


1978

Dickey-Lincoln School Lakes Environmental Impact Statement : Supplement to Draft EIS for Transmission Lines Prepared by the Department of Energy

New England Division

U.S. Army Corps of Engineers

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ENVIRONMENTAL IMPACT STATEMENT

DICKEY-LINCOLN SCHOOL LAKES

**SUPPLEMENT TO DRAFT EIS FOR
TRANSMISSION LINES
PREPARED BY
THE DEPARTMENT OF ENERGY**



*DEPARTMENT OF THE ARMY
NEW ENGLAND DIVISION, CORPS OF ENGINEERS
WALTHAM, MASS.
02154*

SEPTEMBER 1978

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9.0 CONSULTATION AND COORDINATION

9.01 Consultation and Coordination During Preparation of the DEIS

DOE, in developing the scope of work for the Dickey-Lincoln School Lakes transmission study, recognized the need for a great deal of consultation and coordination. Consultation, coordination, and public involvement were integral parts of the study design. As part of this effort, extent of experience in northern New England and location were important factors in selecting consultants for various portions of the study.

The System Planning Study (Appendix A), DOE's first project effort, was accomplished in coordination with the electric utilities of the region, specifically NEPLAN, the planning arm of the New England Power Pool.

During the regional corridor study phase, the emphasis for coordination was with agencies and groups with regional responsibility. Contacts were established with Federal and state agencies and regional planning commissions early in this phase, and also with utilities, major paper and land management companies, and environmental groups. A large number of meetings and discussions were held with representatives of these agencies and groups.

In the spirit of "open planning" and to solicit additional input directly from the people of the region, public information meetings were held in June 1976, at Presque Isle, Bangor, and Augusta, Maine; Concord, and Berlin, New Hampshire; and Montpelier, Vermont. In December 1976, with the corridor study complete, another series of public meetings were held, this time at Presque Isle, Jackman, Bangor, and Augusta, Maine; Concord and Groveton, New Hampshire; and Montpelier, Vermont. These meetings were to present and receive comments on the proposal to proceed with detailed route studies on System Plan E, a system of corridors through western Maine, northern New Hampshire, and Vermont.

When the study effort shifted in focus from broad corridor evaluations to route studies, the coordination requirements changed in emphasis. Discussions became more technical, and, for the first time all towns along the alternative routes were contacted directly. Working with the Regional Planning Commissions, meetings involving town planners and selectmen were arranged. Usually several towns were represented at each meeting. These meetings were held in Montpelier, Essex Junction, and St. Johnsbury, Vermont; Groveton, New Hampshire, and Jackman, Maine, during the fall and winter of 1977-78.

Individual property owners were not contacted during this study. If the project is approved and funded for construction, land-owners along the proposed route will be consulted during actual right-of-way location.

Throughout the project, a great deal of coordination took place between DOE's study team and the U. S. Army Corps of Engineers, responsible for studies relating to the dam and reservoir. It was also necessary to coordinate closely with the U. S. Fish and Wildlife Service, which has project responsibilities under the Fish and Wildlife Coordination Act.

Staff members also briefed the Citizen's Review Committee for the Governor of Maine on several occasions, and provided relevant material on various aspects of the transmission studies.

Governmental agencies, groups and individuals who were in contact with the study team with whom some degree of consultation or coordination took place are listed as follows. Contacts by the various environmental contractors are shown in the technical reports published as appendices to this statement.

9.01 1. Contacts

ENVIRONMENTAL GROUPS

| | |
|---|-------------------|
| Natural Resources Council | Augusta, ME |
| Sunkhaze Chapter of Trout Unlimited | Bangor, ME |
| National Wildlife Federation | Bar Harbor, ME |
| Sportman's Alliance | Gardiner, ME |
| The Maine Association of Conservation Commissions | Kennebunkport, ME |
| Maine Audubon Society | Portland, ME |
| Land Use Foundation of New Hampshire | Concord, NH |
| New Hampshire Association of Conservation Commissions | Concord, NH |
| Society for Protection of New Hampshire Forests | Concord, NH |
| Statewide Program to Conserve Our Environment | Concord, NH |
| Nature Conservancy | Durham, NH |
| New Hampshire Wildlife Federation | Manchester, NH |
| Vermont Natural Resources Council | Montpelier, VT |
| Conservation Society of Vermont | Townsend, VT |
| Appalachian Mountain Club | Boston, MA |
| Friends of the St. John | Boston, MA |

PLANNING COMMISSIONS

| | |
|--|-------------|
| Androscoggin Valley Regional Planning Commission | Auburn, ME |
| South Kennebec Valley Regional Planning Commission | Augusta, ME |
| Penobscot Valley Regional Planning Commission | Bangor, ME |
| Northern Maine Regional Planning Commission | Caribou, ME |

PLANNING COMMISSIONS (Cont'd)

| | |
|--|--------------------|
| Eastern Mid-Coast Regional Planning Commission | Rockland, ME |
| Southern Maine Regional Planning Commission | Sanford, ME |
| North Kennebec Regional Planning Commission | Winslow, ME |
| North Country Council | Franconia, NH |
| Upper Valley Lake Sunapee Council | Lebanon, NH |
| Lakes Region Planning Commission | Meredith, NH |
| Chittenden County Regional Planning Commission | Essex Junction, VT |
| Central Vermont Regional Planning Commission | Montpelier, VT |
| Southern Windsor Regional Planning Commission | Springfield, VT |
| Northeastern Vermont Development Association | St. Johnsbury, VT |

STATE AGENCIES

Maine

| | |
|---|-------------|
| Department of Inland Fisheries and Wildlife | Augusta, ME |
| Department of Forestry | Augusta, ME |
| Department of Inland Fisheries and Wildlife | Bangor, ME |
| Land Use Regulation Commission (LURC) | Augusta, ME |
| Department of Conservation | Augusta, ME |
| Maine Bureau of Geology | Augusta, ME |
| Department of Parks and Recreation | Augusta, ME |
| Department of Agriculture, Soil and Water Conservation Commission | Augusta, ME |
| State Geologist | Augusta, ME |
| State Planning Office | Augusta, ME |
| State Historic Preservation Office | Augusta, ME |

New Hampshire

| | |
|--|-------------|
| Department of Resources and Economics | Concord, NH |
| Department of Inland Fisheries - Fish and Game | Concord, NH |
| Office of Comprehensive Planning | Concord, NH |
| Water Resources Board | Concord, NH |
| Bureau of Outdoor Recreation Planning | Concord, NH |
| Coordinator of Federal Funds | Concord, NH |
| Department of New Hampshire Energy | Concord, NH |
| State Planning Office | Concord, NH |

STATE AGENCIES (Cont'd)

Vermont

| | |
|------------------------------------|----------------|
| Division of Historic Preservation | Montpelier, VT |
| Department of Forest and Parks | Montpelier, VT |
| Environmental Conservation Agency | Montpelier, VT |
| Department of Fish and Game | Montpelier, VT |
| Planning Board | Stowe, VT |
| Public Service Board | Montpelier, VT |
| State Planning Office | Montpelier, VT |
| Vermont Water Resources Department | Montpelier, VT |

FEDERAL AGENCIES

Department of Justice

| | |
|------------------------|------------|
| U.S. Attorney's Office | Bangor, ME |
|------------------------|------------|

Department of the Interior

| | |
|---|------------------|
| U.S. Fish and Wildlife Service | Concord, NH |
| U.S. Department of the Interior, Office of Environmental Project Review | Washington, D.C. |
| U.S. Geological Survey | Concord, NH |
| Inter-Agency Archeological Service, National Park Service | Atlanta, GA |

Department of Agriculture

| | |
|---|---------------|
| Forest Experiment Station, University of Maine | Orono, ME |
| White Mountain National Forest | New Hampshire |

UTILITIES

| | |
|-------------------------------------|------------------|
| Carrabasset Light & Power | North Anson, ME |
| Central Maine Power Co. | Augusta, ME |
| Union River Electric Corp. | Aurora, ME |
| Bangor Hydroelectric Co. | Bangor, ME |
| Eastern Maine Electric Corp. | Calais, ME |
| Maine Public Service | Presque Isle, ME |
| Granite State Electric Co. | Lebanon, NH |
| Littleton Water & Light | Littleton, NH |
| Public Service Co. of New Hampshire | Manchester, NH |
| New Hampshire Electric Corp. | Plymouth, NH |
| Village, Inc. | Barton, VT |
| Green Mountain Power Corp. | Burlington, VT |
| Light Commission | Hardwick, VT |
| Village of Hyde Park, Inc. | Hyde Park, VT |
| Vermont Electric Corp. | Johnson, VT |
| Electric Light Department | Ludlow, VT |

UTILITIES (Cont'd)

| | |
|-------------------------------------|----------------------|
| Electric Plant | Lyndonville, VT |
| Washington Electric Corp., Inc. | E. Montpelier, VT |
| Municipal Electric Association | |
| Morrisville Water & Light | Morrisville, VT |
| Citizens Utilities Co. | Newport, VT |
| Light Commission | Northfield, VT |
| Allied Power & Light Co. | Pittsford, VT |
| Vermont Marble Co. | Proctor, VT |
| Rochester Electric Light & Power | Rochester, VT |
| Conn. Valley Electric Co. | Rutland, VT |
| Vermont Electric Power Co. | Rutland, VT |
| Light Commission | Stowe, VT |
| Northeast Utilities Service Company | Berlin, VT |
| Northeast Public Power Association | Littleton, MA |
| Massachusetts Municipal Wholesale | |
| Electric Co. | Ludlow, MA |
| NEPLAN | West Springfield, MA |
| Northeast Utilities | West Springfield, MA |
| Planning & Power Supply | Westborough, MA |
| Stony Brook Energy Center | Westover, MA |

UNIVERSITIES

| | |
|--------------------------------|-------------|
| Cooperative Extension Service, | |
| University of Maine | Bangor, ME |
| Department of Anthropology, | |
| University of Maine | Orono, ME |
| Dartmouth College | Hanover, NH |

