

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

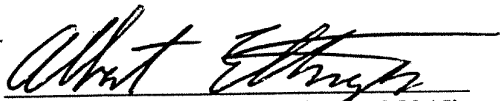
IN THE MATTER OF:)

REVISIONS TO ANTIDegradation RULES:)
35 ILL. ADM. CODE 302.105, 303.205, 303.206, AND)
106.990 -106.995)

R01-13
(Rulemaking-Water)

NOTICE OF FILING

PLEASE TAKE NOTICE that on this date, January 18, 2001, I filed with Dorothy Gunn, Clerk of the Illinois Pollution Control Board, James R. Thompson Center, 100 West Randolph, Suite 11-500, Chicago, IL 60601, the enclosed Memorandum of Law and Supplemental Testimony of the Environmental Law & Policy Center, Friends of the Fox River, Prairie Rivers Network and Sierra Club in the above-captioned proceeding.


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January 18, 2001

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APPENDIX AND EXHIBITS

**Appendix A -Proposed changes to the Agency Proposal to the Board
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Exhibit 1 - Excerpt from "Illinois Water Quality Report 2000"

**Exhibit 2 - Antidegradation Implementation for Water Quality Protection
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**Exhibit 4 - Examples of IEPA Analyses using remote using monitoring stations
for background data in determining reasonable potential to exceed.**

**Exhibit 5 - Letter by Region III U.S. EPA to the Chairman of the West Virginia
Environmental Quality Board, October 25, 2000**

BEFORE THE POLLUTION CONTROL BOARD
OF THE STATE OF ILLINOIS

IN THE MATTER OF:)
)
Revisions to Antidegradation Rules:) R01-13
35 Ill. Adm. Code 302.105, 303.205,)
303.206 and 106.990-106.995)

MEMORANDUM OF LAW AND SUPPLEMENTAL TESTIMONY OF THE
ENVIRONMENTAL LAW AND POLICY CENTER, FRIENDS OF THE
FOX RIVER, PRAIRIE RIVERS NETWORK AND SIERRA CLUB

The Environmental Law and Policy Center of the Midwest, Friends of the Fox River, Prairie Rivers Network and the Illinois Chapter of the Sierra Club (collectively "Environmental Groups") submit this memorandum of law and supplemental testimony in support of adoption by the Board of antidegradation standards that will effectively maintain the chemical, physical and biological integrity of Illinois rivers, streams, lakes and wetlands.

This memorandum provides legal and factual background regarding antidegradation policies and standards, the Environmental Groups' views of the issues that have been raised in this proceeding, and specific proposals for improvements to the antidegradation standard proposed by the Illinois Environmental Protection Agency ("IEPA"). In addition, questions relating to adoption of Agency implementation procedures (Part 354, a preliminary draft of which is attached as Exhibit B to the IEPA Motion for Acceptance, filed August 29, 2000) will be addressed to the extent that the implementation procedures are relevant to this Board proceeding.

I THE CLEAN WATER ACT ANTIDegradation POLICY

The purpose and proper interpretation of the federal antidegradation policy should be viewed in the context of the goals of the 1972 Clean Water Act (“CWA”). The objective of the CWA “is to restore and maintain the chemical, physical and biological integrity of the Nation’s waters.” 33 USC§ 1251(a). In the CWA, Congress set as an interim national goal that “wherever attainable ... water quality which provides for the protection and propagation of fish, shellfish and wildlife and provides for recreation in and on the water be achieved by July 1, 1983.” 33 USC §1251(a)(2). Water quality was to improve not degrade. Congress plainly did not anticipate that large numbers of new discharges and other sources of pollution would be licensed after the passage of the Act as it established *elimination of all discharges* by 1985 as a national goal. 33 USC § 1251(a)(1).

A. Enactment of Federal and Illinois Regulations

The antidegradation policy actually preceded passage of the CWA. As was explained by the United States Environmental Protection Agency (“U.S. EPA”) in the Water Quality Standards Handbook, Second Edition, EPA 823-B-94-0005a (“USEPA Handbook”)¹ :

The first antidegradation policy statement was released on February 8, 1968, by the Secretary of the U.S. Department of Interior. It was included in EPA’s first Water Quality Standards Regulation ... and was slightly refined and re-promulgated as part of the current program regulation published on November 8, 1983 (48 F.R. 51400, 40 CFR 131.12). Antidegradation requirements and methods for implementing those requirements are minimum conditions to be included in a State’s water quality standards. Antidegradation was originally based on the spirit, intent and goals

1. This document is Exhibit A to the Motion for Acceptance, filed in this proceeding by Illinois EPA, August 29, 2000.

of the Act, especially the clause "... restore and maintain the chemical, physical, and biological integrity of the Nation's water" (101(a)) and the provision of 303(a) that made water quality standards under prior law the "starting point" for CWA water quality requirements.²

The original 1968 policy adopted by Interior Secretary Stewart Udall provided :

Waters whose existing quality is better than the established standards as of the date on which such standards become effective will be maintained at their existing high quality. These and other waters of a State will not be lowered in quality unless and until it has been affirmatively demonstrated to the State water pollution control agency and the Department of Interior that such change is justifiable as a result of necessary economic or social development and will not interfere with or become injurious to any assigned uses made of, or presently possible in, such waters. ...

U.S. Dept. Interior Federal Water Pollution Control Administration, Compendium of Dept. of the Interior Statements on Non-degradation of Interstate Water 1-2 (Aug 1968) *reprinted in*, Harleston, John, What is Antidegradation Policy: Does Anyone Know?, 5 S.C. Envtl. L.J. 33, 40 (1996)

Illinois' current nondegradation policy, adopted by the Board in 1972 in PCB 71-14 and now contained at 35 Ill. Adm. Code 302.105, plainly is related to the 1968 federal policy. It states :

[W]aters whose existing quality is better than the established standards at their date of their adoption will be maintained in their present high quality. Such waters will not be lowered in quality unless and until it is affirmatively demonstrated that such change will not interfere with or become injurious to any appropriate beneficial uses made of or presently possible in, such waters and that such change is justifiable as a result of necessary economic or social development.

²The U.S. EPA Antidegradation policy was recognized and codified by Congress in 1987 and 1990 through passage of amendments to the CWA that were codified as 33 USC §1313(d)(4)(B) and 33 USC §1268(c)(2)(A).

In adopting this standard, the Board explained:

This preserves the present prohibition on unnecessary degradation of waters presently of better quality than that required by the [water quality] standards, recognizing that the standards represent not optimum water quality but the worst we are prepared to tolerate if economic conditions so require. In the Matter of Water Quality Standards Revisions, (PCB March 7, 1972) 71-14, p. 11.

B. Clean Water Act Antidegradation Requirements and the Established Illinois Regulations

The regulation that states the federal antidegradation policy, 40 CFR 131.12, requires that states provide essentially three types of protection for their waters. Following this regulation, the standards adopted by the Board in this proceeding must, "at a minimum, be consistent with" the following:

(1) Maintenance of Existing Uses (Tier I)

The first requirement for an adequate state antidegradation policy is maintenance of existing uses:

Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected. 40 CFR §131.12(a)(1) ³

Section 4.42 of the U.S. EPA Water Quality Standards Handbook explains:

No activity is allowable under the antidegradation policy which would partially or completely eliminate any existing use whether or not that use is designated in a State's water quality standards.... Non-aberrational resident species must be protected, even if not prevalent in number or importance. Water quality should be such that it results in no mortality and no significant growth or reproductive impairment

³This point is repeated in 40 CFR §131.12(a)(2) where it is emphasized that, even where accommodation of important economic or social development necessitates allowing new pollution, "the State shall assure water quality adequate to protect existing uses fully."

of resident species. Any lowering of water quality below this full level of protection is not allowed. (p. 4-5)

The Environmental Groups believe strongly that, with the assistance of the Illinois Department of Natural Resources ("IDNR"), IEPA must make greater efforts to assure that new or increased discharges of pollutants will not harm aquatic life in receiving waters. Although there are other provisions which protect existing uses from some threats, antidegradation has a critical role to play in protecting existing uses of Illinois waters, including protection of indigenous aquatic life.⁴

⁴Another way that existing uses are protected is to only allow discharges of pollutants if the discharges will not cause a violation of state water quality standards. Water quality standards are supposed to be protective of aquatic life and other existing uses. 40 CFR 131.10. In Illinois, water quality standards include the numeric and narrative standards of 35 Ill. Adm. Code 302.

No National Pollutant Discharge Elimination System ("NPDES") permit may be granted which allows discharges that may cause or contribute to violations of water quality standards. 40 CFR §122.44(d), which implements CWA Section 301(b)(1)(C), explicitly requires that NPDES permits include restrictions "necessary to achieve water quality standards ... including State narrative criteria." American Paper Institute v. U.S. Environmental Protection Agency, 996 F.2d 346, 350 (D.C. Cir. 1993). Permit "[l]imitations must control all pollutants or pollutant parameters (either conventional, nonconventional or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have a reasonable potential to cause, or contribute to an excursion above any State water quality standard, including state narrative criteria for water quality." 40 CFR §122.44(d)(1)(i); see also, 40 CFR 122.4(d) and (i). Illinois regulations (35 Ill. Adm. Code 304.105) require that any effluent or combination of effluents be regulated to insure that there is compliance with all applicable water quality standards in all waters that may be affected by the discharge. In the Matter of: Petition of Commonwealth Edison Company for Adjusted Standard from 35 Ill. Adm. Code 302.211(d) and (e), AS 96-10 (PCB, October 3, 1996)

Realistically, enforcement of water quality standards is not sufficient. Many Illinois numeric standards are far from being protective. This situation must be addressed, but Illinois cannot hope to develop protective standards for the thousands of chemicals that may harm Illinois waters. Moreover, water quality standards generally are not designed to be protective of all species. They are based on protecting 95% of the individuals of the small number of, hopefully representative, species tested. (Frevort Testimony, Dec. 6, 2000, Tr. 24-5)

Generally, proper protection of resident species requires knowledge of the biology of the receiving waters sufficient to determine if particularly sensitive species are present. Individualized consideration of whether the proposed new pollution will affect the species present is also normally necessary. Protection of recreational and other uses also often requires individualized treatment.

The antidegradation standard for protecting existing uses is particularly important with regard to activities that harm water quality that generally are not subject to NPDES permitting, such as stream channelization, filling wetlands and dam construction. These activities are subject to state oversight through the Section 401, 33 USC §1341, certification process which prohibits the Corps of Engineers from issuing a permit to fill waters of the United States unless the state has certified that the activity will not violate state water quality standards, including its antidegradation standard. See, PUD No.1 of Jefferson County v. Washington Dept. of Ecology, 511 U.S. 700 (1994).

The latest Illinois Water Quality Report states that hydromodification and habitat modification are responsible for the impairment of over 3000 miles of Illinois' rivers and streams. (Ex.1) Nonetheless, new permit requests for permission to destroy wetlands and channelize streams continue to be submitted and approved by the Corps and IEPA. Illinois must work more rigorously to assure that projects that threaten to degrade the biological or physical integrity of Illinois waters are denied 401 certification.

(2) Allowing Only Degradation Necessary to Accommodate Important Economic or Social Development (Tier II)

40 CFR 131.12(a)(2) provides:

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. Further, the State shall assure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control.

The central purpose of this provision is to preserve water quality to the extent possible. As was stated by the Board in 1972 in adopting the present "nondegradation" standard, the numeric and narrative standards "do not represent optimum water quality but the worst we are prepared to tolerate if economic conditions so require." (*Supra* p. 4)

To put the matter another way, the assimilation capacity of a water is a public resource that should not be frittered away. During the November hearing, Toby Frevert explained:

[T]he underpinnings of this whole program is that additional - - that residual capacity of the stream to accept waste is, indeed, a public resource. And if that public resource is allocated to an individual entity, then there ought to be some public role playing in the allocation of that resource to that individual entity and there ought to be some indication of why that is generally consistent with the good of the public at large. (Frevert Testimony, Nov. 17, 2000, Tr. 35-6)

IEPA's Frevert elaborated on this concept later during the November hearing:

The antidegradation policy at the federal level basically says [that] any increment of water quality better than what you define as the floor necessary to protect that existing use is a public resource, and that public resource shall be allocated to other people consistent with the general intent of the public at large and their overall social and economic goals. (Tr.104-05)

The amount of assimilative capacity of a water used by one activity is assimilative capacity that cannot be used by another activity. Pollution unnecessarily allowed to one new or increased discharger may stop important social or economic development that cannot take place because the required capacity has been squandered.

A few additional points should be made with regard to this provision. First, the regulation is not limited in its scope to waters that are of unique or exceptional "high quality." The regulation speaks rather of waters with quality that "exceeds levels necessary" to protect uses. Waters need not exceed this level very much. D- (as well as A+) members of the class of waters are covered because they pass standards, even if only just barely.

Thus, although there are numerous instances of this provision being referred to in letters and guidance as one protecting "high quality" waters, speaking of this regulation as governing "high quality" waters is really a misnomer. Every water that is meeting any of the water quality parameters adequate to protect existing or designated uses is covered. (Frevert Testimony, Nov. 17, 2000, Tr. 118, 122-3)

Second, the waters must be looked at on a parameter-by-parameter basis. (Frevert Testimony, Nov. 17, 2000, Tr.122-24; See also, U.S. EPA Handbook p.4-8 B "EPA believes that its antidegradation policy should be interpreted on a pollutant-by-pollutant and waterbody-by-waterbody basis") To repeat Mr. Frevert's example, the fact a water is failing to meet the ammonia standard does not mean that the water is not protected from unnecessary new loadings of copper.⁵

⁵ Under these circumstances, the water requires a TMDL for ammonia under Section 303(d) of the Act, 33 USC §1313(d), and no new discharge of ammonia can be permitted unless it is at such a low concentration that the ambient level of ammonia actually falls. (see Frevert Testimony, Nov. 17, 2000, Tr. 126.)

The Nation certainly will not meet its goal of restoring and maintaining the chemical integrity of its waters if it allows unnecessary new loadings of a pollutant just because the water is violating standards for another pollutant.

Finally, at a minimum, for lowering of water quality to be “necessary to accommodate important economic or social development,” it must be the case that the development cannot practicably go forward without allowing lower water quality.⁶ In most cases, proper consideration of alternatives will require estimating the costs of the various manufacturing processes and treatment technologies that would allow the expansion or other development to proceed without, or with less, lowering of water quality.

(3) Protection of Outstanding Resource Waters (Tier III)

The third major provision of 40 CFR 131.12 (a)(3) provides:

(3) Where high quality waters constitute an outstanding National resource, such as waters of National and State parks and wildlife refuges and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected.

This provision for Outstanding National Resource Waters essentially requires states to establish provisions for the state and its citizens to declare that the assimilative capacity of certain waters is off limits for new loadings. The public must be allowed to reserve water quality for the health of the environment and itself.

⁶The need for an alternatives analysis is well stated in the antidegradation implementation rules that have been adopted by the State of South Carolina. (Ex. 2 at p. 4)

II. THE AGENCY PROPOSAL

A. New Illinois Regulations are Needed.

Illinois currently has a “nondegradation” policy patterned on the 1968 federal policy but Illinois’ regulations do not comply with current federal law. The federal regulations require that a proper state antidegradation standard contain more safeguards than are contained in Illinois’ nondegradation policy. Most obviously, 40 CFR 131.12(a)(3) requires that states provide for designation of “outstanding National resource” waters that will be protected from any degradation. Other of the principles contained in the federal regulations are not spelled out clearly in the current Illinois nondegradation policy.

