

Comments on IDEM June 5, 2008 Draft Antidegradation Rule
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June 23, 2008

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

Thank you for this opportunity to comment on IDEM's second draft antidegradation rule, dated June 5, 2008. The Conservation Law Center and Clinic is a not-for-profit public interest law firm located in Bloomington, Indiana. With these comments we are also representing the interests of the Alliance for the Great Lakes, Inc. This is Conservation Law Center's second set of comments; our April 9, 2008 comments on IDEM's first draft rule dated March 14, 2008 were hand delivered to you.

IDEM's June 5th draft rule has made good progress toward fixing some of the problems with the first draft rule, such as making the information required in the antidegradation demonstration consistent with the information to be considered by the Commissioner in deciding whether to allow degradation, and fixing the circularity in the definitions of "*de minimis* lowering of water quality" and "significant lowering of water quality."

However, the June 5th draft rule carries over some of the problems of the first draft rule, and unfortunately backslides on several key issues, thus providing weaker protections for these issues than the first draft rule provided. For example, by limiting the application of the rule to a proposed new or increased discharge that will result in a reasonable potential to exceed a water quality standard, the new draft may not protect any loading (assimilation) capacity of a waterbody. In addition, the definition of *de minimis* lowering of water quality has been substantially changed to inappropriately exempt more discharges into OSRWs from antidegradation review. Also, opportunities for public input to the antidegradation decision-making process have been cut back in the June 5th draft by deleting public input to the Section 4 exemption decision, while at the same time a key Section 4 exemption has been expanded.

In addition to carrying over problems appearing in the first draft and backsliding on some substantive issues, IDEM has not fixed a few basic drafting errors that impart ambiguity and confusion and will eventually have to be fixed in any final rule.

Our comments on IDEM's June 5th draft rule are presented below in three sections: (1) provisions that afford less environmental protection or less public input than the first draft rule provided, and which are contrary to state or federal requirements and guidance; (2) provisions that are substantially the same as in the first draft rule but which still are contrary to state or federal requirements and guidance; and (3) drafting errors.

I. Provisions in IDEM's Second Draft (June 5, 2008) Antidegradation Rule that Weaken the Rule

Comment (1)

Section: 327 IAC 2-1.3.1(b)

Subject: Application of the rule cannot be limited to new or increased discharges that will result in a reasonable potential to exceed (RPE) a water quality standard.

In the development of the draft rule in early 2008, IDEM proposed to calculate the reasonable potential to exceed (RPE) a *de minimis* set point to determine whether a discharge was exempt from antidegradation review. That intuitive notion was an appropriate use of RPE. Now, the June 5th draft rule uses the RPE concept in a different and inappropriate way. Draft Section 1 states the scope of application of the rule:

327 IAC 2-1.3-1 Applicability of antidegradation standards and implementation procedures

(a) Notwithstanding the requirements of 327 IAC 2-1.5-4 the antidegradation standards established by this rule apply to all surface waters of the state.

(b) The antidegradation implementation procedures established by this rule apply to a nonexempt proposed new or increased discharge of a pollutant of

concern to a surface water of the state that will result in a reasonable potential to exceed (RPE) a water quality standard. RPE will be determined by applying the procedures outlined in 327 IAC 5-2-11.1(h) for non Great Lakes system dischargers and 5-2-11.5 for Great Lakes system dischargers. new or increased loading of any pollutant of concern from any new or existing discharger, including point source or nonpoint source, for which a new, renewed, or modified discharge permit would be required.

Most simply, the limitation of antidegradation to the situation where the new or increased pollution has a reasonable potential to cause a violation of water quality standards essentially eliminates all Tier 2 protections and is legally unacceptable.

If this draft subsection is intended to limit the rule's application to pollutants where a WQBEL can be calculated and included in the permit, this draft language is inadequate.¹

Comment (2)

Section: 327 IAC 2-1.3-4(b)(13)

Subject: The *de minimis* level in the June 5th draft rule does not sufficiently protect OSRWs and EUWs.

The June 5th draft rule applies an “end-of-pipe” WQBEL as a reference point for *de minimis* for OSRWs and EUWs:

(B) For HQWs that are OSRWs or EUWs, the following apply:

(i) Calculation considerations according to the following:

(AA) The proposed increase in mass-based effluent limits is less than or equal to the mass calculated using the new or increased flow and the water quality based effluent limitation (WQBEL) calculated without a mixing zone or the DTBEL, whichever is more stringent; . . .

