## TITLE 327 WATER POLLUTION CONTROL BOARD

### LSA Document #08-764

### SUMMARY/RESPONSE TO COMMENTS FROM THE FIRST COMMENT PERIOD

IDEM requested public comment from October 15, 2008, through November 14, 2008, regarding alternative ways to achieve the purpose of the rule and suggestions for the development of new rules and amendments to rules concerning antidegradation standards and implementation procedures. IDEM received comment letters from the following parties by the comment period deadline:

**Dodds, Norman,** citizen of Pentwater, Michigan, member of Great Lakes Surfrider Chapter (ND)

**Dominion State Line, Inc.,** State Line Power Station, Hammond, Indiana (DSL)

**Environmental Coalition,** including the Conservation Law Center; Environmental Law and Policy Center; Hoosier Environmental Council; Wabash Riverkeepers; Sierra Club Hoosier Chapter; Natural Resources Defense Council; Alliance for the Great Lakes; Surfrider Foundation, Lake Michigan Chapter; Eastern Surfing Association; and Save the Dunes Council, Inc. (EC)

**Fredman, Barbara,** citizen of Granger, Indiana (BF)

**Gerard, Ryan,** citizen of New Buffalo, Michigan, small business owner and Great Lakes enthusiast (RG)

**Haugh, Todd J.,** citizen of Chicago, Illinois, Lake Michigan sailor and surfer (TJH)

**Hoeksema, Marc,** citizen of Spring Lakes, Michigan (MH)

**Indiana Energy Association** is a trade association whose membership includes 13 investor-owned electric and gas utilities and one charitable public trust gas utility, all operating in the state of Indiana. Collectively, the IEA members and four individual non-members are referred to in these comments as the Indiana Utility Group (IUG)

**Indiana Steel Environmental Group,** including ArcelorMittal USA, Inc.; ArcelorMittal Indiana Harbor, LLC; United States Steel Gary Works; United States Steel Midwest Plant; ArcelorMittal Burns Harbor LLC; and Nucor Steel Crawfordsville (ISEG)

**Indiana Water Quality Coalition and the Indiana Manufacturers Association** IWQC is a group of businesses with shared interests in Indiana regulations, policies, and operating procedures concerning water quality. IMA is a voluntary, nonprofit trade association representing nearly 2,000 companies and 600,000 manufacturing jobs. (IWQC-IMA)

**Indianapolis Power and Light Company** (IPL)

**Karp, Audrey,** citizen of Crown Point, Indiana (AK)

**Michigan City Sanitary District** (MCSD)

**Northwest Indiana Forum,** representing 123 industrial and commercial businesses, financial entities, universities and municipalities within Lake, Porter, and LaPorte counties (NIF)

**Parker, John,** citizen of Ada, Michigan, business leader, father, and Lake Michigan recreationist (JP)

United States Department of the Interior, National Park Service, **Indiana Dunes National Lakeshore** (IDNL)

**Warrick, Matt D.,** citizen of Chicago, Illinois, Great Lakes enthusiast (MDW)

Following is a summary of the comments received and IDEM's responses thereto:

**CITIZENS**

**The following group of comments was received from concerned citizens. These comments focus on protection of water quality in the Great Lakes, particularly Lake Michigan.**

*Comment:* Indiana should not allow exemptions to companies that would allow them to justify new or increased discharges into Lake Michigan above background levels. There should be no exemptions even when there may be an economic development. Lake Michigan is the source of drinking water for far too many citizens to allow it to be degraded by any discharges from industry. The new rules should require thorough antidegradation review and justification for all new or increased discharges that exceed background pollutant levels in Lake Michigan. (BF)

*Comment:* The antidegradation rules adopted by Indiana need to be strengthened to prevent any increase in the current amount of pollutants discharged by industries into Lake Michigan. Foresight and strict policies are needed to protect the Great Lakes against the big corporations exploiting our greatest natural resources for their gain. Some who use the Great Lakes have been sick from the water. The result of water rules should be improvement of water quality in Lake Michigan instead of allowing further deterioration. (MDW, AK, TJH, RG)

*Comment:* My drinking water comes from Indiana's portion of Lake Michigan. Please eliminate polluting discharges into my drinking water supply. (MH)

*Comment:* As a business leader and father, I want to express my strong opposition to allowing increased levels of pollutants into Lake Michigan. I support the need to become energy independent, but we cannot do it at the expense of our greatest natural resource. Do not make short term decisions that will hurt Lake Michigan in the longer term. Do not take from my children and all those who love the Great Lakes the ability to use them safely and healthfully. (JP)

*Comment:* We cannot afford the detrimental cost to our drinking water and to the incredible value the Great Lakes bring to our Midwest economy and quality of life in place of short term economic gains that benefit only a few large corporations acting in their own self-interest. It is time to learn from our mistakes and find another way to sustain the profits of these corporations without endangering the very resources that make our living in this region possible. (TJH, RG)

*Comment:* I am a small business owner whose livelihood relies directly on Lake Michigan and its beaches. If we continue to pollute the Lakes as we currently allow, let alone increase that rate, we are setting ourselves up for future disaster. (RG)

*Comment:* Indiana was the first state to sign the Great Lakes Compact; yet, it continues to be the largest per-capita violator of all that the Compact stands for. Why has there been no relevance given to the adopted Compact by the same violators that continue to discharge known pollutants into a now known protected body of water? Ironically, our states permit water to be harvested in its purest from upstream of heavily polluted areas, but, at the same time, states allow the discharge of chemicals into the waters of Lake Michigan that become community drinking water supply for masses of citizens. Community water supply users should be entitled to water as clean as that which bottled water companies are using for their profit making. (ND)

**Following is IDEM's response to the above comments received from concerned citizens.**

*Response:* Antidegradation is a regulatory policy designed to preserve existing levels of good water quality unless the change is necessary and provides a social or economic benefit. Federal antidegradation policy is found at 40 CFR §131.12. and states that:

1. Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected; and

2. Where the quality of the waters exceed levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected unless the State finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the State's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In allowing such degradation or lower water quality, the State shall assure water quality adequate to protect existing uses fully.

The draft Indiana antidegradation rule protects all existing uses of Lake Michigan, including drinking, swimming and fishing. Additionally, the draft rule will maintain and protect the quality of water that exceeds levels necessary for maintaining those existing uses. Discharges proposed to lower the existing levels of good water quality must demonstrate that the lowering of water quality provides a social or economic benefit.

Indiana law has requirements that apply to Lake Michigan and other Outstanding State Resource Waters (OSRWs) that are above and beyond the federal requirements. The draft rule requires any new or increased discharge that will cause a significant lowering of water quality in an OSRW, such as Lake Michigan, to either implement a water quality improvement project or pay a fee up to $500,000.00 to the OSRW water quality improvement fund.

National Pollutant Discharge Elimination System (NPDES) permits set effluent limits for substances that have the potential to harm existing and designated uses. The multiple uses of waterbodies, including the exiting use as a drinking water source, are recognized. When a discharger meets the effluent limits in its NPDES permit, the water quality of the receiving stream will be maintained at a level that supports the existing and designated uses. Any new or increased pollutant loading that is requested through an antidegradation demonstration will not be allowed to exceed any Indiana water quality standard because the NPDES permit has water quality based effluent limits that are designed to meet Indiana water quality standards under all flow and weather conditions.

The draft rule does provide for some exemptions from an antidegradation demonstration. The exemptions contained in the draft rule are similar to those found in the current antidegradation rules for waters in the Great Lakes Basin (327 IAC 5-2-11.3 and 327 IAC 5-2-11.7). The exemptions represent situations where the new or increased discharges do not result in a significant lowering of water quality in the receiving water body. The draft rule requires the discharger to justify why the proposed new or increased discharge qualifies for the exemption.

**REGULATED ENTITIES - INDUSTRY**

*Comment:* The antidegradation rule should apply to all surface waters of the state. (ISEG)

*Response:* The draft antidegradation rule, if adopted as written, will apply to all surface waters of the state.

*Comment:* IWQC-IMA has participated in IDEM'S rulemaking activities concerning various water quality issues including antidegradation dating back to the late 1990s. Numerous detailed comments at various earlier rulemaking stages and position papers have been submitted by IWQC-IMA. However, for purposes of this new first notice of comment period, IWQC-IMA believes the antidegradation rulemaking should be guided by the following three key principles: (1) reasonable trigger for conducting an antidegradation review; (2) appropriate exclusions from full antidegradation review; and (3) reasonable process for obtaining approvals. (IWQC-IMA,

IUG, ISEG, IPL)

*Response:* IDEM appreciates the time and effort given by all stakeholders to the development of this draft rule. IDEM recognizes the principles that have been brought to our attention and has used them as guidelines in the development of the rule.

*Comment:* IDEM is urged to continue to seek input from the technical workgroup that has been established for the antidegradation rulemaking. IDEM is also urged to decide and clearly express its decisions at the time that the workgroup discusses each of the key issues concerning the antidegradation review process. Decision making at the time of topic discussion will ensure that the agency has the essential administrative record to justify the final rule to U.S. EPA and others that may seek review of the rule. (IPL)

*Response:* IDEM has sought the input from the technical workgroup through numerous meetings over the past two years. When possible, IDEM has expressed its preliminary position on several important topics that will be addressed in the proposed rule.

*Comment:* Antidegradation review can be time consuming and expensive and introduce a substantial element of uncertainty into business planning concerning how long the process will take and what the outcome will be; therefore, the antidegradation rule should contain an applicability provision that uses a bright line trigger requiring an antidegradation review only when a discharger is requesting a new or increased discharge that necessitates a new or modified NPDES permit. (IWQC-IMA, IUG, ISEG, IPL)

*Response:* IDEM believes that it has developed draft rule language that addresses the concern regarding the timeliness and the process for obtaining approval for a new or increased discharge of a pollutant of concern. Applicability was the main topic of discussion for the first technical subgroup meeting held on July 15, 2008, (see www.in.gov/idem/5387.htm) for the antidegradation rulemaking. That meeting ended with an agreement reached among the subgroup members in attendance. Subsequently, U.S. EPA reviewed the statement of applicability and gave its approval.