Most seriously, 40 CFR 131.12(a) requires each state to “identify the methods for implementing” the state’s antidegradation policy. Further, the adopted antidegradation policy, together with implementation rules, must be presented to U.S. EPA for approval. 33 USC §1313(c). Illinois has not properly adopted antidegradation implementation procedures under either state or federal law.⁷ As a consequence, Illinois “is essentially on notice that the Illinois program is deficient in that we don’t have a fully promulgated federally approved NPDES implementation procedure to deal with the antidegradation standard.” (Frevert Testimony, Dec. 6, 2000, Tr. 130)

⁷To the extent that it has been following rules in making antidegradation decisions, IEPA has been operating under a 1992 document referred to as a “draft Agency guidance document” that is mentioned in various documents in which IEPA has purported to perform an antidegradation analysis. See e.g. Ex. 3 . This document has never been published pursuant to the Illinois Administrative Procedure Act and has not been approved by U.S. EPA. The unpublished draft guidance is, thus, invalid under Illinois law, see Senn Park Nursing Center v. Miller, 104 Ill.2d 169, 470 N.E.2d 1029 (1984), and federal law. see Alaska Clean Water Alliance v. Clark, 27 ELR 21330, 45 ERC (BNA) 1664 (W.D. Wash.1997).

B. Current IEPA Application of Antidegradation Principles in Permitting Decisions Is Flawed

IEPA's Toby Frevert testified that little was done to enforce the nondegradation policy for 15 years. (November 17, 2000, Tr. 26-7) Frevert further testified that, more recently, IEPA has applied antidegradation principles in considering permits but explained that the Agency is not currently documenting its antidegradation decisions adequately. (November 17, 2000, Tr. 34, 36)⁸

This is not the place to debate specific past or current Agency permits or permit writing proceedings. Still, the Environmental Groups do not want it misunderstood by the Board or others that we believe that IEPA has applied federal antidegradation policy or 35 Ill. Adm. Code 302.105 properly or legally even in recent permitting decisions. IEPA has sometimes failed, even very recently, to assure that existing uses are protected and has often failed to make any real effort to determine if new or increased pollution of waters now meeting standards is necessary to accommodate important economic or social development.⁹

The importance, then, of these proceedings should not be underestimated. While the current Illinois regulations incorporate many of the principles under consideration here, IEPA implementation of the current Illinois nondegradation standard has been very inconsistent. Also,

⁸Other parties have suggested to the Board that current Agency practice is legally proper and acceptable. We strongly disagree.

⁹For example, the perfunctory antidegradation analyses contained in Ex. 3 fail to investigate and inventory the existing uses of the receiving waters or consider seriously the potential impact of the proposed new discharges. The presence of endangered species was overlooked in several of these analyses. The analyses rely on pronouncements of dubious validity without reference to scientific information or Agency studies determining facts regarding existing uses. The cumulative effect of the new pollution under consideration with that of other discharges is not analyzed. These analyses also fail to consider any manufacturing or treatment alternatives to allowing the new discharge. In several cases, increased loading of pollutants for which there are well-known control measures (e.g. phosphorus), have been allowed without consideration of the costs and benefits of implementing controls.

IEPA, permit applicants and the public have been in the position of having to play a game without proper written rules. The standards that come out of this proceeding and the implementing procedures adopted by IEPA will have a major effect on Illinois NPDES permits and 401 certifications.

C. Overview of the IEPA Proposal to the Board

In 1998, the Agency began a series of public information meetings and workgroup conferences designed to develop new antidegradation standards for Illinois. The Agency began this process because of its recognition that new regulations are federally mandated. (Frevert Testimony, Nov. 17, 2000, Tr. 29) ¹⁰ After two years of discussions involving several drafts and eight conferences, the Agency filed its proposed standards with the Board in August 2000. (Frevert Testimony, Nov. 17, 2000, Tr. 9, 14)

Leaving aside wholly technical changes, the Agency proposal breaks down into three major parts, the second of which addresses a number of different topics:

Proposed Sections 106.990 through 106.995 deal with petitions and proceedings for designation of "Outstanding Resource Waters"

Proposed Section 302.105 has five subsections -

Subsection (a) addresses protection of existing uses

Subsection (b) sets forth the standards for protection of waters designated as ORWs

¹⁰It has been suggested during these proceedings that a 1997 threat by certain environmental organizations, including two of the organizations joining in this memorandum, to sue US EPA to force it to write antidegradation regulations for Illinois may have moved IEPA to improve Illinois antidegradation standards and implementation procedures. This may be true but is irrelevant to this proceeding. That IEPA required some persuasion to initiate this process does not bear on the merits of what it has proposed.

Subsection (c) addresses the demonstration that must be made before permission is given to increase pollutant loadings to waters now having water quality better than the minimum necessary to meet established water quality standards.

Subsection (d) sets forth certain activities not subject to an antidegradation demonstration, and

Subsection (e) makes a clarification regarding antidegradation standards for Lake Michigan.

Proposed Sections 303.205 and 303.206 define "Outstanding Resource Waters" and provide for a place in the Code for listing waters designated as such.

Attached to the Agency's proposed standards (as Exhibit B) are draft Agency implementation rules (Part 354). The Agency is not submitting the draft implementation procedures for formal consideration by the Board but wants the Board to be aware of these draft procedures in considering the proposed standards. (Frevert Testimony, Nov. 17, 2000, Tr. 20, 24)

III THE BOARD SHOULD ADOPT RULES THAT ASSURE THAT NPDES PERMITS AND 401 CERTIFICATIONS MAINTAIN WATER QUALITY.

The parties that are participating in this proceeding agree on much. Still, there are a number of issues that must be addressed by the Board.

A. The Board Should Not Fashion a "Significance" Threshold or Create a "De Minimis" Exemption from Review

Much of the testimony in the hearings held in these proceedings has related to the general issue of how to address relatively minor increases in pollution loadings to waters that have better water quality than the bare minimum, the Tier II protections.¹¹ It has been suggested that very small

¹¹ "Significance" should not be an issue at all as to protection of existing uses. New pollution that harms existing uses obviously can never be allowed as insignificant or de minimis.

increased loadings do not really qualify as “degradation.”¹² It has also been suggested that an analysis of alternatives to allowing new pollution or of the importance of the proposed activity for economic or social development is not called for as to “insignificant” pollution increases. Very similarly, it has been proposed that an exemption from having to do an antidegradation demonstration should be allowed for “de minimis” new pollution.

The Environmental Groups believe that basically all NPDES permits or 401 certifications allowing for new or increased loadings should be subject to at least some antidegradation review.¹³ All new loadings constitute degradation and are significant. Further, the Board should not attempt to carve out any exception from antidegradation analysis for “minor” or “de minimis” degradation. Alternatives always should be at least briefly considered and the economic and social value of the activity for which the new pollution is needed should be confirmed, although in many cases this will be obvious.¹⁴

However, the differences between the parties to these proceedings should not be exaggerated. No one claims that small non-toxic increases in loadings should be treated in the same manner as large or highly toxic increases. The issue is whether some types of degradation are so small that they

¹²As a matter of law, any detectable increase in pollutants constitutes degradation. Columbus & Franklin County Metropolitan Park District v. Shank, 65 Ohio St. 86, 600 N.E.2d 1042, 1055 (Ohio 1992).

¹³ The Environmental Groups do not object to the Agency’s proposed subsections 302.105 (d) (2) through (5) and have only a clarifying word change proposal for 302.105(d)(1). The activities specified as not being subject to antidegradation review by (d)(3) and (d)(4) are given stringent review under other provisions of law. The activities specified as not subject to review by proposed 302.105(d)(1), (2) and (5) inherently have only very temporary effects.

¹⁴The Environmental Groups do not object to the listing of benefits that might be used to justify necessary degradation listed in proposed 354.103(c)(2)-(4). Proposed 354.103(c)(1) lists as a “benefit” a change that may or may not be beneficial depending on the particular circumstances of the unsewered community and the proposed centralized system.

should be allowed without considering alternatives at all, without considering whether the social or economic development they promote is important, or given a complete pass from antidegradation review.

For the following reasons, the Board should not attempt to fashion any “significance” limitation or “de minimis” exception from the requirement of at least some antidegradation review before new loadings are permitted:

1. Every increase should be given at least some review. - Little pollution sources add up. No unnecessary pollution should be allowed in the state’s waters. “One molecule of dioxin in the Mississippi River is significant if it is avoidable at no cost.” (Frevort Testimony, Dec. 6, 2000, Tr. 124).

Put another way, the requirement that new pollution be allowed only if it is necessary to accommodate important economic or social development means that pollution prevention must be considered before new pollution is allowed. Numerous state laws and Board decisions strongly support broad pollution prevention programs. E.g. 415 ILCS 85/1 et seq.; 415 ILCS 115/1 et seq.; In Matter of Proposed Amendments to 35 Ill. Adm. Code Subtitle C, 92-8 (April 4, 1996) p.6 (“Pollution prevention is undisputably one of the essential elements in maintaining environmental quality”). Illinois waters certainly are deserving of such pollution prevention efforts.

2. There is no reason under the proposed regulatory scheme to exempt any permits for increases in pollution from receiving some level of review. - It has been argued that a good reason not to require an antidegradation demonstration for a permitting decision involving a small new loading is that such an analysis will cost the Agency and the discharger much time and money. Under some state antidegradation schemes it might well be the case that every antidegradation

analysis involves great cost and expense, but that is not the sort of system that is being proposed here. The Agency's proposal does not contain exemptions for small or insignificant increases in pollution, but it also contains very little in the way of minimum procedures for conducting the antidegradation analyses. The cost for many antidegradation analyses will be insignificant.

The Agency has decided to opt for flexibility that shapes every antidegradation analysis to the particular facts instead of trying to set down in advance rules that would describe the extent of analysis needed. While refusing to say that certain activities would be exempt from antidegradation analysis under the proposed standards and rules, Mr. Frevert repeatedly testified that the activities might get only a very abbreviated analysis. (Frevert Testimony Nov.17, 2000, Tr. 61-2, 73, 79-80, 99, 110-11, 127-28) The level of antidegradation demonstration required under the proposal will "vary from case to case." (Tr. 72) "We have got a sliding scale here that intends to target our resources and your resources where the significance of the decision was more apparent and back off in those cases where we know the relative significance still warrants some review, but it warrants a lesser review." (Tr. 73-4) In some cases, the antidegradation demonstration will consist of a few minutes consideration of the proposed new loading by the Agency followed by the creation of a document by the Agency describing its reasoning for the public. (Frevert Testimony, Nov. 17 2000, Tr. 99, 118, 128, 197, Dec. 6, 2000 Tr. 145)

Frankly, the Environmental Groups have considerable misgivings about the lack of minimum procedural safeguards prescribed by the draft rules. Should not the standards or rules require a bioassay of the receiving water always before new pollution is allowed? Should it not be explicitly required that antidegradation analyses cost out all possible alternatives to make sure that there are no feasible alternatives to allowing the level of new pollution requested? Should not rules

require a signed certification from an environmental professional attesting to all of the facts relevant to the antidegradation demonstration? Antidegradation demonstrations for major new facilities, for toxic, endocrine disrupting or bio-accumulative pollution, and for new pollution going into streams containing rare species definitely should include such procedures and safeguards, as well as others.

There is a serious danger under these proposed regulations that the Agency will give quick and dirty treatment to cases that require a full demonstration by the applicant. Indeed, the Environmental Groups submit that it is much more likely that the Agency will give abbreviated treatment to some significant new loadings or hydrological modifications than that the Agency will subject permit applicants to serious delay or cost who are seeking permission for tiny increases in loadings of pollutants. Nonetheless, we are willing to try for now the "case by case" approach being proposed by the Agency, recognizing that the other side of having some antidegradation analysis given to all degradation is that there is only a very low minimum level of analysis that is always required.

3. There is no good way to define "significance" or carve out a de minimis exemption. - The Agency's flexible approach of treating each case of degradation on a case by case basis would make less sense if there were an easy way to determine in advance what cases are most important and most worthy of a more detailed antidegradation analysis. There is not.

Most of the de minimis tests that have been suggested allow degradation freely if it is no more than a certain percentage of the remaining assimilation capacity. For example, if the water quality standard for a particular pollutant X is 10 units/liter and the current level in the water is 2 units per liter, 8 units per liter of assimilation capacity remain. Parties who argue for a de minimis test of 10% of remaining capacity ask that an Applicant A seeking a permit that would load the water

up to .8 additional units of X per liter should not have to do an antidegradation demonstration. If a permit giving .8 is granted, another new loading that would cause the stream to be degraded up to .72 units per liter could be permitted without an antidegradation demonstration.

There are a large number of reasons why any such proposal should be rejected. First, unnecessary degradation should not be allowed simply because it is coming in relatively small steps. Further, the mere fact that Applicant A asked first to use this assimilative capacity is no reason to think that A needs it or that A's activity has any economic or social value. By giving A this for nothing, less capacity remains for an Applicant B who might actually need it and whose activities might be very important for the community. Further, Applicant A can keep increasing its discharge by 10% of the remaining assimilation capacity as often as it can apply for a new permit modification. By allowing Applicant A to take numerous bites, water quality can be degraded to the point that it is just barely meeting standards and existing uses are threatened, without Applicant A ever being required to do an antidegradation demonstration.

A slightly more sophisticated exemption could be written that limits use of the percentage allowance to increases under a certain fraction of the total assimilation capacity. For example, a state might allow degradation, without a demonstration of need, up to 10% of the assimilation capacity as long as 30% of the total capacity remains. To use the previous example, applicants would be allowed to grab portions of the remaining assimilation capacity in 10% increments up to the point that the water has 7 units of X per liter. This more sophisticated proposal is less horrible than allowing everything to be eaten in small bites. At least something is saved for pollution that is really necessary. But why should the public give any of its scarce resource, clean water, to someone who has not shown that the public will benefit?

Moreover, focusing on assimilation capacity introduces other problems for environmental policy and fairness and encourages unnecessary and dangerous discharges into large water bodies.

Allowing an unnecessary discharge of 10% (or even 5%) of the assimilation capacity of the Mississippi River would allow a huge unnecessary new discharge of many pollutants. Also, what should be done regarding persistent pollutants, bioaccumulative pollutants, and pollutants for which there are no numeric standards but there exists credible evidence that they disrupt hormones or are otherwise harmful to human or aquatic life?

4. Practical considerations do not support requiring a determination of significance or establishing a de minimis exemption - It has been argued that minor increased loadings should not be subjected to an antidegradation analysis due to practical considerations. But allowing totally unjustified new pollution up to some arbitrarily drawn level is a not good for the environment, state government, or even for many dischargers.

A limitation or exception from the antidegradation demonstration requirement does not help the Agency or applicants at all if it is as hard to determine whether something is “insignificant” or fits into an exemption, as it is to do an antidegradation demonstration. (Frevert Testimony, Nov. 17, 2000, Tr. 82-3, 133) A proper analysis of whether something is significant or de minimis involves gauging at least seven factors:

- the assimilation capacity of the stream that will be removed by the proposed new pollution
- the assimilation capacity of the stream that will remain if the new pollution is allowed
- the total amount of the discharge
- the sensitivity and rarity of the aquatic species that might be affected
- the toxicity and scientific uncertainty associated with the pollutants involved

- the likelihood that others will need to use the requested assimilation capacity and
- the ease with which potential alternatives might be identified.¹⁵

It is as easy to perform and document a simple antidegradation analysis as it is to weigh these factors and document a decision that the new loading is insignificant.

American Bottoms, through its expert, Robin L. Garibay, REM, testified in the December hearing that it is not difficult to fashion a significance test or de minimis exemption that is convenient and easy to apply. American Bottoms correctly points out that the Agency already must calculate the “reasonable potential to exceed” water quality standards as part of permitting.¹⁶ From this calculation, American Bottoms claims that the Agency can easily determine the percentage of the remaining assimilation capacity that the applicant seeks to use. In American Bottom’s view, if the Board adopts a significance test or de minimis exception that simply focuses on percentage of assimilation capacity requested, the Agency and permit applicants will have a simple way of avoiding having to do many antidegradation demonstrations.

The Environmental Groups agree that the type of test proposed by American Bottoms is not impossible to apply.¹⁷ In fact, it is far too simple. It is so simple it allows gaming the system, treats

¹⁵Most of these factors were discussed by Mr. Frevert. (Nov. 17, 2000, Tr. 73, 76-77)

¹⁶The Agency has no published procedures for conducting these types of analyses although they are needed. See, 40 CFR 122.44(d)(1)(ii), (iii), (v) and (vi).