In contrast, the first draft rule (in the now deleted Section 6) provided a more stringent *de minimis* for these waters:

(2) For waters that are OSRWs or EUWs, one (1) or more of the following applies:

(A) There is a proposed increase in mass-based effluent limits less than or equal to the mass calculated using the new or increased flow and the

¹ See also 327 IAC 5-2-11.5(f): “(f) In addition to this section [on WQBELs and Reasonable Potential to Exceed water quality criteria], effluent limitations shall be established to comply with all other applicable state and federal laws and regulations, including technology-based requirements and antidegradation policies.”

representative background concentration of the pollutant of concern in the receiving water or waters.

The WQBEL calculated without a mixing zone (equivalent to a WQBEL at the end of the pipe with no dilution), used in the June 5th draft, can be considerably less stringent than the representative background concentration of the pollutant in the receiving water, which was the *de minimis* level for OSRWs and EUWs used in the first draft. Furthermore, in low flow streams the end-of-pipe WQBEL could result in consumption of a significant amount of the remaining assimilative capacity. (In fact, in streams with a 7Q10 of zero, the end-of-pipe WQBEL will give away 100% of the assimilative capacity.) In no case should a *de minimis* level for OSRWs and EUWs be more than 5% of the unused loading capacity of the waterbody.

Comment (3)

Section: 327 IAC 2-1.3-5; 327 IAC 5-2-11.2

Subject: The public should be allowed to comment on the Commissioner's decision of whether any Section 4 exemption applies, as provided in the current 327 IAC 5-2-11.2 and the first draft rule.

The June 5th draft rule takes away a key opportunity for public participation and input that had been provided in the first draft rule as well as in the current antidegradation regulations – namely, public input to the Commissioner's decision to exempt a discharge from antidegradation review. Public input to the exemption decision is just as, if not more important than public input into the antidegradation demonstration decision: Not only does the exemption decision allow a new or increased discharge, but also it appears that an exempted discharge will be exempted from an alternatives analysis. IDEM has provided no justification for not allowing public input for exemption decisions. Moreover, some of the proposed exemptions in Section 4 are controversial and technically complex, and would benefit from public comment and information. The notice and comment required for the NPDES permit does not substitute for public input at key intermediate stages during the antidegradation evaluation process.

The June 5th draft rule makes the following changes in the proposed 327 IAC 2-1.3-5 and 327 IAC 5-2-11.2 (with deletions to the first draft rule struck):

327 IAC 2-1.3-5 Exemption justification

* * *

~~(c) Upon receipt of a nonsignificant lowering justification application, the commissioner shall provide notice and request comment. The commissioner shall hold a public meeting on the nonsignificant lowering justification in accordance with 327 IAC 5-2-11.2 if:~~

~~(1) the proposed discharge is to an OSRW or EUW; or~~

~~(2) a public meeting is requested by at least twenty five (25) persons.~~

~~The commissioner may hold a public meeting in accordance with 327 IAC 5-2-11.2 if the commissioner otherwise deems such a meeting necessary or appropriate.~~

(c) The commissioner shall review the submitted information and determine whether the information provided in the exemption justification is administratively complete and whether the proposed new or increased discharge qualifies for the exemption. If the commissioner determines that the proposed new or increased discharge qualifies for the exemption, the commissioner shall process the request in the following manner:

(1) Approved activities not required to be public noticed under 327 IAC 5-2-11.2 shall be public noticed as part of the draft permit and briefing memo, as described in 327 IAC 5-3-6 and 327 IAC 5-3-7, or fact sheet, as described in 327 IAC 5-3-8.

(2) Activities required to be public noticed under 327 IAC 5-2-11.2 shall follow the process described in 327 IAC 5-2-11.2.

327 IAC 5-2-11.2 Public notice of comment period and public meetings for site-specific modification of water quality criteria and values; an antidegradation demonstration; an alternate mixing zone demonstration; a variance

(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) A nonsignificant lowering justification application under 327 IAC 2-1.3-7.~~

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

~~(3) An antidegradation exception under section 11.7(c) of this rule.~~

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

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

The June 5th draft rule thus removes two public notice and comment provisions: first, notice and comment for the antidegradation exemption application (which was provided in the first draft rule), and second, notice and comment for the antidegradation exemptions applied to OSRWs under the current 327 IAC 5-2-11.7(c).

At the very least, the status quo in the current 327 IAC 5-2-11.7(c) should be maintained. That is, the Commissioner should provide for public notice and opportunity for comment before making a decision to exempt from antidegradation review a new or increased discharge to an OSRW or tributary. The current 327 IAC 5-2-11.7(c) provides notice and comment for several exemptions, including the following also listed in Section 4(b) of the June 5th draft rule:² (1) short term, temporary discharges [Section 4(b)(6)]; (2) discharges due to CERCLA or RCRA actions [Section 4(b)(7)]; (3) discharges due to implantation of approved industrial or municipal controls on wet-weather flows [Section 4(b)(5)]; (4) discharges due to intake of pollutants [Section 4(b)(4)]; (5) discharges where there is a contemporaneous enforceable decrease in the actual loading of the pollutant from sources contributing to the OSRW or tributaries such that there is no net increase in the loading of the pollutant or pollutant parameter to the OSRW [Section 4(b)(9)]; (6) discharges necessary to accomplish a reduction in the discharge of another pollutant [Section 4(b)(10)].

