Dickey-Lincoln School Lakes Project at Dickey, Maine: Final Environmental Statement

New England Division
United States Army Engineer Division

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9.08

Comments and Responses

on the Revised Draft

Environmental Impact Statement
PREFACE

This document contains those comments and responses on the Revised Draft Environmental Impact Statement. It is a continuation of Volume II published by the Corps in 1978. In addition, it contains reproductions of those letters of comment received on the March 1980 Draft Fish and Wildlife Mitigation Plan, and the responses to these comments.

Since the preparation of the Draft EIS on the proposed transmission line, the electrical plan of service has changed, and the Granite-Essex segment discussed in that EIS is no longer proposed or a viable alternative. Therefore, new NEPA documentation has been prepared on a different segment, from Moore to Webster, New Hampshire. Refer to the Summary document of this Final EIS for additional information concerning this change.

Several letters of comment were received which addressed the Granite-Essex segment. Responses to those comments were prepared before the plan of service was changed. In order to present the complete record of public comments on the original DOE EIS and to answer the comments that were made at that time, the original letters and the responses that were prepared have been retained in Volume II, Part I. The reader should keep in mind, however, that the Granite-Essex line is not now proposed for construction, and is not a viable alternative to meet the changed electrical needs identified in recent power planning studies.
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9.08 COMMENTS AND RESPONSES - REVISED DRAFT EIS

9.08.1 Federal Agencies

9.08.1.1 U.S. Department of Agriculture-Soil Conservation Service

COMMENT: 1

Appendix C, "A Scenario of Projected Boom and Decline ....;" prepared by Pamela D. Savatsky; a. Who is Ms. Savatsky, no credit line shown.

RESPONSE: Dr. Savatsky is an environmental sociologist and served as a consultant to the Corps.

COMMENT: 2

Appendix C, "A scenario of Projected Boom and Decline....", prepared by Pamela D. Savatsky; b. pages 12 and 13 are duplicates.

RESPONSE: Your comment has been noted by the EIS preparation staff, and the report has been revised accordingly.

COMMENT: 3


RESPONSE: Sugar beets have been deleted.

COMMENT: 4

Appendix C - "Impact of the Proposed Dickey-Lincoln Construction Work Force....." b. page 9. our data show oats and hay more prevalent than peas and buckwheat.

RESPONSE: We agree with your data showing the prevalence of oats and hay and have revised our report accordingly.

COMMENT: 5

Appendix C - "Impact of the Proposed Dickey-Lincoln Construction Work Force...." c. page 72. Shouldn't the State Conservationist of Soil Conservation Service and the Maine Soil and Water Conservation Commission be listed as agencies available to assist local governments also?
RESPONSE: The Soil Conservation Service and the Maine Soil and Water Conservation Commission have been added to the list of agencies able to provide assistance to local governments at your suggestion.

9.08.1.2 Federal Energy Regulatory Commission

COMMENT: 1

Non-specific comment on RDEIS.

RESPONSE: The EIS preparation staff thanks you for your comment on the Dickey-Lincoln School Lakes Project RDEIS.

9.08.1.3 U.S. Dept. of Transportation - FAA

COMMENT: 1

We have reviewed the Revised Draft Dickey-Lincoln School Lakes EIS and appreciate your reference to compliance with FAR, Part 77 (Volume 3, page 329). However, since the EIS will be used to determine the corridor of the proposed transmission line, we believe that the FEIS should point out that several airports could be adversely impacted by transmission line obstructions, especially that of E.F. Knapp State Airport, Barre, Vermont. We believe that the impact on airport obstruction surfaces could be mitigated by careful selection of the eventual centerline of the proposed route and would encourage that such a review be undertaken prior to complying with Part 77 notification requirements.

RESPONSE: The proximity to airports was a consideration in route location. For example, Link 46, which basically parallels an existing 115-kV line, was shifted 500 feet north and to a lower elevation in order to avoid potential impact to the E.F. Knapp Airport. These types of considerations are documented in the Transmission Reconnaissance Study, Appendix D to the DOE Draft EIS for the transmission project. We do not foresee any conflict with airports, however, each situation will be reviewed in greater detail during centerline location prior to Part 77 compliance, as you have suggested.

9.08.1.4 Department of State

COMMENT: 1

We wish to bring to your attention one item which appears in the Revised Draft, which we believe to be significant. (Volume 2, page 9-72, Comment 42).
The Corps, in responding to an inquiry implied that Canadian views on energy sharing may remain essentially similar to those which were incorporated in the draft treaty on this subject under negotiation in the mid-sixties.

We question this assumption. In the 12 years since negotiations were suspended a new Federal Government has come into office in Ottawa, new Provincial Governments have been elected in Quebec and New Brunswick, and the world energy picture has changed significantly since the crisis of 1973-74.

Given these considerations, it is reasonable to expect that Canadian views on this issue and others related to this project may have changed since 1967.

RESPONSE: Your comment has been reviewed by the EIS preparation staff. It feels that the response to Comment 42, Section 9.06.2.1, in Volume 2, Part I, of the EIS is consistent with and conveys what was stated in your comment. The Canadian views on this issue are not known at this time. Final terms on the issue of energy-sharing between the U.S. and Canada would be dependent upon formal negotiations with Canada.

9.08.1.5 U.S. Environmental Protection Agency

COMMENT: 1

Decisions, conditions, limitations or restrictions that would be required by the State in the form of a water quality certification or other form of approval are not available to be considered as part of this review.

RESPONSE: Since the plan is to submit the environmental impact statement to Congress pursuant to Section 404(r) of the Clean Water Act, 33U.S.C. 1344 (r), the New England Division is not required to obtain a State water quality certification or other form of approval.

Section 404(r) reads as follows: "The discharge of dredged or fill material as part of the construction of a Federal project specifically authorized by Congress, whether prior to or on after December 27, 1977, is not prohibited by or otherwise subject to regulation under this section, or a State program approved under this section, or section 1311(a) or 1342 of this title (except for effluent standards or prohibitions under section 1317 of this title), if information on the effects of such discharge, including consideration of the guidelines developed under subsection (b)(1) of this section is included in an environmental impact statement for such project pursuant to the National Environmental Policy Act of 1969 and such environmental impact statement has been submitted to Congress before the actual discharge of dredged or fill material in connection with the construction of such project and prior to either authorization of such project or an appropriation of funds for such construction."
COMMENT:  2

2. We recognize that the Corps is required to analyze the cost of Dickey-Lincoln according to formulas prescribed by Congress and the Water Resources Council. However, we feel that an additional evaluation using both the actual federal and private interest rates is necessary in comparing the project with less environmentally damaging alternatives in accordance with the intent of NEPA.

RESPONSE: As previously stated, the methodology utilized by the Corps of Engineers in the analysis of the Dickey-Lincoln School Lakes project is in accordance with guidelines established by Senate Document 97 as modified by subsequent legislative and executive actions. Any analysis done outside of these guidelines by the Corps would be contrary to the mandated planning process. It appears that your comment addresses the basic tenets of the planning process and not the manner in which the Corps complied with that process. Attention is called to the "Economic Efficiency Analysis" displayed in Section 1 of the EIS. This analysis is unique to the Corps of Engineers and compares the most likely alternatives to the project using comparable financing or interest rates. The resulting "comparability ratio" is 2.2 and 1.3 for 3-1/4% and 7-1/8% interest rates respectively at 1979 price levels.

COMMENT:  3

We agree with the U.S. Fish and Wildlife Service that the benefit-cost ratio should reflect the level of funding required to carry out all mitigation recommendations, including annual operational costs.

RESPONSE: A mitigation plan has not been authorized by Congress and therefore can not be included in the estimated cost or the economic analysis of an authorized project. However, a sensitivity analysis has been performed by the Corps and is included in the EIS to provide an indication of the effect of proposed mitigation costs on the benefit/cost ratio.

COMMENT:  4

There has been no analysis of the impact of placing 24 miles of 345-kV transmission lines through the White Mountain National Forest, which according to the RDEIS would be needed for ultimate level of development.

RESPONSE: During the ongoing EIS process we have been updating information with new studies. One such study was done by the DOE on the transmission system using current load and resource data for the region.

Those studies have demonstrated that the previously recommended plan of service is not adequate with these new assumptions. It has been determined that a north-south 345-kV line from the Moore-Comerford area to either Beebe or Webster Substation (in the
White Mountain Area) is needed at the authorized level. The east-west Granite-Essex 345-kV line, which was a part of our previously recommended plan, will not be needed for the authorized level.

DOE has identified several corridors and routes that the new north-south line might take. Environmental consultants have gathered and analyzed data for the routes. A supplemental EIS is currently being prepared that discusses the impacts associated with this additional 345-kV transmission line.

COMMENT: 5

We understand that NEPOOL in their current projections indicate that member utilities will possess more than sufficient peaking capacity to meet peak demand needs in 1990, and that legal and institutional barriers make acceptance of Dickey-Lincoln power infeasible. We hope the Final EIS will include a statement by NEPOOL on this subject.

RESPONSE: The latest NEPOOL "Load and Capacity Report 1980-1995" dated April 1, 1980 does not support the understanding expressed by the comment. This report indicates planned additions totaling 5,741 NW in generation capacity between 1980 and 1990.

Currently NEPOOL's most pressing and demanding task is the addition of baseload capacity in the system to meet anticipated load growth, and to reduce their dependence on oil-fired generation. Their plans envision substantial nuclear capacity additions to fulfill this goal. This represents a difficult task due to the long lead times, 10 to 13 years and longer, from inception to completion or on-line date and the large capital investments involved. The complex regulatory and permit requirements and the not uncommon delays experienced due to actions of nuclear opposition groups aggravate the situation even further. In contrast, the lead time for putting intermediate and peaking capacity units on-line is approximately 2-4 years, considerably less than that for large baseload plants.