¹⁷It is not in practice nearly as simple as was suggested. In practice, determining the “reasonable potential to exceed” requires extrapolation from inadequate data and application of a lot of assumptions. Because of the scarcity of ambient water quality monitoring sites, Illinois permit writers often find it necessary to guess at critical background conditions based on monitoring sites that are many miles upstream of the proposed discharge and may even be on a different stream. (Ex. 4) Assumptions are made about stream and effluent flows. Moreover, many Illinois water quality standards simply are not protective. Estimates of assimilation capacity are worthless if they are based on water quality standards that are far less protective than that recommended by the federal criteria.

all waters alike no matter what rare or sensitive species are in them, ignores the persistence or scientifically uncertain nature of pollutants, treats conventional and bioaccumulative pollutants alike, overly relies on the protectiveness of the water quality standards, ignores other potential demands on the remaining capacity, and allows huge new discharges without any showing of necessity as long as the discharger can find a big enough water in which to dump its waste water.

The example given of how a de minimis exemption can work actually shows why no such exemption should be accepted. In her testimony, Ms. Garibay discussed a project she worked on in Indiana:

Knowing that the antidegradation demonstration process can be cumbersome, time-consuming, and more importantly for [Ms. Garibay's client] unpredictable in outcome, part of the overall project was to manage the wastewater to assure that the effluent quality would be at levels below the well-defined de minimis concept in this state. An assessment of the proposed loading increased to show that the impact [on] the receiving stream would be below ten percent of the unused capacity was presented to the State Environmental Agency, and it was presented as part of the permit modification application.

So the project was engineered to assure that the discharge level would be less than six parts per billion for lead. This was not the most cost effective way for the facility to manage their wastewater, but in managing their wastewater this way they knew that they were going to have a de minimis - - they would fit the definition of de minimis and the project could move forward in a timely fashion. (Dec. 6, 2000, Tr. 101-02)

The Environmental Groups have no knowledge of this particular project and have no reason to doubt that Ms. Garibay did what was best under the circumstances. However, the sort of regulatory system and engineering designed to fit into an arbitrary legal exemption described by Ms. Garibay is exactly what the Board should eschew. Illinois should not create a process that is

unnecessarily “cumbersome”, “time-consuming,” or “unpredictable” and then attempt to offset those flaws through creation of arbitrary exceptions that can be exploited by those with clever engineers.

Fortunately, there is nothing in the Agency’s proposal that would necessarily make Illinois’ system operate in a cumbersome or unpredictable manner. More critically, the Board should not write definitions or exceptions into the rules which encourage applicants to engineer their projects to avoid an antidegradation analysis. Again, we do not know what actually happened or should have happened in the project to which Ms. Garibay refers. Still, her description could well describe an instance where an applicant sacrificed using the most cost-effective way of handling its waste and otherwise skewed its engineering in order to fit into an arbitrary exemption. The applicant may thereby have been allowed to create pollution that would have been avoided had alternatives been considered. It is also entirely possible that additional air pollution or solid waste will be created by engineering to fit into an arbitrarily drawn de minimis exception. This is the very opposite of what sound pollution prevention promotes.

5. The board must exercise great care before adopting antidegradation provisions from other states and regions. - Various examples of regulations from other states (Hearing Exhibits 20-22) have been submitted to the Board that contain various significance tests or de minimis exemptions. It has been suggested that Illinois should adopt exceptions from other states and that, if those states were approved by U.S. EPA, U.S. EPA might approve broad exceptions in Illinois rules.¹⁸

¹⁸The U.S. EPA Region VIII Guidance, Antidegradation Implementation, has also been presented. (Hearing Exhibit 1) This guidance indicates that some sort of “significance” provision in a state antidegradation rule would be acceptable to U.S. EPA, at least in Region 8. But the threshold in the Region VIII Guidance for significance is low (less than 5% of assimilation capacity) and the Guidance provides that some antidegradation analysis of alternatives should be done even for degradations found to be insignificant. (Hearing Exhibit. 1, p. 18)

This line of argument should be approached with great caution by the Board. First, we trust that the Board is trying to do what is best for Illinois and its environment, rather than trying to create the weakest program that U.S. EPA can tolerate.

Second, portions of rules from other states should not be adopted without looking at the overall programs established by the rules. A state that requires that elaborate showings be made for every antidegradation demonstration that is required needs exceptions much more than Illinois should need under its flexible “case by case,” “sliding scale” approach.

Finally, it is clear that providing broad exceptions from antidegradation demonstration requirements is one of the ways that a state policy can run afoul of U. S. EPA. One of the sets of rules that was presented to the Board was those of West Virginia. (Hearing Exhibit 22) We do not know the details of what U.S. EPA found objectionable in the West Virginia rules but it is known that a letter was sent by Region III of U.S. EPA to the West Virginia Environmental Quality Board rejecting West Virginia’s proposed procedures because of their “unduly narrow scope of Tier II review, multiple exemptions to such review, and the failure to achieve the ‘highest statutory and regulatory’ requirements for all sources.” (Ex. 5)

B The Occasions on which an Antidegradation Demonstration Is Required

There has been concern expressed regarding the possibility that an antidegradation analysis might be required every time a discharger’s loading increases even though the increase is covered by an existing permit. For example, it is feared that a discharger that has a permit to discharge 1000 lbs. per day of a pollutant but that has not discharged more than 500 lbs per day during the first year of its permit, might be required to demonstrate a need to discharge 900 lbs per day before it may use its permit to do so.

But no one has argued that an antidegradation analysis is needed on every occasion that a discharger wishes to discharge more than it did during some previous period. NPDES permits generally last five years and normally the discharger may discharge the full amount that its permit allows during the life of the permit, subject to the permit conditions and the general rules against causing a violation of water quality standards.¹⁹

An interesting issue that has not been discussed is what should be done regarding permit renewals that do not propose new loadings. Most current NPDES permits were issued without anything like a proper antidegradation demonstration although all permits for new loadings issued since November 28, 1975 should have had one. (See USEPA Handbook 4-1, 4-3) Moreover, a permit to pollute, even issued after a proper antidegradation demonstration has been performed, does not give the permittee a property right to use of the receiving water any more than being allowed to camp in a state park gives the camper a right to permanently settle at the campsite. See 40 CFR §122.5(b).

The fact that a permit was necessary to accommodate social or economic development for one permit period does not necessarily mean that it is necessary for the next permit period. Technology may have changed to make the permitted discharge less necessary. Also, the opportunity cost of allowing the discharger to use the assimilation capacity may have increased because, for example, another party that would create far more social or economic benefit needs to

¹⁹However, two significant points regarding permitting emerge from the fact that a permit holder can discharge the full amount allowed by its permit without further public consideration. First, the Agency must be careful to attach loading limits to all pollutants that will be discharged. Second, the Agency, the Board and the public must assume that the discharger will discharge as much as the permit allows. It is no excuse for an inadequately restricted permit that the discharger will probably not discharge as much as is permitted.

use it. Finally, it should be kept in mind that the nation is trying to eliminate discharges of pollutants into the nation's waters (33 USC §1251(a)(1)), not permanently license them.

For the time being given available resources, the answer as to renewals is probably to presume that any prior antidegradation analysis that has been done is still applicable in the absence of information that it has become outdated. However, the Agency, other dischargers who want to use the assimilative capacity, and members of the public should be allowed to raise the need for a new antidegradation analysis as part of the renewal process.

C. The Application and Supporting Data to be Required of Permit Applicants

There has also been much concern expressed by representatives of the regulated community that they will be forced to obtain much new information to even apply for a permit for a new or increased discharge. These concerns are largely directed at the draft Agency implementation procedures (Part 354), which the Board may decide not to address.

First, the Environmental Groups believe strongly that the draft implementation procedures are correct in generally requiring some research into the biological resources of the water to receive the new or increased discharge. To protect resident species, it is necessary in the case of each new or expanded discharge to consider whether the specific discharge proposed will affect an existing use. While shortcuts will be possible in cases where there have been recent studies of the receiving water by a state agency or other qualified body, consideration of possible effects on resident species will often require a new survey of what is living in the receiving waters.²⁰ Protection of existing uses

20. It is not enough to rely on a grading of the receiving water made using the biological stream classification system described in Hearing Exhibit 15. The fact that the stream as a whole only rates a "C" grade does not prove that the area to receive the new discharge does not contain valuable fish or mussels or other existing uses that must be protected.

will often also require a chemical-by-chemical and whole effluent toxicity analysis of the effects of the proposed discharge.

However, none of the forgoing means that all applicants for increased discharges will be required to conduct expensive studies or prepare needless lengthy reports.²¹ Applicants are allowed to talk to the Agency to learn what, if any, new information is necessary. Indeed they are encouraged to do so. See proposed 354.104(a). The Agency is not going to require permit applicants to collect data or information that the Agency already has (Frevert Testimony, Nov. 17, 2000, Tr. 62, 72, 99, 155, 195) although the Agency will present the essential facts on which it relied in its written antidegradation analysis. See proposed 354.104(b)(2).

Further, it should be mentioned that the Illinois Department of Natural Resources has an important role to play in the implementation of proper antidegradation rules. IDNR is statutorily required to review permits for their potential effect on state endangered species and possesses much of the biological expertise in the state. The appropriate officials at IDNR should also review draft NPDES permits and 401 certifications to assure that resident species are not being overlooked in the analysis and that the potential of the proposed discharge to harm resident species is fully considered.²²

The final implementation procedures must clearly write IDNR into the process. Copies of applications for permits for new pollution should be sent to IDNR. Any studies of the draft permit created by IDNR should be made available to the public during the public review period.

²¹Such as those that some would impose on citizen groups seeking ORW designations.

²²IDNR is already performing such reviews although its responsibilities in this regard have not been explicitly recognized in the rules. IDNR's role should be set forth in the rules although it is, of course, IEPA's responsibility to decide whether to issue the permit (subject to IPCB review).

D. The Board Should Eliminate or Limit the Exception for General Permits

General permits pose a special problem for antidegradation policy. This problem could be addressed by the Board in this proceeding by striking the Agency's proposed exemption for general permits (proposed 302.105(d)(6)) or by limiting the Agency's proposed exemption to assure that particularly biologically significant waters, including waters harboring rare or sensitive species, are not affected. The Board might also order the reopening of the existing general permits based on the changes to water quality standards that will be effected by the Board through this proceeding or open a subdocket that would address general permits.

The Environmental Groups acknowledge that use of general permits is a significant administrative convenience for the Agency. They may be a bit too convenient. The public receives no notice of activities taking place under a general permit. (McSwiggen Testimony, Nov. 17, 2000, Tr. 184) The level of oversight exercised by the Agency over general permits and enforcement of general permit conditions appears to be very limited.²³ At the same time, the types of pollution covered by general permits, including industrial storm water (Hearing Exhibit 8), construction run-off (Hearing Exhibit 9) and sewerage effluent discharge from lagoons (Hearing Ex. 11) clearly can have a very serious effect on the health on many of the Nation's waters. See, Federal Register Vol. 63, No. 6 January 9, 1998, 1536, 1539-41 (effects of industrial and construction storm water discussed).

²³We have been told that generally no one at the Agency reviews the industrial or construction storm water pollution prevention plans required by NPDES permits ILR00 and ILR10. The Agency does not even receive a copy of the plans. Enforcement of the other conditions in the general permits cannot be sufficient given the Agency's limited resources allocated for this purpose.

Three of the four general permits that have been issued are not due to expire until 2003. The Agency's assurance that it will probably not allow use of a general permit where it might affect a water designated as an Outstanding Resource Water (Frevort Testimony, Nov. 17, 2000, Tr. 188) is of little comfort given that no such waters have yet been designated. Further, while something vaguely akin to some antidegradation principles may have been applied generically when the current general permits were written in 1997 and 1998, the Agency and the public certainly did not give the problem the amount of thought warranted. In some cases, particularly for activities near streams containing endangered or sensitive species, much stronger controls against pollution are needed than are generally required by the conditions in the current general permits.

At a minimum, proposed section 302.105(d)(6) should be revised to make clear that the Agency should authorize no general permits for discharges to waters that are particularly biologically significant. IDNR may be able to quickly identify most waters for which this limitation on the use of general permits should apply.

E. Citizens Seeking Outstanding National Resource Water Designations Should not be Burdened Unduly

Another group of issues to be resolved by the Board relates to designation of "Outstanding National Resource Waters" or, using the IEPA's proposed terminology, "Outstanding Resource Waters" ("ORWs").²⁴ These issues principally relate to the cost of giving notice and the burdens to be placed on petitioners for an ORW designation.

²⁴The Agency feels it should not use the word "National" as to a designation made by the state. Perhaps the Agency is correct that the term selected by U.S. EPA in 40 CFR 131.12(a)(3) was ill chosen. Nonetheless, there seems some benefit to using the U.S. EPA terminology to aid understanding the purpose of the Illinois category.

The Environmental Groups believe that they should not be held to notice or proof requirements in seeking to protect water quality that are not applied to persons seeking to degrade it. While we have no objection to providing reasonable notice of ORW petitions, citizens should not be asked to send out huge numbers of bulky petitions to large numbers of people and entities. Some of the persons to whom notice is to be given under the proposed rules will be very hard even to identify.

Similarly, while citizens can be asked to state the likely economic effects of a proposed designation based on what they can easily learn of development plans, they cannot reasonably be asked to read the minds of potential developers or produce a Peat Marwick study proving the economic advantages of the designation.²⁵ Petitioners for ORW designations should show the designation is justified. If reasonable notice of a proposed designation is given, persons with development plans can be expected to let the Board know of any adverse effects of the designation on their economic prospects.

F. No Special Interest Exemption Should Be Allowed for the Mining Industry

The special treatment in complying with water quality standards afforded the mining industry by Subpart B of Title 406 is illegal or chimerical depending on how Subpart B is interpreted. The federal regulations, directing that state water quality standards must be based on sound scientific rationale and must contain sufficient parameters to protect uses (40 CFR § 131.11(a)), do not contain any proviso allowing mine discharges to endanger indigenous species or other existing uses. If

²⁵If the regulated community believes people who want to withdraw assimilation capacity from future use should prove that no other person will want to use it, that should be part of every Tier II antidegradation demonstration. Every NPDES permit eliminates loading capacity that someone might conceivably want to use.

subpart B is construed to grant any measure of exemption to the mining industry from compliance with protective water quality standards, it is illegal.

Specifically regarding antidegradation, the federal antidegradation policy, 40 CFR §131.12, does not contain any special provision exempting mining operations from antidegradation review. 35 Ill. Adm. Code 406.203(c), however, can be misread to allow a mining operation to demonstrate no adverse impact to receiving waters (i.e. no degradation) by showing that the mine discharge will have concentrations of sulfate and chloride lower than 3500 mg/L and 1000 mg/L respectively although these numbers greatly exceed the general Illinois water quality standards 35 Ill. Adm. Code 302.208 (g) (500 mg/L for both).

Subpart B of title 406 is probably more pointless than illegal. Subpart B should be construed to give mining operations little or no special status as to antidegradation or other water quality standards. Below the language in part 406 that seems to give the mining industry special favors, the regulation governing discharges from mines requires that IEPA assure that there is “no adverse effect on the environment in and around the receiving stream,” (406.203(e)(1)). The rules also require that an operator utilize good mining practice designed to “minimize” discharges of listed pollutants. (406.204). These provisions require application of antidegradation principles to mining operations.

Clarity requires that the Board rule that mining operations must comply with Illinois’ antidegradation policy. Unless the special provisions that can be read to favor mine operators are eliminated, Illinois’ antidegradation policy will not be sound or in compliance with federal law.

G. The Board and the draft Agency Implementation Procedures (Part 354)

Illinois law divides authority for enacting environmental regulations between the Board and the Agency. See, Granite City Steel Division of National Steel Co. v Illinois Pollution Control

Board, 155 Ill.2d 149, 613 N.E. 2d 719 (1993); see also, Permitting Procedures for the Lake Michigan Basin:35 Ill. Adm. Code 301, 302 and 309.141 (March 4, 1999) R99-8. Unfortunately, the line between a standard or rules to be enacted by the Board and a procedural regulation that may be adopted by the Agency has not always been clear.²⁶

It is also unclear what the Board should do regarding the draft Agency implementation procedures (Part 354) in this proceeding. The Environmental Groups do not disagree with the Agency's implicit decision as to what should be considered by the Board and what should be published as an Agency regulation. Perhaps, however, the Board should generally address any major issues it finds that relate to the draft procedures to give guidance to the Agency in its rule making. In any event, given that other parties have addressed the draft procedures and the Board has at least on one occasion adopted proposed procedures as Board rules (see Permitting Procedures for Lake Michigan R99-8), the Environmental Groups will address some of the issues relating to the draft Agency procedures. (see IV(E) below).

