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OFFICE OF THE
REGIONAL ADMINISTRATOR

May 4, 2001

David Tilton
U.S. Fish and Wildlife Service
Lake Champlain Fish and Wildlife Resources Office
11 Lincoln Street
Essex Junction, Vermont 05452

RE: Draft Supplemental Environmental Impact Statement for A Long Term Program of Sea Lamprey Control in Lake Champlain, EPA ERC Number SFW-B82009-00

Dear Mr. Tilton:

The Environmental Protection Agency-New England Region (EPA) has reviewed the U.S. Fish and Wildlife Service's (USFWS)/Vermont Department of Fish and Wildlife's (VTFW) Draft Supplemental Environmental Impact Statement (DSEIS) for the consideration of various long term sea lamprey control alternatives within Lake Champlain in Vermont and New York. We submit the following comments in accordance with our responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act.

The DSEIS explains that the current analysis supplements the 1990 FEIS for temporary/experimental sea lamprey control. As you know, EPA's comments on the experimental project related to the project purpose and need, alternatives, cumulative/indirect impacts, and water supply protection. The 1990 report and subsequent Record of Decision led to an eight-year experimental sea lamprey control program on Lake Champlain that focused on thirteen tributary systems and five deltas. The USFWS ultimately deemed the eight-year program a success and used this determination to provide justification for continued sea lamprey control efforts on Lake Champlain.

Subsequent to our review of the EIS for the experimental program, EPA has remained actively involved in a number of efforts related to the health and welfare of Lake Champlain and its tributaries. For example, we fund and support the Lake Champlain Basin Program, and are signatories to the 1996 Lake Champlain Management Plan, "Opportunities for Action: an Evolving Plan for the Future of the Lake Champlain Basin." This plan's highest priorities for action are: 1) reducing phosphorous load to the Lake; 2) reducing toxic inputs to the Lake; and 3) developing and implementing a strategy for managing nuisance aquatic plants and animals. This third item includes the control of sea lampreys. Lake Champlain is home to many environmental victories, of recent note the reduction in phosphorous loads by 25% since 1996. We have also worked to reduce toxic contamination of the Lake, funded studies of toxic contamination, and support current efforts to reduce and remove toxic chemicals in Lake Champlain. EPA's work on

the Pine Street Barge Canal Superfund site is another example of our efforts in the Lake Champlain Basin. We understand how important a clean, healthy and vibrant lake ecosystem is to the local and state economy. We also understand that balancing the needs of various competing demands when formulating public policy is complicated and difficult. It is with these interests in mind that we reviewed the current proposal for long-term sea lamprey control in Lake Champlain and offer these comments.

According to the DSEIS, the goal of the program is "to achieve fish population, recreational fishery and economic benefits associated with reduced sea lamprey predation." The DSEIS considers three alternatives: 1) an extensive, long-term control program for sea lamprey that is tributary specific, screens viable control techniques for use in each stream system and allows for integrated methods to achieve project objectives (the proposed action); 2) continued treatment of the rivers and deltas treated during the eight-year experimental program with chemical lampricides (no additional control techniques or new treatment areas would be added to improve sea lamprey control); and 3) abandonment of sea lamprey control as a fisheries management tool (the no action alternative). Based on our review of the DSEIS, we believe that there are data deficiencies in the DSEIS that must be addressed before the conclusion of the NEPA process and in advance of the selection of a final course of action. In general, we believe that any final measure implemented to control sea lamprey in Lake Champlain will need to be effective, flexible and location specific; must minimize collateral damage to the ecosystem of the lake and its tributaries; and will require the development of a comprehensive public process to allow for changes to the treatment program based on its effectiveness, impacts to nontarget species, and to accommodate concerns of the numerous stakeholders involved in this long-term action. Our specific comments are provided below.

Project Purpose and Need

The DSEIS describes the purpose of the project as an effort to establish and maintain the "greatest practical reductions" in sea lamprey populations in Lake Champlain. The purpose and need analysis describes impacts to salmonids and sport fisheries that existed prior to the experimental treatment program that ended in 1997. While we appreciate this information and quantification of increased sport fish landings resulting from the experimental control program, we found that the DSEIS provides little information to clearly explain the current status and likely future conditions of the sea lamprey population in the lake, its tributaries and deltas. The effect of sea lamprey population changes should be linked, as appropriate, to changes in the sport fishery populations of concern.

The ability of the project to establish and maintain the "greatest practical reductions" in sea lamprey populations is expressed in terms of a set of "accepted" and "ideal" lamprey wounding rates for lake trout, salmon and walleye. These wounding rates appear to be the driver for many details of the program. The DSEIS describes preferred strategies to monitor wounding rates but does not fully explain the basis for the wounding rates. Without this information it is unclear whether or not higher wounding rates, which would theoretically require a less intensive sea lamprey control effort, could be established that would result in practical reductions in sea lamprey populations and allow for the continued existence of a viable sport and recreational

fishery. In addition to examining the basis for wounding rates we think the goals and objectives discussion, and the purpose and need statement itself, should be expanded to include minimization of impact on non-target species and other collateral damage to the environment. While the document does indicate steps that will be taken to minimize damage to organisms other than sea lampreys, this effort should be formalized into the project's goal statement.