TIMBER COMPANIES

| | |
|---|------------------|
| Boise Cascade Corp. | Rumford, ME |
| Brown Paper Company | Berlin, NH |
| Dead River Company | Bangor, ME |
| Diamond International Corp. | Old Town, ME |
| Dunn Heirs | Ashland, ME |
| Georgia Pacific Corp. | Woodland, ME |
| Great Northern Paper Co. | Millinocket, ME |
| James W. Sewall Co. | Old Town, ME |
| J. M. Huber Corp. | Old Town, ME |
| Maine Woodlands International Paper Co. | Jay, ME |
| North Maine Woods | Presque Isle, ME |
| St. Regis Paper Co. | Bucksport, ME |
| Scott Paper Company | Winslow, ME |
| Seven Islands Land Company | Bangor, ME |

OTHER CONTACTS

| | |
|-------------------------------------|----------------|
| Citizens Advisory Committee for the | |
| Governor of Maine | Farmington, ME |
| Jackman Planning Board | Jackman, ME |
| Kennebago Camp Owner's Association | Oguossoc, ME |

OTHER CONTACTS (Cont'd)

| | |
|--|-------------------|
| League of Women Voters of Maine | Winthrop, ME |
| Berlin, Town of (Community Development Director) | Berlin, NH |
| International Generation and Trans- mission Company, Inc. | Berlin, NH |
| Walkers Pond Water Conservation Society | Conway Center, NH |
| Barnet, Town of | Barnet, VT |
| Plainfield, Town of | Plainfield, VT |
| Peacham, Town of | Peacham, VT |
| Tenneco, Inc. | Hopkinton, MA |
| Social Assessment Services | Sudbury, MA |

9.02 Coordination in Review of the DEIS

9.02.1 Comments Requested

Comments on the Draft EIS were requested from:

Advisory Council on Historic Preservation
Department of Agriculture
Department of Commerce
Department of Defense
Department of Health, Education & Welfare
Department of Housing & Urban Development
Department of Interior
Department of State
Department of Transportation
Environmental Protection Agency
Inland Water Directorate of the Environment, Canada
Interstate Commerce Commission
U.S. Army Corps of Engineers, New England Division

Maine State Clearinghouse Coordinator
New Hampshire Coordinator of Federal Funds
Vermont State A-95 Coordinator

NOTE: The above three State A-95 Clearinghouses forward requests for comments to all appropriate State Offices and coordinate State agency review of Draft EIS.

Maine Historic Preservation Commission
New Hampshire Division of Historic Preservation
Vermont Division of Historic Preservation

Androscoggin Regional Planning Commission, ME
North Kennebec Regional Planning Commission, ME
Northern Maine Regional Planning Commission, ME
Penobscot Valley Regional Planning Commission, ME

North Country Council, NH
Central Vermont Planning Commission, VT
Chittenden County Regional Planning Commission, VT
Northeast Vermont Development Association, VT

NOTE: The eight Regional Planning Commissions above act as area-wide A-95 Coordinators. As such, they forward requests for comments to appropriate towns and local agencies and coordinate Draft EIS review. All organized towns along the alternative routes are included in this review process.

Boise Cascade Corp., Rumford, ME
Brown Paper Company, Berlin, NH
Dead River Company, Bangor, ME
Diamond International Corp., Old Town, ME
Dunn Heirs, Ashland, ME
G. Pierce Webber, Bangor, ME
Georgia Pacific Corp., Woodland, ME
Great Northern Paper Co., Millinocket, ME
J.M. Huber Corp., Old Town, ME
International Paper Co., Jay, ME
St. Regis Paper Co., Bucksport, ME
Scott Paper Co., Winslow, ME
Seven Islands Land Co., Bangor, ME
James W. Sewall Co., Old Town, ME

Associated General Contractors of Maine

Business & Industry Association of New Hampshire
Carpenter's Local 621, Brewer, ME
Economic Resources Council, ME
Industrial Development Council of Maine
International Brotherhood of Electrical Workers, MA
Maine AFL-CIO
Maine Electric Cooperative Association
Maine Citizens for Dickey-Lincoln
Maine State Chamber of Commerce, Portland, ME
Valley Residents Against Dickey-Lincoln, Fort Kent, ME
Vermont State Chamber of Commerce

A-95 Coordinator, Boston, MA
American Rivers Conservation Council, D.C.
Maine Association of Conservation Commissions
Maine Forest Products Council, ME
Massachusetts Water Pollution Control
New England Governor's Conference, MA
New England Regional Commission, MA
New England River Basins Commission, MA
New Hampshire Association of Conservation Commissions
Office of Legislative Research, Hartford, CN
Society of American Foresters, ME

American Association of University Women, ME
Audubon Society of Maine
Audubon Society of New Hampshire
Appalachian Mountain Club, MA
Bates Outing Club, ME
Colby Environmental Council, ME
Connecticut River Watershed Council
Conservation Law Foundation of New England, MA
Conservation Society of Vermont
Friends of the St. John, MA
Institute of Natural and Environmental Resources,
Univ. of N.H., Durham, N.H.
Garden Club Federation, ME

Green Mountain Club, VT
Land Use Foundation of New Hampshire
Land and Water Resources Institute, University of Maine, Orono, ME
League of Women Voters, ME
Midcoast Audubon Society, ME
National Audubon Society, Inc., Washington, D.C.
National Wildlife Federation, Bar Harbor, ME
Nature Conservancy, MA
Nature Conservancy, NH
Natural Resources Council of Maine
Natural Resources Council of Vermont
New England Natural Resources Center, MA
New Hampshire Wildlife Federation, NH
Penobscot Paddle & Chowder Society, ME
Sierra Club, MA
Society for Protection of New Hampshire Forests
SPACE: Statewide Program to Conserve Our Environment, NH
Sportsman Alliance, Gardiner, ME
Sunhaze Chapter of Trout Unlimited, Bangor, ME

Bangor Hydroelectric Company
Boston Edison Company, MA
Central Maine Power Company
Eastern Maine Electric Coop.
Eastern Utilities Associates Service Corporation, MA
Fitchburg Gas and Electric Light Co., MA
Green Mountain Power Corp., VT
Maine Public Service Company
Massachusetts Municipal Wholesale Electric Company, MA
Municipal Electric Association of Vermont
New England Electric Gas and Electric Associates, MA
New England Electric Service, MA (NEES)
New England Power Planning, MA
Newport Electric Corporation, RI
Northeast Public Power Association, MA
Northeast Utilities Service Co., CT (NESCO)
Public Service Co. of New Hampshire
United Illuminating Company, New Haven, CT (EUA)
Vermont Electric Power Company

9.02.2 Public Comments and Responses

The Draft EIS was filed with the Environmental Protection Agency on April 6, 1978. The Notice of Availability of the Draft was published in the Federal Register, April 7, 1978, page 14715. The notice also announced a 60-day public review and comment period, and included a schedule of formal public hearings on the Draft EIS to be held at eight locations throughout New England.

After publication of the Notice of Availability, over 700 copies of the Draft EIS were mailed to Federal, state, local government agencies, non-governmental groups, and interested individuals. All supporting appendices were made available to those requested to comment on the Draft.

Copies of the statement and appendices were made available to the public at the following repositories:

Connecticut

| | |
|----------|---------------------------|
| Hartford | State Library |
| Stoors | University of Connecticut |

Maine

| | |
|------------|--|
| Allagash | Town Hall |
| Ashland | Town Council |
| Auburn | Androscoggin Regional Planning Commission |
| Augusta | Natural Resources Council |
| Augusta | State House Law and Legislative Library |
| Bangor | Department of Energy-Federal Office Bldg. |
| Bangor | Penobscot Valley Regional Planning Comm. |
| Bangor | Public Library |
| Biddeford | McArthur Public Library |
| Brunswick | Bowdoin College-Longfellow Library |
| Caribou | Northern Maine Regional Planning Commission |
| Castine | Maine Maritime Academy - Nutting Memorial Library |
| Farmington | University of Maine |
| Fort Kent | Chamber of Commerce |
| Fort Kent | University of Maine |
| Jackman | Town Hall |
| Lewiston | Bates College |
| Machias | University of Maine-Merrill Library |
| Madawaska | First Selectman |
| Orono | University of Maine-Raymond H. Fogle Library |
| Portland | Portland Public Library |
| Portland | University of Maine - Documents Department |
| Portland | University of Maine - Law Library |
| Portland | University of Maine - Acquisitions Librarian |
| Portland | University of Maine - Center of Research - Advanced Study |

Maine (Cont'd)

Presque Isle
Springvale

St. Francis
Unity
Waterville
Waterville
Winslow

University of Maine
Nasson College-Anderson Learning Center
Library
First Selectman
Unity College
Colby College - Miller Library
Public Library
North Kennebec Regional Planning
Commission

Massachusetts

Amherst
Boston
Boston
Boston
Cambridge

Cambridge
Cambridge
Chestnut Hill
Lowell

Waltham
Waltham
Worcester

University of Massachusetts
Boston Public Library
Department of Energy
State Library - Fingold Library
Harvard Graduate School of Design -
Gund Hall
Harvard - Widener Library
Massachusetts Institute of Technology
Boston College, Babst Library
University of Lowell - Alumni Memorial
Library
Brandeis University-Goldfarb Library
U.S. Army Corps of Engineers
Worcester Polytechnical Institute -
Gordon Library

New Hampshire

Concord
Durham

Franconia
Groveton
Hanover
Hudson
Manchester

State Library
University of New Hampshire -
Ezekiel W. Dimond Library
North Country Council
Public Library
Dartmouth College-Baker Library
Hills Memorial Library
City Library

Rhode Island

Kingston
Providence
Providence

University of Rhode Island
Brown University
State Library

Vermont

Burlington

Essex Junction

University of Vermont-Guy W. Bailey
Memorial Library
Chittenden County Regional Planning
Commission

Vermont (Cont'd)

| | |
|----------------|--|
| Montpelier | Central Vermont Regional Planning Commission |
| Montpelier | State Library |
| Montpelier | Vermont Free Library |
| South Royalton | Vermont Law School |
| St. Johnsbury | Northeast Vermont Development Association |
| St. Johnsbury | St. Johnsbury Athenaeum |

Also a news release was made on April 6 and April 13, 1978, from the DOE office in Boston to 62 newspapers, 32 radio and TV stations, 2 news services, and over 300 agencies and special interest groups in New England. Included in this news release was information prepared by the U.S. Army Corps of Engineers on the total project in terms of an informational brochure.