IV. Proposed Changes to the IEPA Proposals

The Environmental Groups joining in this memorandum are generally supportive of the IEPA proposal to the Board. We do, however, have a few substantive disagreements with the proposal and a number of suggestions to clarify or strengthen some of the language of the proposal.²⁷

²⁶It is clear that Agency implementation procedures may change the practical effect of a Board standard. For example, if the Board adopts a numeric water quality standard but Agency permitting procedures make it impossible to write enforceable permit limits based on the standard, the Board standard loses its practical effect.

²⁷Appendix A to this Supplemental Testimony and Memorandum of Law shows the exact changes proposed by the Environmental Groups to the Agency's proposal to the Board. Proposed changes to the draft implementation procedures, which are not formally before the Board, are contained in IV(E) below but are not contained in Appendix A.

A. Proposals for Improvements to 302.105

302.105 - Statement of Purpose - A change is proposed to state the purpose more precisely by mentioning protection of existing uses and maintaining waters with quality that is better than water quality standards.

302.105(a)(2) - The words “whose presence is necessary to sustain commercial or recreational development” should be stricken. This language could be misread to imply that only species falling in this limited category are worthy of full protection.

Further, examples of existing uses including drinking water and recreational uses would be helpful to show more fully of what must be protected.

302.105(b) - Title of the Subsection - Insert “National” between “Outstanding” and “Resource.” While this is not a major issue, there would be some benefit in adopting the federal terminology of 40 CFR 131.12(a)(3) which uses the term “Outstanding National Resource Water.” Corresponding changes are proposed throughout the proposal.

302.105(c) Title of Subsection - The title “High Quality Water” should be replaced with “Waters with Water Quality that is Better than the Standard.” Because of the misnomer involved in discussing waters to which this section applies as “high quality”(see I.B.2 above), it is best to use a more accurate title for the subsection.

302.105 (c)(1) - Replace “exceed” with “is better than any of the.” This eliminates the ambiguity created by use of the word “exceed.” In this case, it is proposed to diverge from the federal language because the federal language is seriously flawed.

“Exceed” in one sense means “better than” and that is, of course, what is intended. However, there is an ambiguity in using “exceed” because “exceed” in the quantitative sense generally means

“greater than.” For most water quality parameters, to have a number that is greater than a standard is to violate the standard.

Addition of the words “any of the” is proposed to make more clear that a water failing to meet one or more water quality parameters is protected as to other parameters.

302.105(c)(2) - This might be corrected to state that “any increase in a pollutant loading that has occurred since November 1975” must be assessed. Language is also suggested to make clearer that an assessment will only take place in connection with a permitting decision.

Reference should also be made to hydrological modifications. Flow changes can seriously affect water quality (see Frevert Testimony, Nov. 17, 2000, Tr. 156; N.L. Poff and J.D. Alan, The Natural Flow Regime: A Paradigm for River Conservation and Restoration, Bioscience, 47:769-84 (1997)). Disturbances of natural conditions should be minimized. Accordingly, the Environmental Groups believe that the opening clause of 302.105(c)(2) should state:

Any proposed increase in pollutant loading or disturbance of natural conditions, not been previously authorized by a NPDES permit or CWA section 401 certification, must be assessed pursuant to 35 Ill. Adm. Code Part 354 to determine compliance with this section prior to issuance of a NPDES permit or 401 certification.

302.105 (c)(2)(B)(iii) - To incorporate the concept of avoiding hydrological modifications that disturb natural flow and other natural conditions, the words “and disruption of natural conditions” should be added after “proposed load increase.”

302.105 (c)(2)(C) - a new subsection C is proposed to allow such loadings to be reassessed when there is reason to believe that the original assessment is no longer relevant. The proposed language states:

An assessment may be required in connection with the renewal of a existing permit for a loading or disturbance of natural hydrological

conditions that has been authorized since November 28, 1975, if there is good reason to believe that the discharge or disturbance is no longer necessary to accommodate important economic or social activity.

302.105(d)(1) - The phrase “not affecting existing uses” should be added to this provision to make clear that temporary lowering of water quality that affects existing uses cannot be tolerated. Although this result follows under other water quality standards, clarity is added and no harm done by repeating this language here.

302.105 (d)(6). This subsection language, which exempts discharges permitted under a general permit from making a facility-specific antidegradation review, should be stricken. At a minimum, the Board should add language to the end of the section which states:

however the Agency shall assure that individual permits are required of all new loadings or hydrological modifications subject to NPDES permitting or 401 certification that may affect waters of particular biological significance, including waters containing rare or pollution intolerant species.

A list of such waters might be appended.

Alternatively the Board should order that the existing general permits all be reopened for reconsideration in light of the new antidegradation standard.

B. Proposals for Improvements to Section 303.205

303.205 Introductory words - For the reasons raised by the Board in its questions of the Agency, see, December 6, 2000, Tr. 42-3, “uniquely high” should be replaced with “outstanding.” At least some of the dictionary definitions of “unique” are far too restrictive.

303.205 (b). This section which states that zero 7Q10 streams will generally not be considered for ORW status, should be deleted. It is not uncommon for streams that occasionally

have no flow to be rich in rare biological life and many such streams support recreational activities such as birding, hiking and other activities.

C. Proposals for Section 106

106.992 - This proposed provision provides for filing a petition to create (or repeal) an ORW, and requires that extremely broad notice be given. For petitioners seeking to give ORW protection to be required to give the petition to IEPA and IDNR in addition to the Board is acceptable. Giving notice to other state and local officials and current NPDES permit holders who discharge into the water to be designated is also tolerable as long as IEPA can identify them for the petitioners and it not necessary to send the whole petition.

The requirement proposed by the Agency is to give notice to NPDES permit *applicants*, Section 404 permit *applicants* and “to other persons as required by law” is unreasonable. Petitioners will not generally know who all these people are and IEPA does not even appear to know who some of these persons might be. Further, it appears that this “other persons” language was simply copied from other provisions without consideration as to whether there are such “other persons” in this case.(see Frevert Testimony, Nov. 17, 2000, Tr. 147)²⁸

On the other hand, a requirement should be added that parties seeking to repeal an ORW designation should attempt to give notice to the persons who petitioned for the designation.

106.994 (e) - requires petitioners to produce unreasonable amounts of economic information to which they will have little access. Much of the proposed subsection should simply be stricken.

D. Proposal to Amend Existing 35 Ill. Adm Code 406 Subpart B

²⁸If there really are other persons that the law requires be notified of an ORW petition, they should be listed in the regulations so that petitioners for designations can know who they are and give them notice.

Subpart B should probably be repealed in its entirety by the Board as soon as possible. However, for the present proceeding it is sufficient to add a new third sentence to 35 Ill. Adm. Code 406.203(b) that states:

However, in no case shall a permit applicant be exempted from complying with the antidegradation standards of 35 Ill. Adm Code 302.105.

E. Proposals for Improvements to the Agency Implementation Rules

Section 354.102 - An additional clause in this procedure should state:

An assessment may be required in connection with the renewal of a existing permit for loadings or disturbances of natural hydrological conditions that have been authorized since November 28, 1975, if there is good reason to believe that the discharge or modification is no longer necessary to accommodate important economic or social activity.

Section 354.103 - The permit applicant will be required to provide the Agency with information on the physical, biological, and chemical condition of the waters in question. Although we believe that the rule provides for this, for clarification purposes, the rule should make clear that the Agency has the authority to require the applicant to collect additional data if adequate data do not exist. For example, if a new discharge was proposed on a water body where no data has ever been collected on mussel populations, but rare mussels are known to exist elsewhere in the watershed, the Agency should require additional data to be collected.

Subsection 354.103(c)(1) should be stricken. Provision of centralized sewerage service is not a benefit if such service will promote pollution or sprawl and quality septic treatment is required.

This section should also provide that a copy of the application will be delivered to the

appropriate office of the Illinois Department of Natural Resources.

Section 354.104 - The rule should clearly state that other agencies will have input into the demonstration review. In determining the existence of existing uses or impacts to existing uses other agencies may be able to provide information and expertise unavailable within the Agency. In addition to IDNR, local park districts may be able to provide information on existing recreational uses of waters.

Section 354.105 - Paragraph (b) should be changed to, "Identification of the affected water segment, any downstream water segment also expected to experience a lowering of water quality, characterization of the designated and current existing uses of the affected segments and identification of which uses are most sensitive to the proposed load increase..."

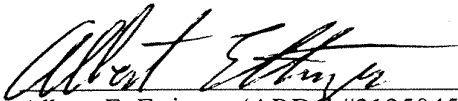
This change will make 354.105 consistent with Part 302 and with the intent of the antidegradation policy to protect existing uses.

354.104(a)(2) - provides for disappointed permit applicants to take an immediate review. It is unclear how citizens could get involved in the process if they agree that the permit should be denied. Procedures are not acceptable which have the effect of allowing only the polluter to participate in an appeal. Some sort of notice to the public of appeals should be required if the IPCB rules do not already provide for such notice.

CONCLUSION

The Board should adopt the antidegradation standards proposed by the Agency with the changes presented and discussed in this memorandum. The Board should also act to assure that the Agency implementation procedures that will be adopted following this proceeding are consistent with the standards adopted by the Board and the goal of the Clean Water Act to maintain the chemical, physical and biological integrity of the nation's waters.

Respectfully submitted,



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NOTICE OF PROPOSED AMENDMENTS

Section 302.105 Antidegradation

The purpose of this Section is to protect existing uses, maintain waters with quality, better than water quality standards and maintain high quality waters and to prevent unnecessary deterioration of waters of the State.

a) Existing Uses

Uses actually attained in the water body on or after November 28, 1975, whether or not they are included in the water quality standards, must be maintained and protected. Examples of degradation of existing uses of the waters of the State include but are not limited to:

- 1) an action that would result in the deterioration of the existing aquatic community, such as a shift from a community of predominantly pollutant-sensitive species to pollutant-tolerant species or a loss of species diversity; or
- 2) an action that would result in a loss of a resident or indigenous species, whose presence is necessary to sustain commercial or recreational activities.
- 3) An action that would endanger drinking water supplies or threaten uses such as recreational or commercial fishing, swimming, paddling or boating.

b) Outstanding Resource Waters

- 1) Waters that are classified as an Outstanding National Resource Water (ONRW) pursuant to 35 Ill. Adm. Code 303.205 must not be lowered in quality except as provided below:
 - A) An activity that results in short-term, temporary (i.e., weeks or months) lowering of water quality; or
 - B) Existing site stormwater discharges that comply with applicable federal and state storm water management regulations and do not result in a violation of any water quality standards; and

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- C) The proponent of any activity requiring a National Pollutant Discharge Elimination System (NPDES) or a Clean Water Act (CWA) Section 401 certification must also submit a demonstration to the Agency meeting the requirements of subsections b(2) and c(2) of this Section.
- 2) Any activity listed in subsection (b)(1) or proposed increase in pollutant loading must also meet the following requirements:
- A) All existing uses of the water will be fully protected;
- B) The proposed increase in pollutant loading is necessary for an activity that will improve water quality in the ONRW; and
- C) The improvement could not be practicably achieved without the proposed increase in pollutant loading.
- 3) Any proposed increase in pollutant loading requiring an NPDES permit or a CWA 401 certification for an ONRW must be assessed pursuant to 35 Ill. Adm. Code Part 354 to determine compliance with this Section.
- c) Waters with water quality that is better than the Standard ~~High Quality~~ Waters
- 1) Except as otherwise provided in subsection (d) of this Section, waters of the State whose existing quality is better than any of the exceeds established standards of this Part must be maintained in their present high quality, unless the proponent can demonstrate pursuant to subsection (c)(2) of this Section, that allowing the lowering of water quality, is necessary to accommodate important economic or social development.
- 2) Any proposed increase in pollutant loading or disturbance of natural conditions that has occurred since November 28, 1975, not previously authorized by ~~subject to~~ a NPDES permit or CWA Section 401 certification must be assessed pursuant to 35 Ill. Adm. Code Part 354 to determine compliance with this Section prior to issuance of a NPDES permit or 401 certification.
- A) The Agency shall consider the fate and effect of any parameters proposed for an increased pollutant loading.

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B) The proponent of an increased pollutant loading shall demonstrate the following:

i) The applicable numeric or narrative water quality standard must not be exceeded as a result of the proposed activity;

ii) All existing uses must be fully protected;

iii) All technically and economically reasonable measures to avoid or minimize the extent of the proposed load increase and disruption of natural conditions have been incorporated into the proposed activity; and

iv) The activity that results in an increased pollutant loading must benefit the community at large.

C) An assessment may be required in connection with the renewal of a permit for a loadings or disturbance of natural hydrological conditions that hasve been authorized since November 28, 1975, if there is good reason to believe that the discharge or disturbance is no longer necessary to accommodate important economic or social activity.

d) Activities Not Subject to an Antidegradation Demonstration

The following activities will not be subject to an antidegradation demonstration pursuant to subsection (c) of this Section.

1) Short-term, temporary (i.e., weeks or months) lowering of water quality not affecting existing uses;

2) Bypasses that are not prohibited at 40 CFR 122.41(m);

3) Response actions pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), as amended, or similar federal or State authority, taken to alleviate a release into the environment of hazardous substances, pollutants or contaminants which may pose a danger to public health or welfare;

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- 4) A thermal discharge that has been approved through a CWA Section 316(a) demonstration;
- 5) New or increased discharges of a non-contact cooling water, without additives, returned to the same body of water from which it was taken as defined by 35 Ill. Adm. Code 352.104, provided that the discharge complies with applicable Illinois thermal standards; or

[6 should be stricken or alternatively]

- 6) Discharges permitted under a current general NPDES permit as provided by 415 ILCS 5/39(b) or general 404 permit, are not subject to facility-specific antidegradation review , however, the Agency shall assure that individual permits are required of all new loadings or hydrological modifications subject to NPDES permitting or 401 certification that may affect waters containing rare or pollution intolerant species or otherwise are of particular biological significance, including those containing rare or pollution intolerant species.

- e) Lake Michigan Basin

Waters in the Lake Michigan basin as identified in 35 Ill. Adm. Code 303.443 are also subject to the requirements applicable to bioaccumulative chemicals of concern found at Section 302.521 of this Part.

Section 302.105 Nondegradation

- 1) ~~Except as otherwise provided in Section 302.520, waters whose existing quality is better than the established standards at their date of their adoption will be maintained in their present high quality. Such waters will not be lowered in quality unless and until it is affirmatively demonstrated that such change will not interfere with or become injurious to any appropriate beneficial uses made of, or presently possible in, such waters and that such change is justifiable as a result of necessary economic or social development.~~ Heading of Part: Water Use Designations and Site Specific Water Quality Standards

Section 303.205 Outstanding National Resource Waters

An Outstanding **National** Resource Water (ONRW) is a water body or water body segment that is of **outstanding** ~~uniquely high~~ biological or recreational quality and shall be designated by the Board pursuant to 35 Ill. Adm. Code 106, Subpart L.

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a) Outstanding **National** Resource Waters (“ONRW”) shall be listed in Section 303.206 of this Part. In addition to all other applicable use designations and water quality standards contained in this Subtitle, an ONRW is subject to the antidegradation provision of Section 302.105(b).

~~b) Stream segments that have a 7Q10 low flow of zero will generally not be considered a candidate for this designation.~~

e)b) A petition to designate a water or water segment as an ONRW must be submitted to the Illinois Pollution Control Board pursuant to the procedural rules found in 35 Ill. Adm. Code 106, Subpart L.

