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## ABSTRACT

This compilation is one of a series produced through the combined efforts of the United States Office of Education/Environmental Education, coordinators for environmental education in the various states, and the ERIC Center for Science, Mathematics, and Environmental Education, in an attempt to collect and detail environmental education efforts throughout the nation. The series is assembled in geographical groupings, using combinations of the U.S. Office of Education regions. This first volume in the series includes Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont. Environmental education information from these states is provided under the following headings: State Environmental Education Contact; State Plan Activities; School Programs and Activities (or Environmental Education Programs Funded); University and College Programs and Activities; Groups and Agencies with Interest in Environmental Education; Resource Materials Available; and Possible Resource People. Related documents are SE 017 102 - SE 017 105. (JR)

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# STATE DIRECTORIES IN ENVIRONMENTAL EDUCATION

Based on Information Supplied By  
The United States Office of Education/Environmental Education  
and  
State Coordinators for Environmental Education

Coordinated by: John F. Disinger and Beverly M. Lee

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ERIC Information Analysis Center for  
Science, Mathematics, and Environmental Education  
The Ohio State University  
400 Lincoln Tower  
Columbus, Ohio 43210

November, 1973

SE 017 101

## PREFACE

This compilation is one of a series produced through the combined efforts of the United States Office of Education/Environmental Education (USOE/EE), coordinators for environmental education in the various states, and the ERIC Center for Science, Mathematics, and Environmental Education (ERIC/SMEAC), in an attempt to collect and detail environmental education efforts throughout the nation.

The compilation was begun in 1972 as part of a contract between USOE/EE and ERIC/SMEAC. Initial input was obtained from the files of the USOE/EE and assembled by Ms. Joan M. Nicholson, Ms. Catherine Barnett, and Mr. Andrew B. Rosenberg of that office, working under the direction of Mr. Paul Cromwell, USOE/EE, and Dr. John F. Disinger, ERIC/SMEAC.

Coordinators of environmental education at the state level were asked to review the information for their respective states in detail, and have made numerous additions, deletions, and other corrections. In cases where such a review was not obtained, information based on original 1972 data from USOE/EE has been utilized.

Because the field of environmental education is dynamic, many revisions have been necessary, and will continue to be so. Therefore, inaccuracies in this and other volumes in the series will generally reflect inability to keep up with change in the field, though doubtless other errors of both commission and omission will be noted. ERIC/SMEAC will appreciate any information regarding such errors, both to keep its own files updated and for future editions of these directories.

The series is assembled in geographical groupings, using combinations of the U. S. Office of Education regions, and is available only through Educational Document Reproduction Service (EDRS). Contents of each document are listed on the next page. Also noted for each entry is recentness of update information: entries not marked with asterisks have been updated since June 1, 1973; those marked by single asterisks were reviewed by state coordinators in late 1972 or early 1973; those marked by double asterisks have not been reviewed by state coordinators.

In addition to those named above, substantive assistance has been received from: George Lowe, USOE/EE; Robert W. Howe and Robert E. Roth, ERIC/SMEAC; Mrs. Robert L. Steiner and Mrs. Stanley L. Helgeson, typists; and coordinators for environmental education in the various states, as named within the individual entries.

John F. Disinger and Beverly M. Lee  
Coordinators

November, 1973

This publication was prepared pursuant to a contract with the National Institute of Education, United States Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their judgment in professional and technical matters. Points of view or opinions do not, therefore, necessarily represent National Institute of Education position or policy.

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Alaska  
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Colorado\*  
Hawaii  
Idaho  
Montana  
Nevada\*  
North Dakota  
Oregon  
South Dakota\*\*  
Utah  
Washington  
Wyoming

\* Entry updated by state coordinator between September 1, 1972 and June 1, 1973.

\*\* No update information received from state coordinator; entry based on information supplied in Spring, 1972 by USOE/EE.

All other entries have been reviewed and updated by state coordinators for environmental education since June 1, 1973.

## CONNECTICUT

### STATE E.E. CONTACT:

Dr. Sigmund Abeles  
Consultant in Science Education  
State Department of Education  
Box 2219  
Hartford, Connecticut 06115  
(203) 566-4825

### STATE PLAN ACTIVITIES:

Two years ago, approximately twenty state agencies, private and professional groups and business organizations provided representation to form the Connecticut State Council on Environmental Education.

The main objective of the organization is to provide planning and perspective for the environmental education programs in the state. The hope is to make the programs more effective, avoid unnecessary duplication of effort, disseminate information about existing activities and identify resources which can be useful to those working in the environmental education field.