9.02.3 Public Meetings

DOE held eight public meetings to receive questions and presentations on the Draft EIS during the first 2 weeks of May 1978. The Dickey-Lincoln School Transmission Team Project Manager presided over the meetings, which were recorded verbatim by a professional court recorder. Copies of the full hearing transcripts were made available for public review at DOE's office in the Federal Building, Bangor, Maine. The hearings were announced both in the Federal Register notice of April 7, 1978, and through 31 paid advertisements in newspapers throughout the northern New England area, and by several news releases.

The meeting locations, dates, attendance, and the number of people who gave testimony are summarized as follows:

| <u>Meeting Place</u> | <u>Date and Time</u> | <u>Attendance</u> | <u>Number Testifying</u> |
|----------------------|-----------------------------|-------------------|--------------------------|
| Fort Kent, ME | May 1, 1978 - 6:30 p.m. | 65 | 9 |
| Jackman, ME | May 3, 1978 - 6:30 p.m. | 150 | 14 |
| Augusta, ME | May 4, 1978 - 6:30 p.m. | 70 | 22 |
| Groveton, NH | May 8, 1978 - 6:30 p.m. | 55 | 7 |
| St. Johnsbury, VT | May 9, 1978 - 6:30 p.m. | 40 | 8 |
| Montpelier, VT | May 10, 1978 - 6:30 p.m. | 100 | 26 |
| Concord, NH | May 11, 1978 - 6:30 p.m. | 25 | 3 |
| Cambridge, MA | May 15, 1978 - 1:30 p.m. | 24 | 5 |

The purpose of the public meetings was to afford the public an opportunity to comment and ask questions and for DOE to receive comments on the work that has been done and the decisions that have been reached related to the transmission facilities for the overall project. The meeting also gave the public a chance to comment on the total project, including the dam, reservoirs, and generation facilities, as well as the transmission facilities. The Corps reopened their comment period to coincide with the comment period for DOE to give the public a chance to comment on the combined aspects and combined impacts on the total project. Therefore, representatives of the Corps of Engineers attended all public meetings to answer any questions related to their areas of responsibility.

Each meeting followed the same format, beginning with about three-fourths to one hour of presentation by the project managers about the transmission studies undertaken and the major findings and conclusions of all studies. Following the presentations was a general question-and-answer period. After this, prepared statements and testimony were read into the verbatim transcript.

9.02.4 Review Procedures for Comment

To be considered in preparation of the Final EIS, comments had to be submitted in writing and be received by the DOE office in Bangor, Maine, by June 6, 1978, the close of the announced 60-day review period.

Statements read into the record at a public meeting were considered for response if they were also submitted in writing.

All comment letters received were reviewed and considered. Comments considered to be substantial and related to the Draft EIS were used in revising the text or were responded to individually. To qualify as being substantial, a comment basically had to present new data or information, to question facts and/or contexts of analyses performed, or to review, or raise general questions on alternatives or overall environmental effects.

All letters were reviewed. Individual portion(s) thereof were identified as specific comments and assigned specific comment numbers. A general classification of comments that grouped sets of similar comments into a specific type or category was then performed. The final comment type categories are listed on pages 9-18 to 9-19.

Comments were then assigned to DOE personnel or contractors for response and to suggest required changes in the Final EIS.

9.03 Comment Responses

9.03.1 Individuals Testifying at Public Hearings

| <u>Speaker</u> | <u>Representing</u> | <u>Location</u> |
|----------------------|--|-----------------|
| Ezra James Briggs | Self | Fort Kent |
| Karen Cathey | Northern Maine Regional Planning Commission | Fort Kent |
| Gale L. Flagg | Self | Fort Kent |
| Stanley R. Flagg | Self | Fort Kent |
| John Martin | Self | Fort Kent |
| Kathy Olson | Self | Fort Kent |
| John O. Olson | Valley Resident Against Dickey-Lincoln | Fort Kent |
| George C. Sawyer | Dunn Heirs | Fort Kent |
| Dr. Ogden E. Small | Self | Fort Kent |
| David Ault | Congressman William Cohen | Jackman |
| Carole Coley | Jackman Planning Board | Jackman |
| Norman E. Drew | Senator Wm. H. Hathaway | Jackman |
| Joan Ferland | Town of Jackman | Jackman |
| Reginald O. Fournier | Self | Jackman |
| Robert Gramigna | North Kennebec Regional Planning Commission | Jackman |
| Howard J. Hagen | Town of Moose River | Jackman |
| Harvey A. Smith | Democratic Candidate State Legislative District 96 | Jackman |
| A.E. Brower | Garden Club Federation of Maine | Augusta |
| Robert V. Clark | Eastern Maine Electric Cooperative, Inc. | Augusta |

Individuals Testifying at Public Hearings (Cont'd)

| <u>Speaker</u> | <u>Representing</u> | <u>Location</u> |
|------------------------|--|-----------------|
| Philip R. Davis | Kennebunk Light and Power District | Augusta |
| Elizabeth H. Doak | Self | Augusta |
| John R. Goodwin | Maine Citizens for Dickây-Lincoln | Augusta |
| Jonathon Gorham | Maine Audubon Society | Augusta |
| Robert Gramigna | North Kennebec Regional Planning Commission | Augusta |
| Mary M. Grow | Self | Augusta |
| David E. Honey | Union River Electric Cooperative | Augusta |
| Joseph M. Lupsha | Maine Forests Products Council | Augusta |
| J. David Madigan | Independent Candidate Congress, 1st District | Augusta |
| Louis Marstaller | Self | Augusta |
| Brooks B. Mills | Maine Woodsman's Association | Augusta |
| Louis F. Parent | Van Buren Light and Power District | Augusta |
| Edward Lee Rogers | Natural Resources Council of Maine | Augusta |
| M. Tieche Shelton, Jr. | Sportsman's Alliance of Maine | Augusta |
| Kenneth Shinchette | Chianbro Corporation | Augusta |
| Roger F. French | Advanced Energy and Technology Associates | Groveton |
| Fred King | Self | Groveton |
| Guy L. Krapp | Wolfeboro Municipal Electric | Groveton |

Individuals Testifying at Public Hearings (Cont'd)

| <u>Speaker</u> | <u>Representing</u> | <u>Location</u> |
|------------------------|---|-----------------|
| Robert C. Learned | Trout Unlimited | Groveton |
| Robert Petrofsky | Self | Groveton |
| Charles Willey | Self | Groveton |
| Jim Ashley | Self | St. Johnsbury |
| Bill Nichols | Self | St. Johnsbury |
| Richard H. Saudeck | Vermont Public Service Board | St. Johnsbury |
| Harland G. Titemore | Self | St. Johnsbury |
| John Warshow | Self | St. Johnsbury |
| Brendon Whittaker | Vermont State Energy Office | St. Johnsbury |
| Ray Zirblis | Self | St. Johnsbury |
| Robert Barasch | Plainfield Vt. Board of Selectmen | Montpelier |
| John Bohn | Vermont Electric Cooperative | Montpelier |
| Mr. Paul Cate | Central Vermont Audubon Society | Montpelier |
| William D. Countryman | New England Botanical Club | Montpelier |
| Douglas R. Fitzpatrick | Berlin, Vt. Planning Commission | Montpelier |
| Diane Geerken | Sierra Club | Montpelier |
| Gordon Gianninoto | Self | Montpelier |
| Norman Grearson | Barre Fish and Game Club | Montpelier |
| Glenn Hawkes | Self | Montpelier |
| Arnold Koss | Self | Montpelier |
| Mildred P. Menard | Self | Montpelier |
| Eldon Morrison | Vermont Agency of Environ- mental Conservation | Montpelier |

Individuals Testifying at Public Hearings (Cont'd)

| <u>Speaker</u> | <u>Representing</u> | <u>Location</u> |
|-------------------------------|---|-----------------|
| Nancy Floyd Morsbach | Vermont Energy Office | Montpelier |
| Leigh Seddon | Vermont Public Interest Research Group | Montpelier |
| Warner Shedd | National Wildlife Federation | Montpelier |
| Jeff Squires | Central Vermont Regional Planning Commission | Montpelier |
| Seward Weber | Vermont Natural Resources Council | Montpelier |
| Jan P. Wells | Self | Montpelier |
| Jay W. Wisner | Self | Montpelier |
| Prof Joseph C. Ezyk | New Hampshire Wildlife Federation | Concord |
| Cathy Hood | Appalachian Mountain Club | Concord |
| Cleve Kapala | New Hampshire Environmental Coalition | Concord |
| John Pillsbury | Self | Concord |
| Statement Read into Record | Meldrim Thompson Jr. | Concord |
| Robert W. Bacon | Massachusetts Municipal Whole- sale Electric Company | Cambridge |
| Hal Clifford | Self | Cambridge |
| Raymond Cristell | Northeast Public Power | Cambridge |
| Girard G. McDuff | Peabody Municipal Light and Power | Cambridge |
| Sally Surgenor | Appalachian Mountain Club | Cambridge |

JACKMAN/MOOSE RIVER CONSULTATION

I. JACKMAN PUBLIC MEETING

As part of the public review process for the DEIS, a meeting was held in Jackman, Maine, on May 3, 1978. At that meeting, several statements were received from regional and local planning officials and local residents, charging DOE and its contractor, E.C. Jordan Company (ECJ), with failing to obtain adequate information to assess fully the socio-economic impacts of transmission line construction on the Towns of Jackman and Moose River. Several written comments of a similar nature were received. As a result, representatives from DOE and ECJ visited Jackman on June 28, 1978 to obtain more detailed information.

Town officials, commercial establishment owners, and residents were interviewed individually during the day. An evening meeting was held with Planning Board members and officials of Jackman and Moose River to discuss interview results, and to fill in any remaining data voids.

The following information was discussed during the June 28 meeting:

Winter recreation activity has increased substantially over the past 3 years as a result of the snowmobile trail system, created by the Town of Jackman.

Tourism is a major economic activity in Moose River and Jackman. (This was discussed in Appendix H, Socioeconomic Impact Study, but had not been included in Table 2.09-2 in the DEIS).