*Comment:* The current approach should be maintained so that an antidegradation review is required when a new or increased discharge triggers the need for a new or modified NPDES permit limit due to a significant lowering of water quality above a de minimis allowance. The de minimis aspect below which antidegradation procedures do not apply to OSRWs should be kept as part of the applicability section. (DSL)

*Response:* The draft rule includes a trigger to conduct an antidegradation review when there is a new or increased loading of a pollutant of concern that results in a significant lowering of water quality in the receiving water body. There are some proposed discharges that will result in an increased loading of a pollutant of concern although there is no need for a new or modified NPDES permit limit. When those proposed discharges will result in a significant lowering of water quality, IDEM believes, an antidegradation review is warranted. The trigger proposed in the draft rule allows for an antidegradation review when there is increased loading that will significantly lower water quality, whether or not there is a need for a new or modified NPDES permit limit.

*Comment:* The de minimis concept should be applied to all surface waters. Tributaries to OSRWs should be treated as high quality waters unless or until they are specifically designated as OSRWs themselves. (ISEG)

*Response:* The draft rule does include a de minimis lowering of water quality for all surface waters unless the surface water is designated as an Outstanding National Resource Water (ONRW), but currently, Indiana does not have any designated ONRWs. In the draft rule,

tributaries to an OSRW are designated as High Quality Waters. A new or increased discharge to a tributary of an OSRW does have the potential to cause a significant lowering of water quality in the OSRW. If the new or increased discharge to a tributary of an OSRW results in a significant lowering of water quality in the OSRW, the discharger will be required to either implement a water quality improvement project or pay a fee to the OSRW improvement fund in accordance with IC 13-18-3.

*Comment:* Since antidegradation addresses streams and lakes that possess water quality better than the established water quality standards, it is important that the antidegradation review process focuses on more significant projects rather than small projects that have little or no impact on pollutant loadings in waters. The antidegradation program never allows any increases that would violate the established water quality standards so there is no risk that increases will cause unsafe water quality. (IWQC-IMA, IUG)

*Response:* The draft rule establishes what is considered to be a significant lowering of water quality. Any new or increased loading of a pollutant of concern that results in a significant lowering of water quality is considered to be a significant project requiring an antidegradation review.

*Comment:* The General Assembly enacted SEA 431 (of the 2000 legislative session, AKA Public Law 140-2000) that obligates IDEM to define levels below which antidegradation review would not be required. IDEM included a de minimis level in its Great Lakes antidegradation rules, and other states across the country also have incorporated de minimis levels in their antidegradation rules. The new rulemaking effort should do the same. (IWQC-IMA, IUG, ISEG, IPL)

*Response:* The draft rule does include a de minimis lowering of water quality for all waters except those that are designated as ONRWs.

*Comment:* The main purpose of antidegradation review, for a new or increased discharge, is to ensure that the increase is necessary and will bring social or economic benefits. In some cases, such as a facility required under the Clean Air Act to install equipment to reduce air emissions which end up generating additional wastewater loadings or a company doing a hazardous waste soil clean up or a groundwater remediation project where part of the clean up action is to discharge treated water to a nearby waterbody, it is clear without doing an antidegradation review that the increased loading meets the social or economic tests. Activities of this sort should not be required to undergo a full antidegradation review with a detailed demonstration of necessity and socio-economic benefit. Requiring a full antidegradation review in such situations could actually be counterproductive by slowing down or even preventing actions that are environmentally productive. (IWQC-IMA, DSL, IUG, IPL)

*Response:* In situations where there is a clear social or economic benefit to the environment or the affected community, the burden of making that demonstration should be very low. IDEM believes that the draft rule does reduce the demonstration burden for situations that are clearly beneficial to the community or the environment.

*Comment:* The antidegradation rule should include a provision that a determination in accordance with Section 316(a) of the Clean Water Act, concerning alternative thermal effluent limitations, be considered consistent with the antidegradation standards. These determinations, or variances, involve comprehensive scientific studies to assure the protection of aquatic communities, and, therefore, it is appropriate to exempt this action from antidegradation reviews. (DSL, IPL)

*Response:* When a new 316(a) variance is granted to a discharger, the discharger is

allowed to have effluent that will exceed the water quality-based effluent limits (WQBELs) for temperature. The 316(a) variance does not include a review of alternatives that would eliminate or reduce the need for the effluent limits that exceed the WQBELs for temperature. Therefore, the procedures for obtaining a 316(a) variance, in and of themselves, will not satisfy antidegradation demonstration requirements. The data used to support the application for the variance may be used, along with an analysis of social and economic factors, in the antidegradation demonstration.

*Comment:* A 30 day public notice period associated with exemption activities is not a necessary step in the permit process because these types of activities have already been determined by IDEM to have no significant lowering of water quality. Furthermore, the determination made by IDEM that these types of activities do not have a significant lowering of water quality is currently undergoing a public review period via the current rulemaking process. Therefore, an additional 30 day public notice period through a permit modification process serves no additional purpose. (IPL)

*Response:* IDEM believes that the public should be notified about proposed activities that qualify for one or more of the exemptions as early in the process as possible so that the public has time to understand what is being proposed. IDEM is still required to make a decision on the NPDES permit application within the normal time frames allowed by statute.

*Comment:* Non-storm water discharges covered under the NPDES Multi-Sector General Permit should be exempted from the antidegradation process as these non-storm water discharges do not contribute to a significant lowering of water quality. U.S. EPA issued a Notice of Availability for the new NPDES Multi-Sector General Permit (2008 MSGP) on September 29, 2008. The 2008 MSGP replaces the 2000 MSGP and authorizes certain non-storm water discharges, including: discharges from fire-fighting activities; fire hydrant flushings; potable water, including water line flushings; uncontaminated condensate from air conditioners, coolers and other compressors and from the outside storage of refrigerated gases or liquids; irrigation drainage; landscape watering provided all pesticides, herbicides, and fertilizer have been applied in accordance with the approved labeling; pavement wash waters where no detergents are used and no spills or leaks of toxic or hazardous materials have occurred (unless all spilled material has been removed); routine external building washdown that does not use detergents; uncontaminated ground water or spring water; foundation or footing drains where flows are not contaminated with process materials; and incidental windblown mist from cooling towers that collects on rooftops or adjacent portions of the facility but not intentional discharges from the cooling towers (e.g., "piped" cooling tower blowdown or drains). (IPL)

*Response:* All existing Indiana issued general permits by rule will be evaluated for compliance with antidegradation standards as required by P.L. 78-2009 (HEA 1162 2009 General Assembly regular session).

*Comment:* For projects necessitating a full antidegradation review, it is important that the antidegradation process be designed to ensure that worthwhile projects are not unnecessarily discouraged, impeded, or even halted because that would have profound effects on business and municipal planning with adverse impacts on economic growth and on society generally with little or no benefit to water quality. The antidegradation rule should create a review process that: (1) clearly spells out the process yet not be so rigid as to preclude consideration of case-specific factors; (2) gives due deference to determinations made by local authorities concerning the social and economic benefits that would result from the proposed projects; and (3) has built in time lines so the review takes place within a reasonable time frame that will allow proposing entities

to make plans without enduring enormous uncertainty. (IWQC-IMA, IUG)

*Response:* IDEM believes that the draft antidegradation rule does not unnecessarily discourage, impede, or halt projects that have profound impacts on business and municipal planning or economic growth. IDEM is still required to make a decision on the NPDES permit application within the normal time frames allowed by statute.

*Comment:* The definition of "pollutant of concern" must be sufficiently clear to adequately define the universe of pollutants to which the antidegradation implementation procedures apply. (ISEG)

*Response:* During the course of developing the draft antidegradation rule, IDEM has modified the definition of pollutant of concern as follows:

"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) be present in the receiving water in sufficient amounts to have a potentially detrimental affect on the designated or existing uses of the receiving water.

*Comment:* IDEM is urged to use the terms "unused loading capacity" and "used loading capacity", but not use the term "assimilative capacity", to clearly define the de minimis concept. (IPL)

*Response:* The draft rule uses the terms "unused loading capacity" and "used loading capacity" but not the term "assimilative capacity".

*Comment:* The rule should contain provisions to allow the consideration of mixing and mixing zones, especially in high volume waters such as Lake Michigan, where the current rules define a de minimis level as the background pollutant level in an OSRW without considering mixing. (DSL, IPL)

*Response:* The draft rule does not address the issue of mixing zones other than in the definition of the total loading capacity where the stream design flow can be the alternate mixing zone when an alternate mixing zone has been approved. There is no mixing zone for a discharge to Lake Michigan, other than a thermal discharge, until the discharger has applied for and received an alternate mixing zone.The appropriateness of mixing zones is considered and addressed in the calculation of WQBELs.

*Comment:* The list of factors considered as justification of important social or economic development should be expanded to include positive benefits to the area of the discharge as well as negative impacts. (DSL)

*Response:* The draft rule includes all the social or economic factors that the Indiana General Assembly believes should be used to justify the important social or economic development in the areas of the discharge in accordance with P.L. 78-2009 (HEA 1162 2009 General Assembly regular session).

Comment: Watershed projects should be allowed as part of the option to implement a water quality project in the watershed of an OSRW or payment of a fee, with a cap, based on the type and quantity of the increased pollutant loading. (DSL, ISEG)

*Response:* IDEM believes that watershed projects will be considered in the selection of the best cost effective water quality improvement project.

*Comment:* It is essential that the antidegradation rule address the issue of general permits so that it is clear that specific activities qualifying for a general permit do not need to go through individual antidegradation review. The antidegradation rule could accomplish this through a number of methods such as: (1) opening up each general permit rule to make a finding that compliance with the rule meets the antidegradation standard; (2) providing a detailed analysis of

each general permit rule to be submitted as supporting justification when submitting the antidegradation rule to U.S. EPA for review and approval; or (3) placing language in the applicability section of the antidegradation rule. (IWQC-IMA, IUG, IPL)

*Response:* All existing Indiana issued general permits by rule which will be evaluated for compliance with antidegradation standards as required by P.L. 78-2009 (HEA 1162 2009 General Assembly regular session).

