such a small magnitude that the net effect is still a significant impact. Also, whether bioaccumulativity and toxicity are the only important criteria to consider when trading pollutants

[12] In contrast, Exemption 4(b)(4)(A) requires a net improvement in water quality only over the HUC-10 watershed.

[13] EPA accepts the pollutant trading concept as a tool for maintaining or improving water quality, but only for some pollutants and some situations. See U.S. EPA, Water Quality Trading Assessment Handbook (November 2004) EPA 841-B-04-001. EPA does not support trading of bioaccumulative toxics. See U.S. EPA, Water Quality Trading Toolkit for Permit Writers, Office of Wastewater Management Water Permits Division, (August 2007) EPA 833-R-07-004, page 10 ("Not all pollutants are necessarily suitable for trading. . . . EPA's Trading Policy supports trading for TN, TP, and sediment and indicates that other pollutants may be considered for trading on a case-by-case basis. EPA does not support trading of persistent bioaccumulative toxics.").

depends on how those terms are defined and whether species-specific impacts are important in a particular situation.[14]

These problems with Exemption 4(b)(4)(B) are especially troublesome because the exemption applies to all OSRWs and EUWs, all HQWs in the Great Lakes Basin, and all loadings of BCCs. Even if Exemption 4(b)(4)(B) were appropriate as an exemption, it should not apply to BCCs or OSRWs/EUWs. EPA recommends against pollutant trading for BCCs, and in fact the analogous exemptions in the current interim rules do not apply to BCCs (see 327 IAC 5-2-11.3(b)(1)(C)(iii)(JJ) and 327 IAC 5-2-11.7(c)(2)(B)). Moreover, because of the relative high uncertainty in the outcome of pollutant trading, the application of this scheme in OSRWs and EUWs is particularly risky.

Q→ How is the situation in this provision appropriate as an exemption from an antidegradation demonstration and consistent with EPA's views on exemptions?

Q→ Even if this situation were properly an exemption from an antidegradation demonstration, why should the exemption apply to BCCs, especially given that the comparable exemptions in the interim rules do not apply to BCCs?

Q→ Even if this situation were properly an exemption from an antidegradation demonstration, why should the exemption apply to OSRWs, and EUWs?

4(b)(4)(C): Exemption for cross-pollutant and cross-media trading

4(b)(4) The following exemptions from the antidegradation demonstration requirements included in section 6 of this rule require the submission of an exemption justification according to section 5 of this rule:

* * *

(C) A new or increased loading of a pollutant of concern that demonstrates:

(i) the new or increased loading is necessary to accomplish a reduction in the release of one (1) or more air pollutants;

(ii) all reasonable and cost-effective methods for minimizing or preventing the new or increased loading have been taken; and

(iii) there will be an environmental improvement, which will occur when the applicant demonstrates that the reduction in the loading of the air pollutant:

(AA) is necessary to meet a state or federal air quality standard or emission requirement; or

[14] BCCs constitute only a subset of "bioaccumulative" pollutants.

> (BB) will substantially reduce human exposure to hazardous air pollutants or other air pollutants that are subject to state or federal air quality standards.

Comments: Exemption 4(b)(4)(C) is not appropriate as an exemption under EPA guidance, and even if it were appropriate, it should not apply to BCCs.

Exemption 4(b)(4)(C) also is not appropriate as an exemption from antidegradation review. It exhibits all of the shortcomings of both Exemption 4(b)(4)(A) and Exemption 4(b)(4)(B): the spatial scale of nonsignificance is too large, it applies to BCCs and OSRWs/EUWs, and it involves pollutant trading. Furthermore, Exemption 4(b)(4)(C) has two additional problems.

First, the exemption sets forth a cross-media pollutant trading scheme. EPA Region 5, in its review of a prior IDEM draft antidegradation rule, rejected cross-media transfers of pollutants as not appropriate as an exemption.

Second, Exemption 4(b)(4)(C) entirely abandons EPA's principle that any exemptions from the antidegradation review process must be based upon a well-founded determination that the pollution discharges permitted under such exemptions will have a truly *de minimis* impact upon the water quality of the impacted waters.[15] Exemption 4(b)(4)(C) requires only that "there will be an environmental improvement," meaning that water pollution and air pollution are fungible and can be traded as long as the "environment" is improved. There is no specific application of this cross-media trading scheme that would be appropriate as an antidegradation exemption under the Clean Water Act because the application of the exemption would consistently allow significant impacts to water quality. This does not mean that allowing significant reductions in water quality for the purpose of reducing exposure to hazardous air pollutants is not an important social and economic activity, but simply that the tradeoff must be evaluated in the context of an antidegradation demonstration.