The DEIS shows the correct unemployment rate for Somerset County of 12 percent. However, it was emphasized by Jackman officials that the unemployment rate for Jackman and Moose River is much less.

There is a severe shortage of permanent housing the the community. This shortage includes apartments and houses available for rent, as well as homes for sale.

Motels, hotels, and lakefront camps total about 120 units. Of these, 80 units are open year round. Most motel owners reported a summer peak during the tourist season, a short busy period during hunting season, and a winter weekend peak due to snowmobilers. Many units are booked in advance for the summer season. Average stay at lakefront camps is a week. Most Canadian woodsmen working in the area stay at a boarding house or in trailers.

An old cemetery north of Moose River near the Highway 201 crossing, should be checked for historic significance. (It was subsequently determined to be 3/4 mile south of the proposed alignment.)

The school currently has an enrollment of 311 students and has shown significant growth in the past few years. School officials estimate the present facilities can handle about 35-40 additional students.

The sawmill operation at Holeb may be moved to Moose River and expanded. This would place additional pressure on housing and municipal services and facilities.

Jackman and Moose River need new sewerage and water systems. The communities currently obtain water from Wood Pond and discharge sewage back into the same pond. A sprayed lagoon sewerage system, which would accommodate 400 users, is being contemplated. Studies to determine the exact systems needed have been underway for some time, but are not complete. The new system would include replacement of existing sewer lines, and installing additional lines to hook up all lakefront camps and motels. The existing water system is antiquated and needs replacement, however, the towns feel that they cannot afford a new water system at this time. A complicating factor is that much needed highway reconstruction has been delayed, pending placement of the new sewer and water lines.

Heald Pond has experienced severe sedimentation from recent logging activities, indicating a need for extreme care in transmission line location and construction in this area. One Heald Pond residence is occupied year-round. The owner's only link to the outside during the winter is by CB radio. This radio station is also used as a relay for snowmobilers using the Boundary Bald Mountain trails.

II. REVIEW OF IMPACT ASSESSMENT

As a result of comments received during the public review period for the DEIS and the visit to Jackman (as described above), the following review of potential impacts associated with the proposed Dickey-Lincoln Transmission Line is provided.

Employment

Estimates of employment requirements likely to be filled by local labor refer to the State as a whole, not specifically to individual communities. How much the local area market provides will depend on the amount of available labor and the wage rate. At present, the unemployment rate in the Jackman/Moose River area appears to be significantly below the rate for Somerset County as a whole. In Phase I, preconstruction work, there may be competition with private industry for Class I woodcutters and potentially a labor shift to the project. At present, a great deal of woodcutting in the Jackman area is being done by Canadian woodsmen. Throughout the State as a whole, there is believed to be a sufficient number of unemployed or underemployed woodsmen who will be available at the anticipated wages.

Because of the transitory and temporary nature of much of the required labor, transmission line work does not generally encourage job shifting of presently employed workers.

Very few secondary employment opportunities are generated by transmission line work. If work crews are scheduled so that a maximum of one full crew is in the Jackman area at one time, there may be some opportunity for overtime work but little or no need for additional employees.

Anticipated impacts for employment are not expected to be different from those discussed in the DEIS. If work crews are scheduled as recommended in the report, the impact for secondary employment is expected to be minimal.

Income

The principal income impact anticipated for the local area is the increase due to secondary income benefits. Such income will relate most specifically to food, lodging and entertainment. If a decision is made to utilize labor camps along the right-of-way, there will be minimal secondary income for lodging and food and significantly less for entertainment, as crews would not be in town on a daily basis.

Housing

The temporary housing situation in Jackman cannot accommodate an influx of up to 120 workers without severe repercussions, at least for the short-term, due to the strong tourist industry. In order to avoid the impacts anticipated with 120 workers, DOE will schedule construction to reduce the number of workers in the Jackman area at any one time. Even so, construction workers may experience housing problems during the summer months because of competition with the tourist market. Careful and full cooperation will be maintained by DOE with the contractor and community officials to time work schedules to reduce impacts on housing. Consideration will be given to the use of a labor camp during the largest (employment) stage of work if it occurs during the summer tourist season.

Temporary Population Increase

As stated in the DEIS, transmission line construction workers generally do not bring their families with them because of the temporary and transitory nature of the work. The lack of available family housing in the Jackman area will discourage workers or administrative personnel who might contemplate bringing in their families. The possible relocation of the Holeb sawmill complex to Jackman will further burden an already tight housing market.

Public and Private Services

Capacity for handling additional school population is limited. The impact on the school system is considered to be minor because there is little evidence that workers bring families with them in the best of situations. The isolation and housing situation will discourage many workers who may consider doing so. Present development plans indicate that the update of the wastewater treatment system will occur prior to commencement of proposed construction work for the transmission line. The new system will have sufficient capacity to accommodate anticipated work crews.

The minimal availability of law enforcement officials is of concern to the communities. The DEIS indicated a potential need for additional law enforcement if two crews are in the area at one time.

Careful scheduling by DOE can minimize potential social pressures associated with an influx of temporary work crews. It is believed that the Jackman/Moose River area may require a full-time law enforcement official during the height of construction.

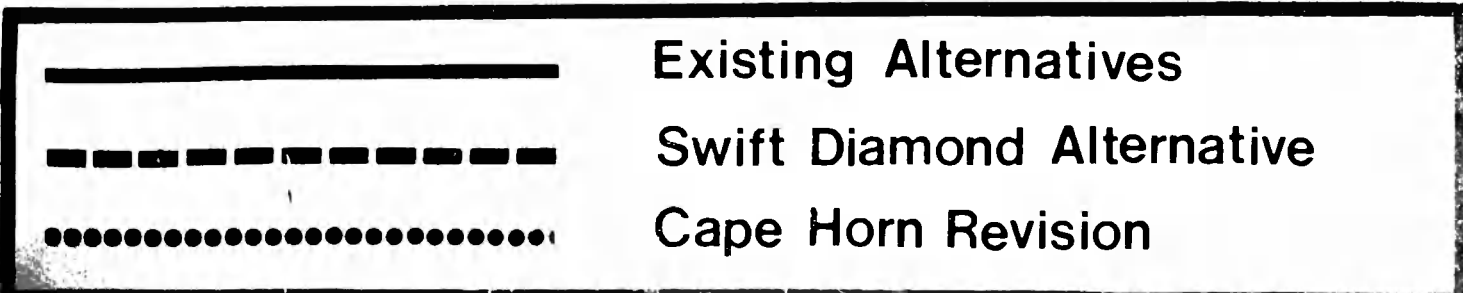
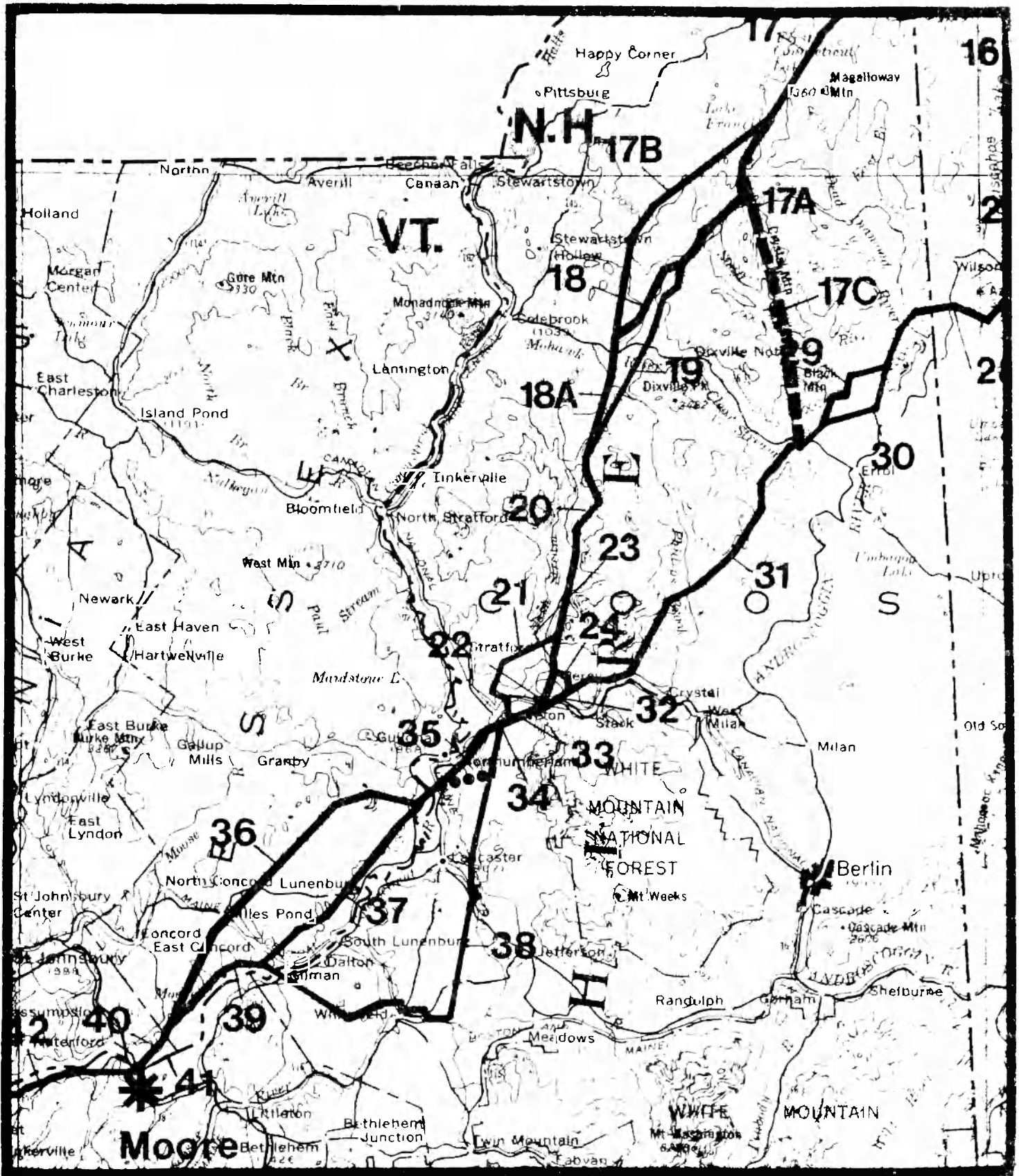
Community Concerns

The Socioeconomic Impact Study had identified Jackman/Moose River as an area which expressed concerns with the proposed transmission line. A result of that concern was reflected in the recommended route through that area. Local concern is concentrated in two areas: the conflict of the proposed line with the wilderness character, and the temporary impacts of construction crews on the social and economic structure of the community. In acknowledgement of these local concerns, DOE will seek close cooperation with community officials during all stages of planning and construction.