*Comment:* The antidegradation rule should specify that the implementation procedures apply only to activities subject to the NPDES permitting program but not to Clean Water Act Section 401 water quality certifications. (IWQC-IMA, IUG, IPL)

*Response:* The antidegradation requirements of the CWA apply to more than just the NPDES permitting program, however IDEM contends that the avoidance and minimization and mitigation necessary to satisfy the CWA 401 certification and 404 permit requirements will also satisfy antidegradation demonstration requirements.

*Comment:* Antidegradation review for Section 401 and 404 approvals should be fulfilled by the terms and conditions imposed by IDEM and the U.S. Army Corps of Engineers. The current Section 401 and 404 programs maintain current water quality standards and provide compensatory mitigation in cases where adverse impacts cannot be avoided. (IPL)

*Response:* IDEM believes that, in most cases, the avoidance and minimization and mitigation necessary to satisfy the CWA 401 certification and 404 permit requirements will also satisfy antidegradation demonstration requirements.

*Comment:* IDEM is urged not to include the use of de minimis technology-based effluent limitations (DTBELs) in the antidegradation rule because their development would be extremely time consuming and of limited value in the application of antidegradation. (IWQC-IMA, IUG, ISEG, IPL)

*Response:* IDEM is including specific limits for substances and facilities in the rule where it has already been determined what constitutes the Best Available Demonstrated Control Technology (BADCT). IDEM recognizes that it may be time consuming and difficult to develop BADCT limits for every type of wastewater discharge, however, when it is possible to identify the type of treatment system and the corresponding effluent limits that are the BADCT, it will streamline the antidegradation review process.

*Comment:* Exemptions for important activities that have significant social or environmental benefits should include federally developed technology based effluents limits at internal outfalls and increases in discharges that result from a regulatory requirement to install new air pollution control devices. (ISEG)

*Response:* The draft rule does allow an exemption for discharges that result from a regulatory requirement to install new air pollution control devices when that exemption is justified. Additionally, the draft rule allows for an exemption for a change in the loading of a pollutant of concern within the existing capacity and processes that are covered by an existing applicable permit including changes in the applicable effluent limitation guideline based on a change in production. IDEM does not agree to exempt discharges simply because they meet a federal effluent guideline because it is possible for an effluent limit based on the federally developed effluent guideline to exceed the de minimis lowering of water quality.

*Comment:* SEA 431 (Public Law 140-2000) calls for IDEM to reevaluate all exceptional use waters (EUWs) to determine whether they qualify as outstanding state resource waters (OSRWs) or should be treated as high quality waters (HQWs). Despite the clear intent of SEA 431 concerning the phase out of the EUW category, the antidegradation rulemaking first notice

appears to contemplate that EUWs will be subject to the same antidegradation standards and implementation procedures for OSRWs. IDEM needs to establish a plan and process for fulfilling the requirement to reevaluate and redesignate EUWs. (IWQC-IMA, IUG)

*Response:* Action taken by the General Assembly in the 2009 legislative session designated all EUWs as OSRWs. The draft rule has been modified accordingly.

*Comment:* The antidegradation rulemaking first notice contains a cursory description of the potential fiscal impact to comply with an antidegradation rulemaking. IDEM must conduct a more thorough analysis to comply with the statutory requirements in IC 4-22-2-28 and IC 13-14-9-4.2. (IWQC-IMA, IUG)

*Response:* Prior to the hearing before the Water Pollution Control Board for consideration of preliminary adoption of this rule, IDEM will prepare a more extensive fiscal impact analysis for submission to the Office of Management and Budget. IDEM will work with facilities representative of the types of dischargers that may have new or increased pollutant loadings that would require the completion of an antidegradation demonstration and review under these rules. The cursory nature of the fiscal impact discussion in the first notice of comment period is due to not having a draft rule at that point in time and, therefore, not knowing what requirements will need to be met by dischargers in addition to not knowing how many or what type dischargers may be affected by the rule requirements or may be covered under exemptions.

## REGULATED ENTITIES – MUNICIPALITY

**Note: this commentor categorized his comments by the alternatives presented in the first notice of rulemaking.**

**Alternative 1: Should antidegradation requirements apply to all of the surface waters of the state or should the current antidegradation requirements only applicable to the Great Lakes Basin be maintained?**

*Comment:* Currently, there are two distinctly separate divisions within the State of Indiana in relation to water quality standards, i.e., inside and outside the Great Lakes Basin. The antidegradation standards and water use classifications differ for each area. It is clear from side-by-side comparison of the antidegradation standards for both areas that the antidegradation standards for each area of the state are not identical. The antidegradation standard for the Great Lakes Basin specifically addresses the three tiers required by the Clean Water Act, i.e., (1) impaired waters, (2) high quality waters and (3) outstanding national resource waters; and both inside and outside the Great Lakes Basin address thermal degradation. The State's standard for outside the Great Lakes Basin only addresses high quality waters. Both areas' standards consider outstanding state resource waters and exception use waters are addressed outside of the Great Lakes Basin. The most critical difference between the two areas of the state is the lack of specific reference to implementation and approval decision procedures outside of the Great Lakes Basin. This lack of formal procedures could potentially open the agency to criticism and concern over the consistency in applying the antidegradation standard. This deficiency in itself is justification for applying antidegradation requirements to the entire State. (MCSD)

*Comment:* The Great Lakes Basin implementation procedures for OSRWs, 327 IAC 2-2-11.7, are interim procedures that were questioned during the recent BP AMOCO permit renewal in 2007. As a result, the Governor requested and received an evaluation of all antidegradation procedures, with the recommendation that this specific procedure be clarified for permittees and the general public. As a result, the basin implementation procedures need review and clarification. Therefore, it is recommended that the current rulemaking apply antidegradation

requirements to the entire state, provided that any revisions to the current Great Lakes Rules do not conflict with or regulate conditions of NPDES permits nor act as a deterrent to future social and economic growth. (MCSD)

*Response (for all comments categorized under Alternative 1):* The draft rule has been developed to create a statewide antidegradation process for all waters of the state.

**Alternative 2: How should the concept, de minimis lowing of water quality, be defined to facilitate a clear and consistent application and to eliminate further antidegradation review?**

*Comment:* In the Water Quality Guidance for the Great Lakes System; Supplementary Information Document (SID) (Water Quality Guidance for the Great Lakes System: Supplementary Information Documentation (SID), US EPA, Office of Water, EPA-820-B-95-001, March 1995, p 207), the background for the concept of classifying an increased loading as de minimis included the following three criteria in the original proposed Guidance:

(1) only non-BCCs will be released as a result of the proposed activity responsible for lowering of water quality;

(2) the proposed lowering of water quality uses less that ten percent of the available assimilative capacity; and

(3) for pollutants contained in 40 CFR 132.2, Table 5, at least ten percent of the total assimilative capacity remains unused following the lowering of water quality.

According to the SID, EPA's intent in including the de minimis test in the proposed Guidance was to recognize that certain activities, although they may result in some lowering of water quality, will not lower water quality to such an extent as to result in a significant lowering of water quality; and thereby providing a means of reducing administrative burden on all parties associated with activities of little or no consequence to the environment. (Water Quality Guidance for the Great Lakes System: Supplementary Information Documentation (SID), US EPA, Office of Water, EPA-820-B-95-001, March 1995, p 208) However, EPA did not include the de minimis test in the Final Guidance because non-BCCs were not addressed there. Instead, EPA permitted the States or Tribes to address non-BCCs individually as long as any de minimis approach was based on the criteria from the proposed Guidance. Indiana adopted the de minimis test with the Great Lakes System rules and included for both high quality waters, (327 IAC 5-2-11.4), and discharges to tributaries of OSRWs, (327 IAC 2-2-11.7(b)(2)), the following criteria:

The proposed increase in monthly average mass for a non-BCC (proposed monthly average mass – existing permitted monthly average mass):

(1) less than 10% of the unused loading capacity; and

(2) at least 10 % of the total loading capacity remains unused after the lowering of water quality; and

(3) for tributaries to OSRWs ONLY, the discharge shall not cause a significant lowering of water quality in the OSRW.

(MCSD)

*Response:* The draft rule includes the criteria for setting the de minimis lowering of water quality in accordance with IC 13-18-3.

*Comment:* Current Great Lakes Basin rules define total loading capacity for high quality waters and OSRWs that are streams as the product of the applicable water quality criterion times the sum of the existing effluent flow and the stream design flow for the waterbody in the area where the water quality is proposed to be lowered, expressed as a mass rate. For discharges to Lake Michigan, the total loading capacity is defined as the product of the applicable water

quality criterion times the sum of the existing effluent flow and approved mixing volume for Lake Michigan in the area where water quality is proposed to be lowered, expressed as a mass loading rate. (327 IAC 5-2-11.3(b)(1)(B)(iii)(AA); 327 IAC 5-2-11.7(b)(5)(A)) Those rules also define unused loading capacity for high quality waters and all OSRWs as the amount of total loading capacity not utilized by the point source and nonpoint source discharges. The unused loading capacity is established at the time the request to lower water quality is considered. (327 IAC 4-2-11.3(b)(1)(B)(iii)(BB); 327 IAC 2-2-11.7(b)(5)(B)) The problem with the existing language for total loading capacity lies in the use of "existing effluent flow". Instead, the more appropriate definition would be the effluent design flow as defined in 327 IAC 5-2-11.4(a)(9). This change would make de minimis calculations consistent with total maximum daily loading and wasteload allocations. In addition, the definition for used loading capacity is unclear. (MCSD)

*Response:* The definition for total loading capacity in the draft rule does include the proposed flow in the calculation of the total loading capacity.

*Comment:* The following proposed definitions should be used to determine total loading capacity:

> For high quality waters and OSRWs that are streams: total loading capacity is the product of the applicable water quality criterion times the sum of the effluent design flow, as determined by 327 IAC 5-2-11.4(a)(9), and the stream design flow, in accordance with 327 IAC 5-2-11.4(b)(3)(A), for the waterbody in the area where the water quality is proposed to be lowered, expressed as a mass rate.
>
> For Lake Michigan: total loading capacity is the product of the applicable water quality criterion times the sum of the effluent design flow, as determined by 327 IAC 5-2-11.4(a)(9), and the approved mixing volume for Lake Michigan in the area where the water quality is proposed to be lowered, expressed as a mass rate.