Comment (4)

Section: 327 IAC 2-1.3-4(b)(9)

Subject: The pollution trading exemption is inappropriately applied to BCCs, inappropriately applied at the generalized watershed scale, and inappropriately applied without evaluation of the trade; as such, the exemption is contrary to EPA guidance, the first draft rule, and the current antidegradation regulations.

The Section 4(b)(9) exemption of the June 5th draft rule contains a significant change to the first draft rule and to the current 327 IAC 5-2-11.7.³ Section 4(b)(9), prior to the June 5th draft, exempted an increase in the discharge of a pollutant from antidegradation review if there was a concomitant decrease of that same pollutant in the same waterbody. Section 4(b)(9) of the June 5th draft rule states (with deletions to the first draft rule struck):

(b) For HQWs, the following new or increased discharges are exempt from the antidegradation demonstration requirements:

* * *

² The wording of the exemptions in the June 5th draft rule is in some cases significantly different from the wording in 327 IAC 5-2-11.7(c).

³ 327 IAC 5-2-11.7 is titled "Great Lakes system dischargers interim antidegradation implementation procedures for outstanding state resource waters."

(9) New or increased discharges of a pollutant of concern where there is a voluntary, simultaneous, enforceable decrease in the actual loading of the pollutant of concern from sources contributing to the same watershed ~~body of water, as determined under 327 IAC 5-2-11.5(b)(4)(B)(i), with the result that there is a net decrease in the loading of the pollutant of concern to the same watershed body of water, as determined under 327 IAC 5-2-11.5(b)(4)(B)(i), or sensitive area.~~

Such “pollutant trading” has been endorsed by EPA, but only for some pollutants and some situations.⁴ The June 5th draft rule, however, unjustifiably generalizes this concept of pollutant trading to an unsanctioned extreme by applying it to all pollutants of concern, including BCCs ((bioaccumulative chemicals of concern), to the watershed rather than the waterbody scale, and without any evaluation of the trade. This expansion is contrary to EPA guidance and unsupported by law or science, and likely will not survive EPA review.

First, application of the pollutant trading exemption to BCCs is contrary to both the current regulations and EPA guidance. The current antidegradation regulations for OSRWs in the Great Lakes system expressly do not apply pollutant trading to BCCs:

327 IAC 5-2-11.7 Great Lakes system dischargers interim antidegradation implementation procedures for outstanding state resource waters

- (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; and*
 - (iii) the new or increased discharge complies with subdivision (4).*

⁴ See U.S. Environmental Protection Agency, Water Quality Trading Assessment Handbook, November 2004, EPA 841-B-04-001.

EPA does not support trading of bioaccumulative pollutants. EPA guidance states as follows:

What Pollutant Trading Does EPA Support?

Not all pollutants are necessarily suitable for trading. Regulatory authorities should determine which pollutants may be traded within a specific watershed or as part of a particular trading program and may determine that certain pollutants may not be traded at all. 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 (PBTs).⁵

The lists of PBTs and BCCs share several pollutants in common.⁶

Second, application of the pollutant trading exemption to the watershed rather than the waterbody scale is contrary to EPA guidance. EPA's guidance states:

What Is the Appropriate Geographic Scope for Water Quality Trading?

EPA's Trading Policy states that all water quality trading should occur either within a watershed or within a defined area for which a TMDL has been approved. But what, exactly, does "trading within a watershed" mean? For example, how large can the watershed be? Is it appropriate to trade between dischargers to different streams within the same watershed? Does it matter where the trading partners' discharges are located relative to one another? The answers to these questions will vary on the basis of a number of factors. 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. Beyond this, regulatory authorities should carefully

⁵ U.S. Environmental Protection Agency, Water Quality Trading Toolkit for Permit Writers, August 2007, Office of Wastewater Management Water Permits Division, EPA 833-R-07-004, page 10.