In planning for baseload additions at this time, NEPOOL can meet their most pressing requirements and still have subsequent options for providing intermediate and peaking capacity. One option would be to use the existing older and less efficient fossil units, displaced by the newer baseload units, to meet the growth in intermediate and peaking loads. Another would be to schedule intermediate and peaking capacity at a later time, not yet shown in NEPOOL's Load and Capacity Reports, and have them on-line to meet the load growth because of the shorter lead-time requirements. Still another option would be a combination of both approaches. It should be noted that due to the operating characteristics of the older fossil units, their use as peaking capacity would present operational problems and would be very inefficient and costly.
NEPOOL has had the opportunity to comment on the project and the EIS, and as of this writing has chosen not to make any statements or comments to date.

9.08.1.6 U.S. Department of the Interior

COMMENT: 1

As with our comments of December 15, 1977, on the earlier draft, we feel that the statement does not adequately assess the environmental impacts of this project. In particular, the statement suffers from a lack of site specific data on the regional fauna. This lack of data is especially evident for the avifauna and herpetofauna.

RESPONSE: Refer to Response to Comment 24, Section 9.06.1.1, Volume II, Part I, p. 9-16.

Since the last response to this comment, additional on-site data have been collected. The Habitat Evaluation Procedures (HEP) have been employed on the proposed mitigation lands and adjacent areas.

An additional area of land has been aerial photographed, photointerpreted, and ground-truthed. This area encompasses the proposed mitigation lands for the Dickey-Lincoln School Lakes project.

A study is currently underway to determine status of carnivores in the Dickey-Lincoln area, but results are not as yet available.

We still believe that we have provided adequate information for those parameters which are important to the decision-making process. Additional information may more thoroughly describe on-site communities, but are not deemed essential for consideration in the decision-making process.

Finally, we have trouble understanding the reference to the lack of site-specific data when we consider the data which the USDI utilized to determine mitigation for a project. Theoretically, mitigation is supposed to offset impacts of a project on a one-for-one basis. The USDI utilizes its Habitat Evaluation Procedures (HEP) to determine what is necessary mitigation for a project and these procedures do not require extensive site specific data for fauna. We have utilized HEP for the project area as well as the proposed mitigation lands. We must assume that the methodology and data used to determine mitigation needs and impacts noted in the Conservation and Development Report were sufficient for our purposes as well.
COMMENT: 2

We are still concerned about the high levels of mercury in the waters and its potential impact upon the future fisheries. The accumulation of mercury to unacceptable levels in salmonid fishes introduced into the proposed Dickey Lake would severely limit the mitigation of the lost fishery in the St. John River system.

RESPONSE: The U.S. Food and Drug Administration guidelines recommend that the Division of Regulatory Guidance take legal action when mercury concentrations in the edible portion of fish, shellfish, crustaceans, and other aquatic animals exceed 1.0 ppm. (FDA Administrative Guidelines Manual, Chapter 8, Guideline 7408.09). Although the FDA has no specific guidelines regulating the creation of a sportfishery in waters where mercury accumulation may become a health hazard, the justification for such a fishery must be closely examined.

Mercury investigations in three northern Maine watersheds suggest long-term diffuse mercury inputs to the lakes of this region. High mercury is accumulated by the biota. Total mercury in skinless fillets of most lake trout studies exceeded 0.5 ppm, several larger specimens contained approximately 1 ppm, and one lake trout contained approximately 2 ppm. These findings and the knowledge that newly-impounded reservoirs appear to be natural sinks for mercury during their early years reinforce the statements that mercury will accumulate in Dickey Lake salmonid fishes to levels which may be unsuitable for regular consumption. This concentration would be greatest in long-lived predators such as lake trout and Atlantic salmon, and lowest in short-lived species such as brook trout which are also lower on the trophic chain. This is one of the reasons we have proposed to manage the existing brook trout lake fishery rather than stock lake trout.

COMMENTS 3 AND 4:

The final statement, as we noted in 1977, should address the impacts on terrestrial and aquatic systems of the following activities:

a. The "borrow pits" outside the pool area to be used for construction materials.

b. The relocation of households, cemeteries and 7.9 miles of State Highway Route 161.

RESPONSE: Sedimentation will be the primary impact of borrow pits on the aquatic ecosystem. Where such borrow areas are close to streams, standard mitigation measures will be used to minimize the introduction of sediment into the aquatic system. Mitigation measures have been specified in the Dickey-Lincoln School Lakes 404 Evaluation, September 1978. The use of these mitigation measures, particularly the stabilization of excavated slopes prior to the critical
October through April period when brook trout larvae are within the stream substrate, should prevent any long-term degradation of the aquatic habitat.

Similarly, standard mitigation techniques and protection of brook trout spawning areas from October through April will prevent any impact of relocating Route 161 on the aquatic habitat. Provision of adequate septic systems and sewage disposal will minimize aquatic impacts of relocating the households.

Information concerning relocation of households, cemeteries and Route 161 is partially available in Design Memorandum No. 26 (CE, 1977).

Terrestrial impacts caused by the borrow pits cannot be accurately predicted with the limited information currently available. However, impacts are expected to be similar to those described for the pool area (Appendix F, CE, 1977, p. 109), with the exception of impacts resulting from inundation.

All borrow areas for earth materials are within or on the shoreline of the reservoirs. All earth borrow areas will be covered completely or in part by the reservoir pool. A rock borrow area (quarry) outside the reservoir is available at a site about 2½ miles southeast of the Dickey damsites. Portions of any area extending above the pool will be treated to minimize erosion and to prevent an appearance consistent with natural conditions of adjacent areas.

COMMENT: 5

The RDEIS is an inadequate response to previous comments submitted by the Department on the outdoor recreation potential of the region, with the exception that recreation visitation, benefits and development plans have been revised satisfactorily after coordination with the Heritage Conservation and Recreation Service and the State of Maine.

RESPONSE: While attempting not to be overly redundant, the RDEIS and Revised Appendix G, as discussed in Section 9.06.1.1, Comments 34-40 of Volume 2, Part I, does include numerous references to the recreation and related values of the upper St. John River. Since publication of the RDEIS in September 1978, the St. John River from Dickey to the confluence with the Baker Branch (76.5 miles) plus the entire Big Black River (29 miles) and Little Black River (27 miles) within the State of Maine have been included on the final list of rivers meeting the criteria for designation as potential wild and scenic rivers by the Heritage Conservation and Recreation Service. Section 2.13 has been revised to reflect this fact in the FEIS. The intangible values of a wild and scenic free-flowing stream and the lost recreation benefits resulting from impoundment of such a unique resource
cannot be adequately quantified in terms of dollars, therefore, no attempt has been made to do so.

COMMENT: 6

The above notwithstanding, the Department's concerns with this project remain substantially unresolved. The project would result in the most severe environmental loss of a unique and irreplaceable resource - the St. John River. We have found that river to be of regional and national importance in its free-flowing state. It possesses values similar to those required for consideration under the Wild and Scenic Rivers Act.

As with the previous draft, this revised draft and the Corps planning for this project have not adequately considered the loss of these values. No substantial analyses or study of them has occurred. The loss is not accurately reflected in the benefit-cost ratio nor is it apparent that this severe loss is a major part of the Corps decision-making process for the project.

RESPONSE: If the river has been found to be of regional and national importance it should be ranked with other rivers to show the degree of importance. We have not seen such a ranking.

The loss of the St. John River and its related values cannot be quantified. It would be speculative to place a dollar value on the river and reflect that in the benefit-cost ratio analysis. However, the loss is recognized and will be factored into the decision to be made on the project. Although discussed in several places in the EIS documents the value of the river is considered best expressed in "A CANOEIST'S REFLECTIONS OF THE ST. JOHN RIVER", Appendix G, Revised. This verbal expression of the loss of the St. John River reflects the views of the Corps environmental planners who have floated the Saint John and camped and explored along its shores.

COMMENT: 7

Further, we remain concerned that both the reservoir area and transmission line corridors have had only limited mapping and exploration for mineral deposits. Both are within the New Brunswick-Connecticut Valley trend, which is the most favorable area known for mineral prospecting in New England.

RESPONSE: Reference is made to Volume II, Part I, of the EIS, Section 9.06.1.1, Comment 7. The potential for mineral deposits within the reservoir area has been investigated by the State Geologist of the State of Maine. A report on this investigation was completed in May of 1980 and concluded that there are no potential economic heavy metal deposits within the limits of the proposed reservoir or project structures. The report has been added as a Supplement to Appendix A. Future exploration and access to the area of the transmission corridor will not be restricted by the construction of the transmission line.
COMMENT:  8

The responses given in the revised draft recognize ways of meeting the concern for mineral resources expressed in the Department's previous comments. However, since there is apparently no section in the statement for discussing mitigating measures, we are not sure that either our recommendations for mineral investigation or those of the Department of Energy as expressed in the supplement to the draft environmental statement on transmission lines would be implemented. Our concerns are basically those expressed on pages 199-200 of Volume 3 by the University of New Hampshire Institute of Natural and Environmental Resources. We believe that more should be known of the commitment of mineral resources to the project.

RESPONSE: Refer to previous Comments 3, 4 and 7 in this section.

COMMENT:  9

We note that a very large volume of earth borrow material would be required for the dams and five dikes, having a total volume of approximately 56.5 million cubic yards, excluding the borrow available from excavation of project features (table 1.0-6, p. 1-18). The proposed sources of earth borrow material are described in fairly general terms, such as within four miles of the damsites at Dickey (p. 1-18, last par.). Because of the large volumes of earthwork involved, we believe that the proposed sites of the excavations should be identified with greater specificity, that the materials to be excavated should be described, and that related impacts and mitigating measures be evaluated for the major sites.

RESPONSE: Reference is made to the following Sections in Volume II, Part I, of the EIS: Section 9.06.2.1, Comment #5, for information on borrow areas and materials and Section 9.06.3.2, Comment #42, for mitigation measures.