(MCSD)

*Response:* The definition of "total loading capacity" in the draft rule was written to work for all dischargers. The suggested definition for the discharger design flow found in 327 IAC 5-2-11.4(a)(9) works for dischargers of sanitary wastewater because they get to use their average design flow in the calculation of the WQBELs. However, the definition for the discharger design flow found in 327 IAC 5-2-11.4(a)(9) does not work for industrial dischargers because they are required to base their design flow on the highest monthly flow over the previous two year period. If the industrial discharger is new or expanding, it will not be allowed to account for the new or increased discharge flow in the calculation of the total loading capacity when using the referenced definition.

*Comment:* The following definition for used loading capacity should be used:

> For high quality waters and OSRWs that are streams: the used loading capacity is the sum of the existing mass permit limit for the pollutant of concern plus the product of the representative background concentration just upstream of the proposed new or increased discharge times the stream design flow, in accordance with 327 IAC 5-2-11.4(b)(3)(A), for the waterbody in the area where the water quality is proposed to be lowered, expressed as a mass rate.
>
> For Lake Michigan: the used loading capacity is the sum of the existing mass permit limit for the pollutant of concern plus the product of the representative background concentration outside of the approved mixing volume times the approved mixing volume for Lake Michigan in the area where the water quality is proposed to be lowered,

expressed as a mass rate.

(MCSD)

*Response:* IDEM believes that the draft rule addresses the commentor's position.

*Comment:* Concerning de minimis for High Quality Waters and in light of the proposed definition for used loading capacity, the unused loading capacity for all waterbodies becomes the total loading capacity minus the used loading capacity. Applying the SID guidelines, a proposed or new increase in loading of a non-BCC to high quality waters, including tributaries to an OSRW (or EUW), would be considered de minimis as long as all of the following are true:

(1) the proposed increase in (or new) mass loading is less that 10% of the unused loading capacity as calculated above;

(2) a minimum of 10% of the total loading capacity remains untouched; and

(3) if the receiving waterbody is a tributary to an OSRW (or EUW), then no significant lowering of water quality shall occur in the OSRW (or EUW).

(MCSD)

*Response:* The draft rule includes a de minimis lowering of water quality that is very similar to the commentor's position.

*Comment:* Certainly, OSRWs (or EUWs) should have a higher level of protection than high quality waters. Therefore, it is recommended that for OSRWs (or EUWs) significant lowering of water quality be defined as when a new or increased loading for a pollutant of concern exceeds the following criteria:

(1) the proposed increase in (or new) mass loading is less that 5% of the unused loading capacity in the OSRW (or EUW); and

(2) a minimum of 25% of the total loading capacity for the OSRW (or EUW) remains untouched.

(MCSD)

*Response:* IDEM agrees that OSRWs should have a higher level of protection than high quality waters. The draft rule sets the de minimis lowering of water quality for a discharge to an OSRW equal to a proposed increase in mass that is less than or equal to one percent of the unused loading capacity in the OSRW. EUWs have been eliminated by P.L. 78-2009 (HEA 1162 2009 General Assembly regular session).

*Comment:* As the receiving waterbody volume or design flow increases in relation to the existing and proposed increase in discharge flow, the mass that qualifies as a de minimis increase will, by the mathematics, become larger in magnitude. As to the question of whether this mass increase should have an upper limit, the current rules already have an upper limit, depending upon the pollutant of concern and the manner in which the permit limits are applied to the discharge. If the permitted discharge is to a "zero flow" stream, i.e., the design flow for the receiving waterbody is zero or insignificant, then the permit limits are applied to the end-of-the-pipe. Consequently, the acute toxicity permit limit becomes FAV. This is also true when no mixing zone is allowed. Depending whether acute or chronic toxicity, the following existing rules provide a reasonable limit to de minimis for discharges:

| **Outside of Great Lakes System** | | **Rule** |
|---|---|---|
| For acute toxicity: | FAV, in undiluted discharge | 327 IAC 2–1-6(a)(1)(E) |
| | AAC, outside of zone of initial dilution | 327 IAC 2-1-6(a)(1)(E) |
| For chronic toxicity: | CCC, outside zone of initial dilution | 327, IAC 2-1-6(a)(2) |
| Inside of Great Lakes System | | |

| | | |
|---|---|---|
| For acute toxicity: | FAV, in undiluted discharge | 327 IAC 2-1.5-8(b)(1)(E) |
| | CMC, outside of zone of initial dilution | 327 IAC 2-1.5-8(b)(1)(E) |
| For chronic toxicity, depending on the applicable criterion: | CCC, HNC, HNV, HCC or HCV, outside zone of initial dilution | 327 IAC 2-1.5-8(b)(2) |
| | WC, 30-day average | 327 IAC 2-1.5-8(b)(2) |

(MCSD)

*Response:* IDEM believes that the draft rule includes a reasonable de minimis lowering of water quality that was developed after consideration of the comments and feedback received from the antidegradation subgroup.

**Alternative 3: Should de minimis technology-based effluent limitations (DTBELs), determined from federal effluent guidelines or IDEM's best professional judgment, be used when current rules do not address the pollutant of concern?**

*Comment:* The concept of using a BPJ-based DTBEL for, as described, total phosphorus or ammonia-nitrogen is intriguing but vague. IDEM should develop a complete list of parameters proposed to be addressed using DTBELs and provide BPJ values and their derivation for review by the workgroup and other interested parties, along with clear examples on how the DTBELs would be applied. In addition, the application of DTBELs cannot conflict with the de minimis calculations discussed by this commenter. Finally, DTBELs for municipal permits would have to specify what treatment technologies are associated with the BPJ and if other equivalent technologies would be considered and how. (MCSD)

*Response:* The draft rule establishes BADCT limits (formerly known as DTBELs) for a limited number of parameters, but IDEM has not developed proposed BADCT limits for all parameters and for all types of wastewater. IDEM believes that more BADCT limits will be added to the rule over time to include all of the most common pollutants that are discharged. IDEM may need to develop non-rule policies that include the need to use specific treatment technology before the discharge is allowed.

**Alternative 4: Should the rulemaking expand the social and economic justification to include the positive benefits to the area of the discharge as well as the negative impacts?**

*Comment:* The SID lists three sequential components to the antidegradation demonstration, with social and economic development being the last. (Water Quality Guidance for the Great Lakes System: Supplementary Information Documentation (SID), US EPA, Office of Water, EPA-820-B-95-001, March 1995, p 221) The first two are pollution prevention followed by alternative and enhanced treatment. The pollution prevention component is geared towards industrial dischargers, with municipal application through industrial pretreatment programs. The cost-effective pollution prevention component includes, but is not limited to:

(1) substitution of non-BCC or non-toxic chemicals for BCCs,
(2) application of water conservation techniques,
(3) waste source reduction within process streams,
(4) recycle or reuse of waste byproducts, and
(5) manufacturing process operational changes.

This component is considered by pretreatment communities when new industrial users or expansion of existing industrial processes are anticipated. The objective of the alternative or enhanced treatment analysis component is to limit the actual degradation of the high quality

water to the greatest extent practical. The analysis incorporates a cost-effective analysis to determine the least costly options for additional treatment with the greatest reduction in the pollutant of concern and proposed degradation. This process is an inherent component of any existing treatment plant expansion or design for new treatment facilities. The third component is the social and economic benefit analysis. The SID states, "In determining whether or not a proposed activity will support important social or economic development, Tribes and States should consider the geographic area in which the significant lowering of water quality will occur, the current or baseline economic condition of the area, the net positive impacts that will result for the proposed activity and the possibility of other development occurring in the area that will result in similar economic and social benefits but will not cause a significant lowering of water quality." (Water Quality Guidance for the Great Lakes System: Supplementary Information Documentation (SID), US EPA, Office of Water, EPA-820-B-95-001, March 1995, p 223) Therefore, the SID already required that the antidegradation demonstration consider the net positive impacts on the geographical area in which the significant lowering of water quality is proposed. (MCSD)

*Comment:* Of equal, if not greater importance to social and economic importance, are the detailed demonstration requirements for net positive impacts. The demonstration process should not have the potential to become so unyielding that it acts as a deterrent to natural population growth, the growth of a community's tax and employment base, or threatens the implementation of cost-effective solutions to alleviate public health concerns. Therefore, net positive impacts to the social and economic benefits should be included in the antidegradation demonstration with emphasis on streamlining the process for natural population growth, encouraging growth for a communities tax base and employment base, or threatens the cost-effective solutions to public health concerns. (MCSD)

*Response (for all comments categorized under Alternative 4):* The draft rule includes all of the social or economic factors that the Indiana Legislature believes should be used to justify the important social or economic development in the areas of the discharge in accordance with P.L. 78-2009 (HEA 1162 2009 General Assembly regular session).

**Alternative 5: Under IC 13-18-3-2, if a significant lowering of water quality in an OSRW or EUW occurs as a result of new or increased discharge, then the discharger must submit an antidegradation demonstration and support a project that results in an overall improvement of water quality in the watershed of the discharge, or pay a fee, not to exceed $500,000, based on the cost necessary to reduce the increased pollutant loading to the background concentration.**

*Comment:* This change is mandated by law and must be incorporated into the antidegradation implementation procedures throughout the State. The first concern for dischargers to a tributary of an OSRW or EUW is that the project or fee will be assessed without a justified and reproducible evaluation of significant lowering to the OSRW. The second concern is that new or increased loadings required in eliminating a public health concern, whether that loading is a result of natural population growth or a deliberate expansion to replace failing septic or mound systems, will require a project or fee over and above the cost associated with the treatment expansion. Therefore, it is recommended that a significant lowering of water quality to an OSRW or EUW be determined by the 5%/25% rule proposed under Alternative 2. Furthermore, when significant lowering of water quality in an OSRW or EUW is required in eliminating a public health concern, we recommend that the increased discharge from expanded treatment be considered as the water quality enhancement project for the watershed in lieu of a

new project or payment of a fee. (MCSD)

*Response:* The draft rule defines what constitutes a significant lowering of water quality in an OSRW. When a municipality expands its discharge to accommodate natural growth and the increased discharge results in a significant lowering of water quality in the OSRW downstream of the discharge and the action does not qualify for an exemption, the municipality will be required to implement a water quality improvement project or pay a fee. IDEM may consider whether the municipality should be given credit for the new or increased treatment that will be provided to the sanitary wastewater.