Section 303.206 List of Outstanding National Resource Waters (Reserved)

Subpart K proposals

Section 106.990 Applicability

The procedures set forth in this Subpart apply to any person seeking an Outstanding National Resource Water “ONRW” designation for a surface water or any segment thereof as provided by 35 Ill. Adm. Code 303.205. This Subpart shall be read in conjunction with 35 Ill. Adm. Code 102 that contains procedures generally applicable to regulatory and informational hearings and proceedings. In a proceeding held pursuant to this Subpart, the requirements of this Subpart shall apply in the event of conflict between the requirements of 35 Ill. Adm. Code 102 and those of this Subpart.

Section 106.991 Definitions

For the purpose of this Subpart, words and terms shall have the meanings as defined in 35 Ill. Adm. Code 102.101, unless otherwise provided.

Section 106.992 Petition

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Any person may submit a written petition for the adoption, amendment or repeal of an ONRW designation. The original and nine (9) copies of each petition shall be filed with the Clerk and one copy each served upon the Agency, and the Illinois Department of Natural Resources (IDNR). Notice of the petition shall be given to the Attorney General, the States Attorney of each county in which the waters or water segment runs, the Chairman of the County Board of each county in which the waters or water segment runs, to each member of the General Assembly from the legislative district in which the waters or water segment runs, ~~and notice of the petition shall be given to~~ and to current NPDES permit holders discharging into the water to be designated. and NPDES permit applicants, applicants for federally permitted activities that require a certification from the Agency pursuant to Section 401 of the Clean Water Act, and to other persons as required by law. Persons seeking to amend or repeal an ONRW designation shall give notice to the persons who joined in the petition that caused the water or waters to be designated as an ONRW.

Section 106.993 Publication

A person that submits a written petition for the adoption, amendment or repeal of an ONRW designation shall, within 10 days after the petition is filed, publish notice of such petition in a newspaper of general circulation in the county or counties in which the effected water body flows.

Section 106.994 Petition Contents

The petition must be captioned in accordance with 35 Ill. Adm. Code Section 101.ILLUSTRATION A General Rulemaking. The petition must contain headings corresponding to the informational requirements of each subsection of this Section. The following information shall be contained in the petition:

- a) The proponent shall identify the waters or water segment, which is to be addressed by the proposed amendment and the language to be added, deleted or repealed. Underscoring must indicate language being added and strikeouts must indicate language being deleted.
- b) A statement describing the specific surface water or segment thereof for which the ~~ORW~~ONRW designation is requested and that waters' or segment's present designation;
- c) A statement describing the area in which the specific surface water or segment thereof exists including, but not limited to:

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- 1) the existence of wetlands or natural areas;
- 2) the life contained within that area including endangered or threatened species of plants, aquatic life or wildlife listed pursuant to the Endangered Species Act, 16 USC 1531 et seq. or the Illinois Endangered Species Protection Act, 41 ILCS 10.
- d) A statement supporting the designation including, but not limited to, the health, environmental, recreational, aesthetic or economic benefits of the designation
- e) A statement identifying the ~~ORWONRW~~ designation's anticipated impact on economic and social development. This statement should be supported by ~~current, verifiable information including, but not limited to:~~
 - 1) impacts on the regional economy;
 - 2) impacts on regional employment;
 - 3) impacts on the community;
 - 4) a comparison of the health and environmental impacts to the economic impact of an ~~ORWONRW~~ designation;
- f) A statement describing the existing and anticipated uses of the specific surface water or segment thereof for which the ~~ORWONRW~~ designation is requested;
- g) A statement describing the existing and anticipated quality of the specific surface water or segment thereof warranting the ~~ORWONRW~~ designation;
- h) A synopsis of all testimony to be presented by the proponent at hearing;
- i) Copies of any material to be incorporated by reference within the proposed designation pursuant to Section 5-75 of the Administrative Procedures Act;
- j) Proof of service upon all persons required to be served pursuant to Section 106.942 of this Part and proof of publication required by Section 106.943 of this Part;
- k) Unless the proponent is the Agency, Illinois Department of Natural Resources or receives a waiver by the Board, a petition signed by at least 200 persons, pursuant to Section 28 of the Act and Section 102.160(a); and

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- 1) Where any information required by this Section is inapplicable or unavailable, a complete justification for such inapplicability or unavailability.

Section 106.995 Board Action

a) Dismissal

- 1) Failure of the proponent to satisfy the content requirements for petitions under this Subpart or failure to respond to Board requests for additional information will render a petition subject to dismissal for inadequacy.
- 2) Failure of the proponent to pursue disposition of the petition in a timely manner will render a petition subject to dismissal. In making this determination, the Board shall consider factors including but not limited to, the history of the proceeding and the proponent's compliance with any Board or hearing officer orders.
- 3) Any person may file a motion challenging the sufficiency of the petition pursuant to 35 Ill. Adm. Code 101.243.
- 4) The Board shall dismiss a petition for inadequacy in cases in which the Board, after evaluating the petition, cannot determine the jurisdictional basis on which the petition is made. In all such cases, a statement informing the proponent of the Board's basis for dismissal will be made. Dismissal of the petition does not bar a proponent from re-submitting a petition in the absence of any deadline imposed by the Act or Board regulations.

b) Designation of ONRW

- A) The Board shall designate a water body or water body segment as an ONRW and list it in Ill. Adm. Code 303.206 if it finds:
- 2) the water body or water body segment is of uniquely high biological or recreational quality; and

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- 3) the benefits of protection of the water from future degradation outweigh the benefits of economic or social opportunities that will be lost if the water is designated as an ONRW.



Illinois
Environmental
Protection Agency

P.O. Box 19276
Springfield, Illinois 62794-9276

April 2000

IEPA/BOW/00-005

Illinois Water Quality Report 2000

Illinois Environmental Protection Agency

Bureau of Water



EXHIBIT 1

Sources of Less Than Full Support

Sources of use impairment for rivers and streams not fully supporting uses are summarized below in Table 3-12.

Table 3-12. Statewide Sources - Rivers and Streams (miles).

Sources Category	Total Impact
Industrial Point Source	405
Municipal Point Source	1,641
Combined Sewer Overflow	385
Collection System Failure	26
Wildcat Sewer	18
Agriculture	4,372
Animal Holding/Management Areas	391
Construction	241
Urban Runoff/Storm Sewers	1,020
Resource Extraction	1,048
Land Disposal	38
Hydromodification	2,613
Habitat Modification (other than Hydromodification)	795
Atmospheric Deposition	7
Highway Maintenance/Runoff	53
Contaminated Sediments	281
Natural Sources	137
Recreation Activities	7
Other	110
Source Unknown	346

D. Water Quality Summary by Watershed

Water quality summary information for the 33 watersheds of Illinois can be found in Appendix A of this report. Additionally, a series of 33 fact sheets depicting summary information from the 2000 cycle 305(b) report are available on the Illinois EPA's homepage at www.epa.state.il.us/water/waterquality/.

Sources of Less Than Full Support

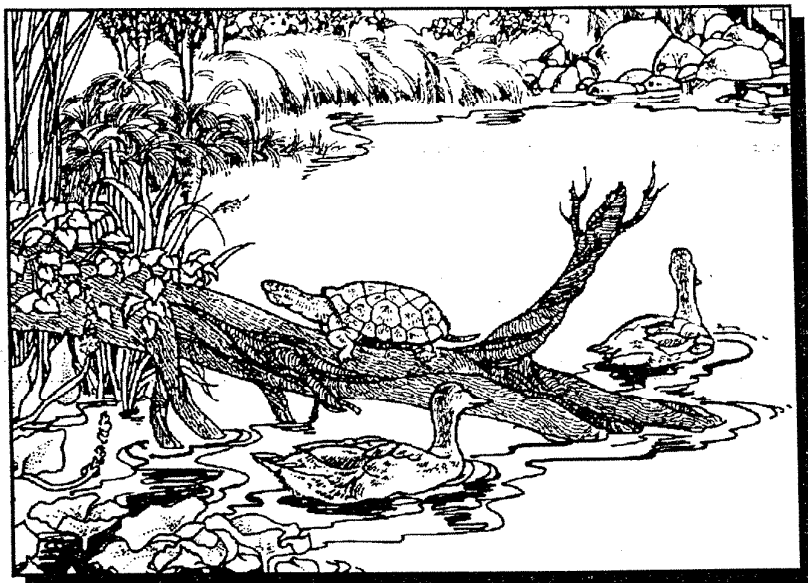
Sources of use impairment for all lakes not fully supporting uses are summarized in Table 3-30.

Table 3-30. Statewide Sources - All Lakes.

Sources Category	Total Impact	
	Number	Acres
Industrial Point Sources	5	14,328
Municipal Point Sources	7	29,300
Collection System Failure	1	225
Agriculture	163	124,749
Off-farm Animal Holding/Management Area	1	23
Silviculture	3	11
Construction	51	11,836
Urban Runoff/Storm Sewers	89	48,530
Resource Extraction	3	19,006
Land Disposal	43	26,895
Hydromodification	11	6,407
Habitat Modification (other than Hydromod.)	118	115,434
Other		
Highway Maintenance and Runoff	7	22,129
Spills	1	40
Contaminated Sediments	89	96,344
Natural Sources	7	7,752
Recreational and Tourism Activities	37	94,405
Groundwater Loadings	1	5
Waterfowl	31	12,013
Lake Fertilization	5	474
Herbicide/Algicide Application	3	339
Forest/Grassland/Parkland	104	103,528

Antidegradation Implementation for Water Quality Protection in South Carolina

BUREAU OF WATER



July 1998



EXHIBIT 2

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Antidegradation Implementation for Water Quality Protection in South Carolina

July 1998



I. Purpose

This document describes how the South Carolina Department of Health and Environmental Control (Department) will implement the State's Antidegradation Policy included as Antidegradation Rules in Section D of S.C. Regulation 61-68, Water Classifications and Standards. It also informs the public of the Department's approach when issuing discharge permits which allow a lowering of water quality in certain waters of the State while providing for protection of classified and existing uses. This approach will be implemented by the Department's Bureau of Water.

Note: A copy of the Antidegradation Rules from Section D of R.61-68 is provided at the end of the text.

II. Background

The Federal Antidegradation Policy was established by the Secretary of the Interior in February 1968 and incorporated into the Federal Water Quality Standards Regulation issued by the Environmental Protection Agency (EPA) in November 1975. That policy was clarified and included in the Federal Water Quality Standards Regulation published on November 8, 1983 (48 FR 51400) and codified as 40 CFR 131.12(a)(1)-(3). These regulations require all states, tribes, and territories of the United States to have an antidegradation policy in their water quality standards consistent with the Federal policy and to identify the methods for implementing the policy. In the preamble to 40 CFR 131, the regulation states: "In its entirety, the antidegradation policy represents a three-tiered approach to maintaining and protecting various levels of water quality and uses." This statement has given the antidegradation policy its common name of a "tiered" approach when referring to the levels of protection outlined in the regulation. The following is an explanation of how this "tiered" approach is defined and how the Department views these levels of protection for existing and classified uses.

The EPA Water Quality Standards Handbook states that an antidegradation policy should consist of at least three tiers or levels of water quality protection. These are summarized as follows:

Tier 1 antidegradation policies apply to all waters of the State and require that existing uses (those attained in the waterbody on or after November 28, 1975) and the minimum level of water quality for those uses be maintained and protected.

Tier 2 antidegradation policies apply to high quality waters where the water quality exceeds the mandatory minimum levels to support Section 101(a)(2) of the Clean Water Act's (CWA) goals of propagation of fish, shellfish and wildlife, and recreation in and on the water. The Department considers all the waters of the State as high quality waters.

Tier 3 antidegradation policies apply to the maintenance of water quality in waters which constitute an Outstanding National Resource Water (ONRW) and do not allow for any permanent permitted discharges.

South Carolina has incorporated these three levels of protection into its water quality standards contained in Section D, Antidegradation Rules of R.61-68 and it reflects the current requirements of Federal Regulation, 40 CFR 131.12. The State's Antidegradation Rules also contain specific language precluding any discharge which would:

- 1) exclude an existing shellfish harvesting or culture use,
- 2) affect stream flows necessary to protect classified and existing uses consistent with riparian rights to reasonable use of water,
- 3) not allow groundwater uses to be maintained and protected, or
- 4) allow a dissolved oxygen depression in naturally low dissolved oxygen waterbodies other than as prescribed.

A fourth level of protection has been added to R.61-68 which incorporates waters which do not meet the requirements of Tier 3 for ONRWs, but provides for a higher level of protection than Tier 2. The State's Antidegradation Rules contain a level of protection for the maintenance of water quality in waters which constitute and are classified as an Outstanding Resource Water (ORW) of the State and will be known in this document as Tier 2½.

The following describes how the State's Antidegradation Rules are implemented through a tiered approach.

III. Implementation

Antidegradation Implementation is initiated by an application to the Department for a new or expanded discharge for a National Pollutant Discharge Elimination System (NPDES) permit. Other activities requiring nonpoint source controls through permits or certifications, such as stormwater permits, are also subject to the State's Antidegradation Implementation. The Department uses a parameter-by-parameter approach for implementation of the State's antidegradation rules and will review each parameter separately as it evaluates an application for a new or expanded discharge. All waters of the State will be provided a minimum of at least one of four levels of antidegradation protection as contained in R.61-68.D as described herein. All waters of the State are considered high quality waters where the water quality exceeds levels necessary to support classified and existing uses or have available assimilative capacity for some constituents. Most of the waterbodies that have impaired water quality are limited for only one parameter.

All waters in South Carolina are classified. The classifications of the waters consist of two parts: the best uses to be made of a waterbody and instream water quality standards which are stringent enough to protect the classified and existing uses. Existing uses are defined in R.61-68 as those uses actually being attained in or on the water, on or after November 28, 1975, regardless of the classified uses. Existing uses also apply to those waterbodies with water quality suitable to allow the uses to be attained in and on the water in accordance with Section 303(a) of the CWA. This Section of the Act established existing State water quality standards for uses that were in effect prior to the enactment of the CWA as a "starting point" for water quality standards.

Note: Flowcharts of Antidegradation Implementation are provided at the end of the text.

A. Implementation of Tier 1 Level of Protection

Section D.1 of R.61-68 requires the protection of existing uses and the level of water quality to protect those uses for all waters of the State. Tier 1 applies a minimum level of protection to all waters.

1. To implement Tier 1 antidegradation, the Department must determine if a planned discharge would lower water quality to the extent that it would no longer be sufficient to protect and maintain the existing uses of that waterbody. Any discharge which would remove an existing use is inconsistent

with the State's Antidegradation Rules which states that existing uses are to be maintained and protected. In such a circumstance, the planned discharge must be avoided or adequate mitigation or preventive measures must be taken to ensure that the existing uses and the water quality to protect them will be maintained.

2. The Department has initiated water quality assessment and protection on a watershed basis in order to emphasize a coordinated approach to basin management and water quality maintenance or improvements, to better address congressional and legislative mandates, to better utilize current resources, and to better inform the public and the regulated community of existing and future water quality issues. This watershed management process focuses the Department's resources and enables staff to target work efforts in order to maximize useful results. Development of the watershed strategies includes wasteload allocations and Total Maximum Daily Loads (TMDLs) for specific waterbodies that may not be fully supporting all the uses of the waterbody. For the purposes of this document, the Department defines total load allocations as a wasteload(s) for point source discharges and load(s) for nonpoint sources. Hereafter in this document the phrase total load allocation will incorporate both point and nonpoint sources where applicable.

In anticipation of the development of a TMDL for a specific waterbody, the Department may conclude that a proposed discharge will not cause or contribute to an impairment of the waterbody based upon the specifics of a total load reallocation that has been agreed to by the project applicant(s) in accordance with areawide planning agencies pursuant to Section 208 of the CWA. The reallocation is allowed as an interim measure until a TMDL pursuant to Section 303 of the CWA can be developed. The Department will ensure that the public health and welfare will not be endangered if a reallocation is allowed. Since all waters of the State are considered high quality in that they possess assimilative capacity for some constituents, any proposed discharge will be subject to an alternatives analysis as required by R.61-67.200.D.1.k (for description, see Section B.2 of this document) and Section 208 of the CWA.