NEPA Action for New Waters

The preferred alternative expands the sea lamprey control program to eleven additional streams, including tributaries beyond that of the original experimental program. According to Figure V-1 this includes Bullis Brook and Mullen Brook on the New York side of the lake. New proposed streams in Vermont include: LaPlatte River, Winooski River, Sunderland Creek, Malletts Creek, Indian Brook, Missisquoi River and Youngman Brook. Two Quebec waters are also proposed: the Pike River and Morpion Stream. In addition Table VIII-23 (page 316) lists additional streams that have the potential to produce sea lampreys, and may eventually be brought into the program. None of these were treated with lampricide in the experimental program.

Identification of additional streams that may be brought into the program is consistent with the Council on Environmental Quality Regulations implementing NEPA requirement that the impacts of reasonably foreseeable actions be described in an EIS. Unfortunately, several pieces of important information, including transformer (described in the DSEIS as "a miniature version of an adult lamprey equipped with functional eyes and a cup-shaped sucker mouth, armed with teeth") production estimates and wetland impact analyses (associated with both chemical treatments and hydrologic changes induced by barrier dams), are not provided for the majority of the newly proposed treatment streams. In addition, according to the DSEIS, potential water supply impact studies need to be done before treatment on the Missisquoi and Pike Rivers.

We also understand from the DSEIS that virtually all of the newly proposed waters to be treated contain state listed threatened or endangered species that will need to be considered as part of any proposed treatment action. This program proposes to use TFM and Bayluscide as chemical lampricides. It should be noted that use of these compounds poses a risk of mortality to various organisms, particularly those that dwell on the stream bottom. This raises significant ecological concern with the use of this compound since some of the areas targeted for treatment contain State listed threatened and endangered mussels and fish. The FEIS should elaborate on the danger presented to these species and should report on the consistency of using this chemical with the State of Vermont's endangered species protection laws.

It is not clear from the DSEIS whether or not this information, and an analysis of impacts associated with proposed treatment programs in the new areas, will be provided prior to the conclusion of the supplemental NEPA process. If this information is not provided in the FEIS, the FEIS must, at a minimum, describe how the relevant site specific information and analysis of impacts will be provided through a public supplemental NEPA process that would occur prior to the commencement of any treatment activity.

Screening/Feedback Mechanism
One of the most significant improvements in the NEPA document since the development of the experimental program is the river by river examination and screening process. This new process is illustrated by the figure on page 41, and described in Section VIII. As useful and important this innovation is, we believe that more data should be provided on the feasability of non-chemical controls and non-target impacts of lampricides. This is particularly important for those rivers that were not treated in the experimental program. The new process discusses the screening technique for feasible treatments on a stream by stream basis; however, it lacks information on how decisions are made to determine how the Lake's tributaries as a whole can and should be managed for sea lamprey control. Specifically, the EIS should provide details on how tributaries are selected as the highest priority for treatment, and how this priority ranking might vary over time as the wounding rate and other program parameters change. The discussion should specifically describe what types of feedback would lead to an increase or decrease in control measures. As it stands now, we believe that the current program focus on wounding rates may lead to treatment of sensitive tributaries that contribute little to the lakewide problem. The Poultney River comes to mind as an example of a biologically rich and sensitive tributary that contributes less than two percent of the sea lamprey population in the lake. Under the proposed program, it would be subject to lampricide treatment if target wounding rates are not achieved, perhaps even if treatments are unsuccessful on other tributaries with far higher transformer production ability.

Revision and Revisitation Strategy
We are concerned that the DSEIS provides no commitment for a periodic review of the control program. We believe that any long-term sea lamprey control program should have provisions for a NEPA review before expanding the program to new waters and at measured intervals to allow for a reassessment of the program's effectiveness and a re-evaluation of sea lamprey control methods, site specific impacts in the lake and its tributaries, and protocols. It would also provide a good opportunity for the public review of project data generated by the program. These occasional appraisals would be particularly valuable in the context of emerging control techniques, such as the use of sterilized males and pheremone-based controls, which might have lower impacts on non-target species. This approach will also allow for the periodic re-evaluation of streams as populations and environmental conditions change. Periodic revisions of the NEPA document would also allow for the valuable input of interested federal, state, and local agencies, as well as the public, on the past and future direction of the program. We suggest a revision frequency of once every eight to ten years (roughly corresponding to two treatment cycles) unless significant adverse effects occur as a result of the initial treatment cycle.