Wilderness Value

The impact to the wilderness character in the Jackman/Moose River area has been acknowledged in the DEIS. There is no empirical evidence to suggest a loss of tourism to the area because of the presence of transmission lines.

Figure 1
 Swift Diamond Alternative and
 Cape Horn Revision



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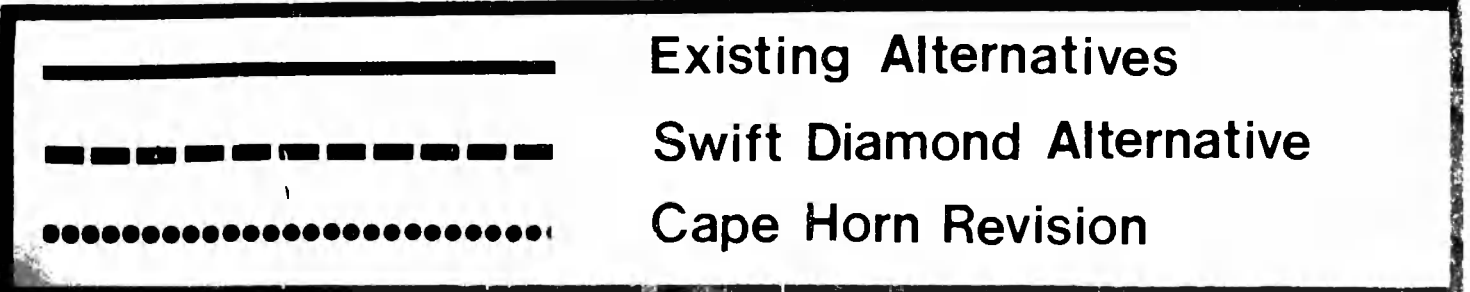
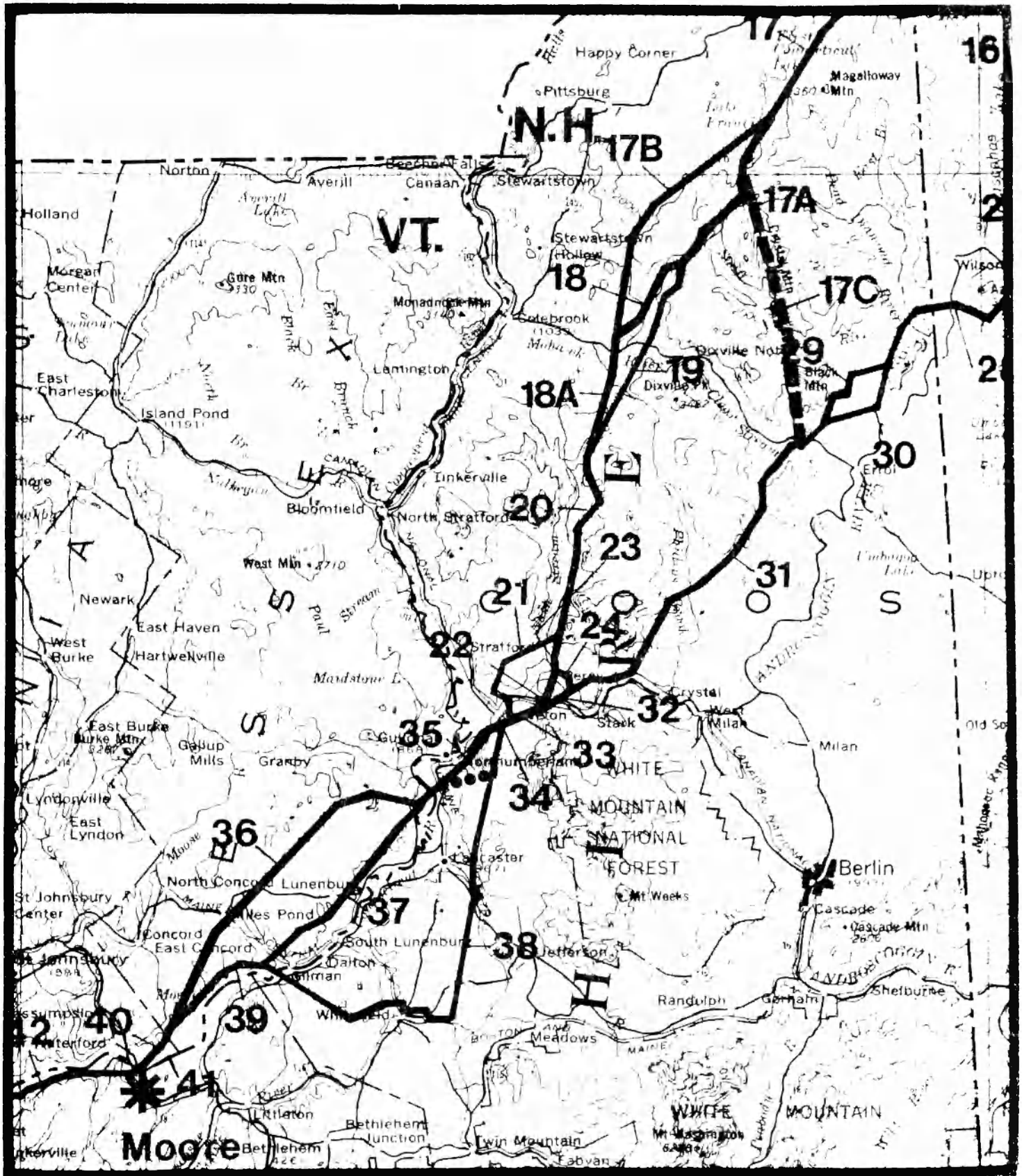
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SWIFT DIAMOND ALTERNATIVE

I. INTRODUCTION

At the May 8, 1978, meeting in Groveton, New Hampshire several residents of the Upper Coos County Community suggested an alternative route which would avoid the rural-residential area between Dixville Notch and Colebrook, New Hampshire. They specifically proposed a route east of Dixville Peak in the Swift Diamond area. DOE agreed to look at the proposal and, if it appeared to have merit, to give it a complete evaluation. On June 27, 1978, DOE's Assistant Project Manager for Location and Engineering, visited the area and reviewed the proposal by helicopter with a local resident designated to represent the group. He found the new route to be feasible from a technical location standpoint, and it was decided to proceed with an environmental assessment.

The same contractors which had performed the original route studies were asked to compare this new route, using the same basic methodologies. The following discussion summarizes the comparative evaluation for each study topic.

II. DESCRIPTION OF ALTERNATIVE

The new route leaves link 17A at mile 1.7 about four miles east of Lake Francis and continues south into the Roaring Brook headwaters between Blue Ridge and Crystal Mountain. It follows the Roaring Brook drainage to its confluence with the Swift Diamond River, then down the Swift Diamond drainage to the mouth of Dixie Brook. From here, it continues south, climbing through a saddle and dropping into the Corser Brook drainage. It follows Corser Brook to its mouth, crosses Highway 26 and Clear Stream and joins link 31 at mile 2.1. The above described route has been designated as link 17C (see Figure 1)

In order to compare the two alternatives it was necessary to evaluate the following links:

Western Alternative (Original Proposal) - Links 17B, 18A, 20, 23, and 22.

Eastern Alternative - Links 17A (First 1.7 mi. of 17A), 17C, 31B, (last 18.3 mi of 31), and 32.

In most cases the existing environment for links other than 17C is not redescribed here as it is documented in the various DEIS appendices.

III. RESOURCE ASSESSMENTS

1. ECOLOGICAL RESOURCES

EXISTING ENVIRONMENT

Vegetation - The area consists mainly of varying mixtures of mature hardwood and softwood. No rare, threatened, or endangered plants are known on this link, and chances of their occurrence are probably low to moderate,

knowing to the fact that much of this area has been heavily logged. No areas with significant botanical features or habitats are known. Potential for rare plants is probably greatest in the first seven miles. Alteration of the adjacent plant communities might be greatest in miles 0-1, 3-6, and 13-14.

Wildlife - No deer wintering areas are known on this link (K. Strong, personal communication). Moose and bear are fairly plentiful, and bobcat and nesting raptors may also be present in relatively good numbers. Remoteness is relatively high for most of the link.

Aquatic Resources - This link would involve 16 stream crossings. All but three of these are crossings of first-order streams, which normally have relatively low value to fisheries. The prime feature of concern is Swift Diamond River/Roaring Brook which the powerline would parallel for several miles, and cross just below the Swift Diamond Farm site. The brook and river support excellent populations of native brook trout, and are among the only streams in New Hampshire managed for native populations of this species. Corser Brook and Clear Stream near the end of this link also support good trout populations. All these streams are heavily utilized by anglers because of access provided by logging roads. No wetlands are crossed by the link.

IMPACT ASSESSMENT

There is a substantial possibility that the native brook trout population in this stretch of the Swift Diamond River/Roaring Brook would be severely impacted by the proposed line. This is because the line will parallel the stream along relatively steep-sloped areas. Unless the buffer zone of vegetation between the stream and right-of-way is rather large, significant long-term increases in water temperature could reduce the stream's carrying capacity for trout. Silt and herbicides could also present a hazard to the stream. Impact on wildlife habitat is considered to be positive and low to moderate in degree.

ROUTE PREFERENCE

From an ecological point of view, it was determined that the eastern route would have greater impact than DOE's proposed alternative. Link 17C poses less threat to deer yards than the other alternative. However, ecological damage from the route overall, of which it is a part, (especially on stream fisheries), would be greater than for the route farther west.