COMMENT:  10

Section 2.03

On page 2-6, a better interpretation should be made of a statement provided on March 22, 1976, by the Bureau of Mines Liaison Officer in Maine. He stated that because of insufficient information no comment on the magnitude or worth of mineral deposits could be made, rather than there are "no known sources of mineral deposits" in the project area. There is a considerable difference between the two statements.

RESPONSE: Reference is made to Comments 7 and 8 in this section. The last sentence of Section 2.03 in the EIS (p. 2-6) has been revised to read: "Requests were made to the Government of Quebec and the Bureau of Mines Liaison Officer in Maine for
information related to any mineral deposits within the reservoir area. Response to the requests indicated that, based on the information available, they were not able to provide site location, magnitude or estimate the worth of any mineral deposits within the reservoir impoundment area."

COMMENT: 11

Also on page 2-6, paragraph 2.03.3.2, Proposed Transmission Route, should acknowledge that important mineral deposits are known along the proposed route, including copper near Moore Station and Gardiner Mountain in New Hampshire and the Copper-molybdenum porphyry deposits near Catheart Mountain southeast of Attean Pond in Maine. There are also known asbestos deposits under or near the transmission corridors such as those southeast of Parmachenee Lake.

RESPONSE: The above information has been noted by the EIS preparation staff and has been included in the Addenda and Errata text. Reference is made also to that information included in the DOE EIS, Appendix G, 1978.

COMMENT: 12

A major deficiency in the document falls under this section (2.12.3, Wildlife). The statement suffers greatly from the lack of site specific information on animal species.

RESPONSE: Refer to response to Comment 1, U.S. Department of the Interior, Section 9.08.1.6, of this document.

COMMENT: 13

Section 2.19.1.7, p. 2-61, and par., last sentence. This sentence is highly speculative with no supporting data. It deserves more explanation.

RESPONSE: We believe that the sentence referred to states "Little change is expected in the amphibian and reptile populations which presently exist on the project area."

This statement appears in Section 2.19, Future Environmental Setting Without the Project. It is our opinion that the commercial forestry activities projected to occur in the St. John River Basin over the life of the project will effect little change in the herpetofauna populations.

COMMENT: 14

The discussion on potential mercury contamination of salmonid fishes, especially as it relates to mitigation measures, should be expanded in the final statement.
RESPONSE: The discussion on mercury contamination of salmonids in Section 4.10 of the RDEIS is expanded upon in Appendix E, CE, 1977, Pesticides and Heavy Metals, p. 95; and Appendix E Supplement, CE, 1978, Northern Maine Mercury Investigations. The Fish and Wildlife Mitigation Plan (Section 3.5.4.1, Appendix K, Revised CE, 1980) and the FEIS (CE, 1980) explain how findings on potential mercury contamination have influenced proposed mitigation measures.

COMMENT: 15

Section 4.11, Terrestrial Ecosystem, Page 4-53, 5th par. This paragraph appears to be contradictory to the last sentence of the second paragraph on page 2-61.

RESPONSE: Section 4.11 (page 4-53) refers to expected impacts for the Future-With-The-Project. Conversely, Section 2.19 (page 2-61) refers to the Future-Without-The-Project.

We do not expect the same future under both conditions. We expect little change in herpetofauna for the Future-Without-The-Project whereas we do expect adverse impact on herpetofauna for the Future-With-The-Project.

COMMENT: 16

Page 4-54, 1st par., last sentence - References is made to Table 3.08-1 (Draft EIS, DOE, 1978). This table should appear in the final statement.

RESPONSE: The EIS preparation staff is of the opinion that Table 3.08-1 in the DOE Draft EIS is too extensive to be included in the summary document, in keeping with guidelines from the Council on Environmental Quality directing that the Final EIS be a concise document not to exceed 300 pages (excluding comment and response). Therefore, the reference to this table has been retained in the FEIS.

COMMENT: 17

Section 9.06

In the responses to comments of the U.S. Department of the Interior it is noted that some of the physical impacts on Canada have been included in the statement, while certain other impacts on Canada have not been assessed (p. 9-5, par. 2). In some cases this creates uncertainty as to whether the figures given apply only to the United States or include the impact within Canada as well. For example, it would be helpful to clarify this for such impacts as: inundation of 278 miles of rivers and streams, 30 lakes and ponds, 1,713 acres of wetlands, and occupation of 134,242 acres of land and water.
RESPONSE: The mileages and acreages mentioned in your comment include Canadian lands.

COMMENT: 18

Appendix E (Supplement), Aquatic Ecosystem and Fisheries Studies. The shoreline erosion potential study does not investigate the erosion potential downstream of Lincoln School Dam. This potential and its effects should be included in the final statement.

RESPONSE: Refer to Volume II, Part I of the EIS, Section 9.06.1.2, Comment #24, p. 9-33.

COMMENT: 19


RESPONSE: The current Fish and Wildlife Mitigation Plan (Appendix K, Revised to the EIS) reflects the most up to date recommendations of the U.S. Fish and Wildlife Service, as presented in Supplements No. 2 (July 26, 1978) and No. 3 (November 8, 1979) to that agency's Conservation and Development Report. Appendix F, Supplement has not itself been revised, as it represents mitigation recommendations based upon earlier USFWS planning inputs.

COMMENT: 20

Based on the severe environmental impacts identified in the Fish and Wildlife Coordination Act Report (January 4, 1978), the FWS has recommended that the Dickey-Lincoln School Lakes Project not be constructed. If the project is to be built, the FWS has recommended substantial mitigation measures which must be included in the final project plan submitted to Congress.

In conclusion we wish to inform you that the Department may refer this matter to the Council on Environmental Quality. This referral would be based on criteria (a, b, c, d, and f) listed in Section 1504.2, page 55998, of CEQ Rules and Regulations published in the Federal Register, Vol. 43, No. 230 - Wednesday, November 29, 1978.

RESPONSE: This comment has been noted by the EIS preparation staff. USDI recommendations are included in both the FEIS and the proposed mitigation plan.
9.08.1.7 Department of Energy

COMMENT: 1

Appendix C - Social and Economic Assessment (Supplement), page 71. The corrected reference for our agency would be Harold J. Keohane, Regional Representative, Department of Energy, Room 700, 150 Causeway Street, Boston, MA 02114.

RESPONSE: The text has been corrected to reflect the correct reference by an errata sheet.

COMMENT: 2

Volume 1, page 6-34, Section 6.01.10.9, Wind, fourth paragraph: First line after ERDA, add in parentheses (DOE).

RESPONSE: The FEIS has been revised to reflect your statement.

COMMENT: 3

b. Third line - Plans are being formulated in New Hampshire and Rhode Island as well as Massachusetts to construct demonstration wind generators. The wind generator in Massachusetts is constructed and operational.

RESPONSE: The text has been revised to reflect this comment.

COMMENT: 4

Volume 1, page 6-34, Section 6.01.10.9 Wind, fourth paragraph: Fourth line - Substitute DOE for ERDA.

RESPONSE: The text has been revised to reflect your statement.

COMMENT: 5

d. Fifth and sixth lines - This statement may not be completely true. New England and the Mid-Atlantic States have equivalent wind power potential as that of the Mid-West. As of the moment, DOE is in the process of evaluating and selecting site locations.

RESPONSE: The text has been revised to reflect your comment.
COMMENT:  6

Volume 1, page 6-35, third paragraph, fourth line - Add the word regional or area after the word England.

RESPONSE: The text has been revised to reflect your statement.
9.08.2 State Agencies

9.08.2.1 State of Maine - Office of the Governor

COMMENT: 1

I thank you for your letter of December 18, 1978 which enclosed a copy of the Revised Draft Environmental Impact Statement for the Dickey-Lincoln School Lakes Project. Your letter further delineates a 45-day comment period for this document. In response to this request, I am providing herein a copy of my decision dated October 27, 1978. In view of the concise and inclusive treatment of this project in my decision document, I request that it be included complete as the official comment of the Governor of the State of Maine.

RESPONSE: Thank you for your comment on the Dickey-Lincoln School Lakes RDEIS. Issues raised in your letter such as energy economics, community and economic impacts, environmental impacts, and conservation received full consideration during preparation of the FEIS. Your decision document has been included in the FEIS.

9.08.2.2 State of Vermont - Public Service Board

COMMENT: 1

The Vermont Public Service Board has reviewed the Revised Draft Environmental Impact Statement for the proposed Dickey-Lincoln School Lakes Project. Particular note is made to the responses offered to the Board's comments on the Draft EIS. The responses are unsatisfactory, as most are too generalized, incomplete and not specifically responsive to the comments.

Vermont's concerns are very real and we are not satisfied with brief, generalized responses to important issues and concerns. We reiterate all our concerns regarding the Draft EIS.

RESPONSE: Your concerns have been noted and included for consideration by those in the decision-making process.

9.08.2.3 State of Vermont, Agency of Environmental Conservation

COMMENT: 1

Our comments at this time are similar to comments previously expressed and addressed in the revised Draft EIS on pages 9-339 through 9-342.
If this project is constructed, we would raise these issues again and address each one on an individual basis after the selection of a final line location.

RESPONSE: The EIS preparation staff acknowledges your comment. See Section 9.07.2.4, Volume II, Part I, of the EIS.

COMMENT: 2

I understand there is work presently being completed addressing Fisheries and Wildlife concerns. Our Agency would be interested in reviewing this material, especially the portion that pertains to Vermont.

RESPONSE: Prior to actual construction of the transmission line a comprehensive study will be carried out by the Dept. of Energy of fish and wildlife resources.
9.08.3 Private Organizations
9.08.3.1 Wildlife Management Institute

COMMENT: 1

Wildlife involvement must become part of the project at the very start.

RESPONSE: Fish and Wildlife concerns were addressed, and impact assessments initiated, early in project planning in close coordination with the U.S. Fish and Wildlife Service and the Maine Department of Inland Fisheries and Wildlife. (See Chronology of Correspondence in Attachment II to the Report, Coordination Documents and Public Comments, USFWS Conservation and Development Report, Appendix J Supplement, CE, 1978). Coordination with these agencies in the consideration of wildlife has continued in the planning of mitigation measures designed to offset losses to fish and wildlife resources.