The following examples (not inclusive) describe how the Antidegradation Rules will be implemented for Tier 1 protection:

- i) When the available assimilative capacity of a waterbody is not sufficient to ensure maintenance of water quality standards for a parameter of concern with an additional load to the waterbody, then the Department will not allow a permitted net increase of loading for the parameter of concern or pollutants affecting the parameter of concern. This no net increase will be achieved by the reallocation of existing total load(s) or by meeting the applicable water quality standard(s) at the end-of-pipe. Until such time that a TMDL is developed for the parameter of concern for the waterbody, no discharge will be allowed to cause or contribute to further degradation of the waterbody.
- ii) When applying narrative standards included in R.61-68, if nutrient loadings caused a waterbody to be on the impaired waters list in accordance with Section 303(d) of the CWA, then the Department will not allow a permitted net increase of loading for the appropriate nutrient(s) until such time as a TMDL is developed for the parameter of concern for the waterbody. No discharge will be allowed to cause or contribute to further degradation of the waterbody.
- iii) When applying numeric standards included in R.61-68 for human health, aquatic life, and organoleptic protection, if a waterbody has been affected by a parameter of concern causing it to be on the impaired waters list in accordance with Section 303(d) of the CWA, then the Department will not allow a permitted net increase of loading for the parameter of concern unless the concentration of the parameter of concern will not cause a violation of water quality

standard(s). This no net increase will be achieved by reallocation of existing total load(s) or by meeting applicable water quality standard(s) at the end-of-pipe. Until such time as a TMDL is developed for the parameter of concern, no discharge will be allowed to cause or contribute to further degradation of the waterbody.

3. Any allowed permit would proceed through the permitting process and allow for public participation through those mechanisms described in Section B.6 of this document.
4. Once the Tier 1 antidegradation review is completed by the Department, documentation of its final decision will be included in the rationale for the permit. The Bureau of Water will maintain a database that will include the Department's evaluation and final decision of all permits that have been reviewed under these conditions.

B. Implementation of Tier 2 Level of Protection

High quality waters are waters where the quality exceeds levels necessary to support classified and existing uses or have available assimilative capacity for some constituents. If an application for a new or expanded discharge for an NPDES permit is submitted to the Department, and if verification is made by the Department through the wasteload allocation, watershed strategy development, or NPDES permitting process that the waterbody has water quality sufficiently greater than that defined by the standards such that available assimilative capacity for the parameter(s) of concern does exist, then the following additional antidegradation review would be initiated.

1. To verify that a waterbody is a high quality water for a parameter of concern which initiates a Tier 2 antidegradation review, the Department must evaluate:
 - a) if and to what degree water quality exceeds that necessary to protect existing uses,
 - b) if and to what degree water quality will be lowered, and
 - c) if classified and existing uses will be maintained and protected by applying the standards set forth in R.61-68.

In multiple discharge situations, the aggregate predicted lowering of water quality must be allocated among the dischargers.

This initial step of the review is presently practiced in the current watershed strategy development, wasteload allocation, and NPDES permitting process and is a necessary evaluation for determination of the level of protection applicable to a waterbody.

2. Section D.2 of R.61-68 requires that in order for the State to allow the lowering of water quality in a waterbody, the need for it must be shown. An alternatives analysis will determine that the lowering of water quality is unavoidable. In accordance with R.61-67.200.D.1.k, the applicant must demonstrate to the Department that none of the following applicable alternatives that would minimize or eliminate the lowering of water quality are economically or technologically reasonable:
 - a) water recycle or reuse,
 - b) use of other discharge locations,
 - c) connection to other wastewater treatment facilities,
 - d) use of land application,*
 - e) product or raw material substitution,
 - f) any other treatment option or alternative.

3. The Department will evaluate whether a proposed discharge that will result in the lowering of water quality of a waterbody, and for which there are no economically or technologically reasonable alternatives, is necessary for important economic or social development. For this to be accomplished, several economic and social factors must be considered. These include, but are not necessarily limited to, the following:

- a) employment (increases, maintenance, or avoidance of reduction),
- b) increased industrial production,
- c) improved community tax base,
- d) improved housing, and/or
- e) correction of an environmental or public health problem.

The Department will use the 208 Planning Process for evaluating these factors. South Carolina prepares areawide wastewater management plans pursuant to Section 208 of the CWA. The 208 plans are administered by five (5) Councils of Government (COGs) and the Department, depending on the applicable area of the State. The development, update, or amendment of a 208 Plan includes economic and social considerations for siting of any discharge point. Since no NPDES permit can be issued unless it is in conformance with the applicable 208 Plan, economic and social considerations are inherent in the 208 review and permit issuance process.

4. The Department will review the pollution prevention and alternatives analysis to determine if the lowering of water quality can be minimized or eliminated. If the analysis identifies affordable treatment options that, combined with any alternatives, would prevent the need for the lowering of water quality, the Department will deny the request to lower water quality. Should the Department find that the pollution prevention and alternative treatments are unable to minimize or eliminate the need for lowering of water quality in the affected area, it will also find whether the proposed discharge will support important social and economic development. If the proposed discharge does support important social and economic development, then the Department may decide to grant the request for lowering of water quality provided water quality sufficient to protect existing and classified uses is maintained and provided the decision is subject to public participation and comment.

5. The Department will provide for intergovernmental cooperation and public participation through the State's ongoing planning process and NPDES public noticing process. This will be accomplished through the development and/or revisions of 208 Plans. In this process, designated COGs are given notification of the NPDES permitting process with the opportunity to seek additional information or provide comment regarding the NPDES permit, whether new or reissued. This allows for public participation at the local level.

The Department further fulfills its requirements for intergovernmental coordination in this process by including notification to the EPA Region IV Office and other governmental agencies on its mailing list which includes the following: the South Carolina Department of Natural Resources; the United States Forest Service; the South Carolina Wildlife Federation; the South Carolina Department of Commerce; the United States Fish and Wildlife Service; the South Carolina Department of Parks, Recreation, and Tourism; the National Marine Fisheries Service; and the Department of Transportation.

6. The Department fulfills its remaining requirements of public participation by notifying individuals who have expressed concern about the proposed conditions of the specific permit. A Public Notice containing a statement that the proposed NPDES permit will address antidegradation concerns is issued and comments are requested from the public on the matter (**see the attached example**). Further, the Department complies with requirements in its permitting regulations that require public

notices of permitting actions and uses many methods for addressing the posting of notices such as displaying the notice in prominent locations.

Other activities requiring nonpoint source controls through permits or certifications, such as stormwater permits, are also subject to the same public participation process as NPDES permits.

7. Once the Tier 2 antidegradation review is completed by the Department, documentation of its final decision will be included in the rationale for the permit. The Bureau of Water will maintain a database that will include the Department's evaluation and final decision of all permits that have been reviewed under these conditions.

C. Implementation of Tier 2½ Level of Protection

When the Department has determined through its water use classification process that a waterbody is of significant ecological or recreational value, then it is classified as an Outstanding Resource Water (ORW) of the State. Tier 2½ level of protection applies to these waterbodies. This level allows no discharges from domestic, industrial, and agricultural waste treatment facilities or open water dredged spoil disposal and requires the maintenance of existing water quality. Stormwater and other nonpoint source runoff including that from agricultural or permitted discharge from aquaculture facilities are allowed in these waters provided no significant adverse effect to water quality will occur.

1. The Department will review applications for a proposed discharge to ORW waters to ensure that the discharge can be considered in accordance with R.61-68.G.5.b.

2. Once the Department has concluded that the discharge can be considered, it must be determined whether the discharge will result in a discernable change in water quality. If the proposed discharge would cause degradation, then the discharge must be denied. Since only discharges that would result in the maintenance and protection of existing water quality are permitted, no further antidegradation review is necessary. Any allowed permit would then proceed through the permitting process and allow for public participation through those mechanisms described in Section B.6 of this document.

3. Once the Tier 2½ antidegradation review is completed by the Department, documentation of its final decision will be included in the rationale for the permit. The Bureau of Water will maintain a database that will include the Department's evaluation and final decision of all permits that have been reviewed under these conditions.

D. Implementation of Tier 3 Level of Protection

The State's Antidegradation Rules included in R.61-68 allow that the Department may determine through the classification process that some Outstanding Resource Waters of the State are nationally significant and may be classified as Outstanding National Resource Waters (ONRWs). ONRW waters are protected by applying the standards of the Class ORW which require maintenance of existing water quality and additionally would not allow any point source discharges. No permanent permitted discharges of any kind would be allowed and the exceptions listed for the State's ORW waters would not apply to those waterbodies classified as nationally significant.

**Antidegradation Rules as contained in Section D. of S.C. Regulation 61-68,
Water Classifications and Standards**

1. Existing water uses and the level of water quality necessary to protect these existing uses shall be maintained and protected regardless of the water classification and consistent with the policies below.

a. A new activity or expansion of an existing activity shall not be allowed in Class ORW or Shellfish Harvesting Waters if it would exclude, through establishment of a prohibited area, an existing shellfish harvesting or culture use. A new activity or expansion of an existing activity which will result in a prohibited area may be allowed in Class SA or Class SB waters when determined to be appropriate by the Department.

b. Existing uses and water quality necessary to protect these uses are presently affected or may be affected by instream modifications or water withdrawals. The streamflows necessary to protect classified and existing uses and the water quality supporting these uses shall be maintained consistent with riparian rights to reasonable use of water.

c. Existing or classified ground water uses and the conditions necessary to protect those uses shall be maintained and protected.

2. Where surface water quality exceeds 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 Department finds, after intergovernmental coordination and public participation, that allowing lower water quality is necessary to important economic or social development in the areas where the waters are located. In allowing such lower water quality, water quality adequate to fully protect existing and classified uses shall be maintained. The highest statutory and regulatory requirements for all new and existing point sources shall be achieved and all cost-effective and reasonable best management practices for nonpoint source control shall be achieved within the State's statutory authority and otherwise encouraged.

3. The water quality of outstanding resource surface waters designated as Class ORW shall be maintained and protected through application of the standards for Class ORW as described in Section G.4 and 5. The Department may determine, through the classification process, that some Class ORW waters are nationally significant. Upon such determination, all activities described in Section G.4 and 5 shall be prohibited.

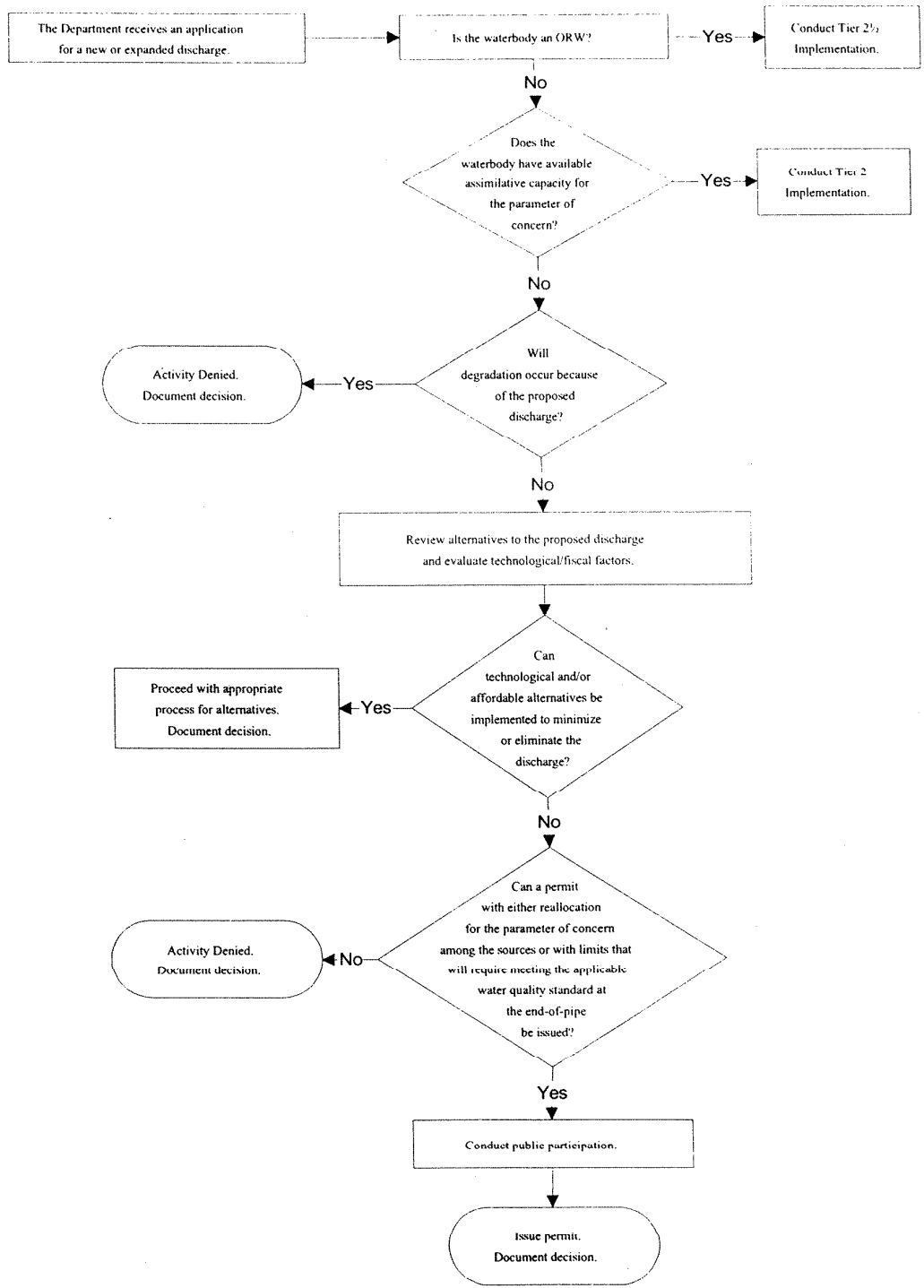
4. Certain natural conditions may cause a depression of dissolved oxygen in surface waters while existing and classified uses are still maintained. The Department shall allow a dissolved oxygen depression in these naturally low dissolved oxygen waterbodies as prescribed below:

a. Under these conditions the quality of the surface waters shall not be cumulatively lowered more than 0.1 mg/l for dissolved oxygen from point sources and other activities, or

