

APPENDIX E  
STATE OF NEW YORK  
EXECUTIVE DEPARTMENT  
ADIRONDACK PARK AGENCY  
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August 27, 1990

Mr. Gerald Barnhart  
Ass't. Director  
Division of Fish and Wildlife  
NYS Department of Environmental  
Conservation  
50 Wolf Road  
Albany, N. Y. 12233-4750



Dear Gerry:

Subject: Final Generic EIS on the NYS Department of Environmental Conservation Program of Liming Selected Acidified Waters

This letter confirms informal reaction to the draft Final GEIS, first discussed with you and your staff in early June, and confirms supplemental discussion and field visits by APA and DEC staff.

We deliberately have not undertaken a detailed review of your responses to our extensive comments of December 4, 1988, and instead limited our concerns at this time to three changes to the body of the Final GEIS that we consider essential, and central to our interest as an involved Agency with respect to the Freshwater Wetlands Act and the Adirondack Park State Land Master Plan. Procedures under both authorities should provide a further opportunity for elaboration and clarification of subsidiary issues.

- 1. The liming program will avoid liming naturally acid waters.

In principal, both Agencies agree on this issue which was the main subject of our June discussion. We find Criteria 2 to be inadequate in this respect. We believe that a "naturally occurring acidic condition" can be defined as an acidic condition as measured by water chemistry, biota and color. The following criteria provide an additional level of specificity to give more reasonable assurance in identifying waters dominated by natural acidity:

(a) The ALSC methodology for water chemistry, found in its Interpretive Report pp. 2-92, should be the foundation for a determination regarding naturally occurring acidic conditions, with data available for many of the potential candidate waters in the Adirondack Park. **A**

Two corollary tests should be used to verify the water chemistry test, or for those situations where a water

chemistry test cannot be used due to a prior history of liming or similar consideration.

(b) Water color and dissolved organic carbon (DOC) together provide a valuable additional test, using a guideline level of 75 platinum-cobalt units for color and 4.5 mg/l for DOC as recommended by the U. S. Fish and Wildlife Service (Gloss, S. P., C. L. Schofield and M. D. Marcus. 1989. Liming and Fisheries Management Guidelines for Acidified lakes in the Adirondack Region.)

B

(c) Peat development and bottom sediment characteristics (muck predominated) provide additional indicators of long-term acid dominance.

C

We respectfully request that criteria 2 be modified to incorporate these three factors as discussed in June and in subsequent field investigations. Specific language in this regard, which was shared with your staff in June informally, is attached.

2. Candidates will be added to the program only after full compliance with the spirit and the letter of SEQRA in applying the "exception" criteria, listed on page 6 of the draft.

The Agency believes that there must be a formal supplement to the Final GEIS for case-by-case approvals that do not meet the program criteria identified in the GEIS. This is important to assure full substantive and procedural compliance and to provide an opportunity for public comment. This might occur in the context of a Unit Management Plan. That is, the UMP SEQR statement could specifically identify additional candidates as a SEQRA Supplement to this Final GEIS.

D

3. The Adirondack Park Agency is responsible for the interpretation of the Adirondack Park State Land Master Plan and this document does not reflect final determinations regarding the interpretation of that Plan.

E

The body of the text should provide a clear statement to this effect. We view the positions taken on the State Land Plan as those of the Department. This Agency expects to continue consultation, and to address the issue of compliance with the Adirondack Park State Land Master Plan in the elaboration of the "Guidelines for Fisheries Management in Wilderness, Primitive and Canoe", which address the most sensitive policy issues in this regard, and ultimately in the context of individual unit management plans.

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We should plan to meet as soon as this Final GEIS is published to review the Guidelines for any desirable additions.

I believe the field visits have been particularly useful in assessing the workability of the criteria on natural acidity. We look forward to working out these specific text changes in final form with the Department.