2. SOCIOECONOMIC

EXISTING ENVIRONMENT

Link 17C is included in Subregion I-D, northern Coos County and runs from the middle area of Clarksville, west of Mt. Pisgah, crosses into the town of Dixville, just east of Blue Ridge, and continues south-southeast paralleling the Dixville-Dix's Grant Boundary line. This entire area is part of the wilderness area of northern New Hampshire

and the lands of both Dixville and Dix's Grant are owned almost entirely by Brown Paper Company.

Population - The population of the area is extremely sparse. In 1975, the population of Dixville was 33; in Wentworths Location, 41; and in Dix's Grant there was no permanent population recorded.

Economic Activity - Economic activity of the area is concentrated in timber harvesting and limited recreation use. Dixville is the site of the famous New England resort, the Balsams.

Other Factors - Other socioeconomic factors such as income levels, commercial activity, tax base, regional character, planning characteristics, and temporary housing are similar to those described in the Existing Environment - Subregion I-D of the Socioeconomic Impact Assessment.

IMPACT ASSESSMENT

Most socioeconomic impacts associated with link 17C are similar to those anticipated on other links running through wilderness areas of northern New Hampshire. The most severe impact will be to the wilderness quality of the area.

Because of the unincorporated status of the community, the low population base and the dominant land ownership by one timber company, there is much less community character to be affected than along the western alternative.

Socioeconomic impacts for the remainder of the eastern alternative (links 31B and 32) would be similar to those for links 20, 29, and 22 of the western alternative.

Available housing for construction workers will be similar for both alternatives, although commuting may be somewhat more difficult for the eastern alternative because of its location in more remote areas.

ROUTE PREFERENCE

From a socioeconomic perspective, the comparisons of the two alternatives present some conflict. The most significant impact of the eastern alternative is to the wilderness quality of the area. At the same time, impact on nearby residents and verbalized community concerns (as evidenced by the formation of a local committee opposing the western route) point out the social impacts on residents along this portion of the proposed route.

Based on socioeconomic considerations, the eastern alternative is preferred, although the preference is not clear-cut.

3. LAND USE

EXISTING ENVIRONMENT

The primary land use along link 17C is Forestry. Outdoor recreational activities such as snowmobiling, cross country skiing, hunting and fishing occur in this fairly remote area of New Hampshire. One mobile home and at least two seasonal camps are located within the route area.

IMPACT ASSESSMENT

The land use impacts of the eastern and western alternatives were compared by totaling the number of miles on which some type of land use impact would occur - even with proper mitigation measures. The total scores would be 91 for the western alternative and 115 for the eastern alternative. This difference can be attributed mainly to the greater extent of forestry land use on the eastern alternative, as well as greater length.

ROUTE PREFERENCE

Based on this system of ranking, the western alternative is best from a land use viewpoint.

4. GEOTECHNICAL RESOURCES

EXISTING ENVIRONMENT

Topographic relief along link 17C is generally between 1,200 to 1,500 feet. Slopes within the right-of-way are low to moderate except in the vicinity of Blue Ridge and Crystal Mountain, where they are moderate to steep. More than 96 percent of the surficial material is glacial till. Bedrock along this link is generally a sedimentary sequence with varying grades of metamorphism.

IMPACT ASSESSMENT

Geotechnical impacts were compared for the eastern and western alternatives using the methodology described in Chapter IV of Appendix F, Geotechnical Impact Study. A moderately high impact value of 26 was assigned to link 17C. Sedimentation potential for Roaring Brook and the Swift Diamond River account for the high level of impact.

The western alternative has a weighted total of 163 units/mile/link, as compared to 63 units/mile/link for the eastern alternative. The high impact value for the western alternative is due primarily to very high values for links 20 and 23. A very high sedimentation potential was assigned to the Nash Stream area of these links and a very slight potential for mineral resources (uranium) may exist along these routes.

The highest sedimentation values along the eastern alternative occur along Mills Field Pond Brook on link 31, and Roaring Brook and the Swift Diamond River on link 17C. There is a very slight potential for mineral resources (copper) along link 17C.

ROUTE PREFERENCE

With regard to potential geotechnical impact, the eastern alternative is preferred.

5. VISUAL RESOURCES

EXISTING ENVIRONMENT

Visual Site Attractiveness - The area traversed by the eastern route is composed mostly of mature woodlands, with uniformly moderate site attractiveness. Site attractiveness is very high between miles 10-16 along link 17C where the route crosses the Swift Diamond River and Clear Stream, respectively, and also high along mile 16 as the route crosses agricultural fields in the Clear Stream valley.

The western alignment, on the other hand, is characterized by a patchwork of land cover types including agricultural fields and mature regenerating woodlands, representing site attractiveness values from high to low. Thus, given a significant agrarian landscape along the western alignment, site attractiveness along this alternative should be considered higher.

Visual Landscape Quality - Both alternatives are situated in mountains with high topographic interest. The principal difference in landscape quality between the two alternatives is that the western route has a higher degree of variety and contrast and townscape elements. As a result of these conditions, much of the western alternative is rated exceptional for landscape quality, whereas the eastern alignment is rated slightly lower, being primarily very high.

Absorption values, however, are decidedly different due to the agrarian characteristics of the northern part of the western alternative, in contrast with the almost exclusively wooded condition along the eastern proposal. Further, part of the western alignment traverses hills and rolling terrain whereas the northern section of the eastern alternative is situated in the narrow valleys of Roaring Brook and the Swift Diamond River, at times dipping into and dominating the valley floor. Therefore the line would be more visually absorbed along the eastern alternative.

Visually Sensitive Land Use Viewers - The types and numbers of viewers along and near each of the route alternatives are similar. However, for links 20 and 23 of the western alignment, the viewer audience is relatively smaller. Comparing the northern parts of the two routes, the eastern alternative (17C) will affect recreation viewers almost exclusively, and the western (proposed) alternative will affect residential and transportation viewers. Recreation viewers will be affected in the vicinity of

Kidderville and Upper Kidderville. To the south, the western alignment (links 20 and 23) will have little effect on viewers, whereas the eastern alignment will be in view of a number of land use types, especially some heavily travelled roadways and populated sections of the Clear Stream and Ammonoosuc River Valleys.

IMPACT ASSESSMENT

Results of the visual impact assessment are tabulated in Figure 2.

Visual Site Attractiveness - Impacts on visual site attractiveness differ between the two proposals by only about 6 percent. Thus, although the total impact is slightly higher in the east, the two alignments may be considered to be more or less equal. Most importantly, there would be a significantly greater number of high impacts along by the western alternative, owing to the infringement upon the farmlands in the Kidderville area along links 17B and 18A.

Visual Landscape Quality - Landscape quality impacts differ only about 2 percent. There are more severe impacts along the western alignment but these are offset by the larger number of high impacts along the eastern alternative.

Visual Sensitive Land Use Viewers - Viewer impacts are significantly greater (20 percent) along the eastern alternative, as reflected in the average impact values of 1.54 and 1.38 for the eastern and western alternatives, respectively. This is primarily the result of higher impacts along links 31B and 32, as documented in the DEIS. Moreover, two miles of the eastern alternative are rated severe for impact as opposed to none of the western. On the other hand, 8.1 miles of the western alternative versus 6.4 miles of the eastern alternative are rated high for impact.

ROUTE PREFERENCE

From the perspective of visual resources, the present (western) alignment through the Dixville area of New Hampshire is preferred. Differences in impacts between the eastern and western alternatives on either visual landscape quality or visual site attractiveness are not considered significant. The greater viewer impacts along the eastern alternative, especially on link 31B, is considered to be significant. As a result, the western or proposed route is favored from the standpoint of visual resources.

6. RECREATIONAL RESOURCES

EXISTING ENVIRONMENT

Western Alternative: The recreational features crossed by link 17B include: a proposed hiking trail, snowmobile trails, and fall foliage route running through the Stewartston/Colebrook area. Features included within the viewshed are: The Lake Francis Wildlife Management Area;

leased camplots; a proposed hiking trail; Mudget and Lovering Mountains and Harvey Swell, designated natural areas; the western part of Coleman State Park; Route 26, a fall foliage route and state designated scenic road and sightseeing route; and the Panorama Golf Course at the Balsams, a recreational resort.

In the first mile of link 18A, near Kidderville, the route crosses the Mohawk River, a state designated Wild and Scenic River candidate, noted for brook and rainbow trout fishing and canoeing; and Route 26, a sightseeing route, fall foliage route, and state designated scenic road. The right-of-way also passes by a fall foliage route near Cilley Hill. Other features in the viewshed include: The Mohawk Valley Camping Area, a picnic area and an historic site near Route 26; and leased camplots near Bog and Uran Brooks.

Along link 20, recreational features are: Nash Stream, a canoe route and state designated Wild and Scenic River candidate, and a hiking trail leading to Percy Peaks from Shide Brook. In the viewshed, the features include: Nash Bog Pond, a brook trout fishing pond, and its boat launch; a hiking trail between Sugarload and Hash Streams; and Percy Peaks, a high elevation of local significance.

There are no recreational features crossed by link 23. However, within the viewshed are Percy Peaks and Nash Stream.

The final 2.4 miles, link 22, affects the Upper Ammonoosuc River, which is a canoe route, fishing stream and a state designated Wild and Scenic River candidate. The fall foliage route on the north side of the river, Route 110, a sightseeing and bicycle route, and the Proclamation Area of the White Mountains National Forest also are located within the route. The route can also be viewed from Nash Stream (described above).

Eastern Alternative: There are no recreational resources crossed by link 17A. Included in the viewshed, however, is a leased camplot near Beaver Pond.

The recreational resources of link 17C include: a mile of the Swift Diamond River, a national and state designated Wild and Scenic River candidate known for canoeing and trout fishing; Corser Brook, a trout fishing stream, canoe route and state designated Wild and Scenic River candidate and the Upper Ammonoosuc River; also a state designated Wild and Scenic River candidate, trout fishing stream and canoe route. Also crossed by the route are: Route 26 (described above); a fall foliage route north of the Upper Ammonoosuc River; a hiking trail leading to Signal Mountain; and snowmobile trails along Millsfield Pond Brook and Newell Brook, and near Long Pond. Features within the viewshed are: Akers Pond, a picnic and boating pond noted for trout fishing; Phillips Pond, Bragg Pond, Long Pond and Dummer Ponds, noted for brook trout fishing; one fire lookout tower on Signal Mountain, and another on a peak west of Phillips Brook; two mineral collection sites north of Victor Head and Bald Mountain; Christine Lakes, a state designated scenic area containing brown trout fishing, swimming and boating; and the White Mountains National Forest.