COMMENT: 2

Wildlife foods. It is quite naive to consider planting wildlife foods in most of these involved lands.

RESPONSE: Wildlife foods can be planted to enhance food sources for wildlife on the mitigation lands. However, it is recognized that the cost-effectiveness of such plantings is reduced by the remoteness of the area and other environmental conditions. Consequently, the current mitigation plan emphasizes management techniques which encourage natural regeneration of vegetation providing high quality browse (Appendix K, Revised, CE, 1980, Section 2.2.2). In addition, roads will be seeded with clover or grasses, providing both erosion control and wildlife food supplements.

COMMENT: 3

Text book wildlife management is too much a part of this section -- the concepts may be real but the actual management is another thing.

RESPONSE: Your concerns have been noted and have been taken into consideration during the final planning of the mitigation proposal.

COMMENT: 4

Traditional deer yards. This is a difficult and a critical concern. If new yards (?) are created, I still question if deer will use them.

RESPONSE: The response of deer to the inundation of traditional deer yards, including the likelihood of
adopting newly created deer yards, cannot be predicted at this time. It is for this reason that the proposed mitigation plan recommends a deer monitoring study in the project area during the first three years of construction. The findings of these studies would be used to develop specific deer mitigation management strategies, probably from the options presented in Appendix F, Supplement, (CE, 1979) and in Appendix K, Revised, (CE, 1980).

COMMENT: 5

Needs of management and interspersion. This is great if manpower and funds are available for the start and the continuation of the program.

RESPONSE: Please refer to Appendix K, Revised, (CE, 1980) Sections 2.7 and 2.8 for a detailed discussion of recommended levels of manpower and funding. The process for authorization for funds and ultimately manpower has been initiated. It goes without saying that any action taken would require funding and that no action could be taken without authorization.

COMMENT: 6

Schedule of mitigation. This must begin even prior to actual site construction.

RESPONSE: The President's Water Policy Message of 1978 sets forth a policy which requires the funding of fish and wildlife mitigation efforts concurrently and in proportion to expenditures for project construction. Given this policy, congressional authorization and appropriation of funds to implement mitigation measures prior to the initiation of project construction is unlikely. Note, however, that the current plan recommends implementation of the mitigation plan concurrently with project construction, rather than following the 8 to 10 year delay proposed earlier in Appendix F, Supplement, (CE, 1979).

COMMENT: 7

7-1 Staff needed. This is one of the key issues to be firmly determined.

RESPONSE: Refer to Comment #5 in this section.

COMMENT: 8

Section 8, 8-1

What agency will do the work? A key question, aside from essential funds, the determination of the head agency must be firmly established.
RESPONSE: Recommendations regarding mitigation management responsibility are clearly established in Appendix K, Revised, (CE, 1980), Section 2.6. The final determination regarding management responsibility, however, will be made by Congress.

9.08.3.2 Environmental Defense Fund

COMMENT: 1

First of all, we would reiterate in full our comments made on the Draft EIS with respect to the economic analysis. The cost/benefit analysis which employs different interest rates and different treatment of taxes and insurance in calculating benefits and costs is simply not economically valid. The response, in the RDEIS, that the analyses were carried out in compliance with Senate Document No. 97 and other guidelines (RDEIS, Volume 2, page 9-125) is simply irrelevant with respect to the adequacy of the analyses for inclusion in an EIS. Unless and until the cost benefit analyses in the EIS are corrected to give comparable treatment of costs and benefits, the document will be inadequate as a basis for a decision regarding construction of the project.

RESPONSE: See response to Comment 2, Section 9.08.1.5, in this document.

COMMENT: 2

First, the conclusion that the conservation alternative could be more expensive than Dickey-Lincoln is somewhat misleading. By comparing only the effects on peak demand at 7 p.m. of a particular winter day, the analysis ignores the continuing benefits from the conservation investments which would accrue throughout the year. Similar benefits would not accrue from Dickey-Lincoln. Therefore, comparing only the cost of meeting the capacity need is somewhat misleading.

RESPONSE: The economic position of the conservation alternative relative to the Dickey-Lincoln project is discussed in the RDEIS, Section 6.01.6, Systems Analysis with Additional Conservation, and Section 6.01.9, Non-Structural Alternatives. Further information is found in Appendix I, Section 3.3.3, Existing Forecasts and Appendix I, Supplement, Section 2.1, Conservation Alternative.

An electrical system must be capable of satisfying both the total energy requirements of its users and the maximum capacity demanded of it (including a reasonable reserve to take unscheduled outage into account). The continuing benefits of conservation investments accruing throughout the year have been included in the analysis of total energy requirements. Insofar as system capacity is concerned, however, it is necessarily determined as a function of the peak demand occurring some time during the year. Thus,
the benefits associated with reducing capacity requirements through conservation should properly be determined by comparing the capital costs of conservation measures with the cost of installing added capacity. The benefits associated with reductions in total energy requirements are accounted for by reflecting changes in expected annual energy growth.

In reference to the sections mentioned in a previous paragraph, NEPOOL forecasts deals only with peak load since this is the basis for planning future generation capacity. As for the continuing benefits of conservation, RDEIS Table 6.01.11 and Figure 6.01-4 illustrate how Load Management and anticipated conservation effect annual energy consumed which accounts for continuing effect of conservation. Both the anticipated conservation and additional conservation load and energy projections were evaluated with and without Dickey-Lincoln showing the cumulative costs to be lower for the system that includes the project.

Comment: 3

Second, the aggregation of all the conservation measures, some of which are not cost-effective, conceals the value of others. For instance, the analysis would indicate that an alternative to Dickey-Lincoln consisting of 409 megawatts of reduced capacity brought about by replacing incandescent fixtures with fluorescent fixtures, combined with conventional thermal investments to make up the difference would be far more economical than Dickey-Lincoln.

RESPONSE: Conservation measures are considered in the RDEIS, Section 6.01.9, Non-Structural Alternatives and more specifically in Appendix I, Supplement, Section 3.4, Feasibility of the Required Conservation Measures. As noted, the only area that is cost effective is lighting at $41 per watt. Also noted was the unlikelihood that the ultimate 409 MW reduction could be expected from additional conservation measures, due to less than complete consumer acceptance of fluorescent lighting. Nonetheless, the system simulation under the additional conservation case showed Dickey-Lincoln as an economical addition to the system when considering the load requirements irrelevant of costs associated with the conservation measures.

COMMENT: 4

Third, the overall conclusion regarding the cost of a conservation alternative would seem to be contrary to all other studies on the subject. For instance, the Massachusetts Energy Office recently released its report "New England Energy Policy Alternative Study, The Economic Impacts of Energy Conservation and Alternative Electric Generation Scenarios, 1975-1985", which was done under contract for the Department of Energy. This report investigated 16 different energy scenarios for New England, and concluded that for all assumptions and under every case investments in conservation created jobs, increased regional income, and reduced the cost of energy. We would also note that the NEEPA report projects substantially smaller rates of increases in electric demand for New England. They estimate the electricity demand
will grow at a rate of 3.13% annually to 1980, and 2.74% annually to 1980-1985. This compares to the 4.29% growth rate projected by the Corps.

RESPONSE: As stated in previous responses, the conservation alternative is addressed in Section 6.01.9, Non-Structural Alternatives of the RDEIS. In reference to the Massachusetts Energy Office report, "New England Energy Policy Alternative Study, the Economic Impacts of Energy Conservation and Alternative Electric Generation Scenarios, 1975-1985", it was based on conservation measures to reduce total energy and not specifically electrical energy. Although the conversion of electrical energy to thermal energy in the form of Btu's is possible, to assume that all potential savings in thermal Btu's will reduce electrical energy requirements by the same amount is in error. In this regard, for example, putting additional insulation in an electrically heated home reduces electrical energy usage; putting additional insulation in a home heated by oil conserves fossil fuel, but does not reduce electrical energy demand. Further, as pointed out in Table VII, p. 61-1, and the Concluding Remarks of Appendix I of the report, in the commercial sector, "electrical equipment demands will substantially increase under all but the strongest of conservation measures."

As for estimated growth rates for electric demand, this comment was addressed in a previous response included in the EIS, Volume 2, Part I, under Appalachian Mountain Club's Comment 3. As stated there, the potential for error exists in any predictive mode. Also noted were growth rates that have been experienced in the years following the oil embargo (i.e., +.3% (74/75), +7.9% (75/76), +6.0% (76/77), +1.1% (77/78), and a +1.3% growth for 78/79, averaging an overall 5-year annual rate of 3.26%). As these growth rates show, there has been no consistent pattern except that growth has been positive. NEPOOL has recently revised its peak load demand downward to 3.8% in 1979 and 2.7% in 1980. The findings of the New England Energy Congress report dated May 1979 adopted an average 2.2% annual electric growth rate as its planning objective. Updates of the alternatives study will take the most current projections by NEPOOL and others into account.

COMMENT: 5

A comprehensive search for a conservation oriented alternative would have included consideration of load management as a component of an overall alternative to the Dickey-Lincoln project. As it stands, the alternative supplement implies that the purpose of Dickey-Lincoln is to assist in satisfying the peak demand which will occur hypothetically at 7 p.m. on the worst winter day in 1986. If this is true, then another alternative to Dickey-Lincoln would be to further flatten the New England load curve such that the peak demand would be reduced by 944 megawatts. Figure 3.1 in the supplemental alternative study indicates that even with "anticipated" load management the 7 p.m. peak could be considerably above the daily average. Additional load management, to eliminate or reduce this peak should be considered. Load management measures could include both non-structural measures such as time of day pricing, and also
direct load flattening investments such as storage units for electrically heated homes which would transfer the electric heat demand away from the peak period. The EIS should consider in detail one comprehensive cost-effective alternative which obviates the need for the project. This has not been done.