[15] Region 7 EPA letter dated March 25, 2009 to the general counsel of the Iowa Department of Natural Resources, in response to a legislative bill setting forth exemptions to antidegradation review.

Q→ How is the situation in this provision appropriate as an exemption from an antidegradation demonstration, and how is it consistent with EPA's views on exemptions?

4(b)(4)(D): Exemption for socio-economic importance of public health concerns

4(b)(4) The following exemptions from the antidegradation demonstration requirements included in section 6 of this rule require the submission of an exemption justification according to section 5 of this rule:

* * *

(D) A new or increased loading of a pollutant of concern from a sanitary wastewater treatment plant constructed or expanded to alleviate a public health concern, for example, a connection of existing residences currently on septic systems.

Comments: Exemption 4(b)(4)(D) is not appropriate as an exemption under EPA guidance, and even if it were appropriate, it should not apply to BCCs.

This exemption, like Exemption 4(b)(4)(C), abandons EPA's principle that any exemptions from the antidegradation review process must be based upon a well-founded determination that the pollution discharges permitted under such exemptions will have a truly *de minimis* impact upon the water quality of the impacted waters. Exemption 4(b)(4)(D) trades a significant lowering of water quality for improvement in public health, but this trade does not result in a *de minimis* impact to water quality. Improving public health is likely an important social and economic development, but this analysis is properly made within the context of an antidegradation demonstration. An "exemption" is not the proper vehicle for situations that are deemed likely to pass the "importance" test but that still produce significant lowering of water quality.

Q→ How is the situation in this provision appropriate as an exemption from an antidegradation demonstration, and how is it consistent with EPA's views on exemptions?

V. SECTION 5: 327 IAC 2-1.3-5 EXEMPTION JUSTIFICATION.

Comments: The Exemption Justification cannot substitute for the "necessary" test of an antidegradation demonstration.

As we have argued immediately above, none of the so-called "exemptions" in 327 IAC 2-1.3-4(b)(4), to which the Section 5 exemption justification procedure applies, are appropriate as exemptions from antidegradation review. Moreover, the Exemption Justification requirement is not equivalent to the necessary and importance tests of the antidegradation demonstration.

VI. SECTION 6: 327 IAC 2-1.3-6 ANTIDEGRADATION DEMONSTRATION APPLICATION.

1. 327 IAC 2-1.3-6(a): Demonstration applicability

> Any existing or proposed discharger seeking a new or increased discharge that constitutes a significant lowering of water quality that is not exempt under **section 4(b)(4)** of this rule, must submit for consideration by the commissioner an antidegradation demonstration application that justifies that the proposed new or increased discharge **is necessary for providing a social or economic benefit in the area of the discharge**.

Comments: It appears that this provision contains mistaken references.

Does IDEM intend the applicability of Section 6 to be broader than significant discharges not exempt under "section 4(b)(4)? It would appear to be the case based on the language in, for example, Section 4(b)(3) ("The following exemptions from the antidegradation demonstration requirements included in section 6 of this rule require . . . .). To be consistent with antidegradation policy, the language in 327 IAC 2-1.3-6(a) should be modified as follows:

> Any existing or proposed discharger seeking a new or increased discharge that constitutes a significant lowering of water quality that is not exempt under **section 4** of this rule, must submit for consideration by the commissioner an antidegradation demonstration application that justifies that the proposed new or increased discharge is **necessary to accommodate important social or economic development in the area of the discharge.**

Q→ Does not IDEM intend the applicability of Section 6 to be broader than significant discharges not exempt under "section 4(b)(4)"?

Q→ Why did IDEM not use the standard language "necessary to accommodate important social or economic development in the area of the discharge" in this provision?

2. 327 IAC 2-1.3-6(b): Antidegradation demonstration factors

EPA views the antidegradation demonstration as a stringent test, a test certainly not met by every applicant:

> This provision is intended to provide relief only in a few extraordinary circumstances where the economic and social need for the activity clearly outweighs the benefit of maintaining water quality above that required for 'fishable/swimmable' water, and both cannot be achieved. *The burden of demonstration on the individual proposing such activity will be very high.*[16]

Promotion of Tier 2 antidegradation policy requires two separate inquiries: (1) whether the proposed lowering of water quality is "necessary," and (2) whether the social or economic benefits of the project are "important."