**Alternative 6: Should the process review the existing conditions and simplify those conditions that trigger an antidegradation evaluation?**

*Comment:* In the existing rules for the Great Lakes Basin, there are several activities that, by their nature, are assumed not to result in a significant lowering of water quality because: (1) the activities are addressed in other portions of the rules (for example, variances), and/or an existing NPDES Permit (general or discharge specific); and (2) the activities will not result in a new or increased permit limit. For high quality waters, these "exemptions" are found in 327 IAC 5-2-11.3(b)(1)(C). For BCCs, there must be a deliberate action that results in an increased or new loading of the BCC, (327 IAC 5-2-11.3(b)(2)). For outstanding state resource waters (OSRWs), these "exemptions" are found in 327 IAC 5-2-11.7(b). It is important to the operations and maintenance of POTWs that these "exemptions remain intact without additional levels of notification or public participation. To add those components could delay critical responses and result in greater degradation. The NPDES permit and existing rules should be used to the full extent to ensure efficient operations and maintenance of POTWs. Therefore, the triggers for antidegradation demonstration should be as follows:

| | | |
|---|---|---|
| High quality waters | non-BCCs | New or increased permit limit |
| | BCCs | Deliberate action resulting in a non-domestic increase in loading |
| OSRWs (EUWs) | non-BCCs | New or increased permit limit |
| | BCCs | Deliberate action resulting in any increase in loading |

Furthermore, the "exemptions" should be retained from the Great Lakes Basin rules with the NPDES Permit, and/or other applicable existing procedures or rules as the determining factor regarding notification and/or public participation. (MCSD)

*Response:* The draft rule includes a trigger for conducting an antidegradation review, and it includes exemptions similar to those in the current rules for antidegradation in the Great Lakes Basin.

**Alternative 7: Should the cap and cumulative cap on unused loading capacity change from existing rules?**

*Comment:* The following are recommended as cap and cumulative cap on unused loading capacity:

For high quality waters and tributaries to OSRWs (or EUWs), the cap for any de minimis lowering of water quality should be limited to 10 % of the unused loading capacity, provided that discharges to tributaries of an OSRW (or EUW) do not result in a significant lowering of water quality in the OSRW (or EUW).

For OSRWs (or EUWs), the cap for de minimis lowering of water quality should be 5% of the unused loading capacity.

For high quality waters and tributaries to OSRWs (or EUWs), the cumulative cap is 90% (or 10% of the total loading capacity must remain unused).

For OSRWs (or EUWs) the cumulative cap is 75% (or 25% of the total loading capacity must remain unused).

For significant lowering of water quality, approved through the antidegradation demonstration process, the cap or cumulative cap cannot exceed the recommended cumulative cap stated above. The individual lowering of water quality should be minimized through the three components of the antidegradation demonstration.

(MCSD)

*Response:* The draft rule does not contain a cap on increased discharges, but it does include a cap on de minimis increases.

**ECONOMIC DEVELOPMENT**

*Comment:* It is important to the economic development capability of the State of Indiana to provide environmental permitting certainty. It is critical that new or renewed permits result in environmental improvement in conjunction with economic development; therefore, the rule must provide an explicitly clear procedure where the expected outcome is certain. (NIF, ISEG)

*Response:* IDEM believes that the draft rule provides as much clarity as possible under the existing legal structure for the evaluation of new or increased discharges.

*Comment:* The rule must be properly vetted with all stakeholder groups during its development so that the rule provides the clarity necessary to ensure permits issued under it can withstand public scrutiny. Any delay in the permitting process could place severe restrictions on important social and economic development within the affected communities without resulting in any significant benefit to water quality. Permit issuance delays could seriously impair attempts to revitalize local communities through brownfield development and compromise the competitiveness of existing industries by limiting their ability to expand or change technologies. (NIF, ISEG)

*Response:* IDEM considered all of the comments submitted by the stakeholders represented on the antidegradation subgroup. IDEM is required to make a decision on the NPDES permit application within the normal time frames allowed by statute.

*Comment:* It is critical that the rules contain appropriate de minimis provisions so that minor increases are not subjected to an expensive, time-consuming regulatory review by IDEM before they can be authorized. As well, it is important for the rules to include appropriate exemptions to antidegradation review for important activities that have significant social or environmental benefits, which should not be delayed or possibly denied by the antidegradation process. (NIF, ISEG)

*Response:* The draft rule includes a de minimis lowering of water quality and appropriate exemptions to the antidegradation demonstration.

**U.S. DEPARTMENT OF THE INTERIOR, NATIONAL PARK SERVICE, INDIANA DUNES NATIONAL LAKESHORE**

*Comment:* The United States Department of the Interior, National Park Service, Indiana Dunes National Lakeshore strongly supports IDEM's efforts to comply with the federal Clean Water Act requirements by updating Indiana's water quality standards at least every three years and developing an antidegradation rule for all surface waters of the state including Lake Michigan and its tributaries. New state regulations should result in strong protection for all of Indiana's valuable water resources from any new or increased pollution above the current background levels. (IDNL)

*Response:* It is IDEM's intent to comply with the federal requirement for triennial review of water quality standards including antidegradation. The subject matter is technical and

complicated which accounts for the long rulemaking process.

*Comment:* Indiana's antidegradation rule should require any new or increased discharges into Indiana's surface waters that flow into Lake Michigan to go through the complete antidegradation review and justification process. (IDNL)

*Response:* The draft rule's applicability is to a new or increased loading of a pollutant of concern to a surface water of the state. The rule establishes various exemptions to the antidegradation demonstration with the understanding that the exemptions are activities that have important value in protecting water quality while allowing certain important necessary social activities to occur. A discharger claiming an exemption from the antidegradation demonstration may, depending on the type of exemption, go through a form of abbreviated antidegradation demonstration by submitting an exemption justification to IDEM.

*Comment:* No degradation should be allowed that increases the background pollutant levels in Lake Michigan. If degradation that increases background pollutant levels is allowed for any reason, then mitigation must be required. (IDNL)

*Response:* The statutorily required water quality improvement project (or payment of a fee to fund such a project) for increased discharges to an OSRW constitutes mitigation.

*Comment:* Few, if any, exemptions should be included in the antidegradation rule that would enable industry to avoid providing required justification for any new or increased discharges, even including minor increases. (IDNL)

*Response:* The draft rule has a finite list of exemptions and the discharger is required to justify claiming an exemption.

## ENVIRONMENTAL COMMUNITY

### Development of Antidegradation Rule Language

*Comment:* The environmental community commends IDEM for its efforts over the past year to meet with stakeholders and to understand their positions and concerns. Although IDEM provided the opportunity for stakeholder agreement and had initially hoped that the stakeholder subgroup would forge agreements on key issues, in fact the stakeholder subgroup meetings have not produced much agreement on important issues. When this lack of agreement became obvious to the subgroup and IDEM, the agency reasonably responded by replacing debates over unresolved issues with presentations of stakeholder positions and proposed rule language. The environmental community encourages IDEM to continue this stakeholder subgroup process until all issues of concern to the stakeholders are considered and areas of agreement and dispute are identified. (EC)

*Response:* IDEM believes that the stakeholder subgroup has provided all of the stakeholders with a much better understanding of everyone's position and ideas on antidegradation to the point of identifying all of the issues of concern.

### The Purpose of the Antidegradation Rule

*Comment:* 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. (U.S. EPA Region VIII Guidance: Antidegradation Implementation (August

1993), page iii (emphasis added).)

Indiana's antidegradation rule must comply with the policy of the United States as stated in the Code of Federal Regulations. In addition, Indiana's rule must comply with EPA's interpretations of antidegradation policy and implementation requirements, as expressed in various guidance documents. Indiana may provide additional protections where needed, however, and, indeed, Indiana 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 logical and comprehensible to the public and the regulated community and afford the public an opportunity to participate in the choices that must be made to implement the antidegradation policy. (EC)

*Response:* IDEM believes the draft rule fulfills the principles and goals of the Clean Water Act and federal regulations.

**Alternative 1. Scope of Rulemaking**

*Comment:* The rulemaking should apply to all surface waters of the State of Indiana. "Each State must develop, adopt, and retain a statewide antidegradation policy regarding water quality standards and establish procedures for its implementation through the water quality management process." (U.S. EPA Water Quality Standards Handbook, Second Edition (August 1994), page 4-2.) (EC)

*Response:* The draft rule as written applies to all surface waters of the state.

**Alternatives 2 and 7. De Minimis Loadings, Cumulative Cap on Exempted Loadings, and Exemptions in General**

**De minimis and Cumulative Cap for Tier 2**

*Comment:* EPA and the courts have stated that BCCs cannot be subject to a de minimis exemption. (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." See also Ohio Valley Envtl. Coalition v. Horinko, 279 F. Supp. 2d 732 (S.D.W.V. 2003) (concluding that any individual de minimis for BCCs in Tier 2 waters within the Great Lakes Basin would be contrary to federal requirements).)

*Response:* The draft rule does not allow a de minimis lowering of water quality for BCCs.