The terminal link of the eastern route, link 32, crosses the Upper Ammonoosuc River (described above), the fall foliage route north of the river and Route 110, a bicycle route, sightseeing route and state proposed bicycle route. The route also enters the Proclamation Area of the White Mountains National Forest. Included in the link's viewshed is a hiking trail near Devil's Slide, and the White Mountains National Forest.

IMPACT ASSESSMENT

Results of the recreation impact comparison are tabulated in Figure 3 and discussed as follows:

Pre-Emptive Impacts - The total pre-emptive impact score for the western alignment is 49.2. In contrast, the eastern route total is 83.9. Both routes have approximately the same number of high impacts (12 for the western, 13 for the eastern), and neither has resources which would be severely pre-empted by the transmission line.

Along the western route, high pre-emptive impacts were assigned to: mile 1 of link 18A where the route traverses the Mohawk River Valley and Route 26; miles 8 and 9 of link 20 as the route follows Nash Stream; and miles 1 and 3 in link 22 where the line crosses the Upper Ammonoosuc River Valley and Route 110, and passes into the Proclamation Area of the White Mountains National Forest.

High impacts along the eastern route were assigned along links 17C, and 31B and 32. Between miles 9-11 of link 17C, the route runs parallel to and crosses the Swift Diamond River. At the beginning of the link, the route crosses Route 26 and Clear Stream (3 times). In the last 3.3 miles of link 31B, the proposed line crosses the Upper Ammonoosuc River Valley and Route 110.

The manner in which recreational features are crossed is significant in the comparison of the alternative routes. For example, both route alternatives cross the Ammonoosuc River and Route 110, but the crossings by the western alignment are more nearly perpendicular. The eastern alignment (link 31B) parallels the river and fall foliage route for approximately 1.5 miles. In a like manner, the Mohawk River and Route 26 are crossed almost perpendicularly by the western alignment. Clear Stream and Route 26 are paralleled and crossed three times by the eastern alignment.

Recreation Viewer Impacts - A comparison of the recreation viewer impacts for the alignments indicates that recreation viewers along the proposed western route would be less affected. The total viewer impact score for the western route is 45.7 as compared to a total of 71.8 for the eastern alternative. The difference between these scores lies in part in the relative frequencies of the high and severe viewer impacts for the routes. For the western route, 4.4 miles were assigned high impacts and no severe impacts were assigned. On the other hand, for the eastern route, 6.1 miles were assigned high impact and 4.75 miles were assigned severe impact.

Along the western route, high viewer impact scores were assigned in the areas where the proposed facilities would be visible from the Harvey Swell and Lovering Mountain Natural areas; from a fall foliage route; and from Route 26 and the Mohawk River. Along link 20, high impacts would result from viewing the lines from Nash Stream and Percy Peaks. Along link 22, high recreational viewer impact would be experienced at locations on the Upper Ammonoosuc River, Route 110 and 110A, and the Proclamation Area of the White Mountain National Forest.

In contrast with the western alternative where no severe impacts were assigned, 4.75 miles of the eastern alternative was identified as having severe impacts. Recreation viewers would observe the transmission facilities from the Swift Diamond River, the Ammonoosuc River, Christine Lake and Route 110. High impacts were assigned where the facilities would be viewed from the Swift Diamond River (link 17C, miles 9 and 11); from Clear Stream and Route 26 and Phillips Brook, (link 31B); and, from the White Mountain National Forest, and its Proclamation Area above the Ammonoosuc (Upper) River (link 32).

ROUTE PREFERENCE

The impact assessment findings indicate that recreational users and viewers along the eastern route would be more directly affected by the transmission facilities than would those along the western route. Not only are per-mile impacts higher along the eastern route, but this route itself is longer by 2.7 miles. However, there are also qualitative differences in the general recreational setting of the two alternatives which argue for preference of the western alternative. The western route is to a greater extent cleared, cultivated, developed and inhabited and has a more active recreation base. For the eastern route, natural stream valleys, mountainous terrain and undeveloped land characterize a more passive recreational base. The overall identity of Northern Coos County is perceived as being relatively undeveloped and remote. This character could be retained by avoiding the eastern route alternative.

7. HISTORIC - ARCHEOLOGIC

No historic or archeologic sites have been identified along either alternative, as reported in Appendix J to the Transmission DEIS (except for link 17C). Link 17C was investigated to evaluate the possible historic significance of Swift Diamond Farm. It was found that Swift Diamond Farm was one of several established and maintained by Brown Paper Company, primarily to furnish hay for horses used in logging operations. It was not a major supply depot.

Due to the absence of significant historic or archeologic resources on either alternative, no route preference can be made based on this resource category.

IV - SUMMARY AND CONCLUSIONS

The following table summarizes the route preferences according to the topical areas studied.

| <u>STUDY TOPIC</u> | <u>PREFERRED ROUTE</u> |
|--|------------------------|
| Ecological Resources Impacts | Western |
| Land Use Impacts | Western |
| Geotechnical Impacts | Eastern |
| Socioeconomic Impacts | Eastern |
| Visual Resources Impacts | Western |
| Recreational Resources Impacts | Western |
| Historic and Archeological Resources Impacts | No Preference |

In reaching a decision, DOE is obligated not only to consider the preferences based on each individual topical study, but to examine, in depth, the reasons behind each preference and the relative importance of each type of impact predicted on the overall environment of northern New Hampshire. This requires a certain degree of subjective judgement.

In addition to the environmental considerations discussed above, DOE must consider economic and other engineering factors. In this case these other factors favor the western alternative.

DOE has decided to retain the original western alternative as the proposed route for the Dickey-Lincoln School transmission line in northern New Hampshire. This decision does not reflect a lack of sensitivity to the concerns of the Upper Coos County residents, but is based on a careful evaluation of all factors involved.

It is felt that the major impact on the community would be the presence of the tall, double circuit steel towers in the landscape. The upper portions of these structures would be in view of several homes and roads. The terrain and natural vegetation will in most cases, effectively screen the right-of-way clearing from prominent view. DOE will consider the other option -- two single circuit wood pole lines, side by side, through that area. The trade-offs are as follows:

| | <u>(1) Double Circuit</u> | <u>(2) Single Circuit</u> |
|-------------------------|---------------------------|---------------------------|
| Structure Material | Steel | Wood Pole "H" Frame |
| Structure Height (Avg.) | 160 ft. | 75 ft. |
| Span Length (Avg.) | 1150 ft. | 600 ft. |
| Right-of-Way Width | 150 ft. | 250 ft. |

Utilization of the wood pole design would allow much shorter structures but they would be spaced closer together and would require a wider right-of-way.

If the project is approved and funded for construction, a centerline will be located, and tentative structure locations will be identified for both options. Local residents and landowners will be consulted during the location process and in making the structures design choice.

DEER YARD SURVEY

The impact of the proposed transmission line to deer wintering areas was studied as part of the Ecological Resources Impact Study. Deer yards along all alternative routes were mapped, based on inventories obtained from various State agencies. Consequently, the maps are a composite from several sources showing all deer yards identified during the past few years. The schedule for the ecological study precluded a new deer yard survey, which must be accomplished during late winter when snow is deep and the animals are congregated in their wintering areas.

DOE determined to proceed with an update of deer yard information along the proposed route, recognizing that the survey could not be completed in time for inclusion in the DEIS. The State Fish and Game Departments in Maine, New Hampshire, and Vermont were requested to perform the work on a reimbursable basis, using experienced wildlife biologists. All three State agencies were cooperative; however, the New Hampshire Section was not completed due to other staff commitments. This was unfortunate but not critical, since deer yard information will be updated before locating the final centerline.

The deer yard surveys in Maine and Vermont were accomplished by Alan Hutchinson (Maine) and Lawrence Garland (Vermont). Both used fixed-wing aircraft at low levels and looked for deer or signs of deer activity (tracks and trail systems). Results were mapped on USGS 15-minute series topographic maps. The process used was not identical. In addition to mapping known deer wintering areas, Mr. Garland identified suspected areas, which he will investigate and delineate more accurately by ground methods before final centerline location.

A study of the new maps shows a degree of consistency with earlier deer yard surveys regarding known wintering areas. However, some new areas were identified and some previously mapped yards showed no signs of recent activity. Furthermore, many wintering area boundaries were interpreted differently.

DOE used these data maps to prepare the following table showing revised deer wintering area statistics for the proposed route. In Vermont, both "known" and "suspected" deer yards are included in the revised figures.

| SEGMENTS | DEER WINTERING AREAS | |
|-------------------------------------|----------------------|-----------------|
| | NUMBER CROSSED | ACRES OF ROW |
| Dickey-Lincoln School -- Fish River | 7 | 27.3 |
| Dickey-Moose River | 17 | 55.5 |
| Moose River-Moore | 5 | 45.1 |
| Moore-Granite | 9 | 61.1 |
| Granite-Essex | 14 | 160.5 |
| TOTAL | 52 | 359.5 |

CAPE HORN REVISION

Subsequent to publication of the DEIS, DOE determined to make a small but significant revision in the proposed route south of Groveton, New Hampshire, in the vicinity of Cape Horn Mountain. This new proposal begins at the end of Link 34 and follows Link 38 for 2.8 miles, paralleling an existing transmission line located east of Cape Horn. At the southern tip of Cape Horn the route would leave Link 38 and run west, joining Link 35 at mile 4.7. The portion of this revised route, not coinciding with an existing route alternative is identified on Figure 1, in Appendix D.

The revised route is 0.9 mile longer than DOE's original proposal. It traverses moderately sloping, forested land. Although impacts were not quantified by the same methodologies as the alternatives studied earlier, this revision has been reviewed by the DOE study team. Impacts will be similar to those of the original proposal, with the exception of visual impacts, which will be considerably reduced. In this instance it is felt that the visual factor justifies the revision.

