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March 18, 2008

Missouri Department of Natural Resources
Division of Environmental Quality
Water Protection Program
Attn: Phil Schroeder
P.O. Box 176
Jefferson City, MO 65102

Re: Proposed Missouri Antidegradation Rule and Implementation Procedure, April 20, 2007

Dear Mr. Schroeder:

This letter contains the comments of the Missouri Water Sentinels of the Sierra Club ("Sierra Club") and the Environmental Law & Policy Center ("ELPC") on the Missouri Antidegradation Rule and Implementation Procedure, April 20, 2007 published by the Missouri Department of Natural Resources and proposed to be incorporated by reference into the Missouri Water Quality Standards at 10 CSR 20-7.031, as published in the Missouri Register on January 16, 2008.

Sierra Club and ELPC value this opportunity to comment on these important procedures as we have numerous members who use Missouri rivers, lakes and streams for various personal, professional and recreational purposes including for drinking water, providing tourism services, fishing, swimming, canoeing and kayaking, and nature study. Our members desire antidegradation implementation procedures that meet the requirements of the Clean Water Act because they would be injured by any degradation of Missouri waters that harms the existing uses of those waters or that unnecessarily degrades the quality of any Missouri water body.

Sierra Club and ELPC fully support the comments and recommendations regarding the proposed implementation procedures made by the Missouri Coalition for the Environment ("MCE"). Also, Sierra Club and ELPC have commented on past drafts of the proposed implementation procedures and continue to believe that comments made on those earlier drafts, including the comment letter dated 1/8/07, should be incorporated into the final rules and procedures.

We appreciate the efforts of the Missouri Department of Natural Resources ("MDNR") and the Missouri Antidegradation Implementation Procedures Advisory Group over the last two years to develop antidegradation implementation procedures that, on balance, go a long way towards protecting Missouri waters and satisfying the requirements of the Clean Water Act. However, as is often the case when the goal is reaching consensus among many different stakeholders, the April 20, 2007 document contains some vague language that creates some uncertainty as to how

the Department intends to implement several provisions. In several cases, language contained in the procedures is capable of being construed in a manner that would cause the rules to be inconsistent with the Clean Water Act or that would require U.S. EPA to assume responsibility for directly administering the NPDES program in Missouri. These comments identify these areas and request clarification as to how the Department intends to interpret and implement these provisions.

We cannot stress enough the importance of the Department providing detailed written responses to these questions so that all parties are able to plan their activities with certainty and so that U.S. EPA has an adequate record for its review of the proposed antidegradation implementation procedures under 33 U.S.C. § 1313(c)(3). EPA's minimum public participation procedures for the revision of water quality standards require states to provide specific responses to public comments, which are then made part of the record for EPA's evaluation. (*See* 40 CFR Part 25). One of the objectives of these requirements is "[t]o assure that government action is as responsive as possible to public concerns." (40 CFR § 25.3). Further, it is imperative that the Department not adopt procedures that will lead to unnecessary controversy in the future and that U.S. EPA not be asked to approve procedures that could be construed or implemented in a manner that is inconsistent with the Clean Water Act. Moreover, such clarity is also necessary to allow EPA to draft properly its decision document regarding the procedures which will have to address these issues.

Our specific questions and request for responses are as follows:

1) **Clarify how Missouri's antidegradation policy will be implemented for facilities that apply for a permit prior to the effective date of the proposed antidegradation implementation procedures.**

The proposed April 20, 2007 implementation procedures ("Proposed Procedures") state that:

> *The department will not require an antidegradation review for any proposed new or expanded discharge for which an entity submits an application for a construction or an operating permit prior to the effective date of these procedures.*

Proposed Procedures p. 34. This language can be interpreted to state that MDNR will not require compliance with Missouri's existing antidegradation policy at 10 CSR § 20-7.031(2). The existing antidegradation policy, which applies to "all waters of the state," allows water quality to be lowered *only if* the state finds that lowered water quality is "necessary to allow important economic and social development in the geographical area in which the waters are located." *Id.*

As Phil Schroeder explained during the April 20, 2007 Clean Water Commission hearing:

> I want to remind the Commission that this document that we're presenting to you today doesn't create new rules. It -- what it's intended to do is implement a current rule. That current rule requires that the State of Missouri in its review of permit applications review the necessity for a discharge first; then review the social and

> economic importance of the activities that are causing the discharge. Those requirements are already existing in our State Rule. And, what we need to do in terms of adopting this document is understand the procedure by which we can do that. I just wanted to make sure that's clear to the Commissioners.

4/20/07 Hearing Transcript p. 14.

Clearly, EPA could not approve implementation procedures that sought to relieve dischargers from the *existing* antidegradation requirements of state and federal law. Thus, refusal by MDNR to enforce its current requirements would require U.S. EPA to withdraw NPDES program approval under 40 CFR § 123.63. Perhaps, the quoted language from the 4/20/07 Proposed Procedures is intended only for the limited purpose of highlighting that the *specific method of implementation* laid out in the Proposed Procedures need not apply to permit applications already in the pipeline, but that those applicants must, nonetheless, still comply with Missouri's existing antidegradation policy. On the other hand, if DNR intends, instead, to grant permits without applying the existing antidegradation policy so long as the applicant applied prior to the effective date of these new implementation procedures, then EPA must object to the proposed procedures, every permit that is issued for a new or increased discharge without the antidegradation review required by 10 CSR § 20-7.031 and 40 CFR § 131.12 will be subject to challenge, and repeated issuance of such permits would require withdrawal of MDNR permitting authority.

This does not answer the question of what procedures these "pre-effective-date" applicants and MDNR should follow in order to comply with Missouri's existing policy. One option is simply to not accept permit applications until the procedures are adopted. Another option is to follow the implementation procedures described in the 4/20/07 Proposed Procedures while construing them in a way to comply with the CWA. Compliance with such procedures would presumably demonstrate compliance with the underlying state and federal policies. If applicants choose not to follow the Proposed Procedures, however, then DNR should ensure that an alternative procedure is used that provides an equivalent level of protection to Missouri waters.