Poultney River
Pursuant to 10 V.S.A. 1424(a) the Poultney River is one of only four designated Outstanding Resource Waters in the state of Vermont. The Vermont Water Resources Board found that the Poultney River contains a highly diverse ecosystem as it provides exceptional aquatic habitat, harboring twelve species of fresh water mussels representing 70% of the total species diversity known to occur in Vermont. This mollusk community is highly diverse and is one of only two of its kind currently known in Vermont. In addition, fish surveys below Carver Falls found 28 of the

87 fish species (32%) known to occur in the state of Vermont. The river also contains a number of mussels and fish that are endangered or threatened in the state of Vermont including the channel darter, eastern sand darter, black sandshell, fluted shell, fragile papershell, pink heelsplitter, pocketbook, and giant floater. In addition, the mudpuppy and silver lamprey are listed as species of special concern in Vermont[1].

Not only is the Poultney home to this wide range of threatened and endangered species, toxicity data are not available for a number of these organisms including the fluted shell, fragile papershell, and the giant floater. Without this information it is difficult to estimate what the effect of lampricide treatments will be on the Poultney ecosystem. Consequently, because the Poultney is not a major sea lamprey transformer producer (it accounts for less than 2% of the Lake Champlain Basin population)[2], we recommend that the US Fish and Wildlife Service consider a longer interval before treating the Poultney with chemical lampricide than the four years stated in section VIII (11). This would provide a greater opportunity to develop and test lampricide alternatives to sea lamprey control as well as obtain and verify toxicity data for the species where no such data are currently available. In addition, during our review of the DSEIS, our appreciation for the resources of the Poultney from the DSEIS was enhanced by discussion with The Nature Conservancy which has invested significant resources to protect this tributary. It is our understanding that The Nature Conservancy intends to comment and suggest a sea lamprey control strategy for the Poultney that differs from the proposal in the DSEIS. We urge the USFWS and VTFW to work with the Nature Conservancy to develop an acceptable management approach to the Poultney.

Finally, the rich species mix of the Poultney may soon be subject to new stresses from invasive zebra mussels recently found in Lake Bomoseen, headwaters of the Poultney. From this location, zebra mussels may be able to colonize the Poultney and imperil the survival of native mollusks. We strongly encourage the USFWS/VTFW to fully explore in the FEIS the potential for sea lamprey control efforts to increase threats from this invasive species to the rare biological assemblage of the Poultney.

Possible Requirement for an NPDES Permit

There is a possibility that discharges of lampricides to waterways under the Sea Lamprey Control Program may require authorization by a National Pollutant Discharge Elimination System ("NPDES") permit under section 402 of the Clean Water Act. On March 12, 2001, the U.S. Court of Appeals for the Ninth Circuit held that the application of a pesticide directly to a water of the U.S. consistent with EPA-approved Federal Insecticide Fungicide and Rodenticide Act ("FIFRA") label nevertheless requires a NPDES permit. Headwaters v. Talent Irrigation District, No. 99-35373. EPA is currently considering the national implications of this case and also needs to determine the ramifications of this case for the question of whether an NPDES permit is

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[1]http://www.anr.state.vt.us/fw/fwhome/nnhp/vt_anim.html

[2]EPA analysis of information presented in section VIII.

needed to authorize the lampricide discharges proposed under the Sea Lamprey Control Program. We understand that it is very likely that the authors of the current DSEIS were unaware of this court decision at the time the document was published. However, it is important for the USFWS to be aware of the issue now and to acknowledge the potential permit requirement in the FEIS. We will try to move consideration of this issue as quickly as possible and keep the USFWS appraised of our progress.

Pesticide Registration and Use Issues

The Vermont Pesticide Regulatory Agency should be contacted to confirm that the pesticide products being used for lamprey control are registered with the state. The most appropriate contact on this matter is Mr. Philip Benedict, Director; Plant Industry, Laboratories & Standards; Department of Agriculture, Food & Markets;116 State Street, Drawer 20; Montpelier, VT 05620-2901; Telephone: (802) 828-2431.

The Vermont Department of Agriculture is responsible for certifying pesticide applicators. Applicators applying pesticides in Vermont need to be certified in Vermont or under a state approved reciprocal arrangement. Mr. Benedict (listed above) should be contacted to confirm compliance with state pesticide training and certification requirements.

States may impose special restrictions on certain pesticide applications. The Vermont Department of Agriculture should be contacted to learn of any special state requirements such as interpretation of what it means to be "under direct supervision" for application of Restricted-Use pesticides.

Chemical Fate of Lampricide

The DSEIS describes at length the residence time and dilution effects of the lampricide treatments. However, discussion about the ultimate fate and decay rates and products of these chemicals is not included. The FEIS should provide this information and should describe to what level they might accumulate in stream sediments or the water column of Lake Champlain. The impacts of any such accumulation should also be discussed in the FEIS.