⁶ The first twelve PBTs were identified from the twelve level-1 substances from the U.S. Binational Toxics Strategy (BNS): aldrin/dieldrin, benzo(a)pyrene, chlordane, DDT and its metabolites, hexachlorobenzene, alkyl-lead, mercury and its compounds, mirex, octachlorostyrene, PCBs, dioxins and furans, and toxaphene. www.epa.gov/pbt/index.htm. Pollutants that are bioaccumulative chemicals of concern (BCCs) are: Chlordane; 4,4'-DDD; p,p'-DDD; 4,4'-TDE; p,p'-TDE; 4,4'-DDE; p,p'-DDE; 4,4'-DDT; p,p'-DDT; Dieldrin; Hexachlorobenzene; Hexachlorobutadiene; hexachloro-1, 3-butadiene; Hexachlorocyclohexanes; BHCs; alpha-Hexachlorocyclohexane; alpha-BHC; beta-Hexachlorocyclohexane; beta-BHC; delta-Hexachlorocyclohexane; delta-BHC; Lindane; gamma-hexachlorocyclohexane; gamma-BHC; Mercury; Mirex; Octachlorostyrene; PCBs; polychlorinated biphenyls; Pentachlorobenzene; Photomirex; 2,3,7,8-TCDD; dioxin; 1,2,3,4-Tetrachlorobenzene; 1,2,4,5-Tetrachlorobenzene Toxaphene. 40 C.F.R. Pt. 132, Tbl. 6(A).

consider the following factors when determining the appropriate geographic scope of a water quality trade. . . .

First, trading should occur only within a hydrologic unit that is appropriately defined to ensure that trades will maintain water quality standards within that unit, as well as within downstream and contiguous waters. Second, it is important to remember that the purpose of trading is to improve water quality. This can occur only if the parties to the trade discharge, either directly or indirectly, to the same waterbody where water quality improvement is necessary. This may involve trading across a wide geographic area if the waterbody to be addressed drains a large area (e.g., the Chesapeake Bay), or across a small area if the impaired waterbody is itself small (e.g., an individual stream segment). Inappropriate trading across geographic or hydrologic units (i.e., where the dischargers are not both contributing to the same water quality problem) will not improve, and could worsen, water quality downstream of the credit purchaser. Water quality trading is intended to provide opportunities for efficiently achieving and maintaining water quality standards within watersheds, as opposed to cleaning up one watershed at the expense of another.

As noted above, trades can also occur on a very small scale. The Trading Policy supports several types of trading that, by definition, would occur below the watershed scale. Specifically, pretreatment trading, intraplant trading, and intramunicipal trading are limited to the geographic scale that encompasses the collection system, facility, or municipality involved in trading.

The appropriate size of the area within which trading may occur depends on the specific characteristics of the site and the trade. Regulatory authorities should consider hydrogeologic conditions, fate and transport of pollutants, ecological parameters, the location and types of point sources, the parameters to be traded, and the regulations and management structure affecting the trading program in evaluating appropriate trading boundaries (USEPA 1996a). These factors, obviously, will vary from watershed to watershed and even within watersheds depending on the pollutants and trading partners. Some example considerations are provided below.

Regulatory authorities should take into account the following factors in determining appropriate boundaries for a trading program and the geographic coverage of a permit that incorporates water quality trading:

- Where are the dischargers located relative to the waterbody for which reductions are needed?
- What is the distance between the potential trading partners' discharges, either along a shared receiving stream, or to the point where the receiving streams converge?
- Is the potential credit purchaser upstream or downstream of the potential credit generator?
- If the credit generator is a nonpoint source, where is its loading released?
- Are there diversions, tributaries, impoundments, drinking water intakes, or other water withdrawals between the potential trading partners'

discharges?• What political boundaries exist between trading partners or within a watershed of interest that may impact the requirements or regulations affecting trades? Are potential partners regulated by the same permitting authority?• What are the water quality impacts and fate and transport (e.g., decay) characteristics of the pollutant(s) to be traded?4• Can appropriate trade ratios be established to account for the distance between trading partners' discharges?• Are other water quality trades being conducted in the waterbody, and how might they affect the water quality impacts of the trade being considered?7

Trading pollutants at a watershed scale risks creating “hotspots.” That is, an increased discharge in one part of a watershed or in one waterbody may not be equalized by a decreased discharge in another part or waterbody, particularly if the traded discharges are far apart. EPA’s Water Quality Trading Assessment Handbook states:

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. Trades that create “hot spots”—localized areas with unacceptably high levels of pollutants—must be avoided.

The guidance goes on to discuss the factors that should be considered to avoid hotspots.⁸ Antidegradation should be applied to the different habitats and assemblages of aquatic organisms in different locations within a watershed.

Third, application of the pollutant trading exemption without an evaluation of the trade, as is the case with the June 5th draft rule, is contrary to EPA guidance.

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 reduction impacts are equivalent, trades must not create locally high loadings of pollutants or “hotspots.”⁹

* * *

Most trading systems use pollutant “equivalence ratios” or similar mechanisms to establish water quality equivalence relationships. In these systems each source or trade transaction is assigned a ratio to account for the effects of distance,

⁷ U.S. EPA, Water Quality Trading Toolkit for Permit Writers, page 12-13.