Federal regulations require states to "adopt a statewide antidegradation policy *and identify the methods for implementing such policy*." 40 CFR § 131.12(a). EPA cannot approve a state program unless the state's water quality standards submission is consistent with Section 131.12. (*See* 40 CFR § 131.6(d)) Therefore, EPA cannot approve Missouri's proposed antidegradation implementation procedures unless DNR clarifies that they will require *all* applicants for new and expanded discharges to comply with Missouri's antidegradation policy, including the requirement that such applicants demonstrate that existing uses will be fully protected and that any lowered water quality is actually necessary.

Responses Needed

We request further clarification as to how DNR intends to implement Missouri's existing antidegradation policy 10 CSR 20-7.031(2) for applicants that apply for permits prior to the effective date of the 4/20/07 Proposed Procedures.Further, DNR must make clear that no permits will be granted that do not comply with the state and federal requirements that new pollution only be allowed that is necessary to accommodate important social or economic development.

2) **Clarify how DNR will apply antidegradation requirements to discharges authorized by general permits.**

The relationship between antidegradation requirements and general permits was the subject of extensive discussion during the workshop process. Following this thorough stakeholder discussion, and in response to detailed stakeholder comments requesting greater clarity regarding general permits (*see* EPA 2/15/07 comments p. E-8; Sierra Club 1/8/07 comments pp. 7-9, MCE 12/22/06 comments pp. 4-5), DNR included several criteria in the draft procedures to "ensur[e] that general permits are issued in accordance with the antidegradation rule."[1] (*See* Jan. 29, 2007 Draft Procedures p. 44). However, at the request of the discharging community, the Commission decided to drop all of these criteria from the proposed rule. (*Compare* 4/20/07 Proposed Procedures p. 36 with 1/29/07 Draft Procedures p. 44).

During the April 20, 2007 Commission Hearing, a DNR representative expressed concern that dropping the criteria would leave EPA and the public without any guidance as to how general permits would be reviewed to meet the "intent and needs and requirements" of the Antidegradation Procedure:

> [T]he reason we put [the criteria] in there [was] to provide assurance that we're not just going to gloss over that issue …Without [the criteria] in there, there's really not much to state it other than we'll address it when the time comes and I'm not sure that that's sufficient to be able to reassure those that we're going to do that job in some structured way.

4/20/07 Hearing Transcript pp. 51-52 (statement of Phil Schroeder). We agree with DNR. Dropping the criteria has left dischargers, EPA and the public without any guidance as to how

[1] The general permit criteria were as follows: (1) During the creation of a new general permit template, or renewal of an existing general permit template, the department shall ensure that the terms of the general permit are based on all applicable requirements including an alternatives analysis and a determination of the socio-economic importance of the discharging activity. (2) All waters receiving discharge from facilities with general permits shall receive Tier 2 protection for all POCs reasonably expected in the ranges or types of discharge covered by the permit. (3) Where the use of a general permit is likely to result in significant degradation, the department will require permit conditions during template renewal to minimize the degradation, or will require an individual permit that requires an antidegradation review prior to issuance. Limitations shall be placed in general permits to assure that discharges limit degradation to the amount calculated by the antidegradation review. For example, if degradation was calculated to result in a 20 percent reduction of a water's available assimilative capacity, the general permit should be written to control degradation to that amount. (4) General permit conditions shall be based on an alternatives analysis as described in Section II.B of this document and shall include effluent limits, best management practices and monitoring requirements sufficient to ensure that permittee uses the preferred alternative in controlling POCs.

antidegradation requirements will be applied to discharges authorized by general permits. We are pleased that the Proposed Procedures require a site-specific or individual § 401 certification for any discharges to Outstanding State or National Resource Waters. (Proposed Procedure p. 35). DNR also apparently understands that general permits must "ensure that the degradation remains insignificant *in each and every case*" in order to be consistent with antideg. 4/20/07 Hearing Transcript p. 53; *see also Ohio Valley Environmental Coalition v. Horinko*, 279 F. Supp. 732, 760-61 (S.D. W. Va. 2003); 40 CFR 131.12(a); *United States EPA Region VIII Guidance: Antidegradation Implementation (1993); United States EPA Water Quality Standards Handbook, Second Edition (1994), Section 4.5, pp. 4-7.* What is missing from the Proposed Procedures, however, is any description of the process and criteria DNR will use to ensure these requirements are satisfied.

Responses Needed

Accordingly, DNR must clarify in its response to comments how it intends to ensure that General Permits will not be used in situations that could lead to significant degradation on an individual or cumulative basis. At a minimum, the Department's response should indicate:

1) *How the Department will consider antidegradation requirements, including alternatives analysis and socioeconomic considerations, when reviewing and approving general permit templates;*
2) *How the Department intends to ensure that the continued use of existing general permits will not lead to significant degradation prior to the expiration of the general permit template;*
3) *How the Department will ensure that individual permits (and associated antidegradation reviews) will be required for any activity that poses a risk of causing significant degradation;*
4) *How the Department will ensure that general permits are not used in circumstances in which degradation could occur to sensitive waters of biological significance, including waters providing habitat for rare or endangered species;*
5) *How the Department intends to account for cumulative impacts to water quality caused by the total amount of discharges authorized by general permits over time;*
6) *How the Department will ensure that the total impact of activities authorized by general permit (including both point and non-point source components of that activity) will be de minimis.*[2]

[2] The fact that activities resulting in *only* non-point pollution need not apply for a federal discharge permit does not mean that the non-point component of permitted point source activities is outside of antidegradation review. *See EPA Water Quality Standards Handbook* (ch. 4, p.6) and *Ohio Valley Environmental Coalition*, 279 F. Supp. 2d at 763 (recognizing that antidegradation sometimes requires that the grant of a point source discharge permit be conditioned on implementation of controls on non-point pollution related to the point source activity). For example, the operation of CAFOs may result in both point source and non-point pollution. Thus, general CAFO permits must be designed to ensure that the total amount of pollution that will be created by the facility, both point and non-point, will be *de minimis* in order to satisfy the antidegradation policy.