First, the proposed discharge must be "necessary." Satisfying this inquiry demands an analysis of alternatives to the proposed discharge. The "necessary" analysis questions whether it is possible to minimize, mitigate, or avoid the proposed discharge or its impacts to water quality through technology or other means. EPA has stated that "[g]iven the variety of engineering approaches to pollution control and the emerging importance of pollution prevention, the finding of necessity is among the most important and useful aspects of an antidegradation program and potentially an extremely useful tool in the context of watershed planning."[17]

An alternatives analysis must consider non-discharge alternatives, pollution prevention and substitution alternatives, alternative locations for the activity or disposal, as well as alternative treatment technologies. The availability of end of pipe control technology should also be considered under this analysis. All available alternatives need to be identified prior to eliminating those that can be deemed technically or economically infeasible. A separate analysis should be performed for each pollutant or pollutant parameter for which there may be a significant lowering of water quality.

Second, the activity that the applicant claims requires a new or increased discharge must accommodate important social or economic development in the area of the receiving waterbody.

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[16] U.S. EPA Water Quality Standards Handbook, Second Edition (August 1994), Pages 4-7 (emphasis added).
[17] 63 Fed. Reg. 36742, 36784.

The demonstration of "importance" focuses on the socio-economic benefits of the proposed activity counterbalanced against the socioeconomic costs of the proposal and the projected environmental effects. This balancing concept is key. Socioeconomic development cannot be said to be "important" if the potential economic and social benefits of the project are outweighed by the overall costs to society of allowing additional pollution to the water.[18] Accordingly, if the negative environmental, social, and economic impacts of the action outweigh the positive environmental, social, and economic impacts, then the antidegradation application must be denied.

Comments: Four factors should be added to the importance test, and Section 6 should be restructured for clarity.

IDEM is correct to include both positive and negative impacts of proposed lowering of water quality. But Section 6(b) has two shortcomings that will make it difficult for IDEM to implement.

First, the most apparent result of a "significant lowering of water quality" will be a reduction in assimilative capacity for one or more pollutants of concern. This impact on assimilative capacity may not cause readily discernable harm to aquatic biota, assuming that water quality criteria are not violated, and the applicant may be tempted to conclude that there are no negative impacts. The impact to assimilative capacity will, however, likely have two results: an increase in the <u>risk</u> of harm to aquatic biota, and harm to the social and economic value that the community and industry places on maintaining high assimilative capacity. IDEM omitted but should include four additional factors to Section 6(b) to ensure that the impacts of reducing assimilative capacity are sufficiently evaluated:

- The value of the proposed reduction in assimilative capacity to residents in the area of the new or increased pollutant loading.
- The value of the proposed reduction in assimilative capacity to future antidegradation applicants.[19]

[18] See U.S. EPA Region VIII Guidance: Antidegradation Implementation (August 1993), page 21 (stating that the inquiry should "weigh the applicant's demonstration against counterbalancing socioeconomic costs associated with the proposed activity, such as projected negative socio-economic effects on the community and the projected environmental effects").

[19] For example, Washington State antidegradation guidance states: "Particularly for parameters such as dissolved oxygen, bacterial pollutants, and common metals, the loss of available assimilative capacity may mean that future

- The potential for reduced effectiveness of government or privately sponsored conservation projects that have specifically targeted improved water quality or enhanced recreational opportunities on the proposed receiving waterbody.[20]
- The anticipated impact of the proposed lowering of water quality on the risk of harm to aquatic organisms and ecosystems, where risk is expressed as the probabilities of different magnitudes of harm.

Second, the structure of 6(b) is likely to be confusing to antidegradation applicants, and thus difficult for IDEM to implement. Section 6(b) mixes the following five issues and sets forth associated factors in what appears to be a haphazard order: (1) the characteristics of the discharge and receiving water (factors 1 through 5); (2) the Necessary Test: alternatives to proposed discharge (factors 11, 12, 13, 14) ; (3) the Importance Test: social and economic benefits of the proposed activity (factors in 15(A) and 15(C)); (4) the Importance Test: negative social and economic impacts of the proposed activity (factors 7, 9, and in 15(A)); and (5) the Importance Test: adverse impacts of the proposed activity on ecological values (factors 6, 8, and 10). The proper ordering of the factors in Section 6(b) into these five categories should appear as follows.