⁸ U.S. Environmental Protection Agency, Water Quality Trading Assessment Handbook, November 2004, EPA 841-B-04-001, Chapter II, pages 16-17.

⁹ *Id.*, Chapter II, page 6.

attenuation, withdrawals, and hydrology between the seller's and buyer's discharge points[.]¹⁰

Not all pollutant trades are alike and not all trades will meet the EPA's standards. The antidegradation rule should provide for evaluation of pollutant trading pursuant to the Section 4(b)(9) exemption. Ultimately, the Commissioner or the applicant must show that the proposed trade will likely achieve no net increase in the pollutant traded.

Comment (5)

Section: 327 IAC 2-1.3-4(b)(13)

Subject: The de minimis cap is revised, but now it is not clear how the cap is linked to loading (assimilative) capacity.

In the first draft rule, each individual application of the *de minimis* exception in high quality waters was required to meet a 90% cumulative cap on total loading capacity of the receiving waterbody. That is, in the first draft rule only ten percent (10%) of the total loading capacity had to remain unused, accounting for the cumulative impacts of discharges to the waterbody. In our comments on the first draft rule, we stated that allowing 90% of the total loading capacity to be used up by new or increased discharges was contrary to case law and EPA guidance.

The June 5th draft rule appears to have removed the 90% cap proposal and replaced it with the following language:

“The representative background concentration has not increased by more than X% above the benchmark set at the time of the initial antidegradation demonstration or de minimis evaluation in the area of the discharge.”

While we commend IDEM for removing the 90% cap proposal from the draft, we are concerned that the replacement language may not reflect the key concept behind a cumulative cap.

Intuitively, the cumulative cap is intended to preserve a significant portion of the distance between the pollutant loading that would be harmful to aquatic or human life (the floor)

¹⁰ U.S. EPA, Water Quality Trading Assessment Handbook, Chapter II, pages 15-16.

and the pollutant loading at some benchmark time in the past (the ceiling).¹¹ Two parameters in addition to the floor must be set: the percentage of this distance that should remain unused, and the benchmark to serve as the ceiling of the interval.

There are two problems with the current formulation of the cap in the draft rule. First, we question whether it is possible to meaningfully set a cumulative cap by reference only to the ceiling, as in the June 5th draft rule, rather than the interval from ceiling to floor. The important and informative quantity is how close we are getting to the floor relative to where we started, not simply how far we are from the ceiling. Second, because of the substantial delay in promulgating antidegradation rules for Indiana waters outside the Great Lakes, a benchmark set “at the time of the initial antidegradation demonstration or *de minimis* evaluation” does not account for waterbodies already receiving significant discharges that have never undergone antidegradation review. These discharges may have already taken a substantial bite out of the loading capacity that EPA considers a valuable resource.

II. Provisions which are Substantially the Same as in the First Draft Rule but which Still are Contrary to State or Federal Requirements and Guidance

Comment (6)

Section: 327 IAC 2-1.3-2; 327 IAC 2-1.3-4(b)(13)

Subject: The DTBELs as defined are not appropriate triggers for antidegradation review.

The June 5th draft rule applies Default Technology-Based Effluent Limitations or “DTBELs” to the Section 4 *de minimis* exemption as follows:

(A) For HQWs that are not OSRWs or EUWs, the following apply:

(i) Calculation considerations according to the following:

(AA) The proposed increase in mass-based effluent limits is less than or equal to the water quality-based effluent limit (WQBEL) calculated using 10% of the unused loading capacity, or the DTBEL, whichever is more stringent.

¹¹ EPA views the total loading capacity as a valuable natural resource that should be protected. See EPA guidance in letter from Ephraim S. King, U.S. EPA Office of Water, to water management division directors, dated August 10, 2005.

(B) For HQWs that are OSRWs or EUWs, the following apply:

(i) Calculation considerations according to the following:

(AA) The proposed increase in mass-based effluent limits is less than or equal to the mass calculated using the new or increased flow and the water quality based effluent limitation (WQBEL) calculated without a mixing zone or the DTBEL, whichever is more stringent;

Draft Section 2 in turn defines DTBEL as the more stringent of either:

(A) effluent limitations based on the applicable federal effluent guidelines; or
(B) a technology-based effluent limit (TBEL) established by the department under 327 IAC 5-5-2 that represents the best cost-effective treatment technology that is readily available.

There are two problems with applying these DTBELs as triggers for antidegradation review. First, the draft *de minimis* exemption allows for the possibility that a new or increased effluent limit that is more protective than a federal effluent guideline would be exempt from antidegradation review. The federal effluent guidelines, however, should not be used as a *de minimis*, even as a fall-back position. In many cases these guidelines have not been updated in decades, do not reflect the best technology available, and were not intended to be used to trigger antidegradation review. Federal effluent guidelines certainly cannot be guaranteed to result in only *de minimis* degradation, especially if used in critical or low-flow conditions. Any facility applying for a new or increased discharge should be able to do better than the federal effluent guideline, and doing so should not exempt the discharge from antidegradation review.