*Comment:* EPA and courts have accepted the application of a reasonably small de minimis for waters subject to Tier 2 protection, if properly implemented. Pollutant loadings below de minimis levels are exempted from the antidegradation demonstration normally required under Tier 2 antidegradation policy. A de minimis must be coupled with a ceiling (i.e., cap) on the cumulative loadings into a waterbody that are allowed under the de minimis exemption. Without a cumulative cap, the risk of using up the entire assimilative capacity without any showing of necessity or importance is uncontrolled. (See Ohio Valley, 279 F. Supp. 2d 732 (S.D.W.V. 2003).) Importantly, the cumulative cap should be a ceiling on all pollutant loadings that are exempted from the antidegradation demonstration based on the justification that they are de minimis. The recent Sixth Circuit opinion in Kentucky Waterways Alliance v. Johnson supports this claim that all exemptions justified as de minimis are relevant to the cumulative cap. Specifically, all of the judges in Kentucky Waterways Alliance concluded that the legally

operative question with respect to the exemption of five categories of discharges in Kentucky's antidegradation rule is the following: "will the extent to which various emitters avail themselves of the exemptions result in significant, rather than de minimis, degradation?" (540 F.3d 466, 492 (6th Cir. 2008).) The court remanded the matter to EPA because the agency had not addressed "whether Kentucky's Tier-II-review exemptions together permit significant degradation." (540 F.3d 466, 492 (6th Cir. 2008) (emphasis added) ("The EPA measured Kentucky's §131.12 compliance by assessing whether each individual exemption resulted in 'significant' or 'insignificant' degradation, but that approach avoids assessing the exemptions' cumulative effects on the State's antidegradation compliance. Because §131.12 regulates degradation, not individual sources of degradation... the legally relevant inquiry is whether Kentucky's Tier-II-review exemptions together permit significant degradation, see Ohio Valley, 279 F.Supp.2d at 770 n. 3 ('From the perspective of water quality... it does not matter whether the number of discharges is one or one hundred; the relevant question is how much water quality is lowered by any and all discharges into a water body'). The EPA's decision document avoids answering this question, and we accordingly lack the information needed to meaningfully review the EPA's decision to approve Kentucky's regulations.").) One judge in the case, writing separately, indicated that no more than 10% of a waterbody's assimilative capacity should be used cumulatively by all "exempt" pollutant loadings justified by non-significance. (540 F.3d at 486-88 (6th Cir. 2008).) Courts are rightly concerned that a significant amount of a waterbody's assimilative capacity could be used up by exempt increases in pollutant loadings without any demonstration that such increases are necessary and important, which is required by federal and State antidegradation policy for significant decreases in water quality. (40 CFR §131.12; 327 IAC 2-1.5-4.) In light of this concern, a stringent cumulative cap allowing no more than 10% of assimilative capacity to be used by all "exempt" loadings is quite reasonable. (EC)

*Response:* The draft rule contains caps on de minimis lowering of water quality cumulative increases.

*Comment:* Current proposals by industry that would allow 90% of a waterbody's assimilative capacity to be used by exempt loadings would mean that the assimilative capacity could be used up almost entirely without any antidegradation demonstration of necessity and importance. In fact, the justification for most exempt pollutant loadings is that they, alone or in combination, will not result in a "significant" decrease in water quality. No logic could construe the depletion of 90% of a waterbody's assimilative capacity—a "valuable natural resource" (Ephraim King, Director Office of Science and Technology, U.S. EPA, in guidance letter to Water Management Division Directors dated August 10, 2005.) —as an "insignificant" decrease in water quality. Moreover, such a proposal could theoretically leave only 10% of a waterbody's assimilative capacity for proposed loadings that do undergo and pass an antidegradation demonstration and which could be quite important socially and economically. EPA and the courts have already stated that each individual loading of pollutants exempted as de minimis must not use more than 10% of the assimilative capacity of the waterbody. If we are correct that courts will strike down a cumulative cap that allows much more than 10% of the total assimilative capacity of a waterbody to be used by loadings "exempt" from antidegradation review by virtue of their insignificance, then the amount of impact allowed for each individual de minimis loading is limited. Specifically, the percent of unused assimilative capacity allocated for each individual de minimis pollutant loading should be around the 5% range to allow for more than one "bite" from the unused capacity. (EC)

*Response:* The 90% cap on increases comes from the SID, and it is contained in the

current version of the antidegradation rules for the Great Lakes at 327 IAC 5-2-11.3(b)(1)(B)(ii)(BB). The draft rule contains caps on de minimis lowering of water quality cumulative increases.

*Comment:* For high quality streams (but not Lake Michigan), alternatives to calculating unused assimilative capacity for each proposed discharge may be acceptable, as long as these methods respect a cumulative cap allowing no more than 10% of the total assimilative capacity to be used up by exempt loadings. For example, IDEM may allow as de minimis those discharges into streams that meet water quality standards at the end of the pipe (e.g., WQBEL with no dilution) whenever there is greater than 20:1 dilution. Where dilution is less than 20:1, however, discharges that meet water quality standards at the end of the pipe will likely use more than 5% of unused assimilative capacity. For these lower-flow situations, simply requiring an antidegradation review would be easier to apply than a 5% unused assimilative capacity rule. This alternative would require an antidegradation demonstration in very few situations in which a de minimis exemption is proper. (EC)

*Response:* The draft rule contains caps on de minimis lowering of water quality cumulative increases.

**De minimis for Tier 2.9 (OSRWs and EUWs) including Lake Michigan**

*Comment:* For Tier 2.9 protected waters (OSRWs and EUWs), Indiana Code §13-18-3-2(m) requires that Indiana's antidegradation rule provide for a "de minimis quantity of additional pollutant load." The designation of Tier 2.9 refers to the extra level of antidegradation protection for these waters that is between Tier 2 and Tier 3 protection. Tier 2.9 is not required by, or referenced in, the federal water quality standards regulation, and the degree of extra protection intended by the Indiana legislature in Indiana Code §13-18-3-2 is unclear. Section 13-18-3-2 prevents any new or increased discharge of a pollutant into an OSRW or EUW that would result in a significant lowering of water quality unless there is an associated overall improvement in the water quality of that waterbody. This requirement adds protection to OSRWs and EUWs not required for other high quality waters. Indiana Code §13-18-3-2 does not address the relative or absolute size of the de minimis threshold required for OSRWs such as Lake Michigan. (EC)

*Response:* IDEM believes that IC 13-18-3-2 provides guidance on the subject of the de minimis lowering of water quality for an OSRW. IDEM has interpreted IC 13-18-3-2 to allow for a de minimis lowering of water quality for an OSRW that is greater than zero and less than or equal to 10% of the unused loading capacity. Since OSRWs are special waters that deserve a higher level of protection, IDEM has proposed a de minimis lowering of water quality for OSRWs that is 10% of the de minimis lowering of water quality for high quality waters.

*Comment:* Reference background concentration is the most justifiable and practical de minimis threshold for Lake Michigan (and other high quality large lakes), for two reasons. First, the concept of assimilative capacity is not readily applicable to a vast waterbody such as Lake Michigan. A de minimis test for discharges into Lake Michigan based on 10%, 5%, or even 1% of unused assimilative capacity would still be a relatively large loading. For perspective, consider that the increases in pollutant loading proposed for the BP Whiting Refinery would have been exempted from an antidegradation demonstration if the de minimis threshold had been even 1% of the unused assimilative capacity of Lake Michigan. Note that for Lake Michigan, the requirement that water quality standards be met at the end of the pipe is a basis for wasteload allocations under 327 IAC 5-2-11.4 and is not appropriate as a basis for a de minimis threshold. (The same holds for inland lakes and other waters of the Great Lakes system with no appreciable flow relative to their volume. 327 IAC 5-2-11.4(b).) Second, because of the OSRW status of

Lake Michigan as well as its symbolic importance, the de minimis used for the Lake should be more stringent than the de minimis used for other high quality waters. (EC)

*Response:* Setting the de minimis lowering of water quality equal to the background creates a situation where there is not a de minimis lowering of water quality. The calculated background concentration has to be greater than the measured background concentration in order for a lowering of water quality (degradation) to occur. IC 13-18-3-2 requires IDEM to establish a de minimis lowering of water quality for OSRWs. This means that the de minimis lowering of water quality has to allow for some lowering of water quality, which can only occur if the discharge exceeds the measured background concentration. There is no mixing zone for a discharge to Lake Michigan, other than a thermal discharge, until the discharger has applied for and received an alternate mixing zone. The alternate mixing zone must include the use of a diffuser. The proposed de minimis lowering of water quality in Lake Michigan is equal to 1% of the unused loading capacity, and the total loading capacity is the water quality criterion multiplied by the volume of the alternate mixing zone.

*Comment:* Reference water quality is a valid de minimis under IC 13-18-3-2, which requires that IDEM provide for a "de minimis amount of loading." (Ind. Code §13-18-3-2(m)(1).) With such a de minimis, facilities would be able to increase pollutant loadings yet stay within the de minimis by adjusting the effluent flow of water to keep the pollutant concentration in the effluent below the reference value. (EC)

*Response:* IC 13-18-3-2(m)(1) requires IDEM to establish a rule which includes; "A definition of significant lowering of water quality that includes a de minimis quantity of additional pollutant load." Setting the de minimis lowering of water quality equal to the background creates a situation where there is not a lowering of water quality. The calculated background concentration has to be greater than the measured background concentration in order for a lowering of water quality (degradation) to occur. This means that the de minimis lowering of water quality has to allow for some lowering of water quality, which can only occur if the discharge exceeds the measured background concentration.

*Comment:* For OSRW and EUW streams, alternatives to calculating unused assimilative capacity for each proposed discharge may be acceptable, as long as these methods respect a cumulative cap allowing no more than 10% of total assimilative capacity to be used up by exempt loadings. (EC)

*Response:* IDEM would be willing to consider specific alternative suggestions. The draft rule includes caps on cumulative de minimis increases.

**Other Exempt Increases in Pollutant Loadings**

*Comment:* Two categories of discharges may be reasonably held "exempt" from a full antidegradation demonstration: (1) discharges that can be presumed to produce no decrease in water quality or only a de minimis decrease in water quality relative to currently permitted levels (e.g., new limits based on improved monitoring or test methods during the 5-year period of permit validity, normal operational variability within current permit limits, a simultaneous decrease of the same pollutant from another outfall of the same facility into the same waterbody, increased loading due solely to an increase of the pollutant in intake water, and a short term and limited loading and effect on water quality); and (2) discharges for which a formal regulatory procedure is in place that sufficiently substitutes for an antidegradation demonstration (e.g., a CERCLA of RCRA action, and a bypass not prohibited by 327 IAC 5-2-8(11)). Most exemptions will fall into the first category: discharges justified as nonsignificant. (EC)

*Response:* The draft rule recognizes these differences in the exemptions. New or

increased discharge situations that have the potential to have a new or increased loading of a pollutant of concern require the discharger to demonstrate that it meets the conditions of the exemption so that no significant lowering of water quality will occur.