Sincerely,



John S. Banta  
Director of Planning

cc: Herbert E. Doig, Assistant Commissioner, Natural Resources  
Herman F. Cole, Chairman  
Robert C. Glennon, Executive Director

Attachment 1

p.viii para.4 Add in line 3 after "the projects are now limited to waters impacted to the point that brook trout cannot survive by acidic deposition. F

p.x para.1 Add in line 3 after "Certain acid tolerant aquatic species of filamentous algae, Sphagnum mosses, bladderwort, sundew, dragonfly larvae, and water boatmen among others are known to become very abundant in acidic ponds which are too toxic for brook trout to live [fish life]. The liming of such waters makes the environment less favorable for [the filamentous algae and Sphagnum] these acid tolerant species of plants and insects. G

Add the following paragraph after para. 1:

In systems which are naturally acidic, liming may have no chance of long term success and will ultimately be abandoned causing unnecessary stress and instability in the natural processes of the lake. In addition, reacidification and subsequent decrease in productivity due to metal toxicity may render the system worse than the original condition. H

p.5 para.7 Change the 5(c) criteria to:

(c) represent a seriously degraded aquatic ecosystem which [is seriously depauperate across] in a few limited instances has had a demonstrable loss of a number of historically known different taxa and where restoration of the ecosystem would be the primary objective of the proposed liming. I

p.14 para.3 2a. Permit Requirements

First paragraph should be omitted. It does not add to the discussion and parts of it are incorrect, e.g., the APA has required permits for the application of lime to Adirondack lakes. J

para.5 Delete and add after second sentence. [Preliminary indications are that waters currently in the DEC liming program which have a history of liming and which do not experience any large pH changes during reliming would be judged to be non-jurisdictional.] The jurisdictional test is substantial impairment of benefits or functioning of

wetlands NYCRR 587.3 (n)(2)(ii). In some instances, liming may not require a wetlands permit from the Agency. For example, waters which have a history of liming to which plant communities have adapted to the water chemistry and where the proposed liming would not drastically change (eg. less than 2 pH units) the water chemistry, a permit would not be required.

p.81 para.4

Add at the end of line 2 "which have adapted to the acidic environment and provide functions and benefits unique to these types of systems."

K

KMR: BANTA

Responses to APA Comments Received 30 August 1990 (pp. 235-239):

- A. Both the APA and the DEC wish to avoid liming naturally acidic waters. The problem is in identifying which waters are truly dominated by natural acidity and in being able to make this determination relatively simply. The methodology referred to in the ALSC Interpretive Report was developed by Munson et al. (1990) and is not necessarily accepted by the ALSC and its members. It is a new method which has not been fully tested and evaluated. Limitations of the method are: (1) mineral acidity may be underestimated in the method, therefore attributing more of the acidity to natural causes than is actually the case; (2) the amount of error in the estimate is unknown and may be large because the various chemical parameters are examined collectively; (3) surface water chemistry may be affected by weather events which would therefore affect the estimate of mineral acidity; and (4) the seasonal variability of the estimate is unknown. The methodology has the potential to be a useful tool in helping us to better characterize the lake water chemistry and the sources of acidity. At this time however it is imperative that the method be evaluated fully to resolve the uncertainties. Because of the limitations listed above it appears unwise at this time to require this methodology as a candidate selection criterion in the DEC liming policy. Once the method and variability of the estimate are better understood, it will be more useful in identifying different types of lakes. At this time however, we must rely on the revised criterion #2 as stated in Section I. and discussed in Section II.D.4.c.
- B. In response to this comment the DEC liming policy has been revised to exclude waters which have a summer surface water color of 75 platinum-cobalt units or above. Section II.D.4.c. has also been revised to discuss how identifying colored waters will help to better identify and exclude naturally acid waters from the program. Dissolved organic carbon (DOC) is also a way of identifying naturally acid waters, but it may not provide any additional ability to identify these waters that water color does not provide. The other problem with DOC is that the 4.5 mg/l level of DOC appears to be too low for Adirondack waters. For Adirondack waters a water color of 75 platinum-cobalt units corresponds to a DOC of 8 or 9 mg/l based on the ALSC data. As was noted in the ALSC Interpretive Report the DOC values obtained by the ALSC were consistently higher than those obtained by the EPA - Eastern Lakes Survey. Because of these problems with using DOC as a criterion only the water color criterion has been added to the DEC liming policy.
- C. The amount of peat development and the bottom sediment characteristics of a pond may be an indicator of long-term natural acidity, but it is not clear how these parameters could be measured and incorporated into a criterion. The ALSC reported the percentage of shoalwater substrate dominated by muck, sand, organic, gravel, etc. in the lakes they surveyed, and these data appear highly variable. It appears unlikely that these numbers can