RESPONSE: Figure 3.1 of Appendix I, Supplement, (CE, 1978), shows that through load management and anticipated conservation, peak demand can be reduced by approximately 2.5 times the equivalent of Dickey-Lincoln. A further reduction in peak demand equivalent to Dickey-Lincoln is shown on Figure 6.01-1 of the RDEIS and Figure 2.1 of Appendix I, Supplement. This latter reduction was accomplished through load management and additional conservation. As Table 2.5 of the Supplement indicates, the Dickey-Lincoln Project remains cost-effective even when extreme measures are taken in an effort to reduce demand. No comprehensive cost-effective alternate has yet been identified to obviate the need for the project.

COMMENT: 6

Finally, as we stated in our original comments on the draft EIS, to the extent that conservation and load management are "anticipated", and therefore not an alternative to the project, they must be factored into the basic economic analysis of the project. We attempted to do this in our original comments, utilizing data contained in the alternative study. In response to our comments, the Corps indicated that combination of the data in Appendix I with the basic economic data to calculate a cost-benefit ratio was not valid, since different assumptions were involved in the generation of the different sets of data. This may be true; however, Appendix I clearly indicates that "anticipated" conservation and load management reduced the expected net benefits of the Dickey-Lincoln project by about 80%, from an annual average of $11 million to an annual average of $2.3 million. (Appendix I, p. 5-5) Either this analysis is invalid, in which case it should not be included, or else it is generally correct, in which case it is indisputable that the anticipated conservation and load management would have some effect on the benefits of the project. These effects must be estimated and included in the economic analysis which is present in the beginning of the EIS.

RESPONSE: This subject was covered in Section 9.06.3.10 of Vol. 2, Part 1, Comment 7 as follows: "The data presented in Appendix I (CE, 1977) represents an analysis of alternatives conducted by a Corps consultant. The alternative study utilized a system's approach to evaluate the project and its alternatives acting within the NEPOOL system. The parameters used for the study were based on the financial or marketing aspects of the project to simulate actual market conditions, e.g. annual costs for Dickey-Lincoln School were based on 6-5/8% interest rate (the prevailing rate in 1975 for repayment purposes) and a 50-year repayment period. The data was also based on October 1975 prices. The economic analysis, however, utilizes a different set of evaluation criteria consistent with procedures prescribed by legislative and executive actions, namely the 3-1/4% and 6-3/8% (1977) interest rates and 100-year period of analysis. Also the project.
economic analysis in the DEIS was based on March 1977 prevailing prices. Accordingly, the data included in Appendix I (CE, 1977) cannot be combined with the data that was used to develop the B/C Ratio."

Further, the economic analysis as prescribed compares the proposed action with the most likely alternative to the project for the benefit to cost calculation. Since various conventional thermal plants are generally the least expensive and the most likely alternatives (as developed in the RDEIS Appendix I), the value of power is compared to the capacity and energy values of the appropriate thermal alternative(s). Unlike the system simulation approach, this is not a dynamic analysis and consequently is not sensitive to the load characteristics except to the extent that the identified alternatives (i.e. mix) are still appropriate. Also referring to Table 6.01-8, even with additional conservation, nuclear, gas turbine and combined cycle additions are projected as the ultimate generation alternatives. Consequently, the economic analysis in Table 1.0-8b of the RDEIS would not be affected by the conservation and load management measures.

COMMENT: 7

We are furthermore very concerned that the water quality impacts of the project be adequately addressed, and in particular that the Corps insures that no violation of water quality standards will result. We have discussed the issue of state certification that no violation of water quality standards will result in previous correspondence dated September 11 and November 15, 1978 which we would incorporate here by reference. We note that the Environmental Protection Agency has indicated in its comments on the Draft EIS that "there will be a degradation of water quality during at least five of the eight construction years and it is probable that due to the sediment effects on fisheries, temperature and pH, violations of water quality standards may occur during these years." (Revised Draft EIS, Volume 3, p. 111). In our view, the Corps must establish and in the EIS discuss in detail evidence that water quality standards will not be violated. This has not been done.

RESPONSE: Refer to Section 9.08.3.8 in this document, Comment #45, Natural Resources Council of Maine. The EIS adequately and thoroughly addresses water quality impacts in Section 4.06 of the EIS.

COMMENT: 8

Finally, although we appreciate General McGinnis' letter of January 16, 1979 containing the Corps' legal interpretation of Section 404(t) of the Clean Water Act, we find this position totally unsupported. We find it ironic that the Corps is using an amendment to 404(t) designed to override Minnesota v. Hoffman as an excuse not to comply with water quality standards in connection with hydroelectric and other projects. We also refer you to California v. United States, U.S. Supreme Court, No. 77-285, 46 U.S.L.W. 4997.
RESPONSE: This comment clearly reflects a legal interpretation arrived at by the author.

Section 404(t) as supported by its legislative history, applies only to maintenance dredging activities of the Corps. In each such project the Corps prepares a 404(b) evaluation and obtains not only a State water quality certificate, but also any and all permits. Section 404(r) of the Clean Water Act clearly applies to Federal construction projects and exempts the Federal agency from State requirements if the project and its EIS has been presented to Congress for approval. Although the Corps is exempted from State requirements, the 404(r) process safeguards water quality standards.
COMMENT: 1

We believe your statement to be inadequate with regard to consideration of possible impacts on rare, disjunct, threatened, or endangered populations of vascular plant species, because the best available scientific information was not utilized in selection of proposed transmission line corridors. Specifically, known occurrences of such species could have been mapped town by town, and used as an additional basis for identifying environmentally sensitive areas during initial route evaluation; the presentation of such data at a county level only is an inadequate degree of resolution for meaningful decision-making of this nature. We have seen no evidence that museum collections were consulted to determine whether such plant species are known from the various corridor alternatives; collections at the University of Maine, the University of New Hampshire, Dartmouth College, the University of Vermont, and the New England Botanical Club should have been examined in this regard. Furthermore, the local floristic literature pertinent to the choice of transmission line corridors should have been reviewed, including numerous articles on rare plants of northern New England in our Club's journal, Rhodora.

RESPONSE: In this study it was felt that a review of the general geographic reference work on the region's flora, plus very selective checking with museum collections and consultation with two noted regional botanists was sufficient to yield useful information for this phase of the transmission route planning, for those species which are legally protected. Prior to actual construction of the transmission line a comprehensive search will be made of all herbaria and relative publications.

In the unlikely event that such a review indicates that a legally protected species has been recorded within the selected corridor, considerable flexibility still exists for avoiding such an area by moving the centerline route up to a quarter mile away.

COMMENT: 2

It appears only one month of field time was allocated for site checking of hundreds of miles of corridor alternatives in three states. We feel this effort was totally inadequate, as visits to all significant areas should have been made minimally in spring, summer, and fall so plant species conspicuous at different times could all be sought. Only after such field studies would you have a basis for reviewing the anticipated impacts of developments in the various corridors on plant populations on or near the various routes.
RESPONSE: The Department of Energy believes the field methods used to locate rare plants in this study are adequate for this phase of the planning. Subsequently, field studies conducted prior to construction will provide more detailed information as needed to avoid adverse impacts to legally designated rare plants.

COMMENT: 3

We are also concerned about possible impacts of the proposed project on populations of the Furbish Lousewort (Pedicularis furbishia), a federally protected endangered plant species. We are pleased to note you have given this issue the considerable attention you did, but we believe the management plan you have developed for this species you have developed in consultation with the U.S. Fish and Wildlife Service represents only the minimum level of conservation actions necessary to protect this unusual species. We therefore ask what additional steps you plan to take to assure long-term conservation of this species, particularly regarding protection of downstream habitat areas and assessment of sensitivity of such areas to erosion or vegetation change anticipated from anticipated downstream flow patterns.

RESPONSE: Subject to Congressional authorization, downstream lands supporting known populations and areas of possible suitable habitat will be acquired and managed as appropriate to ensure the long-term conservation of the Furbish lousewort. Specific management practices have yet to be formulated but will be based on the results of ongoing and future research on the biological requirements of Pedicularis furbishia.

COMMENT: 4

We also ask if you have determined whether periodic flooding is essential to prevention of dense vegetation development in these habitat areas.

RESPONSE: Certainly the hydrologic characteristics of the St. John River play a functional role in the establishment of the river bank's vegetative composition. What specific function, whether beneficial or adverse, flooding has on the life requirements has yet to be identified.

We are obligated to demonstrate that the Conservation program can be effectively implemented. If the program can not be proven successful the jeopardy opinion of the FWS will stand and further action under the Act would be required.
COMMENT: 5

We furthermore ask whether arrangements for protection of Canadian populations of the Furbish Lousewort can be developed and confirmed feasible prior to issuance of the final EIS. Only by stating the extent to which Canadian as well as U.S. populations can be conserved, can an effective statement be made of the extent to which the proposed project would impact this species and its characteristic habitat, and the unusual assemblage of other rare or disjunct plant species occurring in association with the Furbish Lousewort.

RESPONSE: The Corps and the Fish and Wildlife Service (Federal Government), thru the State Department will work with New Brunswick representatives to determine the best ways to protect the plants and habitat in Canada. However, any action that New Brunswick chooses to take is strictly voluntary as they are not subject to the U.S. Endangered Species Act.

9.08.3.4 Society for the Protection of New Hampshire Forests

COMMENT: 1

Our Society continues its grave concern and opposition as reflected in previous comments on the Corps' DEIS and the DOE transmission line phases of the project. We feel Dickey-Lincoln makes little sense either economically or environmentally. "Mitigation," conceptually, in our view is not possible or acceptable. The only authentic "mitigation" of loss of significant mileage of riverine habitat would be reconstruction or replacement. We can't visualize the Corps would undertake the Dickey-Lincoln project, "displace" 287 miles of stream habitat, and recreate that habitat in another area. In essence, acceptable mitigation would need to deal extensively with this issue. Replacement of river habitat with lake or wetland habitat, in our view, is not environmentally acceptable mitigation.