3) **Clarify how DNR will implement Tier 2 antidegradation protection for pollutants (most notably sediment and nutrients) for which there are no numeric criteria.**

The Proposed Procedures require an antidegradation review for any proposed significant increase in the ambient water quality concentration of a Pollutant of Concern ("POC"). (Proposed Procedures p. 15). "Pollutant of Concern" is defined broadly as:

> Discharged pollutants, or pollutants proposed for discharge that affect beneficial use(s) in waters of the state. POCs include pollutants that create conditions unfavorable to beneficial uses in the water body receiving the discharge or proposed to receive the discharge. For example, where pH, temperature, and dissolved oxygen are in noncompliance with applicable numeric criteria.

Proposed Procedures p. 7.

Clearly, some pollutants that currently lack numeric criteria (such as nutrients and sediment) can create "conditions unfavorable to beneficial uses" in receiving waters. Our comments on an earlier version of this rule contain extensive discussion of the environmental and human health problems caused by excessive nutrient loadings. (See Comments of Sierra Club and ELPC dated 1/8/07). Thus, we are pleased that DNR is "certain" that the proposed antidegradation implementation procedures apply to "nutrients and sediments and other pollutants that do not have numeric criteria" as long as those pollutants have "the potential to affect beneficial use." 4/20/07 Hearing Transcript pp. 18-19.

We are somewhat concerned, however, that the Department has not clearly explained how it will apply Tier 2 protections to such pollutants, especially because the Department's proposed approach for determining the significance of degradation is closely tied to engineering calculations that appear to assume that a numeric water quality criterion is available. (See, e.g., Proposed Procedures p. 22).[3] Pollutants subject to narrative criteria only do not lend themselves well to this type of precise calculation. Therefore, it may not be possible to calculate a precise significance threshold for such pollutants in all cases. However, we understand that DNR still intends to apply Tier 2 antidegradation protections to nutrients, sediment and other pollutants lacking numeric criteria even if a precise, numeric assimilative capacity cannot be quantified in each and every case. Such review will ensure that increased loadings of nutrients and sediments in Missouri waters are "necessary to allow important economic and social development in the geographical area in which the waters are located," in accordance with state and federal law. If this is not the case, we expect the Department to clarify its intent for the record.[4]

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[3] DNR uses the following equation on p. 22 to determine the "facility assimilative capacity" (FAC) of a waterbody in order to then determine whether the proposed new loading will be "significant."

FAC = [WQC * (Qs+Qd) – Cs*Qs] * CF

The equation uses a variable for water quality criterion (WQC) that must be expressed as a numeric concentration (e.g. mg/l). This equation cannot be used for pollutants that lack a numeric water quality criterion.

[4] As we explained in our earlier comments, there is nothing in either the state or federal antidegradation policy requiring DNR to determine a "significance threshold" for each and every proposed discharge. Especially in the

Response Needed

Please clarify that in all cases in which phosphorus, nitrogen or other pollutants for which there are no numeric criteria that may be contained in the proposed loading that the DNR will either determine in the record that loading will not be significant or require an analysis of whether the loading is necessary to accommodate important social or economic development.

4) Clarify how DNR will determine whether an alternative is cost effective and reasonable.

Pages 24-28 of the Proposed Procedures set out a general framework to assist applicants and DNR perform alternatives analyses under Tier 2 review to select a "preferred" alternative that represents the least-degrading alternative that is practicable, economically efficient and affordable. See Proposed Procedures at pp. 24-28.

Although we agree that an alternative is not "reasonable" if it would require very significant additional costs to achieve a minimal reduction in overall pollution, we are concerned that some of the discussion under the "economic efficiency" factor in the Proposed Procedures could be misinterpreted in a manner that would not be consistent with EPA guidance and the goals of Tier 2 protection.

Specifically, we want to ensure that the 120% "non-binding rule-of-thumb" will not be used to eliminate alternatives that would otherwise result in a substantial improvement in overall water quality. We take issue with the statement in the Proposed Procedures that, in general, the 120% figure "represents the point beyond which increasing costs yield less proportional increases in water quality." (p. 26) There is no evidence in the record to support this statement. The level at which increasing costs will "yield less proportional increases" in water quality will vary in each individual case and cannot be reduced to such a broad generalization.

We understand that the 120% figure is intended only as nonbinding guidance and that DNR will evaluate alternatives of greater cost on their own merits rather than eliminating them from further consideration. Thus, if an alternative costing more than 120% of the base cost would yield a corresponding significant improvement in the overall level of pollution, we understand that this alternative would be considered economically efficient under the Proposed Procedures. If this is not DNR's understanding of the Proposed Procedures, we expect DNR to clarify its intent for the record.

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case of pollutants lacking numeric criteria, the paperwork and controversies that will develop in determining significance will likely prove to be more trouble than simply evaluating the discharge on its merits under the Tier 2 standards of "necessity" and "importance."

Responses Needed

Please clarify:

That the rules will not be construed to allow permits for increased loadings of pollutants to be issued merely based on a showing that pollution avoidance or minimization exceeds an arbitrary cost threshold.

That the Department will examine both the treatment costs and the corresponding level of water quality improvements when determining whether an alternative is "cost effective" and that the rules will require implementation of all affordable pollution avoidance or minimization measures that will yield significant pollution reductions.

5) Clarify how DNR intends to implement Tier 1 protections.

a) Pollutants that "qualify" for Tier 1 protection.

Tier 1 protection is the minimum level of protection that applies to all proposed new or increased loadings in all surface waters of the state. (See definition of "Tier 1 Review" at p. 8 of the Proposed Procedures). This level of protection prohibits any lowering of water quality that would affect existing uses or otherwise lead to a violation of water quality criteria. *Id.* We are concerned that some of the language in the Proposed Procedures could lead a discharger to assume that additional pollution may be allowed in cases where only Tier 1 protections apply, when in fact it would not.