The Council has met monthly (with the exception of summers) over these two years. It has elected a chairman, an executive secretary, and an executive board. It has also developed a State Plan entitled: A Coordinated Action Plan for Environmental Education. This plan addresses itself to five major areas: Assessment, School Curriculum, Teacher Training, Vocational Training, and General Education of the Public. Goals and objectives are listed for each area. Organizations represented on the Council have given their formal approval to the Plan.

Work in the assessment area will be moving forward this fall with the distribution of several questionnaires. Work in the other areas will proceed as the subcommittees created last spring initiate their activities.

The Planning Group for the State Plan consists of the following:

Sigmund Abeles  
State Department of Education  
Hartford, Connecticut 06115  
(203) 566-4825

David Basch  
Board of Trustees  
Connecticut State Colleges  
Hartford, Connecticut  
(203) 566-3040

Marshal T. Case, President  
Connecticut Association for Environmental Education  
2325 Burr Street  
Fairfield, Connecticut 06430  
(203) 259-6305

William Delaney, Jr.  
Department of Environmental Protection  
730 Silas Deane Highway  
Wethersfield, Connecticut  
(203) 566-3566

Donald Flight  
Education Director  
Connecticut Public TV  
Hartford, Connecticut  
(203) 278-5310

Alan Hugg  
State Department of Education  
Hartford, Connecticut 06115  
(203) 566-3044

Anthony S. Keller  
Commission on the Arts  
340 Capitol Avenue  
Hartford, Connecticut 06106  
(203) 566-4770

Claire Reinhardt  
State Department of Education  
Hartford, Connecticut 06115  
(203) 566-5223

Robert Saunders  
State Department of Education  
Hartford, Connecticut 06115  
(203) 566-5223

Arthur E. Soderlind  
State Department of Education  
Hartford, Connecticut 06115  
(203) 566-2283

Lawrence Steeves  
Connecticut Science Teachers Association  
Teacher - West Hartford Public Schools  
West Hartford, Connecticut  
(203) 233-8281

#### SCHOOL PROGRAMS AND ACTIVITIES:

Environmental education activities in Connecticut have accelerated over the past few years. While a number of schools have had programs related

to environmental education in their instructional offerings for some time the emphasis on the importance of a quality environment over the past five years has given much impetus both to the expansion and the intensification of these programs. The activities related to environmental education in Connecticut fall into three major categories:

- I. Federal-State-local cooperation in fostering environmental education
- II. Local initiatives in environmental education
- III. State planning for environmental education

#### I. Federal-state-local cooperation in fostering environmental education.

Since the environmental education concept touches many subject matter areas recent efforts are being made beyond the disciplines of social studies and science, the two areas in which most of the environmental education thrust has been placed. The current definition of environmental education includes a number of terms often used in the past and to a considerable extent still in use today; for example, conservation education and outdoor education. The broader definition used for the purposes of environmental education activities in Connecticut today is "Environmental education is concerned with the interrelationships between man and his physical, biological, and cultural surroundings."

A number of curriculum bulletins issued by the Department of Education make reference to aspects of environmental education. The curriculum bulletin entitled "Science Education-Grades 7-12" issued in 1958 indicates that conservation is an important aspect of the junior high school science curriculum. In earth science, attention is given to a study of Connecticut's weather and climate, the patterns of erosion along the shore, geology, and oceanography. In biology some of the suggested topics for study are the relation of living things to the physical environment, the interrelationships among living things, and conservation.

State Department of Education publications in the social studies also include concepts impinging on the area of environmental education. Some of the objectives stated in the "Social Studies - Grades 7-12" (1965) bulletin are: to understand the relation of the physical environment to the life and culture of a people; to understand the kinds of resources essential in an industrial civilization as contrasted with an agricultural civilization; to understand how invention, science, and technology have given new values to certain resources and lessened man's dependence on other resources; and to understand the economic relations of people within their own nation and with other nations.

In more recent publications, such as, "Finding our Place in the World through the Study of Connecticut," a significant percentage of the syllabus is devoted to such topics as population, resources, manufacturing, transportation, communication, and the structure and services of government. This approach comes closer to the broad meaning of environmental education generally used today.

The curriculum guide, "Art Education: Kindergarten - Grade 12" (May, 1963), made references to and recommendations for including the arts in daily living, personal surroundings, and architecture, particularly at the secondary level. The 1967 bulletin, "Approaches for Setting Up Art History and Appreciation Programs at the Secondary Level," emphasized and focused research in the history of local community architecture and community growth as a part of the recommended program.