RESPONSE: The 278 miles of stream habitat to be inundated due to the project is recognized in the EIS as an irreplaceable and irretrievable loss of a resource. The objectives of the proposed fish and wildlife mitigation plan (Appendix K, CE, 1980) and the mitigation recommendations of the U.S. Fish and Wildlife Service (Appendix J, Supplement 3, CE, 1980) are to mitigate the loss of 80,455 acres of terrestrial and wetland habitat, the potential loss to the stream brook trout fishery, and the loss of endangered species (Furbish lousewort) populations and habitat. Mitigation of terrestrial
habitat losses involve the replacement of lost habitat productivity and the perpetuation of habitat value on lands of similar habitat type composition in close proximity to the project area. Terrestrial mitigation will include measures to reduce adverse impacts on project lands due to clearing and construction, and to reduce losses to the deer population due to inundation of deer wintering habitat. Fisheries mitigation will focus on brook trout management in Dickey Reservoir and associated streams for the continual replacement of annual brook trout biomass lost to the stream fishery due to inundation. Endangered species mitigation will involve the protection and perpetuation of Furbish lousewort populations in accordance with the Secretary of Interior's 1978 Biological Opinion. The proposed mitigation plan and its environmental impacts are presented in the Final EIS. Mitigation measures are discussed in detail in Appendix K, Revised to the EIS.

9.08.3.5 Appalachian Mountain Club

COMMENT: 1

We find no new information in the Revised Draft Environmental Impact Statement to cause us to change our evaluation. We therefore reiterate our opposition to the peak power project at the Dickey and Lincoln School Dam site and offer comments on the Revised DEIS.

RESPONSE: Your opposition to the Dickey-Lincoln School Lakes Project has been noted.

COMMENT: 2

We have expanded on our existing comments when the Corps' response failed to answer or showed a lack of understanding of AMC's previous comments. We were particularly concerned about significant omissions and evasions in responses to our comments. In many cases the responses do not address the specific criticisms which were raised in the quoted comments. Even more inexcusable is the practice of responding only to general summaries of our comments while failing to answer substantive questions which were raised in the body of our testimony.

RESPONSE: See Volume 2, Part I, Section 9.06.3.8. Your concerns have been noted by the EIS preparation staff. Each comment on the DEIS was printed exactly as it was stated and was responded to accordingly. The following responses expand upon those given in the RDEIS, and also respond to your specific comments on the RDEIS.
COMMENT: 3

Because of Dickey-Lincoln's overwhelming negative environmental impacts, the project should not be built unless it can be shown with absolute certainty that there is a need for the power it will produce and that there are no feasible alternatives to the project. The many impact studies and assessments have not succeeded in demonstrating this. The DEIS and the Revised DEIS have relied on a projected power demand growth rate to prove that the project is necessary. We challenge the claim that the project is needed on the basis of both existing alternate demand projections and the inadequacy of the methodology used to develop the DEIS's demand projections.

RESPONSE: The comment brings forth no new criticism of the demand projections used for Dickey-Lincoln than were presented in earlier comments on the DEIS found in Volume 2, Part I, Section 9.06.3.8. The alternative demand projections considered a wide variety of load scenarios, the most liberal being a 0.3% lower annual growth rate than projected by NEPOOL in 1976. The range is still within the 3.8% annual growth rate projected in the January 1979 NEPOOL long-term forecast. The methodology involves logical procedures including the use of an established system simulation model (General Electric-OGP) and reference to affected regional power pool projected demands. The specific approach and detail of demand projection alternatives has been presented in the RDEIS Alternatives Appendix I, Section 3 and 4. Recent experience in peak demand growth has shown, however, that the minimum peak growth rate of 3.49% can no longer be considered an exceptionally conservative projected growth rate based upon the load growth in the years 1974/75 to 1978/79 with annual increases of +.3%, +7.9%, +6.0%, +1.1% and +1.5% respectively.

COMMENT: 4

Many other sources show lower growth rates than the one projected by the Corps. The Corps must either disprove these figures or reconcile them with their own projections.

In our comments we noted that for the first nine months of 1977, Eastern utilities reported a growth rate of only 3.6%. (The actual growth rate for the entire year, quoted in your response to our comment was even lower, 1.1%.) This figure is ignored with the statement that "Growth projections must be realistically viewed over an extended period of time and not cast within a narrow time frame subject to multi-factored variances." However, no reasons are given as to why the 1977-78 time frame is not representative. Indeed, with the coldest winter and hottest summer in recent history, it is a year in which an increased rate of growth could have been expected.
The Nation's peak demand for electric power grew by only 2.3% in 1978. Utilities had predicted a 6.2% increase.

The Preliminary Report for Public Review issued by the New England Energy Congress in November, 1978 has compiled demand growth rate projections which are significantly lower than those shown in the DEIS or the revised DEIS. Total residential consumption is projected to increase 1.58% between 1977 and 2000. The projected growth rate for the commercial sector between 1985 and 2000 is 2.71%. The Demand Committee of the Energy Congress believes that improved home insulation and other forms of conservation would make possible a growth rate of approximately one percent per year over the next 22 year period.

RESPONSE: This comment was addressed in a previous response included in the RDEIS, Volume 2, Part I, Section 9.06.3.8, Comment 3. As stated there, the potential for error exists in any predictive mode. Also noted were growth rates that have been experienced in the years following the oil embargo (i.e. +.3% (74/75), +7.9% (75/76), +6.0% (76/77), +1.1% (77/78), and +1.3% growth for 78/79, averaging an overall 5 year annual rate of 3.26%). As these growth rates show, there hasn't been a consistent pattern except that growth has been positive. NEPOOL in 1979 revised its peak load demand downward to 3.8%, and in 1980 revised its project peak load demand to 2.7%. The findings of the New England Energy Congress report dated May 1979 adopted an average 2.2 percent annual electric growth rate as its planning objective. Updates of the alternatives study will take the most current projections by NEPOOL and others into account. See also the response to the previous comment.

COMMENT: 5

The usefulness of the demand projections as a tool in assessing the need for Dickey-Lincoln depends on the accuracy and sensitivity of the methodology used to develop the projections. No model is perfect. However, if the inadequacies of the model are carefully explained, the model can still be a valuable decision-making tool. The AMC's critique of the demand projection methodology's focused on the absence of a quantitative or qualitative explanation of the methodology's inadequacies. The response to our comments, included in the Revised Draft, showed a lack of understanding of what we were saying. The use of the best possible demand calculation techniques is not enough. The DEIS should have discussed the sensitivity of their analysis and those factors which could result in deviations from the expected growth rates. Use of the projected growth rate without this information biases the decision-making process.

RESPONSE: The basis for the response to the above is found in Volume 2, Part I, Section 9.06.3.8, Comment 4. As mentioned there, growth rates by their very nature are subject to continuing reevaluation. This is borne out in NEPOOL's reevaluation of peak growth rate from 5.5% in 1976 to 2.7% in 1980. Also mentioned is the meaningfulness of a statistical analysis of potential error.
The scope of the study was not directed at the sensitivity of every individual component and how it affects each sector of the various utilities that comprise NEPOOL. The study did present various projected load scenarios for expected growth and degrees of conservation and demand controls, which provided an evaluation of the system's sensitivity to fulfillment of those demands.

COMMENT: 6

The rate at which New England will need more energy can be debated. However, there can be no doubt that new sources or savings of energy will be needed during the next few years. Whether or not Dickey-Lincoln should be one of these new sources can only be determined through careful study of Dickey-Lincoln and its alternatives. The discussions of alternatives in both the Revised Draft EIS and the DEIS were inadequate. In addition, our comments on alternatives were responded to in an irresponsible way. The Corps ignored five pages of substantive comments and only addressed general statements in our final summary paragraph which it dismissed as "the opinion of the writer."

RESPONSE: In reviewing the RDEIS, Appendix I, (CE, 1977), Appendix 1 Supplement, (CE, 1978), and previous responses to Appalachian Mountain Club comments on alternatives, the adequacy of the analysis and evaluation are in line with the intent of the scope of work. Volume 2, Part I, Section 9.06.3.8 responds in Comment 11 to issues raised regarding alternatives. However, it appears that five points in the Club's comments on computer optimization were not addressed in the RDEIS, Section 9.06.3.8 which are being responded to at this time as Comment 9 on the following pages.

COMMENT: 7

The criteria used to develop alternatives in the revised draft EIS unnecessarily exclude certain viable alternatives to the Dickey-Lincoln project. The Revised Draft initially identified 24 potential forms of energy generation and storage. Of these, fourteen, including solar and wind power, were discarded due to their "limited scale of application, unproven resources and economic feasibility and undemonstrated commercial feasibility for implementation within the 1985-1990 time frame." Wood and solid waste burning plants were not even considered. The assumption that these energy sources will not be economically and technically feasible within the appropriate time frame is inconsistent with the Preliminary Report of the New England Energy Congress. Their report estimates a wood electric potential for the region of 1500 MW by the year 2000. Burlington Electric is already operating a 10 MW woodburning station and expects to have another 60 MW of generating capacity on line by 1983. In New England, the 1978 market potential for electricity production from solid waste is 480 MW and by 1985, 730 MW could be generated. While wind systems are not now economically competitive, the Report of the New England Energy Congress, based on industry projections, estimates that 100 MW
of generating capacity will be available by 1985.

RESPONSE: The review and evaluation of alternative generation and storage is summarized in the RDEIS, Section 6.01.2 and 6.01.10 with discussion of the source suitability in the Alternative Appendix I, (CE, 1977), Section 4.3. Wood and solid waste generating facilities were discussed under Alternative Fuels of Appendix I (CE, 1977), Sections 4.3.2 and 7.2.2. Of primary importance for a sound computer simulation of the Dickey-Lincoln alternatives evaluation is that the least expensive alternatives be considered in the various future generation sources. Since neither wood nor solid waste facilities were anticipated to be as cost effective as conventional generating sources or the alternatives sources chosen for further evaluation, then use of such sources would only have increased the relative merit of Dickey-Lincoln. The anticipated future role of these alternatives is not disputed, but any direct impact on the Dickey-Lincoln project cannot be reasonably expected since the plants would most likely replace oil generation at no reduction in cost. Due to installed capacity size constraints associated with fuel supply, both types of facilities can be expected to have higher capital costs than fossil fired plants. Stability of fuel supply volumes and costs are significant potential problems on a long-term basis.