For example, the Proposed Procedures state that "Tier 1 reviews allow pollutants to be discharged in accordance with the WQS without performing the alternatives analysis, reviewing the implementation of nonpoint source controls, or determining social and economic importance …." (p. 13) While this is technically true, it is misleading because some may interpret this to suggest that Tier 1 provides a less rigorous level of protection. In reality, if Tier 2 protections do not apply for a given pollutant (because the waterbody is already "at, near or violating" the water quality criteria for that pollutant), then Tier 1 protections will prevent new loadings of that pollutant in almost all cases. This is because any new loadings that would lower the water quality for a pollutant already "at" or "near" the relevant water quality criteria will, by definition, "cause or contribute" to a violation of water quality standards. This would violate Tier 1 as well as 40 CFR 122.44(d) (effluent limits must be set at a level that will not "cause or contribute" to a violation of water quality standards). In the absence of a proper and enforceable trading program or approved TMDL designed to assure compliance with the applicable water quality standard, the only conceivable situation where an increased loading of such a pollutant might survive Tier 1 review is where the discharger would meet water quality criteria at the end of the pipe.

Response Needed

Please clarify that new and expanded discharges typically will not be allowed when a given pollutant "qualif[ies] for a Tier 1 review" as described at the bottom of p. 13. If, instead, DNR understands Tier 1 protections to generally allow new or expanded discharges where existing water quality is already "at, near or violating WQS" (p. 13) then we expect DNR to clarify its intent for the record and explain how this is consistent with Missouri and federal law.

b) Protection of existing uses that cannot be tied to violations of water quality criteria.

Federal guidance is clear that "[n]o 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."[5] "Water quality should be such that it results in no mortality and no significant growth or reproductive impairment of resident species." *Id.* "Any lowering of water quality below this full level of protection is not allowed." *Id.*

The Proposed Procedures are very vague regarding how the Department intends to review potential impacts to existing uses that are not tied to violations of water quality criteria, such as impacts caused by hydrologic modification or habitat destruction. We assume that the Department intends the procedures to comply with federal law by denying authorization for activities that would impact an existing use of the receiving water.

Response Needed

Please clarify how this review will take place to ensure that all existing uses of receiving waters are fully protected by the Department's Tier 1 implementation procedures, whether or not such uses are designated in the State's water quality standards.

Additional Comments and Requests for Clarification

Determining the "importance" of social and economic development – The Proposed Procedures discuss several factors that the applicant and Department are to consider in determining whether the social and economic development resulting from a proposed activity is "important" as required by Tier 2 review. (pp. 29-30) Importantly, the Procedures point out that predicted social and economic benefits, such as "increasing production" and "increasing the community tax base," should be balanced against the socioeconomic trade-offs resulting from the proposed activity, such as "impacting fishing, recreation and tourism industries" and "reserving assimilative capacity for future industry and development." Clearly, socioeconomic development cannot be said to be "important" if the potential economic benefits of the project are outweighed by the overall costs to society of allowing additional pollution to the water.[6]

[5] U.S. EPA Office of Water, "Questions and Answers on Antidegradation" p. 3 (1985) (available as attachment to EPA's Water Quality Standards Handbook, 2d ed. http://www.epa.gov/waterscience/standards/handbook).
[6] This principle is recognized in other state rules and EPA guidance, including the Region 8 Antidegradation Guidance, p. 21 (The inquiry should "weigh the applicant's demonstration against counterbalancing socioeconomic

Therefore, *please clarify that DNR will consider the overall impact of a proposed activity on a community and will not consider projected socioeconomic development to be "important" if the predicted benefits of the proposed activity are outweighed by the foreseeable socioeconomic tradeoffs resulting from lost assimilative capacity and increased pollution.*

Public participation – In order to facilitate efficient and informed decisionmaking, *please confirm that DNR will accept information relevant to the Department's antidegradation determination at any point in the antidegradation review process and not only after DNR has issued a preliminary determination.*

Also, please clarify how DNR intends to inform the public of the initiation of an antidegradation review, so that members of the public can provide relevant information to help inform the Department's decision. Although the Proposed Procedures describe public notification via publication in a "qualified newspaper" (p. 32), we submit that there is broader interest in proposals to lower water quality among the public than merely in the immediate vicinity of the discharge. Therefore, we would also request that the Department provide public notice on a designated antidegradation notice page on the Department's website.

401 certifications – Although it is acceptable to rely on the information generated by the U.S. Army Corps of Engineers' § 404(b) determination to help *inform* the State's antidegradation review, we presume that Missouri does not intend to fully abdicate its responsibility by rubberstamping the Corps' analysis rather than conducting its own independent antidegradation review. *Please confirm that DNR intends to make an independent judgment in making 401 certifications. If this is not the case, please clarify whether it intends to abdicate its authority for the record.*

Unclassified waters – EPA comments on an earlier draft of the Proposed Procedures directed DNR to clarify how the antidegradation process would be implemented for unclassified waters. (EPA Comments dated 2/16/07 p. E-2). The latest version of the Proposed Procedures unambiguously states that "All waters of the state are subject to the *Missouri Antidegradation Rule and Implementation Procedure*." (p. 10). *Please confirm, therefore, that any proposal to lower water quality in an unclassified water will be fully justified as "necessary to accommodate important social and economic development" as required by state and federal law. If this is not the case, then we expect DNR to clarify its intent for the record.*

Permit renewals – The Proposed Procedures state that existing facilities that are applying for renewals with no new or expanded discharge will not trigger antidegradation review. (p. 16) Although we generally agree that antidegradation requirements apply only in cases of new or increased discharges, a rigid interpretation of this language could unintentionally grandfather levels of pollution that have never undergone antidegradation review and therefore have never been demonstrated to be "necessary." *Please confirm that DNR intends to apply this exception only to facilities that have previously undergone an antidegradation review consistent with these Proposed Procedures. If this is not the case, we request that DNR clarify its intent for the record.*

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costs associated with the proposed activity, such as projected negative socio-economic effects on the community and projected environmental effects.").