be used to help identify naturally acidic waters. Two factors may explain this. First, the ALSC only surveyed shoal areas and not the deeper waters. Secondly, in waters acidified by atmospheric deposition leaves and other organic matter accumulate on the lake bottom and do not decompose. These waters may then be classified as having an organic substrate even though they are not naturally acidic. The Sphagnum criterion (Sphagnum moss must not occupy more than 50% of the shoreline) would be expected to identify naturally acidic waters which have significant peat development, and it is felt that this criterion in combination with the new color criterion adequately exclude naturally acidic waters from becoming part of the DEC liming program.

- D. The DEC will fully comply with the spirit and the letter of SEQRA, and this is stated numerous times in the policy and the FEIS. In regards to a candidate water which does not meet all of the specific selection criteria it may be necessary to prepare a supplemental EIS, however this determination will be made only after an environmental assessment of the candidate and a comparison of anticipated impacts with the data presented in the EIS to determine the need for a supplemental EIS. In reality few waters (if any) will be considered for liming which do not meet the criteria outlined in the new liming policy. However it is unwarranted to require the preparation of a supplemental EIS if a water exceeds one of the criteria by a small amount. The "Exceptions" section of the policy was developed for this situation and includes the requirement of a detailed justification why the water should be included in the liming program. If the possible environmental impacts are large and are not discussed in the FEIS, then the preparation of a supplemental EIS would be required. For any waters considered under this "Exceptions" section of the liming policy, a requirement is "publication in the ENB and a 30 day public comment period prior to conduct of the project." This public comment period was added in response to APA comments. In the Unit Management Planning Process it is unlikely that all the topics important for an Environmental Impact Statement would be covered. The UMPs are prepared primarily to outline the management plans for an area for the next 5 years. Although the UMPs will identify potential liming candidates and plans for liming, they will most likely not serve as an acceptable supplement to this EIS.
- E. According to the Adirondack State Land Master Plan the APA is "responsible, as a policy matter, for general interpretations of the master plan itself..." The DEC does not dispute this and has added this specific statement to Section II.A.2.b. of this FEIS. The DEC also will continue with the productive discussions which have been held with the Agency on the "Guidelines for Fisheries Management in Wilderness, Primitive, and Canoe Areas."
- F. This change is not warranted because Horn Lake and Tamarack Pond were never impacted "to the point that brook trout cannot survive." These two waters have been limed periodically in order to prevent this from occurring and to maintain the heritage strains of brook

trout present in these waters. All of the waters currently in the DEC liming program have however been impacted by acidic deposition.

- G. Several changes were made in this paragraph in response to APA comments. The revised paragraph includes the additional plants listed, but not the statement that "liming makes the environment less favorable for acid tolerant plants and insects." Most plants and insects which are acid tolerant can survive quite well in circumneutral water chemistry. Other factors such as competition from acid sensitive plants or predation from fish must also be considered.
- H. This paragraph was not added to the Adverse Impacts Section of the Summary because the liming of naturally acidic waters is not part of the DEC liming program. This FEIS evaluates the beneficial and adverse impacts of the DEC liming program under the revised liming policy, and part of the policy is to exclude the treatment of naturally acidic bog ponds. Similarly reacidification of waters in the program will not be allowed to occur because of annual monitoring, reliming when necessary, and a commitment to maintain the water quality of the ponds in the program.
- I. Changes were made in criterion 5(c) in response to this comment. The wording "in a few limited instances" was not included, however, because ecosystems degraded by acidic deposition are more common than this wording would imply. This does not mean that waters limed for the purpose of restoring the ecosystem will represent a large part of the DEC liming program, but several waters, particularly any in wilderness areas, will be treated for this purpose.
- J. These changes and additions have been made as the APA suggested.
- I. This addition also has been included.