Specific comment is not made on the coverage in the "Preliminary Report of the New England Energy Congress" since significant changes were incorporated into the final report and findings. Any future update of the alternatives analysis will take into account the final report of the New England Energy Congress.

COMMENT: 8

Another problem with the Corps' assessment of alternatives is their failure to evaluate combinations of energy sources and conservation measures which could produce (or reduce the need for) an amount of energy equivalent to the power which would be produced by Dickey-Lincoln. The AMC and many other individuals, organizations, and government agencies have already criticized the DEIS for its failure to assess the contribution of many small energy sources. This situation has not been remedied in the Revised Draft. This all or nothing type of approach allowed the Corps to dismiss conservation and load management as an alternative to Dickey-Lincoln because of the high social and economic cost of obtaining the last few increments of energy demand reduction equivalent to the peaking power which would be produced by Dickey-Lincoln. The possibility of combining demand reduction efforts and some of the environmentally sound and cost-effective small energy sources to produce an alternative to Dickey-Lincoln has been ignored.
RESPONSE: The subject of this comment is partially addressed in the response to the Environmental Defense Fund's Comment 3 insofar as combination of conservation measures are concerned.

These responses and the references stated in those responses fairly assesses the potential of a combination alternative. Further reference is made to the previous comment herein which describes the relationship of small energy sources to comparison of Dickey-Lincoln generation. A specific example of the results of combining demand reduction, additional conservation and small hydro in comparison with other alternatives is presented in the Alternative Study Appendix I, (CE, 1977), Section 4.3.

COMMENT: 9
Our comments on the DEIS concerning environmental assessment of alternatives also applies to the Revised Draft. Once again, the basis of comparison between Dickey-Lincoln and its alternatives are almost entirely economic. All of the environmental parameters which were evaluated for the alternatives miss the fundamental point. Only the Dickey and Lincoln dams will be destroying the last free-flowing wilderness river in the Northeast. This impact is far more significant than the quantities for fuel consumption, thermal discharge, chemical and particular emissions, and water consumption. A true and honest comparison between Dickey-Lincoln and other energy sources would assess the environmental and social impacts associated with all the alternatives. Both the DEIS and the Revised DEIS are inadequate in this regard.

RESPONSE: The response contained in Vol. II, Part I to your previous comment on the DEIS pertaining to the same issue is considered appropriate. Attention is called to Comment & Response #14, page 9-203 and Comment & Response #33, page 9-68.

COMMENT: 9 From the DEIS (1977) which was not answered in the RDEIS (Vol. 2).

(a) Second, although the language is unclear, it appears that NEPOOL Planned generating facilities were included only if they have been committed for construction. This includes only those units planned for use prior to 1982. This was assumed "so that capacity expansion beyond this date could be optimized as far as possible." This assumption is artificial, however, and seeks to obscure the fact the Dickey-Lincoln is unnecessary. The fact that NEPOOL has not included Dickey-Lincoln in its capacity plan is deliberate and significant. The system model should be consistent with the NEPOOL plan, rather than separate or in opposition.

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Further, the necessary assumptions as to facility size and output, capital and operating costs are of necessity rough. They are not site-specific estimates, but rather planning guidelines. Their use in an economic efficiency analysis is inappropriate and significantly compromises the precision of the output.

Additionally, the risk index used is more conservative by an order of magnitude over the commonly accepted value.

Most striking however, is the interpretation of the data. For a 5.2% growth rate, the model shows a savings is reduced to 34 million dollars. What is not stated, however, is that 165 million dollars is only 0.28% of the total system cost and 34 million dollars is only 0.06% of the total system cost.

The Corps reliance on the accuracy of these figures is astounding. In view of all the assumptions, imprecisions, and inaccuracies which have been outlined, an uncertainty of 15% would be optimistic, or 250 times 0.06%. The continued and repeated failure to discuss uncertainty is a very serious deficiency. Likewise the continued abuse of mathematic models to justify this project is not acceptable. The Corps has failed to provide it in a form where uncertainty and other factors can be recognized and assessed. Those failures result in the inadequacy of the EIS and in its violation of the spirit and letter of NEPA.

The subject of this comment is addressed in Section 5.1.1 and 5.3.3 of Appendix I, (CE, 1977). As stated there "Planned developments have not been included in the analysis unless they have been committed for construction." As far as capacity expansion after 1982, this was done to allow the full utilization of the OGP optimizing model for the study years 1981-2000. Once these optimization runs were established, simulation runs for the study years with Dickey-Lincoln were performed.

The subject of facility size and output, capital and operating cost assumptions are addressed in Section 5.4, System Simulation and Optimization of Appendix I, (CE, 1977). As stated there, facility size and output were determined after consideration of a number of factors including manufacturers' information and engineering judgement. The capital and operating cost values were determined from existing information and FPC (now FERC) recommendations and accounts. Since forecasting is a planning method and economics, by its very nature, has some uncertainty, when site specific estimates are not available, planning estimates may be tolerated when based on existing data and engineering experience.
(c) Risk index is covered in Section 5.4.1, Load Model of Appendix I, (CE, 1977). As pointed out under Reliability Evaluation, "NEPOOL planning criteria is presently based on a LOLP criteria of 0.1 days/year with a reserve margin of about 23 percent." Further, in an attempt to test the sensitivity of the system, runs were made with LOLP of 0.1 days/year and the reserve margin fell within ±2% of NEPOOL's criteria.

(d) The subject of this comment is covered in Section 5, Impact of Alternatives on System Costs of Appendix I, (CE, 1977). As noted in your comment, as the growth rate decreases the savings from Dickey-Lincoln also decreases. And as your percentage figures show, these savings are small in comparison with the total system cost. This can be expected as was pointed out in Section 5.3.3, Modeling Strategy of Appendix I, (CE, 1977), where it states that the influence of Dickey-Lincoln is expected to be small relative to the total system.

(e) Certainly no mathematical model can describe all possible situations accurately, but other utilities have used the OGP model successfully. As has been stated previously, forecasting and economics are subject to frequent changes and a refinement of these areas is a continuing process. Due to the nature of forecasting and economics, even with refinements there will remain areas of judgement. As stated in Section 9.06.3.8, Comment 4 in Volume 2 of the RDEIS: "A statistical analysis of potential for error, if possible, would not be meaningful." Further, as noted in Section 1.10, Benefit Cost Ratio in Volume 1 of the EIS, the primary justification for authorization of all Corps of Engineers' projects is measured in terms of the benefit-to-cost ratio. Mathematical models, like OGP, are used as supplementary justification.

COMMENT: 10

The Corps' assessment of economic efficiency showed Dickey-Lincoln to be a cost saving addition to the New England system. However, the model used to reach this conclusion was imprecise and relied upon many inaccurate assumptions. We discussed our criticisms of and questions about the model in our comments to the DEIS. Unfortunately, specific points of our critique were not addressed in the Corps' responses in the Revised DEIS. Therefore, we will restate our criticisms in a summarized form. Many of the values assumed by the model are estimates of doubtful accuracy. The model, therefore, has a large margin of uncertainty. As savings attributed to Dickey-Lincoln are minuscule in view of this imprecision, this particular mathematical model has not succeeded in demonstrating that Dickey-Lincoln is the best way to meet New England's energy needs.
RESPONSE: This comment on the model and input parameter accuracies sums up the more specific criticism of Comments 4 through 8 to which reference is made. All comments and particularly specific points have been addressed relative to this alternatives evaluation. Additionally, Comment 9 herein addresses those points brought up in the Club's comments on computer optimization which were not specifically addressed in the RDEIS, Section 9.06.3.8. The model was developed considering the best available data of systems load characteristics and viable alternative generating sources. A wide variety of conditions of both load and generating sources was considered which substantiated the viability of the project. The Dickey-Lincoln benefits were found to be sufficient to amortize the costs associated with the project and additionally provide an overall savings to the electrical system costs under all cases.

COMMENT: 11

Project power benefits were calculated by means of the "least cost" method of analysis. This method assumes that project benefits are equal to providing the same services through private sector investments. As we stated in our comments on the DEIS, success of the least cost method depends upon the identification of the appropriate alternative. We contend that the Corps placed unnecessary limitations on their selection of alternatives and therefore the least cost methods of achieving power benefits were not evaluated.

RESPONSE: The selection of the one alternative most likely to be implemented in the absence of the proposed federal project shall begin with consideration of the least costly of the likely alternatives. However, in the identification of the most likely alternative, the system with hydropower must be compared with other alternatives capable of meeting system loads within established criteria of system reliability. In the calculation of project power benefits the Federal Energy Regulatory Commission (FERC) selects the most likely alternative which fits the above criteria. The calculated costs of this most likely alternative are then used as a measure of benefits which accrue to the hydropower project.

COMMENT: 12

A major flaw in the Corps' economic analysis is the failure to account for the costs of lost timber opportunities. The value of timber yield on the lands taken for the project over the hundred year project life should have been included in the benefit: cost calculations. The DEIS placed a value of $200 to $300 million on the timber yield (a conservative estimate in light of the one billion dollar figure calculated by the Longley study and the figures shown in the comments of the Seven Islands Land Company). In the Revised Draft a rationale was developed for attributing a still lower
value to the lost timber production. In response to comments addressing project related timber losses, the Corps estimates that the loss of wood resulting from spruce budworm would substantially reduce timber opportunity costs. In making such a statement the Corps ignored the overall picture of timber supply and demand in Aroostook County. The affects of budworm and related mortality would not be limited to just the Dickey-Lincoln project area. A widespread decrease in spruce-fir timber would increase the value of the remaining supply thereby increasing the timber opportunity costs associated with implementation of Dickey-Lincoln. In the words of the "Forestry Economic Impact Study" carried out by Kimball Forestry Consultants for the Corps of Engineers, "If, in fact, the budworm does reduce supply conditions, spruce-fir stumpage prices will increase. The loss of timber production in the impoundment will only worsen the supply conditions."