Treatment byproducts of CSOs and SSOs – The Proposed Procedures exempt "treatment byproducts" of CSOs and SSOs from antidegradation review. (p. 16) As noted previously by EPA, the technical basis for this exemption is not clear and the exclusion appears to be "inconsistent with the State's antidegradation policy." (EPA Comments dated 2/16/07 p. E-5) EPA cannot properly approve the prodeures with these exemptions and we are surprised that this exemption was not eliminated or clarified in response to EPA's comments. *Please delete this exemption language or in your response to these comments clarify that this language will not be construed to exempt treatment byproducts from antidegradation review.*

Water quality trading – The Proposed Procedures indicate that a discharger may be able to demonstrate that a proposed activity will not cause significant degradation based on a proposed watershed-based trading scheme that has been agreed to by the project applicant. (p. 16) Although Missouri does not current have a watershed-based trading program in place, *please confirm that in order to be recognized, any proposal would need to be based on concrete and enforceable offsets in the same watershed as the proposed activity.*

Existing Water Quality (EWQ) tracking – The Proposed Procedures indicate that "finalization of a statewide water segment delineation and EWQ tracking system may require years to complete." (p. 17) If this is the case, *please clarify how DNR intends to monitor and track degradation for the purposes of determining cumulative impacts until such a system is finalized.*

We thank you for your consideration and detailed responses to these comments.

Respectfully submitted,

Brad Klein
ELPC, Staff Attorney

/s/ Ken Midkiff
Chair,
Missouri Clean Water Campaign
Sierra Club Water Sentinels

/s/ Scott Dye
National Program Director,
Sierra Club Water Sentinels

cc: John Delashmit, U.S. EPA Region VII Rebecca Landewe, U.S. EPA Region VII
Pete Ford, U.S. EPA Office of General Counsel

Phil Schroeder/WPCP/DEQ/MODNR
03/19/2008 04:35 PM

To: Donna Menown/WPCP/DEQ/MODNR@MODNR
cc:
bcc:
Subject: Fw: Proposed Missouri Antidegradation Rule and Implementation Procedure, April 20, 2007

----- Forwarded by Phil Schroeder/WPCP/DEQ/MODNR on 03/19/2008 04:35 PM -----

"Kelsey Snell" <KSnell@elpc.org>
03/18/2008 05:57 PM

To: phil.schroeder@dnr.mo.gov, delashmit.john@epa.gov, landewe.rebecca@epamail.epa.gov, ford.peter@epa.gov, kknowles@moenviron.org
cc: "Bradley Klein" <BKlein@elpc.org>, "Albert Ettinger" <AEttinger@ELPC.org>, "Scott Dye" <scott.dye@sierraclub.org>, kmidkiff@mchsi.com
Subject: Proposed Missouri Antidegradation Rule and Implementation Procedure, April 20, 2007

Please find attached the comments of the Missouri Water Sentinels of the Sierra Club ("Sierra Club") and the Environmental Law & Policy Center ("ELPC") on the Missouri Antidegradation Rule and Implementation Procedure, April 20, 2007 published by the Missouri Department of Natural Resources.

If you have any questions or if you have any trouble opening the attached document please feel free to contact me at ksnell@elpc.org or at (312) 795-3718

Sincerely,

Kelsey Snell
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ELPC Comments on final DNR draft antideg rule.pdf

Electronic copy
of letterhead

STATE OF MISSOURI

Matt Blunt, Governor • Doyle Childers, Director

DEPARTMENT OF NATURAL RESOURCES

www.dnr.mo.gov

April 15, 2008

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Chicago, IL 60601

Mr. Ken Midkiff and Mr. Scott Dye
Sierra Club Water Sentinels Program
1007 North College, Suite #3
Columbia, MO 65201

Dear Gentlemen:

Thank you for your letter transmitting comments from the Sierra Club dated March 18, 2008 regarding the proposed amendment to Missouri's Code of State Regulations at 10 CSR 20-7.031(2). This proposed rule amendment pertains to the state's antidegradation policy and incorporates, by reference, the Missouri Antidegradation Rule and Implementation Procedure (AIP) adopted by the Missouri Clean Water Commission (CWC) on April 20, 2007.

The Sierra Club requests clarification on the following points to which the department provides a response:

1) **Clarify how Missouri's antidegradation policy will be implemented for facilities that apply for a permit prior to the effective date of the proposed antidegradation implementation procedures.**

Department Response: The department has already begun working with applicants on preparing for implementation of the AIP. The current rule prohibits the department from requiring the specific steps of the AIP until the new rule is in effect; however, most permit holders should be aware of the proposed August 2008 effective date and be taking steps to ensure that applications for construction permits following that date adhere to the new requirements. The department is also meeting with permit holders to ensure that full implementation of the procedures will be achieved upon the effective date of the rule amendment.

The portions quoted by the Sierra Club from the AIP and from the minutes of the April 20, 2007 CWC meeting were meant to remind the CWC and anyone reading the AIP that two requirements exist when establishing state standards satisfying the federal antidegradation policy at 40 CFR 131.12. States must develop a statewide antidegradation policy *and* identify the methods for implementing such a policy. The department developed an antidegradation policy many years ago, through the CWC, which was promulgated into the code of state regulations (CSR) at 10 CSR 20-7.031(2). The department wanted to be clear that no changes were being proposed to the existing policy. Providing that distinction was intended only to keep the discussion properly focused on the second requirement, i.e. the development of an *implementation* procedure, and to not invite reopening the policy which has already been approved by the Environmental Protection Agency (EPA).

2) Clarify how DNR will apply antidegradation requirements to discharges authorized by general permits.

Department Response: The department intends to reopen the general permit (GP) templates at their renewal and explore options at that time to incorporate the requirements of the AIP.

Generally, the department must demonstrate for each activity qualifying for a GP, that any discharge permitted by the GP is necessary to accommodate important socio-economic development. Further ideas about how the department will accomplish this demonstration are described in response to the specific questions below.

Whatever approach is developed, the new GP templates will involve the required elements stated in 40 CFR 131.12, with one of those elements being public participation. We encourage the Sierra Club to be involved with the GP development. Please watch for public notices on the draft GPs during the renewal periods following the effective date of the proposed rule amendment.