Second, while an effluent limit based on “the best cost-effective treatment technology that is readily available” may be appropriate to consider during antidegradation review, whether or not a treatment technology can be cost-effective for the facility to apply is not an appropriate trigger for antidegradation review. Such a consideration is putting the cart before the horse. The key concept behind *de minimis* is that the proposed increase in discharge is too small to worry about having a negative impact on water quality. This is the recognized understanding of *de minimis*. If the increase in discharge is large enough to worry about, then an antidegradation review must be done, and such review is the appropriate context in which to consider such factors as the cost-effectiveness of treatment technologies. In fact, a new effluent limit will not

even be required if the increased discharge is not necessary to accommodate important social or economic development.

Comment (7)

Section: 327 IAC 2-1.3-4(b)(13)

Subject: The June 5th draft rule's application of the *de minimis* exemption to BCCs in the Great Lakes Basin is contrary to EPA guidance.

The EPA and the court in *Ohio Valley Envtl. Coalition v. Horinko*, 279 F. Supp. 2d 732 (S.D. W.V. 2003), have concluded that any individual *de minimis* for BCCs in Tier 2 waters within the Great Lakes Basin would be contrary to federal requirements.¹² Yet the June 5th draft rule continues to apply the *de minimis* exemption to BCCs. Draft Section 3(c)(1) states:

(c) The Tier 2.9 antidegradation standard for HQWS that are OSRWs and EUWs is as follows:

(1) For BCCs in OSRWs and EUWs, as well as waters upstream of an OSRW or EUW, no new or increased loading shall be allowed that causes a significant lowering of water quality.

A “significant lowering of water quality” is defined in Section 2(57) as follows:

“Significant lowering of water quality” means the following:

(A) There is a new or increased permit limit for a pollutant of concern that results in an increase in the ambient concentration of the pollutant and the increased loading [leads to] is greater than a de minimis lowering of water quality.

(B) None of the provisions of 327 IAC 2-1.3-4 apply.

Because draft Section 4 includes the *de minimis* exemption, draft Section 3(c)(1) does not exempt BCCs from application of the *de minimis*. In fact, as discussed in Comment 8 below, all of the draft Section 4 exemptions apply to BCCs as well as non-BCCs, even in OSRWs. As we pointed out in our comments to the first draft rule, application of the *de minimis* to BCCs is not likely to pass EPA review.

¹² In its March 1995 Great Lakes SID, EPA stated: “EPA does not agree that even small increases in the loadings of BCCs to the Great Lakes Basin can be considered *de minimis*. Low levels of BCCs in the Great Lakes have adverse impacts on the organisms that inhabit them. Further, because BCCs are both resistant to degradation and hydrophobic, they tend to accumulate in sediments and biota, amplifying their effects. For these reasons, even small increases in loadings of this type of pollutant must be considered significant.”

Comment (8)

Section: 327 IAC 2-1.3-4

Subject: The June 5th draft rule inappropriately applies several Section 4 exemptions to BCCs.

In the June 5th draft rule, Section 4(b) lists thirteen activities that do not constitute a significant lowering of water quality for HQWs (including OSRWs and EUWs). These activities apparently apply to both BCCs and non-BCCs alike. The thirteen exemptions are:

- (1) change in loadings within capacity and processes covered by existing permit;
- (2) bypasses not prohibited by 327 IAC 5-2-8(11);
- (3) existing discharger, and new or improved monitoring or analysis or new or modified criteria or guidelines;
- (4) new or increased discharge due solely to pollutant in intake water;
- (5) new or increased discharges due solely to storm water controls;
- (6) new or increased discharges resulting in short term (< 12 months) lowering of water quality;
- (7) new or increased discharges due to CERCLA, RCRA, or other response or abatement actions;
- (8) new or increased discharges due to increase in sewerage or trucked in wastes;
- (9) new or increased discharges where a simultaneous enforceable decrease in other sources resulting in net decrease in loading of pollutant;
- (10) new or increased discharge is necessary to reduce another pollutant of concern and reasonable and cost-effective methods taken and improvement in water quality such that new pollutant is less bioaccumulative and less toxic than reduced pollutant;
- (11) new or increased discharges are noncontact cooling water;
- (12) new or increased discharges are non-BCC used to treat nuisance species and blessing of commissioner;
- (13) new or increased discharges are less than *de minimis*.