POTENTIAL IMPACTS ON MINERAL RESOURCES

I. INTRODUCTION

The statement in the DEIS (p. 3-9) on mineral resources encompasses the most significant impacts of the proposed transmission line on possible mineral development:

"No direct impacts upon areas presently utilized for extraction of minerals or aggregate would occur as a result of the action. Areas in which such deposits exist but as yet are not mined would not be adversely affected. In most circumstances, the facility may remain in place while mining activities occur around it. In other cases, the capital investment required to mine such resources under most circumstances so overwhelms the cost of moving a transmission line, that the value of the underlying resource is not considered to be altered."

Any further work regarding mining, mineral potential and the transmission line should address itself to, but not be limited to, the following:

1 To define, in the area of the proposed transmission line, any known ore deposit or deposit which may in the future become economic.

2. To determine the location of units favorable for the discovery of economic ore deposits. Defining the more favorable units could result in a slight alteration of the route of the transmission line, and hence, the lowering of the possibility of an economic discovery along the line.

3. To determine the effect that the transmission line would have on the discovery or development of an economic ore deposit. Certain geophysical exploration techniques are negatively affected by power transmission lines, e.g., electromagnetic survey (E-M), resistivity surveys, magnetic surveys, etc. On the other hand, the building of the power line and access roads might expose more bedrock outcrops, thus allowing better evaluation of the area. Also the availability of power from the line, if it could be utilized, might encourage the development of marginally economic deposits due to the lower costs in the construction of power lines or generating facilities.

II. COMMENT/RESPONSE

Responses to comments 80-1a through 80-1d, made to the Edward C. Jordan Co., Inc. regarding mineral potential along the proposed transmission line are as follows:

COMMENT: 80-1a

BY: U. S. Department of Interior

According to the Bureau of Mines Minerals Availability System, the western branch of the transmission corridor crosses the Kibby

prospect at longitude 45°20'46"N. and latitude 70°32'44"W. This gold and silver prospect was field checked in 1958.

RESPONSE:

The Kibby prospect is located on the north side of Kibby Range in Kibby Township, Maine (45°20'46"N and 70°32'44"W). The prospect is more than two miles southeast of the proposed transmission line. In a search of literature only two references about the prospect could be found. Rand (1968) listed the prospect in a table of prospects. His miscellaneous notes on the prospect stated:

"Gold, silver in bedrock exposures. Talc, scheelite in general area."

Wing (1959) discussed the gold in the Kibby and western Maine area:

"Placer gold is known to occur in Gold Brook in the northern part of the map and also in Kibby and Spencer Streams a few miles to the northeast. It has also been reported from some of the other streams within the area. Panning was tried in some of the more promising localities with poor results. Nearly all of the streams show considerable magnetite of "black sand" in the concentrates. A pan from Tim Brook near Eustis showed one small grain of gold. It is believed that any placer deposits are too small and lean for successful exploration.

From the information found on the Kibby prospect no evaluation of its potential can be made. A more complete search of the literature and an on-site evaluation would be needed.

COMMENT: 80-1b

BY: U. S. Department of Interior

Our greatest concern is with possible conflicts with potential mineral deposits in the area of northern Franklin and Oxford Counties where the transmission corridor would cross a belt of sulfide mineralization. This belt extends from the New Hampshire border and Parmachenee Lake in Oxford County northeasterly to Van Buren in northeastern Aroostook County.

RESPONSE:

One of the areas of greatest concern for potential mineral development along the proposed transmission line is in the area of northern Oxford County, northern Franklin County and northern New Hampshire. From approximately the southern part of segments 12 and 13 west to approximately the Connecticut River (segments 37 and 38), the line crosses units favorable for base metal mineralization. Mineralization has been found associated with the sediments and meta-volcanics of the Dixville Fm. (New Hampshire and Maine), Frontenac Fm. (Quebec), and the Ammonoosuc Volcanics (New Hampshire).

In this belt numerous occurrences of mineralization have been found. None of the following occurrences are found on the proposed transmission lines, but represent the types of deposits which may be contained in some of the lithologic units in the area. In the Thrasher Peaks area of Parachenee Township, Maine, pyrite-chalcopyrite-sphalerite mineralization have been found, (Fournier, 1970). This mineralization has been examined by at least three different companies. Also in Parmachenee Township, a few million ton massive sulphide containing zinc-copper-lead has been located by J. S. Cummings, Inc., for a joint venture consisting of the Superior Oil Co., and the Louisiana Land and Development Co. This discovery is reported to be non-economic at the present time (Cummings, 1978).

In Quebec, approximately seven miles north of the Maine-Quebec border near Clinton Lake, five small pods of massive sulphide have been found (Marleu, 1968). These sulphide pods contain significant amounts of zinc, copper, lead, gold, and silver. One of the pods has been mined.

In the border area of northern New Hampshire and Quebec native gold has been found in placer occurrences. A placer gold mine near the Town of La Partie, Quebec produced in the last century.

Throughout the volcanic belt in New Hampshire numerous shows and prospects occur. One mine was operated near Milan, New Hampshire (Chapman, 1949).

Two other minerals of possible economic importance have been found in this area: asbestos and chromite. Asbestos has been reported associated with some of the ultramafic bodies in the western Maine area (Wing, 1949). Harwood (1973) notes disseminated grains of chromite in an amphibolite of the Dixville Fm. near Arnold Pond in the Arnold Pond quadrangle.

To better evaluate the potential for mineral development along the transmission line, a complete study regarding published and unpublished material would be needed.

COMMENT: 80-1c

BY: U. S. Department of Interior

Some of the most useful techniques for finding hidden massive sulfide bodies involve electromagnetic (EM) geophysical methods. Prospecting by reconnaissance, airborne, or ground EM methods are at best hindered and commonly are useless in areas of power transmission lines. Thus, the construction of the Dickey-Lincoln Lakes transmission system could conceivably eliminate the chance for discovery of buried massive sulfide deposits. This issue should be addressed more fully by the final EIS.

RESPONSE:

Geophysical surveys, such as electromagnetic (E-M) induced polarization (IP), resistivity, and magnetics are common tools of the exploration

geologist. The construction of the proposed Dickey-Lincoln power transmission line would hinder the use of these tools in the area of the line.

A common exploration approach would be an airborne E-M survey with follow-up ground E-M or EP and magnetics over the anomalies located by the airborne survey. These surveys are generally done in conjunction with geochemical and geological surveys which would not be affected by the transmission line.

Discussions with Bill Finney (Geotrix Ltd., personal communication) and Paul Wessler (Scentrex Ltd., personal communication) indicated that airborne E-M would be affected up to 600-1000 feet on either side of the transmission line. The effect of the transmission line on ground E-M surveys may be less, 300-600 feet. Mr. Wessler noted that certain specialized E-M units may be used upon power lines but that their depth of penetration is not as great as the standard equipment used. Also, the cost and inconvenience of the special equipment may deter follow-up of anomalies and possible ore bodies.

To evaluate the area along the transmission line by electromagnetic methods, an airborne E-M survey with follow-up ground E-M would be needed before the initiation of power along the transmission line.

Since E-M surveys are most effective in the detection of massive sulphide deposits, the cost of the survey can be reduced by only covering areas underlain by lithologic units favorable to the formation of massive sulphides. Analysis of published and unpublished geologic information along with reconnaissance geologic mapping can be used to determine the area of highest potential to be surveyed by airborne E-M.

If the survey were completed early enough and the data released to the public, private industry could test the anomalies before the final construction of the power line.

COMMENT: 80-1d

BY: U. S. Department of Interior

Considerable mineral exploration has taken place in this area in the last few years and a significant zinc-copper discovery was recently made in Aroostook County about 15 miles northwest of Ashland. Because of the potential for additional deposits in this area of Maine, a detailed mineral survey by a competent consulting mining engineer should be made of the areas of this sulfide belt intersected by the proposed transmission line corridors.

RESPONSE:

From available data, Hall (1970), Horodski (1968) and Boone (1958), it seems that the belt of volcanics which contains the zinc-copper deposit (T12, R8) northwest of Ashland lies southeast of the proposed transmission line. The closest that the belt comes to the transmission line

is approximately fifteen miles. Since the strike of the favorable units and the trend of the transmission line are approximately parallel, it appears that they will not intersect.

The extension of the favorable volcanic rock units southwest of the Allagash Waterway is uncertain. The Ordovician volcanic sequence appears to end near the Allagash Waterway in the vicinity of Chamberlain Lake (Hall, 1970).

III. OTHER CONSIDERATIONS

As noted in the Geotechnical Study by the Edward C. Jordan Co., Inc. a copper-molybdenum deposit in the Cathart Mountain area (segment C, link 10, mile 7 and 8) is at present uneconomic. This type of deposit, porphyry copper, is more apt to be affected by the transmission line than a massive sulphide deposit. Since porphyry copper deposits are large tonnage, low grade, and required open-pit type mining techniques, they would likely require moving the transmission line.

At present, the low price of copper and the large capital costs needed to open a porphyry copper-type deposit deter many of the major mining companies from seeking this type of ore. However, as the price of copper rises and the demand for copper and molybdenum increases, exploration for this type of deposit will again become active.

IV. RECOMMENDATIONS

If the decision is made to go ahead with the construction of the Dickey-Lincoln School Hydroelectric Project and related transmission facilities, further work regarding the impacts and final location of the transmission line with regard to potential mineral resources might be warranted.

The recommended sequence of steps for the next level of evaluation for potential mineral resources along the proposed transmission lines for the known mineralized belts is as follows:

1. Complete evaluation of published and unpublished geologic material for the entire length of the transmission line to determine the segments which show possible favorable economic potential. Since the volume of unpublished material (State and USGS open file reports, theses, and work by private mining companies) is considerable, detailed evaluation of these data is needed.

2. On-ground reconnaissance geologic mapping to better delineate the segments which show favorable lithologic units.

3. Airborne electromagnetic and magnetic surveys over the areas of possible economic development. This technique will not work for the area approximately one-quarter mile to either side of the line once transmission of power is initiated.

4. Ground follow-up of the airborne E-M anomalies with geologic mapping and ground E-M.

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