In addition, the referenced timber appraiser performed an appraisal of the total estimated land for the project in 1979 and current sales are being closely observed.

COMMENT: 13

We hope that all the costs associated with fish and wildlife mitigation will be included in the project's economic analysis, so that the b/c ratio will represent the true costs of constructing Dickey-Lincoln. In particular, the cost of land to mitigate the loss of deer habitat and the costs of building and operating the fish hatchery should be included. In view of the U.S. Fish and Wildlife Service's strong objections to the project (Comment 33, Section 9.06.1.1) and the comments by the State of Maine, Office of the Governor, that it is not possible to mitigate the loss of a stream fishery, we would expect the wildlife mitigation costs to be significant.

RESPONSE: Costs attributable to fish and wildlife mitigation cannot be included in the benefit-to-cost ratio analysis for the authorized project because they are not an authorized portion of the project. However, a sensitivity analysis of benefits to costs has been carried out utilizing the estimated costs of mitigation. Applying the estimated costs of the proposed plan as presented in the FEIS and Appendix K, Revised, CE, 1980, the resulting project benefit-to-cost ratios are 2.6 to 1 and 1.4 to 1 at the 3-1/4% and 7-1/8% interest rates, respectively. The estimated costs of the U.S. Fish and Wildlife Service mitigation plan are also presented in the FEIS and Appendix K, Revised. Unlike the proposed plan, the USFWS plan recommends the building and operation of a fish hatchery, and the acquisition of a much larger area for terrestrial mitigation. A sensitivity analysis using these higher costs has not been included in the FEIS.
COMMENT: 14

We commend the Corps for concluding that only minimal recreational development of the project site is economically justifiable. However, even the adjusted calculations of recreational costs and benefits in the RDEIS overstate project benefits and underestimate losses resulting from project implementation. The comparison of Dickey Lake with other Corps projects cannot be justified for day activities due to its remoteness and the large number of lakes in northern Maine. Hunting use projections should decrease, reflecting the loss of wildlife habitat, until adequate habitat mitigation measures are planned. The dollar values attributed to different recreation activities are also questioned since present activities occurring in the vicinity of the last unique, free-flowing wilderness river in the northeast are of greater value than these same activities would be when associated with a large reservoir.

RESPONSE: The recreation use projections and benefits as discussed in the Revised Appendix G, Recreation Resource, and in the RDEIS, were the result of extensive coordination with the Maine Bureau of Parks and Recreation and the Heritage, Conservation and Recreation Service. The remoteness of the project site and the other lake resources available in Maine were taken into consideration in regard to all recreation activity projections. Hunting supply with the project would continue to exceed the demand, therefore hunting use projections would not decrease with the loss of habitat. The dollar values of the various recreation activities are consistent with the Water Resource Council's "Principals and Standards" and are considered to be relatively accurate in relation to each other, even though there may be some disagreement on certain values depending upon the point of view of the individual. However, since no recreational development, other than minimal facilities for public health and safety, is recommended, recreational benefits have not been included in the benefit-cost analysis for this project.

COMMENT: 15

There is an entire category of costs associated with the Dickey-Lincoln project which have not been adequately addressed in either the Draft or the Revised Draft EIS. These are the tragic and staggering losses to the quality of life and the integrity of the environment which cannot be quantified or mitigated. The free-flowing Saint John River and the open spaces of the expansive Valley are unequalled in the Northeast. The values are not narrowly recreational. The vast majority of opponents to the Dickey-Lincoln dams have never--and will never--canoe the river. Their concerns are not utilitarian, and will therefore never be counted in the dollar values of lost recreation based on use figures, estimates of capacity for canoes, or projections of fish caught. The Saint John River is a wilderness heritage, a resource of inestimable beauty, wildness, and richness. Its value cannot be coldly assigned in a benefit: cost ratio, but should be a clear factor in public policy. With a benefit: cost ratio near or below unity, the weight of wildland values should seal the doom of this project.
RESPONSE: All categories of costs which the Corps has been directed to address under the guidelines of Senate Document 97 and the Water Resources Council have been addressed. It is true that concepts such as "quality of life" and "integrity of the environment" cannot be quantified. However, it is also true that no attempt was made to coldly assign a benefit/cost ratio to the value of the St. John River. Notions such as beauty, wildness and richness are by nature abstract and are perceived differently by different individuals or groups, therefore the value of the St. John River is presented qualitatively through the EIS process.

COMMENT: 16

The Dickey-Lincoln project is based upon uncertain projections of energy demand at a time when public electrical pricing policies, a national energy crisis, and a rising public awareness in conservation are beginning to test the elasticity of electrical demand. The low demand growth rates of the past few years show a significant downward trend in overall growth rates. Small changes in rate-of-increase have more-and-more significant impacts into the future and ultimately open a margin of excess supply or an unnecessarily consumptive market.

RESPONSE: The subject of energy projections is addressed in Section 6.01.3, in Vol. I, of the EIS, and pricing policies are addressed in Section 6.01.9.1, Load Management and Conservation. Further coverage of these areas can be found in several subsections of Section 3 of Appendix I, (CE, 1977). As mentioned in previous comments, NEPOOL has revised its peak load demand projections from 5.5% in 1976 to 2.7% in 1980. This decrease in projected demand is understood to be due in part to increased interest in conservation.

COMMENT: 17

The project is marginally economic, and is clearly not the least-cost means to the project objectives. Equivalent dollars spent on alternatives could produce (or save) an equivalent or greater amount of power while being more consistent with national policy, more labor intensive, and less environmentally damaging than Dickey-Lincoln. These alternatives were inadequately studied in the Revised Draft, and the EIS therefore fails to justify beyond doubt that the Dickey-Lincoln project is in the public interest.

RESPONSE: The comment reflects the opinion of the writer and is not shared by the EIS preparation staff.

COMMENT: 18

Dickey-Lincoln violates the common sense adage that water power provides cheap base load. The hydrologic qualities of the St. John River preclude its use as a base load plant and allow it to produce power only 15% of the year. For an equivalent dollar invested on a consistently flowing river, with an equivalent acreage of environmental loss, the taxpayers might return much more than 15%.
Therefore, we believe that the Corps of Engineers has failed to justify a marginal economic venture whose environmental costs are staggering and whose power benefits can be achieved at a lower cost.

RESPONSE: It is not the hydrologic qualities of the St. John River which control the type of power (i.e. base-load, peaking, etc.) that the project would produce. The hydrologic conditions, reservoir storage and the hydraulic head at available damsites dictate the total energy potential that can be derived from the resource. This energy potential can either be realized through small generating units over long periods of time (base-load operation) or through large generating units for intermittent periods of time (peak-load operations). From the standpoint of economic and operational efficiency and flexibility, hydroelectric sites have their greatest value within the system as peaking plants, such as Dickey Dam.

9.08.3.6 Maine State Biologist's Association

COMMENT: 1
Non-specific comment on RDEIS.

RESPONSE: Your opposition to the Dickey-Lincoln School Lakes project on the basis of the flooding of the St. John River is noted.

9.08.3.7 Seven Islands Land Company

COMMENT: 1

The points raised in our letter of December 5, 1977, on the original DEIS still stand unanswered. A copy of that letter is attached hereto as part of our comment on the revised draft.

RESPONSE: See Volume 2, Part I of the Revised Draft EIS, Section 9.06.3.5. Your concerns have been noted by the EIS preparation staff.

COMMENT: 2

It would not be worth anyone's time to debate the forest resource issue much further, unless you use factual information and a review of the situation by people who have working knowledge and familiarity with the commercial forest of the region.

RESPONSE: In the collection of field data and information for the Forestry Economic Impact Study (Supplement to Appendix C) it was the intent of the contractor to gather factual information through the use of personal visits, telephone contacts and mailed questionaires. These methods were used in contacting the
primary sources of data and information, i.e. the major timber processing mills within and outside of Aroostook County and the major land management companies.

COMMENT: 3

At this time, it is not possible to comment on the proposed wildlife mitigation plan until the acreages, location and operational procedures are defined. Naturally, the impacts of such a plan compound the effects of the project. The present proposal calls for acquisition of at least twice the area to be flooded. This increased acreage out of production will not merely triple the impacts on the local area; it will have a far greater, synergistic and negative effect on forest management, employment, products and tax flow from the renewable resources.

RESPONSE: See the following comments and responses on mitigation planning in this document for more current and more detailed discussion of these concerns: Section 9.08.3.4, Comment 1; Section 9.08.3.8, Comment 41; Section 9.08.1.6, Comments 14,19,20; Section 9.08.3.1, Comments 1-8, and Section 9.08.3.5, Comment 12.

COMMENT: 4

The strength of this region is the private ownership, the working forest and liveability of the area. The value of this unique, commercial forest structure and what it can contribute in products and opportunities to the people of Maine and the nation has not been evaluated. Until that is meaningfully done, the true costs of the Dickey-Lincoln project cannot be known - or will be greatly understated.

RESPONSE: The value of the commercial forest is described in the Forestry Economic Impact Supplement to Appendix C (CE, 1978). Also, refer to the response to Comment #35, Section 9.06.1.2, Vol. 2, Part I. Livability, uniqueness and opportunities are qualitative judgement factors which are perceived differently by different individuals or groups of people and are described in the EIS process.

9.08.3.8 Natural Resources Council of Maine

COMMENT: 1

After reading the Revised Draft Environmental Impact Statement (RDEIS), one is left with the inescapable impression that the RDEIS fails to respond adequately to many of the doubts, concerns, data and alternatives submitted by responsible and knowledgeable