In the 2005 IDEM antidegradation draft rule, in contrast, nonsignificant activities in HQWs were divided into two classes based on whether the pollutant was a BCC or not. There were only four nonsignificant activities that applied to BCCs in HQWs, as follows:

- (1) changes in loadings of any BCC within the existing capacity and processes that are covered by an existing applicable control document;
- (2) bypasses not prohibited by 327 IAC 5-2-8(11);
- (3) new or increased discharges due to increase in sewerage or trucked in wastes;
- (4) new or increased discharges due to CERCLA, RCRA, or other response or abatement actions.

The number and scope of exemptions that apply to BCCs are substantially greater in the June 5th draft rule than in the 2005 draft rule. Similarly, the current antidegradation regulations in 327 IAC 5-2-11.3 and 11.7 apply only a relatively small subset of the full range of exemptions to BCCs.

IDEM has not justified why the special treatment of BCCs in the current regulations and in past draft rules should now be removed. Such justification is not likely possible given EPA guidance regarding BCCs, as discussed above in Comments 4 and 7. IDEM should use the 2005 draft rule as a model to reduce the number and scope of exemptions that apply to BCCs.

Comment (9)

Section: 327 IAC 2-1.3-6(d)

Subject: The antidegradation review must look at “important” social or economic development.

Draft rule Section 6(a) states in part:

*Any existing or proposed discharger seeking a new or increased discharge that constitutes a significant lowering of water quality, 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.*

The highlighted text should read “necessary for providing an important social or economic benefit ...”

Comment (10)

Section: 327 IAC 2-1.3-4(b)(6)

Subject: The “short term” exemption should be more carefully delineated.

In the June 5th draft rule, one Section 4 exemption is for temporary discharges. Section 4(a) states the following for ORNWs:

(a) For ONRWs, only short term, temporary, new, or increased discharges may be allowed 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 not permanently degrade water quality.

Section 4(b)(6) states the exemption for HQWs:

(b) For HQWs, the following new or increased discharges are exempt from the antidegradation demonstration requirements:

** * **

(6) New or increased discharges of a pollutant of concern that will result only in a short term, temporary (not to exceed twelve (12) months) lowering of water quality.

There are two problems with these exemptions. First, the third condition in Section 4(a) – “the discharge will not permanently degrade water quality” – is vague and unenforceable. Is “permanent” 15 years, 50 years, or even 500 years? Is degradation of an ORNW lasting 50 years acceptable? In fact, contrary to expectation and antidegradation policy, the Section 4(b)(6) exemption for HQWs, which allows only short term “lowering of water quality,” may be more protective than the Section 4(a) exemption for ORNWs which allows temporary discharges but potentially long-lasting impacts.

IDEM should replace the term “permanently” with “short term,” and borrow language from EPA guidance on this topic. EPA’s Water Quality Handbook, chapter 4, page 4-1 states:

Section 131.12(a)(3), or “Tier 3,” applies to Outstanding National Resource Waters (ONRW) where the ordinary use classifications and supporting criteria may not be sufficient or appropriate. As described in the preamble to the Water Quality Standards Regulation. States may allow some limited activities which result in temporary and short-term changes in water quality,” but such changes in water quality should not impact existing uses or alter the essential character or special use that makes the water an ONRW.

Second, whether a discharge or a lowering of water quality is considered to be “short term” should be based on the toxicity of the pollutant, the location of proposed discharge, and the alternatives available, not simply on the time interval of discharge. Again, the language in the above exemptions is too vague and general to guide agency action, thus risking challenges to the Commissioner’s exemption decisions.

Comment (11)

Section: 327 IAC 2-1.3-3(c)

Subject: Define “overall improvement in water quality” or provide policy guidance.

In the June 5th draft rule, as in the 3/14/08 draft rule, the term “overall improvement in water quality” is found in several provisions but is not defined. For example, draft Section 3(c)(3) states:

(3) For non-BCCs in OSRWs and EUWs, as well as waters upstream of an OSRW or EUW, any new or increased discharge of a pollutant of concern that results in a significant lowering of water quality for that pollutant of concern shall be prohibited, unless:

(A) the activity causing the increased discharge:

(i) results in an overall improvement in water quality in the OSRW or EUW; and
(ii) meets the applicable requirements of 327 IAC 2-1-2(1), 327 IAC 2-1-2(2), 327 IAC 2-1.5-4(a), and 327 IAC 2-1.5-4(b); or

(B) the person proposing the increased discharge implements or funds a water quality improvement project in accordance with IC 13-18-3-2 in the watershed of the OSRW or EUW that:

(i) results in an overall improvement in water quality in the OSRW or EUW; and
(ii) meets the applicable requirements of 327 IAC 2-1-2(1), 327 IAC 2-1-2(2), 327 IAC 2-1.5-4(a), and 327 IAC 2-1.5-4(b).