The Sierra Club further requests responses to the following specific questions to which the department provides additional information:

Accordingly, DNR must clarify in its response to comments how it intends to ensure that General Permits will not be used in situations that could lead to significant degradation on an individual or cumulative basis. At a minimum, the Department's response should indicate:

1) ***How the Department will consider antidegradation requirements, including alternatives analysis and socioeconomic considerations, when reviewing and approving general permit templates;***

Department Response: The department will identify Best Management Practices (BMPs) and/or effluent limits for typical discharge scenarios that satisfy the three parts of the alternative analysis, i.e. practicability, economic efficiency and affordability. Those BMPs and/or limits must meet the criteria for the selection of a pollution control alternative appropriate for the type of discharging activity proposed. Because GPs contain standard terms and conditions, the identified BMPs and/or limits will be required at all permitted sites involving that type of activity. The basic premise is that the use of these standard BMPs and/or limits will represent the highest level of pollution control generally accepted as practicable, economically efficient and affordable for the type of activity causing the discharge. The administrative record created at the time a GP template is rewritten must also provide the documentation that, for the types of discharge activities covered by the GP, no other cost-effective and reasonable alternatives are available to prevent or lessen a discharge from the activity covered by the GP.

2) How the Department intends to ensure that the continued use of existing general permits will not lead to significant degradation prior to the expiration of the general permit template?

Department Response: The antidegradation policy does not require assurance against significant degradation. It requires that, before significant degradation occurs, a demonstration be made of the necessity of the discharge for important socio-economic development. The policy is designed to prevent significant degradation where non-discharging or minimally-degrading alternatives are reasonably available. Also, the proposed procedures should provide better assurance by requiring a review for these alternatives. Even under the new proposed procedures, the protection of water quality at a level above the

numeric water quality criteria is dependent on the availability of reasonable alternatives. The only assurance provided by the proposed procedures, and by the current procedures to some extent, is that degradation will only occur after non-discharging and less-degrading alternatives have been explored and determined to not be practicable, economically efficient or affordable.

3) How the Department will ensure that individual permits (and associated antidegradation reviews) will be required for any activity that poses a risk of causing significant degradation?

Department Response: The AIP requires an antidegradation review on any activity that would result in a new or expanding point-source discharge. This review ensures that a reasonable set of alternatives are explored for achieving either a non-discharging, minimally-degrading or least-degrading alternative. The alternative is selected through an alternatives analysis that finds the alternative that offers the most pollution reduction and is practicable, economically efficient and affordable.

4) How the Department will ensure that general permits are not used in circumstances in which degradation could occur to sensitive waters of biological significance, including waters providing habitat for rare or endangered species?

Department Response: During the renewal of GP templates, the department will also explore the option of establishing a subset of GPs to address different, but common, site scenarios where different BMPs or limits are needed to protect sensitive species. If a GP cannot be developed because of unique or site-specific requirements for the protection of a species, the department will require a site-specific permit in coordination with the state and federal wildlife management agencies to ensure the discharges do not adversely impact the sensitive species.

5) How the Department intends to account for cumulative impacts to water quality caused by the total amount of discharges authorized by general permits over time?

Department Response: The response here is similar to our response to Question 1. The antidegradation policy does not require assurance against significant (or cumulative) degradation. It requires the evaluation of the necessity of a discharge and its socio-economic importance before significant degradation occurs; therefore, the amount of cumulative degradation depends on the availability of reasonable alternatives to prevent degradation. GPs are renewed every 5 years. As these renewals occur, the department will re-examine the availability of alternatives that offer greater pollution reduction. Where greater pollution reduction can be achieved through new advancements in technology (making greater pollution reduction practicable, economically efficient or affordable), then those alternatives will be incorporated into the requirements of the GP during the next five years.

6) ***How the Department will ensure that the total impact of activities authorized by the general permit (including both point and non-point source components of that activity) will be de minimis?***

Department Response: Only point sources are regulated by a state operating permit; therefore, any discharge regulated by a GP must undergo an antidegradation review during the template development to ensure these discharges are documented as the least-degrading alternatives available for the type of activities covered. Permits on Concentrated Animal Feeding Operations (CAFOs) do not allow a point source discharge. Any pollutant load coming from fields upon which wastewater is land applied must be de minimus and not

capable of causing significant degradation. Any significant degradation of water quality resulting from runoff of land application fields would be a permit violation.

3) Clarify how DNR will implement Tier 2 antidegradation protection for pollutants (most notably sediment and nutrients) for which there are no numeric criteria.

The Sierra Club further requests responses to the following specific questions to which the department provides additional information:

Please clarify that in all cases in which phosphorus, nitrogen or other pollutants for which there are no numeric criteria that may be contained in the proposed loading that the DNR will either determine in the record that loading will not be significant or require an analysis of whether the loading is necessary to accommodate important socio-economic development.

Department Response: The department will require a Tier 2 antidegradation review on pollutants for which there are no numeric criteria but for which a pollution threshold (numeric translator) can be reasonable developed. It is reasonable to expect applicants to explore a range of pollution control alternatives for these pollutants when sufficient science is available to understand the effects that these pollutants have on water quality and the attainability of beneficial uses. Sufficient science is available to understand the effects of nutrients and sediments on aquatic life, and the current science provides a reasonable basis for calculating waste load allocations for these pollutants on point source discharges. Examples of these calculations are found in several recent Total Maximum Daily Loads written by the department and EPA.

The effects of emerging pollutants such as pharmaceuticals, endocrine disruptors and caffeine are still not understood well enough to establish a meaningful threshold or reliable process for their control. These emerging chemicals will be included into the antidegradation reviews after our understanding improves on the pollutant thresholds critical to protecting water uses and on the wastewater treatment processes effective for their control.

An administrative record will be created for each application involving a new or expanding discharge. The record may consist of either a narrative within the Fact Sheet or Water Quality Review Sheet, or as part of the information provided by the applicant. The record will document the extent to which the antidegradation policy applies to each pollutant of concern. Furthermore, the record will provide a basis for determining the necessity to discharge and the importance of the discharging activity to socio-economic development. This administrative record will be available for public review when a public notice is made of a draft permit as required by the current permitting procedures.

4) Clarify how DNR will determine whether an alternative is cost effective and reasonable.

The Sierra Club further requests responses to the following specific questions to which the department provides additional information:

- ***That the rule will not be construed to allow permits for increased loadings of pollutants to be issued merely based on a showing that pollution avoidance or minimization exceeds an arbitrary cost threshold.***
- ***That the department will examine both the treatment costs and the corresponding level of water quality improvements when determining whether an alternative is "cost effective" and that the rules will require implementation of all affordable pollution avoidance or minimization measures that will yield significant pollution reductions.***

Department Response: A "cost effective and reasonable" alternative is defined in the AIP as an alternative that is selected through a properly conducted alternatives analysis. Such analysis determines an appropriate alternative by examining a range of pollution control options and selecting the one that provides the greatest pollution control that is also practical, economic efficient and affordable.