Chemical Reduction Bill

The FEIS should explain how any long term sea lamprey control efforts involving lampricides would be compatible with the Vermont state goal of "achieving an overall reduction in the use of pesticides consistent with sound pest or vegetative management practices...". This goal was established by the enactment into law of Vermont House Bill 851 on May 24, 2000.

Historic Preservation Act

The DSEIS mentions that certain lamprey control techniques (primarily barrier dams) may impact archaeological sites. A more complete discussion regarding the USFWS's responsibilities under §106 of the Historic Preservation Act with respect to these actions should be included in the FEIS.

Non-target Impacts Reporting
More detail should be provided on the impacts of lampricide on aquatic species other than sea lamprey. It is our understanding that the bulk of this information is available in the 1999 document prepared by the Fisheries Technical Committee of the Lake Champlain Fish and Wildlife Management Cooperative. More of this information should be made available, in addition to the data contained in Table VII-15, and included in the FEIS. Doing so will provide agencies and the public with better information about the number of individuals of each non-target species that will likely perish, and an improved estimate of what percentage of each species are affected.

Economics
The DSEIS provides a good background on how sea lamprey control will impact the economics of sportfishing. However, the section on economic impacts does not describe the value of sea lamprey reduction to non-fishing users. It also ignores the monetary and other value of the non-target species inadvertently harmed by sea lamprey treatments. The FEIS should estimate the value of these organisms and, along with this analysis, evaluate whether a revised economic impact estimate that considers these values results in changes to the project's direction or goals.

Miscellaneous

- An assertion is made that boating (unrelated to fishing) and swimming use of Lake Champlain will increase once sea lamprey populations have been reduced. No theory explaining this prediction has been posed. Please provide a rationale for this hypothesis.

- The FEIS should discuss the potential for sea lampreys in the Lake Champlain Basin Program to develop a tolerance for lampricides. Bacteria, insects, and other organisms have demonstrated an ability to become, over time, resistant to chemical control means. Theoretically, this might be the case as well with sea lampreys. Ammocetes and transformers that survive a treatment may have progeny that are also resistant.

- The FEIS should provide an analysis of the long term impacts of lampricide treatments as compared to those of barrier dams.

- The FEIS should contain a more complete explanation of the effectiveness of fish passage at lamprey barrier dams. The usefulness of barrier dams as a sea lamprey control depends in large part on the ability of migratory fish species to bypass those dams, while blocking sea lamprey movements. Also, more detail on the costs of barrier dam and fishway construction should also be included in the FEIS.

- The DSEIS dismisses the use of fishing as a method of control. While we concur that the high fertility of sea lampreys make it impossible to rely on this method alone, it may prove useful in certain circumstances as a tool in the work to control sea lamprey populations. While a domestic food market for sea lampreys may not exist, a strong

foreign export market, particularly in Spain and Portugal, could be developed[3]. We recommend that the FEIS include an enhanced discussion of this issue.

Conclusion and Rating

EPA recognizes the efforts of the USFWS and the VTFW to incorporate a screening process into the long-term sea lamprey control program presented in the DSEIS. We believe, however, that a successful and environmentally acceptable control program will require constant attention to feedback data related to the effectiveness of the controls and non-target species impacts, and ongoing coordination with interested stakeholders. As one of many parties interested in the long term health of Lake Champlain, EPA looks forward to continuing involvement in the review of the project prior to the completion of the NEPA process.

For the reasons discussed above, EPA has rated this EIS "EC-2 Environmental Concerns, Insufficient Information" in accordance with EPA's national rating system, a description of which is enclosed with this letter. Please feel free to contact me or Timothy Timmermann of EPA's Office of Environmental Review at (617) 918-1025 if you wish to discuss these comments further.

Sincerely,

Ira Leighton
Acting Regional Administrator

Enclosure
cc:

Bill Howland, LCBP
Canute Dalmasse, VT DEC
Stu Buchanan, NY DEC
Gerald Potamis, EPA New England
EPA, Office of Federal Activities
Rachel Jablonka, EPA Region 2

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[3]See the following web resources: http://www.great-lakes.org/delic_ay.html, http://www.seagrant.umn.edu/seiche/sep.96/art01.html, http://www.sciencenews.org/sn_arch/8_10_96/food.htm.

SUMMARY OF RATING DEFINITIONS AND FOLLOW-UP ACTION

Environmental Impact of the Action

LO--Lack of Objections
The EPA review has not identified any potential impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC--Environmental Concerns
The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

EO--Environmental Objections
The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU--Environmentally Unsatisfactory
The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the CEQ.

Adequacy of the Impact Statement

Category 1--Adequate
EPA believes that draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2--Insufficient Information
The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

Category 3--Inadequate
EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analysed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.