Q→ Why did IDEM not order and separate these criteria to make clear what types of information and tests are being required of the applicant?

Q→ Why did IDEM not include the following factors in Section 6(b): (1) The value of the proposed reduction in assimilative capacity to residents in the area; (2) The value of the proposed reduction in assimilative capacity to future antidegradation applicants; (3) The potential for reduced effectiveness of government or privately sponsored conservation projects that have specifically targeted improved water quality or enhanced recreational opportunities on the proposed receiving waterbody; (4) The anticipated impact of the proposed lowering of water quality on the risk of harm to aquatic organisms and ecosystems, where risk is expressed as the probabilities of different magnitudes of harm?

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entities and expansions will be held to higher and more expensive treatment requirements. The less each individual activity uses of the assimilative capacity, the better the potential for cost-effective future development will be. Discussing the relative impact on the remaining assimilative capacity addresses the relative impact of the activity on the costs and opportunities for future growth." Washington State Supplementary Guidance Implementing the Tier II Antidegradation Rules (July 18, 2005) WAC 173-201A-320, page 15.

[20] This factor is included in the current interim antidegradation rule at 327 IAC 5-2-11.3(b)(3)(C)(vi).

3. 327 IAC 2-1.3-6(b)(15)(B): Provision in importance test

> Demonstration by the applicant that the positive and negative social or economic development impacts identified and reviewed under clause (A) are necessary to accommodate important social or economic development despite the proposed significant lowering of water quality.

Comments: This provision does not make logical sense.

We challenge IDEM to explain what this paragraph means and how it will be implemented. This paragraph does not make logical sense. The positive and negative social or economic development impacts identified and reviewed under clause 15(A) are not necessary to accommodate development, but rather they are evidence of the importance or lack of importance of the proposed action.

The statement of antidegradation policy to which this paragraph alludes is correctly stated elsewhere in the Draft Rule (*e.g.*, later in Section 7(c)(2)). The requirement in 6(b)(15)(B) should be written as follows:

> (B) Demonstration by the applicant that, given the positive and negative social or economic development impacts identified and reviewed under clause (A), the action that would cause the lowering of water quality is necessary to accommodate important economic or social development in the area.

Q→ How can it be that creating employment is "necessary to accommodate important social or economic development"? Is not creating employment evidence of important economic development?

4. 327 IAC 2-1.3-6(c): Options for applicant

> (c) The discharger may either:
> (1) accept effluent limits for mass and concentration based on the BADCT, when available, as established by the department; or
> (2) include as part of its antidegradation demonstration application a request for the commissioner's review and approval of an alternative treatment technique analysis that includes submission of the following information:
> (A) The available alternative or enhanced treatment techniques, including new and innovative technologies.
> (B) A review of how the alternative or enhanced treatment techniques available to the applicant would minimize or prevent the proposed significant lowering of water quality.

> (C) The effluent concentrations attainable by employing the alternative or enhanced treatment techniques.
> (D) The costs associated with employing the alternative or enhanced treatment techniques relative to the cost of treatment necessary to achieve effluent limitations based on the de minimis lowering of water quality.
> (E) The alternative or enhanced treatment techniques selected to be employed and an explanation of why those selections were made.
> (F) The reliability of the selected treatment alternative or alternatives, including, but not limited to, the possibility of recurring operational and maintenance difficulties that would lead to increased degradation.

Comments: **327 IAC 2-1.3-6(c) is unclear, may contradict 6(b) and 7(c), and may effectively vitiate the requirement that alternatives be considered.**

Under 6(c), it appears that certain dischargers may essentially opt out of a full consideration of alternatives by accepting particular BADCT limits. This apparent truncation of the alternatives analysis is not consistent with federal requirements or even with section 6(b). 40 C.F.R. § 131.12(a)(2) requires that the increased loading be shown to be necessary but such increased loading is not necessary if there are alternative methods of handling the wastewater through which the increased loading could be avoided or minimized. BADCT, as defined in Section 2 of the Draft Rule, does not state the best feasible treatment for any of the categories to which it is applied. Moreover, even to the limited extent that BADCT limits could accurately be said to represent "state of the art," allowing a discharger to use BADCT limits in place of a proper antidegradation analysis would circumvent consideration of no discharge alternatives – alternatives that involve creating less wastewater or waste and alternative discharge locations.