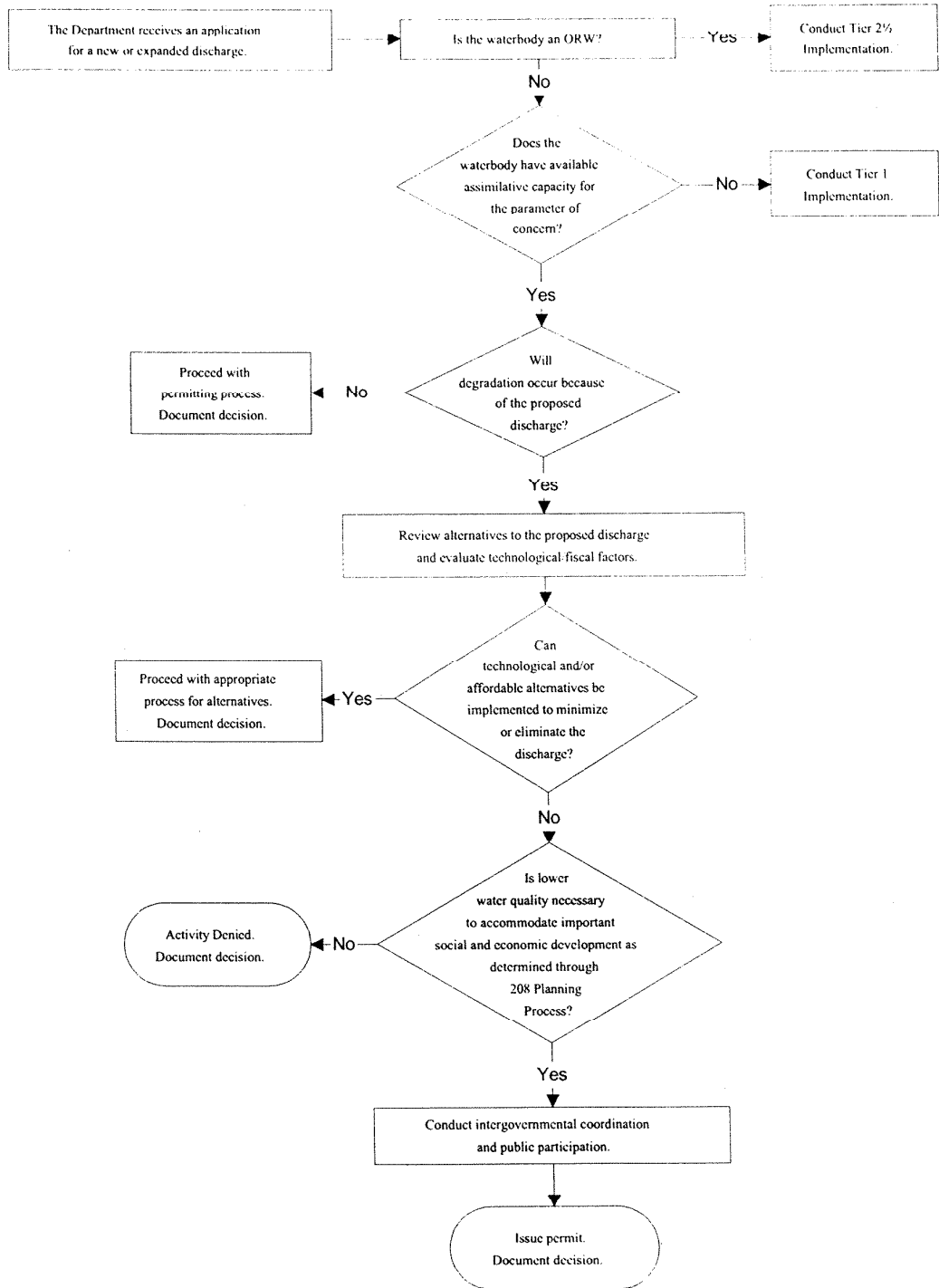
b. Where natural conditions alone create dissolved oxygen concentrations less than 110 percent of the applicable water quality standard established for that waterbody, the minimum acceptable concentration is 90 percent of the natural condition. Under these circumstances, an anthropogenic dissolved oxygen depression greater than 0.1 mg/l shall not be allowed unless it is demonstrated that resident aquatic species shall not be adversely affected. The Department may modify permit conditions to require appropriate instream biological monitoring.

c. The dissolved oxygen concentrations shall not be cumulatively lowered more than the deficit described above utilizing a daily average unless it can be demonstrated that resident aquatic species shall not be adversely affected by an alternate averaging period.

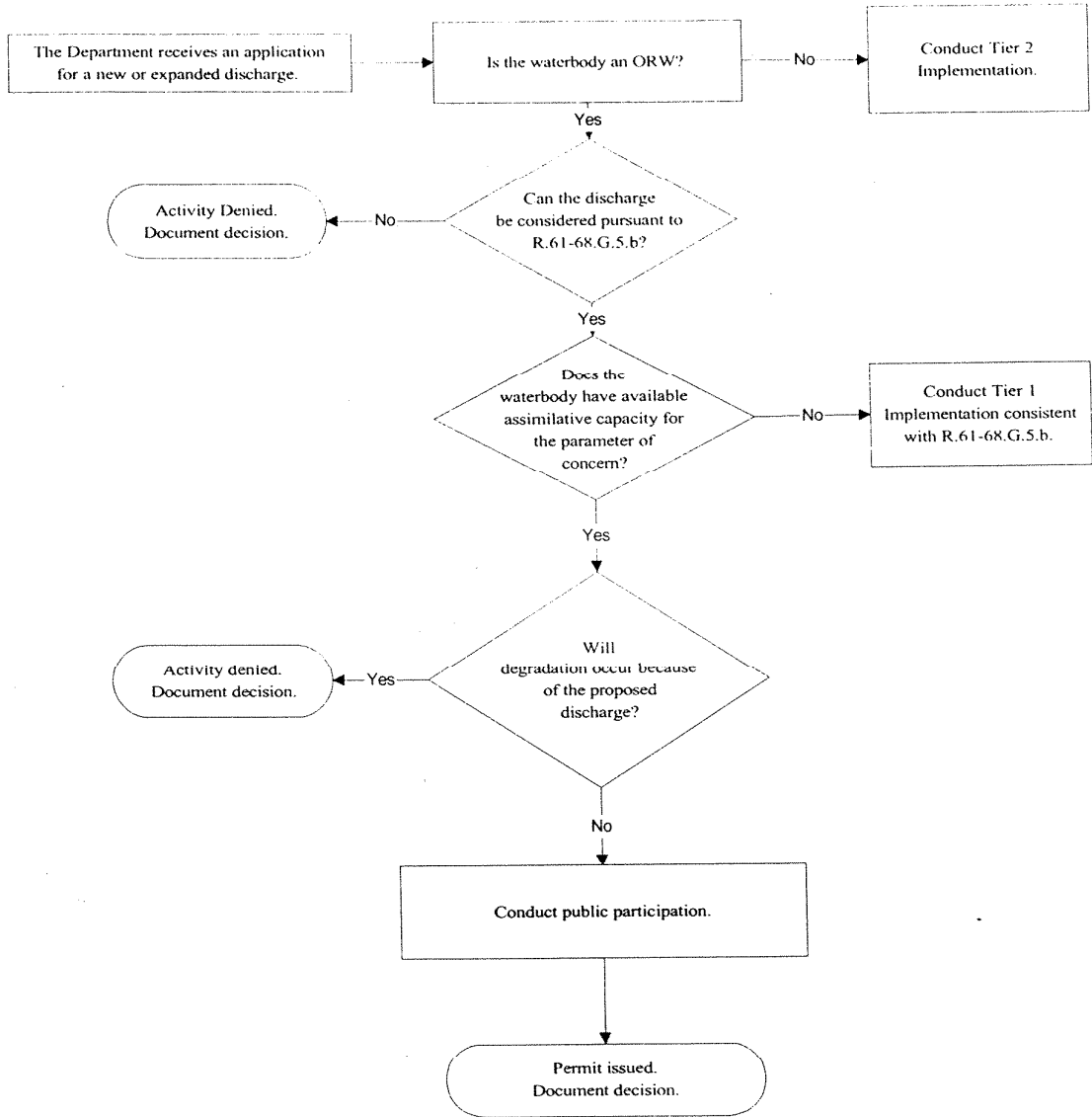
Tier 1 Implementation



Tier 2 Implementation



Tier 2½ Implementation



Example of Public Notice Language for Antidegradation

The Department has conducted a review of the proposed discharge in accordance with the Antidegradation Rules of S.C. Regulation 61-68. The Department has made a preliminary decision that the discharge may be allowed. This Notice provides for public participation and intergovernmental coordination. Documentation of the antidegradation decision is available in the permit rationale.



State of Illinois

ENVIRONMENTAL PROTECTION AGENCY

Mary A. Gade, Director

2200 Churchill Road, Springfield, IL 62794-9276

MEMORANDUM

DATE: April 7, 1995
TO: Kevin Meyers
FROM: Bob Mosher *RM*
SUBJECT: Nondegradation Evaluation
Proposed Huntley West STP NPDES No. IL0070688

Huntley West is a proposed facility that would discharge to the South Branch of the Kishwaukee River. Since the plant will be designed to meet 1.5 and 4.0 mg/l ammonia 30 day average limits summer and winter, respectively, it is recognized that the best degree of ammonia treatment will be applied. The only other known parameters that would be considered in a nondegradation evaluation are nutrients. All other substances would be predicted to be present in the effluent at levels far below water quality standards.

According to the draft Nondegradation Policy currently used, streams other than "A" streams in the Biological Streams Classification system are not given special protection from increased loading when valid social or economic needs exist. The South Branch of the Kishwaukee River is a "B" rated stream. Given that the best degree of treatment will be provided for ammonia and that no treatment is ordinarily required for nutrients, no restrictions should be placed on this facility for the sake of meeting the nondegradation regulation at 35 Ill. Adm. Code 302.105.

Since this decision is not based on the effluent flow of the facility, the conclusion is the same whether the DAF is 1.0 or 0.8 mgd.

RGM:dis:huntley2

cc: Wally Matsunaga
Jay Patel

EXHIBIT 3



State of Illinois

ENVIRONMENTAL PROTECTION AGENCY

Mary A. Gade, Director

2200 Churchill Road, Springfield, IL 62794-9276

Memorandum

Date: August 22, 1996
To: Kevin Meyers
From: Bob Mosher *RM*
Subject: Nondegradation Evaluation for Gilberts (Kane County)
NPDES No. IL0068764

The subject community proposes to construct a 0.8 MGD DAF sewage treatment plant. The receiving stream is Tyler Creek which has a 7Q10 flow of 0.15 cfs at this location. Tyler Creek is rated as a "B" stream under the Agency's Biological Streams Classification system. Downstream, from Randall Road to the mouth of Tyler Creek, the stream is rated as a "C" stream.

The parameters for which nondegradation issues arise at this facility are nutrients, biological oxygen demand (BOD) and ammonia. The increased loading of ammonia and BOD should not impact aquatic life in Tyler Creek. Degradation of these will occur as the effluent flows downstream. The nutrients in the effluent also should not impact the ability of the receiving stream to support aquatic life given that excess nutrients are already present from other sources.

The Illinois Pollution Control Board regulation for Nondegradation found at 35 Ill. Adm. Code 302.105 is currently implemented via a draft Agency guidance document. Waters rated as "B" streams under the BSC system will be allowed to receive new or increased discharges with the following provisions: the water quality standards are met, there is an economic or social need for the discharge, best degree of treatment is attained, and, no ecological alteration of the receiving stream is likely to occur. In the case of the Gilberts STP proposed discharge, all these conditions are met. The proposed discharge is therefore not in violation of the Board's Nondegradation rule.

The facility should be encouraged to apply for a seasonal disinfection exemption for the new plant. I will send the appropriate material for this purpose if you provide the name and address of a contact person.

RGM:dls.gilbrnd

cc: Wally Matsunaga
Jay Patel



State of Illinois
ENVIRONMENTAL PROTECTION AGENCY

Mary A. Gade, Director

2200 Churchill Road, Springfield, IL 62794-9276

Memorandum

RECEIVED

Date: August 19, 1996
To: Mike Hayes
From: Bob Mosher *RM*
Subject: Nondegradation Evaluation for Lake in the Hills Sanitary District
 NPDES No. IL0021733

AUG 20 1996

Environmental Protection Agency
 Division of Water Pollution Control
 Environmental Protection Agency
 Springfield, Illinois
 State of Illinois

The subject facility is planning to increase the rating of the treatment plant from 2.1 MGD DAF to 3.1 MGD. The discharge is to Crystal Creek also known as Crystal Lake Drain, which has a 7Q10 flow of 3.6 upstream of the outfall. The creek also receives effluent from the main Crystal Lake sewage treatment plant about two miles distance upstream of the Lake in the Hills discharge. Approximately one-half mile downstream of the Lake in the Hills effluent outfall is an 11 acre impoundment, Lake in the Hills #2.

Crystal Creek is rated a "C" stream for its entire length according to the Agency's Biological Stream Characterization (BSC) system. Lake in the Hills #2 is reported to have a 6,200 acre watershed and a maximum depth of 10 feet. It was formed by the impoundment of the main stem of Crystal Creek and has no unique features that would make it especially prone to degradation. Based on Agency water quality data, the lake is considered highly eutrophic with very high levels of nitrates and phosphates.

The parameters for which nondegradation issues arise at this facility are nutrients, biological oxygen demand (BOD) and ammonia. The increased loading of ammonia and BOD should not impact aquatic life in Crystal Creek. Degradation of these substances will occur as the effluent flows downstream. The nutrients in the effluent also should not impact the ability of the receiving stream to support aquatic life given that excess nutrients are already present from other sources. Likewise, Lake in the Hills #2 also has an excess influx of nutrients due to both point and nonpoint sources regardless of this plant expansion. The increased loading of nutrients that would occur due to the expansion would therefore not factor into any increase in the incidence of negative aspects due to nutrients, such as algae blooms or increased growth of aquatic macrophytes. In other words, once nutrient levels reach a certain point, plant growth becomes limited by other factors such as light penetration and excess nutrients are not utilized.

The Illinois Pollution Control Board regulation for Nondegradation found at 35 Ill. Adm. Code 302.105 is currently implemented via a draft Agency guidance document. Waters rated as "C" streams under the BSC system and lakes with no unique features susceptible to impairment will be allowed to receive new or increased discharges with the following provisions: the water quality standards are met, there is an economic or social need for the discharge, best degree of treatment is attained, and, no ecological alteration of the receiving stream is likely to occur. In the case of the Lake in the Hills Sanitary District STP proposed discharge, all these conditions are met. The proposed discharge is therefore not in violation of the Board's Nondegradation rule.

The DAF of the treatment plant is not critical in determining ammonia permit limits at this facility because of the small amount of mixing available. Since the ammonia limits are currently set at 1.5 and 4.0 mg/L monthly average for summer and winter, respectively, and these are generally the most stringent attainable limits applied, I suggest that no modifications be made at this time. When the Board adopts new ammonia water quality standards, these will be addressed in the Lake in the Hills permit at the next renewal. I anticipate that the limits dictated by the new standards will be identical to those now present. A memorandum from Steve Vance will follow to provide the calculations used in this opinion.

These recommendations reflect a water quality standards perspective only and should not be construed as being indicative of all factors which have to be taken into consideration by the permit writer.

RGM:dls.lakehill

cc: Wally Matsunaga
Jay Patel
Gregg Good



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 North Grand Avenue East, P.O. Box 19276, Springfield, Illinois 62794-9276 [Redacted], Director

MEMORANDUM

RECEIVED

Date: March 3, 1999

To: Mike Hayes

From: Bob Mosher *RM*

Subject: Water Quality Based Effluent Limit and Nondegradation Evaluation for Fox River WRD West STP NPDES No. IL0035891

MAR 08 1999

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
BOW/WPC/PERMIT SECTION

The subject facility proposes an expansion of the treatment plant from the existing DAF of 1.5 MGD to 5.0 MGD DAF. This is the first phase of plant expansion that may be followed by others depending on the growth experienced in the service area. The receiving stream is the Fox River which has a 7Q10 flow value of 133 cfs at this location.

The Fox River is not found on the Illinois 303(d) list as published by the Agency on April 1, 1998.

The Fox River is rated as a "C" stream under the Agency's Biological Stream Characterization (BSC) program at this location

The parameters for which nondegradation issues arise at this facility are nutrients, biological oxygen demand (BOD) and ammonia. The increased loading of BOD should not impact aquatic life in the Fox River. The expanded facility will be required to meet the BOD and TSS effluent standards established by the IPCB. These standards are applied consistently on a state-wide basis and have been proven to be protective of dissolved oxygen water quality standards in receiving waters. The additional loading of BOD to the Fox River is not expected to cause depletion of dissolved oxygen or cause any other environmental problem because the prescribed dilution ratio of 5:1 (see 35 IAC 304.120) is maintained. The actual dilution ratio at 7Q10 flow and DAF from the plant is now 57:1 and will be reduced to 17.2:1 after the expansion. BOD will degrade as the effluent mixes with ambient river water and flows downstream. The expanded plant should cause no discernable change to the quality of the Fox River.

The nutrients in the effluent also should not impact the ability of the receiving stream to support aquatic life. The relatively small increase in nutrient loading as a result of the expansion will not cause an increase in algae or other noxious plant growth. No adverse effects to the Fox River should result from the anticipated increase in nutrient loading. No degradation is anticipated from this discharge.

Ammonia limits recommended for the expanded plant are given on the attached ammonia analysis sheet. Daily maximum limits are based on the acute water quality standards for ammonia and downstream pH and temperature values. Monthly average ammonia limits are based on the existing limits of 1.5 and 4.0 mg/L, summer and winter, respectively. The existing FRWRD West plant has had these values as limits for the past several years. The plant has met these limits in all but a few months over the last three years. The new plant should also be able to meet 1.5 and 4.0 limits. While additional mixing is available in the receiving water, limits higher than 1.5 and 4.0 may not be applied based on the past performance of the existing plant. An increase in ammonia loading will result from these limits given the plant expansion. However, no degradation should occur in the river given the mixing present. A small mixing zone is recognized to reduce monthly average concentrations to below the chronic water quality standard.