The use of the three measures (practicability, economic efficiency and affordability) ensures that the selected alternative will be chosen through a structured analysis that considers the factors that determine the most cost effective and reasonable options for reducing pollution when new or expanded discharges are necessary to accommodate important economic development.

5) Clarify how DNR intends to implement Tier 1 protections.

a) Pollutants that "qualify" for Tier 1 protection.
The Sierra Club further requests responses to the following specific questions to which the department provides additional information:

Please clarify that new and expanded discharges typically will not be allowed when a given pollutant "qualifies for a Tier 1 review" as described at the bottom of p. 13. If, instead, DNR understands Tier 1 protections to generally allow new or expanded discharges where existing water quality is already "at, near or violating WQS" (p. 13) then we expect DNR to clarify its intent for the record and explain how this is consistent with Missouri and federal law.

Department Response: New or expanded discharges will not be allowed under any circumstances if they create a reasonable potential for exceeding water quality standards. In that Tier 1 pollutants are "at, near or in violation" of the numeric water quality criteria (i.e. where no assimilative capacity remains), an additional discharge of these pollutants would be largely restricted to unique conditions. One possible scenario may be in a trading situation where the pollutants are reduced in one segment to offset the increase of the same pollutant in another. The redistribution of pollutants in this manner may be part of an effort to move the pollutant to less sensitive segments (e.g. away from mussel beds), or to accommodate a longer range plan for reducing pollutants within a watershed, such as when individual treatment facilities are connected to a centralized system.

Any water body that presents little or no assimilative capacity for additional pollutants will be protected through a Tier 1 review. The review must assure that the new or expanded discharge does not require the assimilation of a pollutant in order to achieve a water quality standard. An example where this may be true is where the total mass of a pollutant in the discharge is increasing but the concentration of the pollutant in the discharge will continue to meet the water quality criterion at the outfall.

b) Protection of existing uses that cannot be tied to violations of water quality criteria.

The Sierra Club further requests responses to the following specific questions to which the department provides additional information:

Please clarify how this review will take place to ensure that all existing uses of receiving waters are fully protected by the Department's Tier 1 implementation procedures, whether or not such uses are designated in the State's water quality standards.

Department Response: The Sierra Club identifies "hydrologic modification" and "habitat destruction" as examples of activities that are not addressed by the state's numeric water quality criteria. The numeric criteria generally address the protection of the chemical and biological integrity of the waters of the state. These criteria provide the basis for the effluent limitations specified by the state operating permits on point source discharges. The protection of physical integrity of a water body is generally addressed through the Section 404 permits and 401 certifications. The AIP states that 401 certifications are also subject to an antidegradation review, and that these requirements are met through the alternatives analysis and mitigation requirements contained the 401 certification procedures.

Additional Comments and Requests for Clarification

Determining the importance of socio-economic development - ***Please clarify that DNR will consider the overall impact of a proposed activity on a community and will not consider projected socioeconomic development to be "important" if the predicted benefits of the proposed activity are outweighed by the foreseeable socio-economic tradeoffs resulting from lost assimilative capacity and increased pollution.***

Department Response: These situations are very site-specific and cannot be accurately described or predicted by the AIP. However, the AIP specifies that, during the "practicability" portion of the alternatives analysis, the applicant must consider unique or special environmental values of the water body while examining alternatives. If an applicant proposes to discharge to a water body that has values not identified by its designated uses, the department would still consider those values in determining the threshold for deciding on practicability, economic efficiency and affordability of more protective treatment options.

Because these unique water uses and values are best recognized and described by the persons who make special use of the waters, this situation spotlights the importance of allowing public participation in the antidegradation review. The department encourages public participation as a way to ensure the proper balance between environmental quality and important socio-economic benefits.

Public participation - ***Please confirm that DNR will accept information relevant to the Department's antidegradation determination at any point in the antidegradation review process and not only after DNR has issued a preliminary determination. Also, please clarify how DNR intends to inform the public of the initiation of an antidegradation review, so that members of the public can provide relevant information to help inform the Department's decision.***

Department Response: The Sierra Club's request for making documents available on the department's web site is a reasonable request. The department is currently placing draft permits and associated supporting documents on our web page at the following web address:
http://www.dnr.mo.gov/env/wpp/permits/permit-pn.htm
After the effective date of the AIP, we will begin placing the documents associated with the antidegradation reviews at the same location as soon as the documents are available. The information made available to the public will include the information listed in the AIP on Page 40 under Section VI. Administrative Record of Decisions.

401 Certifications - ***Please confirm that DNR intends to make an independent judgment in making 401 certifications. If this is not the case, please clarify whether it intends to abdicate its authority for the record.***

Department Response: The Sierra Club's comment is not clear on what authority they believe the department would be abdicating. All 401 certifications must go through an antidegradation review. The department is making independent decisions on each 401 certification request in that we must perform an independent review of each application. The requirements that fulfill the policy include the alternative analyses and mitigation plans that are submitted as part of applications for 401 certifications.

Generally, the requirements for project design and completion specified by 404(b)(1) Guidelines Part 230.10 contain elements that satisfy EPA's requirements for antidegradation reviews at 131.12(a)(2). These federal requirements ensure that each project undergoes an alternative analysis and considers practicable mitigation of impact on aquatic ecosystems. Each project is reviewed through a sequence of questions aimed at ensuring the least amount of stream degradation possible. Example questions include: 1) Can adverse impact to the aquatic ecosystem be avoided through the selection of a least environmentally damaging practicable alternative?; 2) Can any unavoidable impacts be minimized through appropriate and practicable measures?; and 3) "Can any unavoidable adverse impacts, which remain after minimizing measures have been taken, be compensated through appropriate and applicable measures?