Further, it appears that a discharger of sanitary wastewater could avoid controlling phosphorus or nitrogen – even to levels that are recognized as feasible (see Hypoxia in the Northern Gulf of Mexico, EPA Science Advisory Committee, EPA=SAB-08-003 (Dec. 2007)) – simply by accepting a permit with BADCT limits. Allowing unnecessary phosphorus and nitrogen pollution is clearly inconsistent with the Clean Water Act and prudent public policy.

On the other hand, 6(b)(13) seems to require a broad consideration of alternatives. It is, then, difficult to reconcile Section 6(c) with Section 6(b)(13), and we do not know what IDEM intends. Similarly, Section 7(c) appears to require the Commissioner to deny a permit where less polluting alternatives are available without regard to the BADCT provision.

Perhaps, some provision like proposed 6(c) could properly be adopted but it would have to do the following:

- assure that no-discharge alternatives, and alternative discharge locations, are considered before BADCT could be selected; and
- be based on defined BADCT limits that really were close to the "state of the art" or at least actually represented the best treatment already being practiced for the relevant group of dischargers.

Q→ Can any dischargers opt out of a full consideration of alternatives, including the no-discharge alternative and alternative locations, by accepting particular BADCT limits, and if so, does this comply with antidegradation policy?

Q→ Can a discharger of sanitary wastewater avoid controlling phosphorus or nitrogen – even to levels that are recognized as feasible – simply by accepting a permit with BADCT limits, and if so, does this comply with antidegradation policy?

Q→ Is 6(c) fully consistent with the other provisions of the Draft Rule?

VII. SECTION 7: 327 IAC 2-1.3-7 COMMISSIONER'S DETERMINATION ON ANTIDEGRADATION DEMONSTRATION APPLICATION.

1. 327 IAC 2-1.3-7(e): Deference to other governmental entities

(e) The commissioner, in making a determination on the antidegradation demonstration shall give substantial weight to any applicable determinations by a governmental entity.

Comments: The legality of this provision under the Clean Water Act turns on IDEM's interpretation of the word "applicable."

This provision requires that the Commissioner give "substantial weight" to "any applicable determinations" by a governmental entity. The phrase "substantial weight" in Indiana law and court decisions reflects two concepts: first, substantial deference is given to a decision maker, and second, the decision maker receiving the deference is an expert on the subject of the

decision.[21] IDEM's deference under this proposed provision, whether or not it ultimately appears in legislation, is unnecessarily broad and ambiguous because it is entirely unclear what expertise of other governmental agencies would receive deference by IDEM's experts and what "determinations" of other governmental entities would be "applicable" to IDEM's determination of antidegradation necessity and importance.

Surely IDEM could not give substantial weight to another entity's determination that the permit applicant will meet the best available technology of pollution control without abdicating IDEM's delegated authority under the CWA. IDEM is clearly the expert on the issue of necessity.

Furthermore, IDEM could not give substantial weight to another agency's determination that the proposed polluting activity is socially and economically important in the area of the receiving waterbody without improperly abdicating its delegated authority under the CWA. IDEM's determination of social and economic importance weighs the socio-economic costs and benefits of allowing water quality degradation, and the costs are specific to the valuation of assimilative capacity. No other governmental entity, except EPA, could properly weigh socio-economic costs and benefits and water quality impacts.

For example, any "determination" by another governmental entity that an increase in jobs and tax base makes a polluting activity "important" is not applicable to IDEM's Tier 2 or Tier 2.9 determination, which must weigh any benefits against the costs of lowering water quality. Another entity's determination will be unlikely to consider, for example, a possible reduction in the quality of life for residents or in the recreation or tourism industries that may be associated

[21] E.g., *Indiana Dept. of State Revenue v. Martin Marrietta Corp.*, 398 N.E.2d 1309 (Ind. Ct. App. 1979) ("Administrative interpretation of a statute is entitled to substantial weight by courts in construing meaning of such statute."); Ind. Code § 35-46-3-6(f) and (g) ("(f) The state veterinarian or the state veterinarian's designee who is appointed under subsection (e) shall do the following: (1) Make a recommendation to the court concerning whether confiscation is necessary to protect the safety and well-being of the animal. (2) If confiscation is recommended under subdivision (1), recommend a manner for handling the confiscation and disposition of the animal that is in the best interests of the animal. The state veterinarian or the state veterinarian's designee who submits a recommendation under this subsection shall articulate to the court the reasons supporting the recommendation. (g) The court:(1) shall give substantial weight to; and (2) may enter an order based upon; a recommendation submitted under subsection (f)."). See also *City of Philadelphia v. Fraternal Order of Police Lodge No. 5*, 916 A.2d 1210, 1216 (Commonwealth Court of Pennsylvania 2007) ("The term "substantial weight" is used in the administrative law context where courts accord a measure of deference to an agency's interpretation of its governing statute. In doing so, the courts implicitly recognize the expertise of the agency in carrying out its mission as charged by the General Assembly because the agency is generally in a better position to interpret its governing statute.").

with the use of assimilative capacity. In other words, no other governmental entity will consider all of the factors that enter into a "determination" of importance.