The need for the Fox River WRD West plant expansion is based on projected population growth. The population of the service area for the West plant is currently estimated at 11,664 population equivalents (PE). Northeastern Illinois Planning Commission (NIPC) projections for the year 2020 are for 61,271 PE. Projections made by the City of Elgin and the Village of South Elgin are somewhat higher and if the Village of Gilberts is added to the service area, another 8,300 PE are expected by 2020. This represents a definite social need to provide sewage treatment for the projected additional residents. An additional expansion of the West plant will be necessary if these projections come to pass.

The Illinois Pollution Control Board regulation for Nondegradation found at 35 Ill. Adm. Code 302.105 is currently implemented via a draft Agency guidance document. Waters not rated as "A" streams under the BSC system will be allowed to receive new or increased discharges with the following provisions: the water quality standards are met, there is an economic or social need for the discharge, best degree of treatment is attained, and, no ecological alteration of the receiving stream is likely to occur. In the case of the expanded Fox River WRD West STP proposed discharge, all these conditions are met. The proposed discharge is therefore not in violation of the Board's Nondegradation regulation.

Effluent biomonitoring requirements should include only the routine once-per-permit cycle testing. The existing facility has had no toxicity of concern and the expanded plant should not be different.

These recommendations reflect a water quality standards perspective only and should not be construed as being indicative of all factors which have to be taken into consideration by the permit writer.

RGM:prh:foxrwest

cc: Wally Matsunaga
Jay Patel



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276

THOMAS V. SKINNER, DIRECTOR

MEMORANDUM

RECEIVED

MAY 11 2000

Date: May 1, 2000

To: Gary Bingenheimer

From: Bob Mosher *RM*

Subject: Water Quality Based Effluent Limits and Nondegradation Evaluation for
Silverleaf - Fox River Resort
NPDES No. IL0064416 (LaSalle County)

ILLINOIS ENVIRONMENTAL
PROTECTION AGENCY
BOW/WPC/PERMIT SECTION

The subject facility proposes an expanded discharge of domestic wastewater from the existing DAF of 0.075 MGD to 0.225 MGD. The discharge is to the Fox River which has a 7Q10 flow of 243 cfs at this location.

The Fox River is not found on the Illinois 303(d) list at this location as published by the Agency on April 1, 1998.

The Fox River is rated as a "B" stream at this location under the Agency's Biological Stream Characterization (BSC) program.

The Illinois Natural History Survey lists the Fox River as a biologically significant stream at this location. The state threatened river redhorse and state endangered greater redhorse are resident according to the 1992 publication *Biologically Significant Illinois Streams*. These species are known to utilize the river in this area as well as the neighboring Illinois and Kankakee Rivers. Since these are wide ranging species, it is difficult to determine whether the Fox River is a breeding area, nursery, feeding area, etc., or if these species occupy the area for all or part of the year. It is very likely that these species are not strictly local residents but instead utilize habitats in the Fox, Illinois and Kankakee Rivers at various seasons. The increased flow from the Silverleaf resort should not jeopardize the continued existence of these species in the Fox River.

The parameters for which nondegradation issues arise at this facility are BOD, nutrients and ammonia. The increased loading of BOD should not impact aquatic life in the Fox River. The expanded facility will be required to meet BOD and TSS effluent standards established by the IPCB. These standards are applied consistently on a state-wide basis and have been proven to be protective of dissolved oxygen water quality standards in receiving waters. The additional loading of BOD to the Fox River is not expected to cause depletion of dissolved oxygen or cause any other environmental problem. BOD will degrade as the effluent mixes with ambient river water and flows downstream. The expanded plant should cause no discernable change to the quality of the Fox River. No degradation will occur from this discharge.

USEPA is developing national nutrient criteria that will formulate the basis for future state water quality standards and nutrient management strategies. Upon promulgation of national criteria, state standards and adoption of a management strategy, there may be nutrient reduction requirements imposed on this source.

GEORGE H. RYAN, GOVERNOR

At the present time however, the incremental nutrient loading anticipated to result from this project is not expected to increase algae or other noxious plant growth, diminish the present aquatic community or otherwise aggravate existing stream conditions. Therefore no permit limits for nutrients are recommended at this time. It may be prudent to advise the permittee that nutrient criteria are being developed and nutrient limitations may be imposed on this source at some future time.

Ammonia limits recommended for the plant are given on the attached ammonia analysis sheet. Daily maximum and monthly average ammonia limits are based on the acute and chronic water quality standards for ammonia and downstream pH and temperature values. An increase in ammonia loading will result from the new discharge, however, recommended concentration limits are lower for the expanded plant and this increase will therefore be quite small.

Given the predicted ambient conditions of the Fox River near the outfall, as determined using data collected at AWQMN station DT-46 located on the Fox River at Dayton, monthly average limits of 1.5 mg/L (summer) and 4.0 mg/L (winter) are appropriate. The summer and winter limits are based on 75th percentile pH and mixing using background ammonia concentrations from AWQMN station DT-38, Fox River at Montgomery.

Daily maximum limits of 3.0 mg/L (summer) and 5.1 mg/L (winter) are also recommended. These limits reflect the seasonal acute water quality standards with a zone of initial dilution.

The need for the expanded plant is based on the business decisions of the developer or property owner. An economic reason is therefore present justifying the decision to build the treatment plant.

The Illinois Pollution Control Board regulation for Nondegradation found at 35 Ill. Adm. Code 302.105 is currently implemented via a draft Agency guidance document. Waters rated as "B" streams under the BSC system will be allowed to receive new or increased discharges with the following provisions: the water quality standards are met, there is an economic or social need for the discharge, best degree of treatment is attained, and, no ecological alteration of the receiving stream is likely to occur. In the case of the proposed Silverleaf - Fox River Resort discharge, all these conditions are met. The proposed discharge is therefore not in violation of the Board's Nondegradation regulation.

These recommendations reflect a water quality standards perspective only and should not be construed as being indicative of all factors which have to be taken into consideration by the permit writer.

Attachment

RM:kab/silverl3

cc: Jay Patel
Wally Matsunaga

Fox River WRD West - Ammonia Analysis

NPDES# IL0035891
Date: March 1, 1999
Receiving Stream: Fox River

The following parameters were used in the determination of ammonia water quality standards and effluent concentration required to comply with the water quality standards after mixing allowances. The methods used are in accordance with the methodologies given in the proposed rules filed with of State and published in the Illinois Register on July 17, 1998.

- Qe:** The effluent flow used in the mixing zone and ZID calculations: 7.7 cfs
- CDs** The water quality standard, in terms of total ammonia, to be met outside the allowable Z mixing zone respectively. These values are based on the following un-ionized ammonia quality standards:
- | | Acute | Chronic |
|--------|-----------|------------|
| Summer | 0.33 mg/L | 0.057 mg/L |
| Winter | 0.14 mg/L | 0.025 mg/L |
- Cus:** Average upstream ammonia nitrogen concentration from data collected at AWQMN station DT-06, Fox River at Algonquin from January, 1993 through December, 1997
- | | | | |
|---------|-----------|---------|-----------|
| Summer: | 0.11 mg/L | Winter: | 0.16 mg/L |
|---------|-----------|---------|-----------|
- Qus:** Total upstream 7Q10 flow = 133 cfs (from ISWS map of the NE IL Region)
Flow available for dilution = 33.25
- Ce:** Maximum total ammonia concentration in the effluent to meet either the chronic or acute
- pH and temp:** The values below represent the 75th and 50th (median) percentile values from data collected at station DT-09, Fox River at South Elgin from January, 1993 through December, 1997. The chronic standards computed below use median pH and 75th percentile temperature. The acute standards were calculated using 75th percentile data for both pH and temperature.

	pH		temp
	50th %tile	75th %tile	75th %tile
Summer	8.34	8.51	24.4
Winter	8.17	8.37	3.5

(Chronic) (Acute)

Mass Balance Equation (30-day avg.): $C_e = [CDs(Q_{us} + Q_e) - C_{us}Q_{us}] / Q_e$
Flux Avg. Dilution Equation (daily max): $C_e = S(CDs - C_{us}) + C_{us}$

WQS and Effluent Limit Calculations and Recommendation

	Summer	Winter
Chronic WQS:	0.5 mg/L	1.5 mg/L
30-day avg. w/ available dilution:	2.2 mg/L	7.1 mg/L
Recommended Limit:	1.5 mg/L	4.0 mg/L
Acute WQS:	2.1 mg/L	5.3 mg/L
daily max. w/ available dilution:	N/A	N/A
Recommended Limit:	2.1 mg/L	5.3 mg/L

- Notes:** **Insufficient stream width for allowing discharge-induced mixing at**
Stream Width = 300 (ft)
- diameter of outfall pipe (d) = 2.25 (ft) (Mannings n=0.013)
- available radius for ZID (x): 7.5 (ft)
- $S = 0.3(x/d) = 1$

EXHIBIT 4



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276

THOMAS V. SKINNER, DIRECTOR

MEMORANDUM

Date: February 4, 2000

To: Wayne Caughman

From: Bob Mosher *RM*

Subject: Water Quality Based Effluent Limit and Nondegradation Evaluation for Mattoon STP NPDES No. IL0029831 (Coles County)

RECEIVED
FEB 10 2000
ILLINOIS ENVIRONMENTAL
PROTECTION AGENCY
WATER QUALITY DIVISION

An expansion of the existing activated sludge treatment plant is proposed for the Mattoon STP to accommodate growth in the community. The existing DAF of 4.5 MGD will be expanded to 5.3 MGD. The receiving stream is zero cfs at this location.

Kickapoo Creek is not found on the Illinois 303(d) list as published by the Agency on April 1, 1998.

Kickapoo Creek is rated as a "B" stream under the Agency's Biological Stream Characterization (BSC) program at this location.

No federal or state threatened or endangered species are known to be present in Kickapoo Creek according to the IDNR publication *Biologically Significant Illinois Streams*.

The parameters for which nondegradation issues arise at this facility are nutrients, biological oxygen demand (BOD) and ammonia. The increased loading of BOD should not impact aquatic life in Kickapoo Creek. The expanded facility will be required to meet the most stringent BOD and TSS effluent standards established by the IPCB. These standards are applied consistently on a state-wide basis and have been proven to be protective of dissolved oxygen water quality standards in receiving waters. The additional loading of BOD to Kickapoo Creek is not expected to cause depletion of dissolved oxygen or cause any other environmental problem. BOD will degrade as the effluent mixes with ambient stream water and flows downstream. The expanded plant should cause no discernable change to the quality of Kickapoo Creek.

The nutrients in the effluent also should not impact the ability of the receiving stream to support aquatic life. The relatively small increase in nutrient loading as a result of the expansion is not anticipated to cause an increase in algae or other noxious plant growth. No adverse effects to Kickapoo Creek should result from the anticipated increase in nutrient loading. No degradation is anticipated from this discharge.

Ammonia limits recommended for the expanded plant are given on the attached ammonia analysis sheet. Daily maximum and 30 day average limits are based on the acute and chronic water quality standards, respectively, for ammonia and downstream pH and temperature values. Existing monthly average ammonia limits are 1.5 and 4.0 mg/L, summer and winter, respectively. A decrease in ammonia loading will occur with the implementation of these recommended limits. The pH and temperature values used in this determination were collected from the Embarras River a significant distance downstream of this facility. The City of Mattoon may want to consider monitoring for pH and temperature in Kickapoo Crcek below the existing discharge so that stream-specific data may be used in this calculation.

The need for the Mattoon plant expansion is based on projected population growth. The increased capacity of the plant will accommodate community growth for the next 20 years. This represents a legitimate social need to provide sewage treatment for the projected additional residents.

The Illinois Pollution Control Board regulation for Nondegradation found at 35 Ill. Adm. Code 302.105 is currently implemented via a draft Agency guidance document. Waters rated as "B" streams under the BSC system will be allowed to receive new or increased discharges with the following provisions: the water quality standards are met, there is an economic or social need for the discharge, best degree of treatment is attained, and, no ecological alteration of the receiving stream is likely to occur. In the case of the expanded Mattoon STP proposed discharge, all these conditions are met. The proposed discharge is therefore not in violation of the Board's Nondegradation regulation.

Attachment

RM:kab/matton3

CC Joe Koronkowski
Bill Ettinger



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1660 Arch Street
Philadelphia, Pennsylvania 19103-2029

OCT 25 2000

Dr. Edward Snyder, Ph.D., Chairman
West Virginia Environmental Quality Board
1615 Washington Street, East
Suite 301
Charleston, WV 25311

Dear Dr. Snyder:

I was extremely disappointed to learn the details of the Board's decisions concerning the proposed antidegradation procedures that will be referred to the West Virginia legislature for enactment, as reflected in the August 31 proposal referred to the Secretary of State. As you are aware, the Environmental Protection Agency (EPA) repeatedly voiced its concern that these procedures remain faithful to the State's antidegradation policy and the underlying requirements of the Clean Water Act.

On August 16, 2000, I transmitted to the Board EPA's views concerning those aspects of the proposed procedures that would need to be strengthened if the procedures are to receive EPA approval. Our objections, while limited, addressed fundamental issues such as the unduly narrow scope of Tier 2 antidegradation review, the multiple exemptions to such review, and the failure to achieve the 'highest statutory and regulatory' requirements for all sources. Notwithstanding the strength of EPA's objections, the Board did not respond to EPA's concerns and instead incorporated changes that further weakened the proposal earlier published for comment.

In light of the Board's action, there appears little prospect that the flaws in the current proposal will be remedied by the West Virginia Legislature in a manner that could lead to EPA approval upon enactment. Accordingly, EPA is immediately proceeding to prepare a draft proposal for Federal procedures that will be applicable in lieu of state-promulgated procedures.

EXHIBIT 5

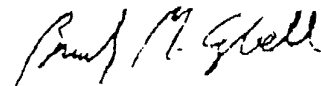
This is unfortunate. EPA's clear preference has been and remains that West Virginia maintain its lead role in implementing its antidegradation policies. The West Virginia Division of Environmental Protection (DEP) has a similar view, and has been discussing with us alternative approaches that might address EPA's concerns. ~~We remain open to a dialogue with DEP that might obviate the need for Federal action, but the process of promulgating a Federal proposal will proceed apace while that dialogue continues.~~

I assure you that in developing the Federal proposal, we will endeavor to work from the proposal initially before the Board, we will limit the changes to those necessary to address concerns of EPA and other interested members of the public, and we will consult with all of the constituency groups that the Board convened to support its proposal. Our hope is to circulate a draft proposal to these constituency groups and to the Board as early as November.

West Virginia's protracted delay, and the Board's ultimate ineffectiveness, in developing proper implementation procedures for antidegradation in its water quality standards program also suggests the need for additional oversight measures to ensure that the protection of water quality in West Virginia is not diminished by the continuing failure to have antidegradation procedures in place. EPA will immediately initiate discussions with DEP to address this issue. We also will be raising with DEP the consequences of this failure in terms of EPA's continued funding of West Virginia's water quality programs.

There may yet be an opportunity for West Virginia to reassert its leadership in resolving this issue. EPA's experience with the Board on this issue over the past decade gives little room for optimism, however, and so the process of Federal promulgation should begin now. If you have any questions please call me or Ray George at 304-234-0234.


Sincerely,



Bradley M. Campbell
Regional Administrator

CERTIFICATE OF SERVICE

I, Albert F. Ettinger, certify that I have filed the above Notice of Filing together with an original and 9 copies of the *Memorandum of Law and Supplemental Testimony of the Environmental Law & Policy Center, Friends of the Fox River, Prairie Rivers Network and Sierra Club*, printed on recycled paper, with the Illinois Pollution Control Board, James R. Thompson Center, 100 West Randolph Street, Suite 11-500, Chicago, IL 60601, and served all the parties on the attached Service List by depositing a copy in a properly addressed, sealed envelop with the U.S. Post Office, Chicago, Illinois, with proper postage prepaid on January 18, 2000.


Albert F. Ettinger

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