*Comment:* Two other categories of discharges are not appropriately exempted from an antidegradation demonstration: (1) discharges that produce a significant net decrease in the water quality in a particular waterbody, regardless of their effect on the "environment" generally (e.g., a new or increased discharge necessary to accomplish reduction in air pollutant, and any other activities intended to result in a net benefit to the "environment" but not the waterbody); and (2) discharges that may have the potential to improve overall water quality in the waterbody but which will require an analysis of alternatives and impacts (e.g., a simultaneous decrease of the same pollutant from another facility, pollutant trading, and a new or increased discharge from wastewater treatment plant to alleviate public health concern). Such discharges cannot benefit from a presumption that they will produce only a de minimis lowering of water quality and do not have substitutes for antidegradation demonstration in place. (EC)

*Response:* Both of the discharge situations identified in the comment require the discharger to provide an exemption justification to IDEM that is sufficient to show that the new or increased discharge will result in an overall improvement to the environment.

*Comment:* Pollutant trading schemes—any proposal to mitigate an increased loading of a pollutant with a decrease in another pollutant—are improper bases of exemption from an antidegradation demonstration. 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.) First, EPA does not support trading of bioaccumulative pollutants. (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 (PBTs).").) Second, application of the pollutant trading exemption to the watershed scale must be done with care. (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.").) For example, "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." (U.S. EPA, Water Quality Trading Assessment Handbook, chapter II, pages 16-17.) Third, pollutant trading must be preceded by a rigorous analysis of the trade:

> 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." (U.S. EPA, Water Quality Trading Assessment Handbook, chapter II, page 6.)

(EC)

*Response:* IDEM does not support a pollutant trading proposal that results in a significant lowering of water quality in the receiving water.

*Comment:* It would be inappropriate to use an exemption as an incentive for economic activity. For example, some interests have proposed that significant discharges associated with brownfield and other redevelopment projects be exempted from an antidegradation demonstration to avoid discouraging such activities with such a regulatory burden. This is a wholly inappropriate use of the exemption concept and would violate federal antidegradation policy. (EC)

*Response:* Activities listed as exemptions in the draft rule are considered to be activities that allow certain important necessary social activities to occur while protection water quality is acheived *[sic]*.

**Public Involvement in Exemption Decisions**

*Comment:* Federal law requires that the public have an opportunity to comment on the IDEM Commissioner's decision to approve or reject an antidegradation demonstration. EPA guidance states as follows:

> Antidegradation, as with other water quality standards activities, requires public participation and intergovernmental coordination to be an effective tool in the water quality management process. 40 C.F.R. §131.12(a)(2) contains explicit requirements for public participation and intergovernmental coordination when determining whether to allow lower water quality in high quality waters.... The antidegradation public participation requirement may be satisfied in several ways. The State may hold a public hearing or hearings. The State may also satisfy the requirement by providing public notice and the opportunity for the public to request a hearing. (U.S. EPA Water Quality Standards Handbook, Second Edition (August 1994), section 4.8.2., page 4-13.)

This decision on the antidegradation demonstration is an intermediate stage in the process of reviewing a discharger's application for a new or increased discharge. Note that although public notice and comment is also required for the draft NPDES permit, that opportunity does not substitute for advance public input at key intermediate stages during the antidegradation evaluation process. (EC)

*Response:* The draft rule includes a requirement for the discharger to hold a public meeting prior to submitting its antidegradation demonstration to IDEM and a requirement for IDEM to public notice the receipt of an antidegradation demonstration and an antidegradation exemption justification. The existing NPDES permit rules require IDEM to public notice the draft NPDES permit that will contain the preliminary position taken by IDEM on the antidegradation demonstration or the antidegradation exemption justification. Therefore, under this process, the public will have a number of opportunities to comment on the proposed new or increased loading of a pollutant of concern to the waters of the state before IDEM makes its final decision regarding the proposed new or increased loading of a pollutant of concern to the waters of the state.

*Comment:* Public input to the Commissioner's decision to exempt a discharge from an antidegradation demonstration may in some cases be just as important as public input into the antidegradation demonstration decision itself, for two reasons:

> (1) Public review and scrutiny is an integral part of antidegradation policy. EPA guidance states: "the intent (of the public participation provisions in the federal antidegradation policy) is to ensure that no activity that will cause water quality to decline in existing high-quality waters is undertaken without adequate public review." (U.S. EPA Water Quality Standards Handbook, Second Edition (August 1994), section 4.8.2., page 4-7.) Where the de minimis nature of an activity is not clear cut, opportunity for public input

into the decision whether or not to grant an exemption is vital to antidegradation policy.) The current antidegradation implementation rule at 327 IAC 5-2-11.7(c) provides notice and comment for several exemptions: (1) short term, temporary discharges; (2) discharges due to CERCLA or RCRA actions; (3) discharges due to implantation of approved industrial or municipal controls on wet-weather flows; (4) discharges due to intake of pollutants; (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; (6) discharges necessary to accomplish a reduction in the discharge of another pollutant.)

(2) If the rule does not require a formal analysis of alternatives before the IDEM Commissioner grants an exemption for an activity, public input is necessary to explore the range of alternatives. Alternatives to an exemption may obviate the need for the exemption and the subsequent decrease in water quality. Some of the exemptions that have been proposed in the past are controversial and technically complex, and their claimed de minimis nature is not clear. These exemptions especially would benefit from public comment and information on alternatives. (EC)

*Response:* The draft rule requires dischargers that are seeking an exemption from the antidegradation demonstration to take all reasonable methods for minimizing or preventing the new or increased loading. In claiming an exemption, depending on the type of exemption, a discharger may be required to submit an exemption justification to IDEM. The commissioner is required to provide notice and request comment according to 327 IAC 5-2-11.2 and hold, under certain conditions, a public meeting on the exemption justification in accordance with 327 IAC 5-2-11.2.

**Alternative 3. DTBELS Based on Federal Effluent Guidelines or Best Available Treatment**

*Comment:* IDEM's default technology-based effluent limitations (DTBELs) are based on applicable federal effluent guidelines or, for pollutants without such guidelines, IDEM's best professional judgment of the best cost-effective treatment technology that is readily available. IDEM intends to use DTBELs to allow antidegradation to be assessed for pollutants without water quality criteria. IDEM's intent to assess antidegradation for all pollutants of concern, whether or not they have associated water quality criteria, is on the right track. (EC)

*Response:* The draft rule has incorporated this concept into the development of the BADCT limits.

*Comment:* With regard to using DTBELs as triggers for antidegradation review or as de minimis levels of loading, there is concern that, in many cases, the federal effluent guidelines have not been updated for decades, do not reflect the best technology available, and were not intended to be used to trigger antidegradation review. Federal effluent guidelines cannot be guaranteed to result in only de minimis degradation of water quality, especially if used in critical or low-flow conditions. The environmental community recommends that 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 unless the discharge independently meets the de minimis test. (EC)

*Comment:* With regard to using DTBELs as triggers for antidegradation review or as de minimis levels of loading, there is concern that, 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 puts the cart before the horse. The recognized understanding of de minimis is that the proposed increase in discharge is too small to worry about having a negative impact on water quality. If the increase in discharge is large enough to worry about, then an antidegradation demonstration must be done, and such a demonstration 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 appropriate if the increased discharge is not necessary to accommodate important social or economic development. (EC)

*Comment:* With regard to using DTBELs as triggers for antidegradation review or as de minimis levels of loading, there is concern that the DTBEL concept may not be appropriate in low flow streams where there is very little mixing. If DTBELs are to be used in these situations, IDEM should set the limits at sufficiently protective levels. Furthermore, the environmental community supports an approach that defines a de minimis discharge for non-OSRWs as the more stringent of a limit based on a DTBEL or a limit based on 5% consumption of unused assimilative capacity per proposed new or increased discharge. (EC)

*Response (for all comments regarding DTBELs as triggers for antidegradation review):* The draft rule does not propose to use technology based effluent limits, such as the DTBELs, as triggers for antidegradation review.

**Alternative 4. Social–Economic Justification/Necessary and Importance Demonstration**

*Comment:* The "necessary and importance" test is the basis of the antidegradation demonstration that is provided in 40 CFR §131.12(a)(2), which states that no lowering of water quality in waters with Tier 2 protection is allowed unless allowing lower water quality is "necessary to accommodate important economic or social development in the area in which the waters are located." (40 CFR §131.12(a)(2)) Activities such as new discharges or expansion of existing facilities would presumably lower water quality and would not be permissible unless the State conducts a review consistent with the requirements of 40 CFR §131.12(a)(2). The full requirement under the Tier 2 antidegradation policy is that the State must properly find that the discharge is necessary to accommodate important economical or social development in the area in which the waters are located, must fully satisfy all intergovernmental coordination and public participation provisions, and must assure that the highest statutory and regulatory requirements for point sources and best management practices for nonpoint source pollutant controls are achieved. 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. (EPA Water Quality Standards Handbook, Second Edition (August 1994), page 4-7 (emphasis added).)