The federal guidance also further states that no discharge shall be permitted if there is a practicable alternative which would have less impact on the aquatic ecosystem. An alternative is practicable if it is available and capable of being done after taking into consideration cost, existing technology and logistics.

Therefore, each 401 certification provides assurance that each project is designed following an alternatives analysis and an examination of available methods to mitigate impact. If these provisions are met, all projects receiving a 401 certification should satisfy the fundamental requirements of the AIP.

If the Sierra Club wants to review the specific guidance establishing the level of review afforded to 401 certifications, it may find documents containing guidance at the following web addresses:

http://www.mvs.usace.army.mil/permits/guidelines.pdf

http://www.nwk.usace.army.mil/regulatory/compensatory%20mitigation/MSMM%20February%202007.pdf

Unclassified Waters - ***Please confirm that any proposal to lower water quality in an unclassified water will be fully justified as "necessary to accommodate important social and economic development" as required by state and federal law. If this is not the case, then we expect DNR to clarify its intent for the record.***

Department Response: The AIP affords the same level of review on unclassified waters as it does for classified waters. However, the water quality criteria are different (chronic criteria versus acute criteria) and therefore the calculation of assimilative capacity will reflect these differences. Otherwise, the reviews between unclassified and classified waters should be identical.

Permit renewals - ***Please confirm that DNR intends to apply this exception only to facilities that have previously undergone an antidegradation review consistent with these proposed procedures. If this is not the case, we request that DNR clarify its intent for the record.***

Department Response: There has been little documentation up to this date of the decisions made relative to the current antidegradation rule; therefore, it's difficult to determine the methods used up to this date to fulfill the requirements of the rule. Performing another antidegradation review in accordance with the AIP on existing facilities, or those already approved for construction, would not be productive, would invite legal challenges or would not likely result in any significant environmental benefit.

Treatment by-products of CSOs and SSOs - ***Please delete this exemption language or in your response to these comments clarify that this language will not be construed to exempt treatment byproducts from antidegradation review.***

Department Response: The department needs more experience in administering the AIP in order to fully understand how the antidegradation policy can effectively interrelate with wet weather issues. There is a general lack of federal guidance on this issue and an absence of clarity in other states as well. More time is needed to fully identify how the antidegradation rule assists in identifying the best approach to address new and expanded discharges resulting from improvements in wet weather treatment strategies.

SSOs are prohibited by the Clean Water Act. Therefore, there would be no benefit to reference SSOs in the AIP, since no discharge through a SSO will be permitted. Consequently, the department is removing any reference to exemptions to SSOs in the AIP.

CSOs generally remnants of historic and large scale sewer collection systems requiring long-term solutions achieved through incremental improvements. The methods for addressing wet weather discharges are much different than the methods used to control the new or expanding discharges associated with future community growth and development. The department agrees that further clarification is needed with respect to the applicability of antidegradation reviews to treatment proposals affecting CSOs. The department is seeking clarification from EPA.

In the meantime, the department will give deference to the requirements dictated by the national CSO policies when addressing these discharges. These policies set forth distinct approaches for reducing the effects of wet weather discharges (e.g., Nine Minimum Control Measures, Long-Term Control Plan, etc.). Both the antidegradation and wet weather policies emphasize the need for maximum pollution reduction, but offer different approaches to meet that goal. The approaches needed to address the widespread, historic and long-term needs generally presented by wet weather issues require different approaches than the approaches generally used in determining appropriate wastewater treatment needed to accommodate new growth. For example, in some cases, short-term degradation may be necessary to achieve long-term improvements in streams affected by wet weather discharges. This short-term degradation may result from the redistribution of wastewater flows within a collection system or from incremental adjustments in treatment that results in the generation of by-products. By exempting certain wet weather discharges, the AIP recognizes these separate regulatory programs and supports the existing, yet different, regulatory approaches to achieve the reduction or elimination of wet weather discharges.

To avoid any interference the AIP may have with implementing the CSO policies, the department is revising the AIP to simply reference the national CSO policies in the AIP for determining future permitting decisions regarding wet weather discharges. A similar approach was used in coordinating the AIP with the 404 permitting and 401 certification activities on Page 37 of the AIP. The changes in the AIP will appear on Page 16 and clarifies that all wet weather discharges

are subject to the national wet weather policies and are not subject to additional review under the AIP as long as the discharger is in compliance with these national policies.

Water Quality Trading - ***Please confirm that in order to be recognized, any proposal would need to be based on concrete and enforceable offsets in the same watershed as the proposed activity.***

Department Response: The department needs more experience in administering the AIP in order to fully understand how the antidegradation policy can effectively interrelate with water quality trading proposals. There is a general lack of federal guidance on this issue and an absence of clarity in other states as well. More time is needed to fully identify how the antidegradation rule assists in identifying the best approach to address new and expanded discharges resulting from improvements in water quality trading strategies.

Generally, the department supports trading and agrees that the redistribution of pollutant loads may be part of an overall strategy to reduce pollution within a watershed. However, many factors complicate the development of guidance or restrictions on its use. Until these factors are better understood, or are guided by decisions at the federal level, the department reserves the right to review each trading situation independently.

Existing Water Quality (EWQ) Tracking - ***Please clarify how DNR intends to monitor and track degradation for the purposes of determining cumulative impacts until such a system is finalized.***

Department Response: Until a tracking system is developed, the department will rely on the administrative record filed with each permit to provide a permanent accounting of the cumulative use of assimilative capacity within water body segments. Specifically, the department will review the records of issued permits on segments containing past approvals of degradation under the AIP to determine the assimilative capacity likely remaining and available for new or expanding discharges. Each successive administrative record prepared on a new or expanding discharge will provide a summary of the degradation approved previous to the present request. This information will be among the documents available for public review when the draft permit is open for public review and comment.

Thank you for your detailed comments and for participating in the development of the AIP. I sincerely hope the department's responses are satisfactory in providing the clarification or verification you desired. If you have any questions, please contact me at (573) 751-6770 or by mail at P.O. Box 176, Jefferson City, Missouri 65102.

Sincerely,

WATER PROTECTION PROGRAM

Signed by Phil Schroeder

Philip A. Schroeder, Chief
Water Quality Monitoring and Assessment Section

PAS:lsm