The phrase “overall improvement in water quality” is an important and likely contentious concept. The phrase comes directly from Ind. Code § 13-18-3-2(l) and (m). The Indiana legislature did not define the term “improvement in water quality.” However, draft Section 4(b)(10) already provides one interpretation that can be applied to this statutory phrase:

(b) For HQWs, the following new or increased discharges are exempt from the antidegradation demonstration requirements:

** * **

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

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

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

(C) 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 discharge of the pollutant of concern is:

(i) less bioaccumulative; and

(ii) 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.

IDEM should either define this phrase “overall improvement in water quality” in the draft rule or issue guidance concomitant with the rule to explain IDEM’s policy.

Comment (12)

Section: 327 IAC 2-1.3-11(e)

Subject: The antidegradation rule should contain standards for implementing the OSRW improvement fund, as required by Ind. Code § 13-18-3-2(l) and (m).

Indiana Code § 13-18-3-2(m)(6) requires that IDEM promulgate “*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.*” The June 5th draft rule should, but does not, contain criteria for using the fees collected from applicants and deposited in the outstanding state resource water improvement fund. The draft rule also should contain a time frame or time limit for funding mitigation projects from the fund. A project implemented 20 years after the allowed increase in discharge is not likely to effectively mitigate the associated lowering of water quality.

Comment (13)

Section: 327 IAC 2-1.3-2(45)

Subject: The definition of “pollutant of concern” should be clarified to include nutrients.

The June 5th draft rule defines “pollutant of concern” as follows:

“Pollutant of concern” means a substance for which an NPDES permit limit can be established using a WQBEL or a technology-based effluent limitation according to 327 IAC 2-1-6, 327 IAC 2-1.5-8, 327 IAC 5-2-11.1, 327 IAC 5-2-11.4, 327 IAC 5-2-11.6 and 327 IAC 5-5-2.

IDEM should clarify that pollutants of concern include nutrients such as phosphorus and nitrogen. A WQBEL “can be established” for nutrients or other pollutants that do not currently have numeric water quality criteria. EPA has been clear that state antidegradation procedures must not exclude nutrients.

Comment (14)

Section: 327 IAC 2-1.3-2(57)

Subject: The definition of “significant lowering of water quality” should refer to loading as well as concentration.

The definition of “significant lowering of water quality” refers only to concentration and not to mass. (In fact, references to the “mass” of pollutants proposed to be increased have been deleted throughout this new draft: see, *e.g.*, Sec. 6(b)(2); Sec. 6(b)(13)(A)(iii); Sec. 6(e)(3)). This would appear to exempt projects that would result in a significant increase in the mass loading of a pollutant, but where an increase in the “ambient concentration” of that pollutant cannot be measured. IDEM should account for mass loading as well as concentrations of pollutants.

III. Basic Drafting Errors that Impart Ambiguity and Confusion (in order of appearance in June 5, 2008 draft rule)

Comment (15)

Section: 327 IAC 2-1.3-2(5)

Subject: Drafting Issue: Definition of BAF

In the June 5th draft rule, Section 2(5) states:

“Bioaccumulation factor” or “BAF” means the ratio (in liters per kilogram) of a substance’s concentration in tissue of an aquatic organism to its concentration in the ambient water in situations where:

- (A) both the organism and its food are exposed; and*
- (B) the ratio does not change substantially over time.*

The parenthetical (*in liters per kilogram*) is in the wrong location: it should be placed after the word “concentration.” BAF is the ratio of two terms, each with units of concentration (mg/liter).

The resulting ratio is dimensionless and does not have the stated units of “liters per kilogram,” unless the definition is wrong.

Comment (16)

Section: 327 IAC 2-1.3-2(64)

Subject: Drafting Issue: Definition of “total loading capacity”

In the June 5th draft rule, the definition of “total loading capacity” is as follows:

“Total loading capacity” expressed as a mass loading rate for the waterbody in the area where the water quality is proposed to be lowered means:
(A) the product of the applicable water quality criterion multiplied by the sum of the existing effluent flow plus the stream design flow; or
(B) the alternate mixing zone volume approved for a discharge.

This definition has two drafting errors. First, the provision does not follow the common standards used for writing out mathematical expressions. The terms “product” and “multiplied by” are redundant and thus confusing. Similarly, the terms “sum of” and “plus” are redundant and thus confusing. Second, the placement of (A) and (B) are in error. Although it is not clear what equation IDEM intends to describe in this definition, the logical phrasing of the definition is as follows:

“Total loading capacity” expressed as a mass loading rate for the waterbody in the area where the water quality is proposed to be lowered means the applicable water quality criterion multiplied by: (A) the sum of the existing effluent flow and the stream design flow; or (B) the alternate mixing zone volume approved for a discharge.

Comments on IDEM June 5, 2008 Draft Antidegradation Rule
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Thank you for considering our comments.

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