(EC)

*Comment:* To satisfy the inquiry of whether the proposed discharge is "necessary" 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." (63 Fed. Reg. 36742, 36784.) The applicant must provide information sufficient for IDEM to reach a reasoned determination. The burden is on the applicant to show that none of the possible alternatives identified is technologically feasible and that all feasible alternatives are cost prohibitive before IDEM can find that a particular discharge is "necessary." As IDEM stated in the BP Whiting permit fact sheet, antidegradation analysis requires that the applicant "demonstrate that all economically and technically feasible measures have been taken to avoid the action that will result in the new or increased discharge of the pollutant or pollutant parameter including a demonstration that it is not feasible to limit the new or increased discharge to a temporary or short term period." (IDEM's BP Products North America Inc. Whiting Refinery Fact Sheet for NPDES Permit (March 2007), page 15, available at: www.in.gov/idem/files/bp_factsheet.doc.)
(EC)

*Comment:* 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. For example, the following alternatives should be considered: improved operation and maintenance of an existing treatment system; recycling or reuse of wastewater; discharge to on-site system; seasonal or controlled discharges to avoid critical water quality periods; discharge to a sanitary sewer; and land application of wastewater. (See Massachusetts and Oregon antidegradation implementation procedures.) 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. The Washington State antidegradation implementation procedures provide, for example, that "(t)he rejection of any alternative that would produce a significant improvement in the resulting discharge or water quality must be based on a solid determination that the costs are prohibitively expensive." (Washington State Supplementary Guidance Implementing the Tier II Antidegradation Rules (July 18, 2005) WAC 173-201A-320, page 16, available at: http://www.ecy.wa.gov/programs/wq/swqs/antideg-tier2-guidance.pdf.) In addition, the reasoning behind eliminating alternatives should be clearly documented so that IDEM and the public can be assured that any rejection of alternatives is reasonable. If it appears based on the record that an alternative may be reasonably available but the applicant does not provide the information necessary for IDEM to determine whether it would be "feasible," IDEM should require the applicant to submit additional information or should deny the application. (EC)

*Comment:* 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. The demonstration of "importance" focuses on the socio-economic benefits of the proposed activity, such as job creation, social services and increased tax base, counterbalanced against the socioeconomic costs of the proposal, such as projected negative socio-economic effects on the community 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. (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"). 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. (EC)

*Comment:* Often the economic benefits of an activity, such as jobs creation, are more readily quantified than the economic and social costs of the activity. This imbalance in the ability to quantify costs versus benefits may skew the importance analysis since the human mind is often more impressed by quantitative information than qualitative information, regardless of its relative uncertainty. When numeric information is not available, IDEM should consider reasonable public expectations and narrative descriptions. For example, Washington State antidegradation guidance states:

> It is intended that the analysis focus on reasonable expectations and be generally based upon available information. The use of narrative descriptions is acceptable, and should be encouraged, where numeric information is not readily available. For example, we may not know the lost economic benefits of using up most of the remaining assimilative capacity for a common water quality pollutant, but the relative change in capacity and the fact that newcomers will meet very stringent requirements is important social and economic information. Similarly, it may not be reasonable to put a value on the increased contamination of a popular fishing hole or swimming beach, but it is a social effect that is worthy of discussion and is further illuminated by including information on the estimated number and types of users. (Washington State Supplementary Guidance Implementing the Tier II Antidegradation Rules (July 18, 2005) WAC 173-201A-320, page 13, available at: http://www.ecy.wa.gov/programs/wq/swqs/antideg-tier2-guidance.pdf.)

(EC)

*Comment:* In creating a framework for the importance analysis, it is important to ensure that the positive and negative impacts of the activity are capable of unbiased comparison in a documented weighting scheme. This will likely require that both monetized and qualitative effects, as well as their relative uncertainties, are analyzed on both sides of the equation. (EC)

*Comment:* Past proposals for an antidegradation rule have suggested that agencies or organizations other than IDEM are qualified to make the decision pertaining to the economic or social importance of a proposed activity. It would be bad policy to adopt any presumption that an applicant has met the importance test for antidegradation purposes simply because that applicant's activity has been approved by another agent of the State or found to be economically or socially important by another agency or organization. The importance test reflects a balancing act specific to antidegradation—Do the potential economic benefits of the project outweigh the overall costs to society of allowing additional pollution to the water? This question cannot be answered outside the context of antidegradation and water quality. Although IDEM may use data and analyses from reliable sources to inform its decision on the antidegradation demonstration, IDEM is the agent of the State in the best position to further antidegradation policy by determining when a particular activity is important despite a significant lowering of water quality. (EC)

*Response (for all comments categorized under "Alternative 4"):* The draft rule has been developed mindful of the federal requirements and other guidance. Public Law 78-2009 requires IDEM to give substantial weight to determinations by governmental entities concerning whether a proposed discharge is necessary to accommodate important economic or social development in the area in which the waters are located. However, the final decision about the project's social

and economic benefits to the community resides with the commissioner.

**Alternative 5. Water Quality Improvement Project for OSRWs**

*Comment:* According to IC13-18-3-2 and IC 13-11-2-50.5, 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 shall be prohibited unless the activity causing the increased discharge results in an "overall improvement in water quality in the OSRW or EUW," or the person proposing the increased discharge implements or funds a water quality improvement project in the watershed of the OSRW or EUW that results in an "overall improvement in water quality in the OSRW or EUW." The phrase "overall improvement in water quality in the OSRW or EUW" is key to the cited statutory requirement. The Indiana legislature did not define the phrase, however. IDEM should either define this phrase in the draft rule or should provide guidance for the interpretation and implementation of the phrase. Factors that should be considered in evaluating each project that seeks to improve water quality in an OSRW or EUW include: (1) the hydrological and ecological context of the waterbody in the watershed; (2) the amount, chemical behavior, and toxicity of the new or increased pollutant; and (3) the likelihood that the project in the watershed will improve water quality in the target OSRW or EUW receiving the new or increased loading. (EC)

*Response:* IDEM plans to outline how to define "overall improvement" in nonrule policy.

*Comment:* IDEM must ensure that each improvement project, either implemented or funded by the discharger, actually leads to improvement of water quality in the target OSRW or EUW that receives the new or increased loading. Note that the improvement project must be implemented in the same stream or lake receiving the new or increased loading in order to create "overall improvement in water quality in the OSRW or EUW." No new or increased loading should be allowed if it cannot be clearly shown that a proposed water quality improvement project will result in an overall improvement in the water quality of the OSRW or EUW. (EC)

*Response:* Proposed water quality improvement projects will be evaluated for the expected improvements to water quality. IDEM expects selection of water quality improvement projects will be done to create as much water quality improvement as funds will allow.

*Comment:* IC 13-18-3-2(m) requires IDEM to provide in the antidegradation rule:

(1) criteria for the submission and timely approval of water quality improvement projects;

(2) a process for public input into the approval process; and

(3) criteria for using collected fees to fund projects in the watershed that will result in improvement in water quality in the target OSRW or EUW. (Ind. Code §§13-18-3-2(m)(3), -2(m)(4), and -2(m)(6).)

A major challenge for IDEM will be to use the fees collected to implement water quality improvement projects that have the mitigating effect required in the target OSRW or EUW. (EC)

*Response:* IDEM agrees that it needs to develop criteria for selecting the OSRW water quality improvement projects. IDEM plans to outline factors for consideration in a non-rule policy.

*Comment:* Criteria for selecting water quality improvement projects and monitoring their results in the waterbody receiving the discharge need to be key provisions of the rule. IDEM should be careful to fund in-kind projects that will actually offset the particular biological impacts of the added pollutant. While a significant increase in pollutant "A" need not be offset specifically by a decrease in the same pollutant (allowing for pollutant trading schemes), the statutory requirement of an "overall improvement in water quality" must not allow a type of organism to be negatively impacted. For example, increases in a pollutant that affects the

reproduction of mussels should be offset by an improvement project that mitigates at least the impact on mussels generally, and not by a project that creates, say, salmon habitat. There can be no "overall improvement" in water quality if the health of one species is sacrificed for the sake of another. (EC)

*Response:* Both the new or increased discharge and the pollutant that is being increased cannot be present in amounts that cause or contribute to a violation of Indiana's water quality standards. Indiana's water quality standards are designed to be protective of all aquatic life.

*Comment:* The antidegradation 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 in the target water receiving the new or increased loading. (EC)

*Response:* IDEM agrees that a reasonable time frame for implementing a water quality improvement project is essential to its success at improving water quality.

**Alternative 6. Antidegradation Evaluation Trigger**

*Comment:* The application of the antidegradation rule should be triggered by any action that would result in the lowering of water quality in a high-quality water. (See U.S. EPA Water Quality Standards Handbook, Second Edition (August 1994), page 4-7. See also U.S. EPA Region VIII Guidance: Antidegradation Implementation (August 1993), page iii ("Antidegradation requirements are typically triggered when an activity is proposed that may have some effect on existing water quality."). This trigger, applying the rule to non-exempt new or increased loadings, was agreed upon during IDEM's July 15, 2008 stakeholder meeting (see Antidegradation Stakeholder's Subgroup Meeting Summary, July 15, 2008, page 7).) This trigger simply opens the door to the application of antidegradation policy and implementation procedures. The applicant may then qualify for an exemption, or instead may be subject to a full antidegradation demonstration.

*Response:* The antidegradation standards and implementation procedures in the draft rule are triggered by any action that would result in a significant lowering of water quality in a high quality water.

*Comment:* Industry representatives have proposed that the trigger to enter the antidegradation rule be either a finding that a new or increased loading has a "reasonable potential to exceed" a water quality standard, or a finding that a new or increased loading requires a "new or increased permit limit." Neither of these proposals is appropriate, for the following reasons:

(1) The limitation of the antidegradation rule to the situation where 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. For example, dischargers to the Mississippi River using diffusers do not have a "reasonable potential to exceed" water quality criteria even when quadrupling their discharges. If the reasonable potential to exceed the water quality standard were the trigger for applying the rule, then the only new or increased loadings subject to the antidegradation rule would be those that have a reasonable potential to use up 100% of the assimilative capacity of the waterbody, which is precisely the resource that antidegradation policy is intended to protect.

(2) The limitation of the antidegradation rule to the situation where a new or increased permit limit is required also is not an appropriate trigger for the rule (irrespective of the language in the to-be-replaced 327 IAC 5-2-11.3(b)(1)(B)). Permit limits may be water quality based (WQBELs) or technology based (TBELs). The determination of a WQBEL

is linked to the "reasonable potential to exceed," and thus, considering the previously discussed reason, a new or increased WQBEL is not an appropriate trigger for applying the rule. In addition, several pollutants of concern do not have water quality criteria, and, thus WQBELs are not calculated for these pollutants. However, significant new or increased loadings of these pollutants should not evade antidegradation scrutiny.

(3) A new or increased TBEL also may be inappropriate as a trigger because such a trigger could omit significant loadings from antidegradation scrutiny.

In short, any trigger that allows more than a de minimis new or increased loading of a pollutant to bypass the antidegradation rule is inconsistent with antidegradation policy. Thus, a "new or increased permit limit" would be an appropriate trigger only if a new or increased permit limit is required by IDEM regulations for every significant new or increased loading of a pollutant of concern, including pollutants such as nitrogen and phosphorus. (U.S. EPA has been clear that antidegradation procedures must not exclude nutrients.) IDEM has not, to date, shown that a new or increased permit limit is required by IDEM regulations for every significant new or increased loading of a pollutant of concern. (EC)

*Response:* The draft rule does not use reasonable potential to exceed a WQBEL as the trigger for an antidegradation application.