The proposed 327 IAC 2-1.3-7(e) is unnecessarily broad because it does not distinguish between invalid and valid interpretations of the provision.

Q→ How will IDEM interpret the phrase "any applicable determinations" in 327 IAC 2-1.3-7(e)?

Q→ Given 327 IAC 2-1.3-7(e), how will IDEM avoid relinquishing to another entity IDEM's delegated authority under the CWA to determine whether a lowering of water quality is necessary to accommodate important social or economic development?

2. 327 IAC 2-1.3-7(g): Explanation of Commissioner's decision

(g) When the commissioner makes a determination on an antidegradation demonstration application, the commissioner shall public notice the antidegradation demonstration determination according to 327 IAC 5-2-11.2 and the final determination shall be:
(1) summarized in the public notice form prepared by the commissioner; and
(2) incorporated into the draft permit and the fact sheet that is made available for public comment under 327 IAC 5-3-9.

Comments: The fact sheet should justify the Commissioner's determination.

To clarify IDEM's obligations under antidegradation and the public notice requirement, the rule should require IDEM to document, with regard to the Commissioner's decision on the antidegradation demonstration: (1) which factors the Commissioner considered in making his or her determination; (2) what weights these factors were given; and (3) what determinations of other governmental agencies were considered and which were given substantial weight.

VIII. SECTION 8: 327 IAC 2-1.3-8 WATER QUALITY IMPROVEMENT PROJECT APPLICATION OR PAYMENT TO THE OSRW IMPROVEMENT FUND.

Indiana Code § 13-18-3-2(m)(6) requires IDEM to provide in the antidegradation rule criteria for using the fees placed into the OSRW improvement fund:

(m) The procedures provided by rule under subsection (l) must include the following:

* * *

(6) Criteria for using the watershed improvement fees to fund projects in the watershed that result in improvement in water quality in the outstanding state resource water or exceptional use water.

Comments: Section 8 appears to violate Indiana law because it fails to set forth the statutorily required criteria for using the fees.

Although Section 8 of the Draft Rule contains criteria for setting the fee amount, the Rule appears to contain no criteria "for using the watershed improvement fees to fund projects in the watershed," and is thus inconsistent with the statutory requirement.

Q→ Where in the Draft Rule are the criteria required under Ind. Code § 13-18-3-2(m)(6), and if such criteria are omitted, why did IDEM omit them?

IX. 327 IAC 5-2-11.2 PUBLIC NOTICE OF COMMENT PERIOD AND PUBLIC MEETINGS.

327 IAC 5-2-11.2(a): Applicability of notice and comment

(a) This section is applicable to an application for the following:

(1) Site-specific modification to water quality criteria under 327 IAC 2-1-8.9 and Tier I water quality criteria and Tier II water quality values under 327 IAC 2-1.5-16.

(2) An antidegradation demonstration application under section 11.3(b)(4) of this rule 327 IAC 2-1.3-6.

(3) An antidegradation exception exemption justification under section 11.7(c) of this rule. 327 IAC 2-1.3-5.

(4) An alternate mixing zone under section 11.4(b)(4)(F) of this rule.

(5) A variance under 327 IAC 5-3-4.1(c).

Comments: Short-term loading exemptions should be afforded notice and comment.

The federal antidegradation policy requires adequate public input. Decisions to approve or deny an exemption for short-term loadings into ONRWs and OSRWs under 327 IAC 2-1.3-4(a) and 327 IAC 2-1.3-4(b)(3)(C), respectively, are as complex as the other decisions listed in 11.2(a) and potentially have the same effect on water quality and socioeconomic values. The public should be afforded an opportunity to comment on these exemptions before approval or denial.

Q→ Why did IDEM not provide for public input into the decisions on whether to approve the exemptions under 327 IAC 2-1.3-4(a) and 327 IAC 2-1.3-4(b)(3)(C)?

Thank you for considering and responding to our comments and questions.

Sincerely,

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