Under Title III ESEA, the Department of Education has participated in projects directed toward or involving environmental education. Two publications are noteworthy. RESCUE, Project OUTDOORS in Manchester, and C.O.P.E.S. (the Connecticut Outdoor Project in Educational Services) have produced "Outdoor Education in Connecticut." The other publication is entitled, "Social Studies Concepts and Generalization - A Framework for Curriculum Development." This work, an outgrowth of Project DISCUSS, includes a number of topics concerned with environmental education under the headings of the various social science disciplines.

The staff of Project OUTDOORS has written a five volume set of Teachers Guides for Environmental Education. These five guides have been reproduced and sent to each school in the state.

Also initiated under Title III ESEA, were the Talcott Mountain Science Center in Avon, and Project Oceanology at Avery Point in Groton. The Center is currently self-sufficient and serves 46 school districts. It employs a staff of eleven full time and eight part time people with two full time personnel specifically for ecology and environmental concerns. Staff of the Center operate in the school districts, at colleges, or in the excellent facility maintained atop Talcott Mountain.

Project Oceanology is in its second year and serves 15 school districts on or near the shore of Long Island Sound. The first year of development has seen the acquisition and modification of two craft. One of these is capable of holding 50 people. It is equipped with stations and materials for biological and physical laboratory activities. A number of these activities are related to water pollution. The second craft is a whaler suitable for transportation to and from the larger boat. It is also used for other laboratory activities. Shore facilities have been rented from the University of Connecticut and modified to include aquaria and laboratory activities on the Sound. It is anticipated that approximately ten times that number will be accommodated next year.

Under financing from EPDA, the four state colleges have cooperated to prepare and offer materials and activities related to environmental education. The objectives here were to provide interdisciplinary activities in environmental education for the instructional program of the colleges and to run workshops for teachers at the local level. Although financial support has drawn to a close, the program is being continued.

Under Title V ESEA several activities have taken place. A curriculum guide in environmental education combining Social Studies and Science has been developed for grades 7 through 9 and sent to the schools.



A resource kit containing appropriate printed materials has been compiled and is available to schools on a loan basis. One of these kits was delivered for use in the state library bookmobile.

Also under Title V ESEA, the six New England States, New York, New Jersey and Pennsylvania have joined to form the Northeast Environmental Education Development system. This system has undertaken a number of projects designed to prepare and disseminate environmental education materials to the schools. Some of this group's activities follow:

1. Dissemination of "Environmental Education - Instructional Activities K-6 and 7-12," prepared in New York State to all appropriate schools in the nine states.
2. Development of a standardized Environmental Awareness test by Syracuse University.
3. Development of "An Environmental Repair Kit" in Connecticut. This kit contains 100 activities in air, water and soil pollution. Workshops have been conducted for teachers, supervisors, and administrators making use of these materials.
4. Development of six 15 minute videotapes in New Hampshire for TV use.
5. Development, at Southern Connecticut State College, of audio-tutorial units on air, water and noise pollution and population concerns. Workshops have been conducted making use of these units.
6. Workshops involving various agencies concerned with environmental education.
7. An audio-tutorial unit on the social implications of monitoring earth resources from space is being developed in Connecticut with particular emphasis on the northeastern United States. This is being accomplished with the aid of the National Aeronautics and Space Administration (NASA).

In addition, NASA has contracted with the nine state group to develop a similar set of materials for use across the United States. This work is also being done in Connecticut.

Again, at the Connecticut State level, copies of mathematics problems related to pollution were purchased from the State of Wisconsin and sent to appropriate level schools in Connecticut.

Under PL 91-516, Connecticut has, over the past two years, received four grants for projects ranging from curriculum development to teacher training.

The Department of Environmental Protection in cooperation with the Connecticut Audubon Society has conducted a number of teacher workshops based, in part, on the "People and Their Environment" series.

The Connecticut Tuberculosis and Respiratory Disease Association, in cooperation with the Department of Education, has made available electronic air pollution monitoring devices for use in earth science and biology classes. The devices, loaned to the schools for a week at a time, continuously monitor levels of particulates in the atmosphere. Data collection and analysis are performed by the students and teachers.

## II. Local Initiatives in Environmental Education

Activities in environmental education vary from community to community. Since the interest in environmental education increased sharply, a number of publishers have been developing texts and other materials for distribution to the schools. Programs such as the "Science Curriculum Improvement Study," "Interaction of Man and the Biosphere," "The Intermediate Science Curriculum Study," and many others have environmental components. Many new social studies programs have materials in environmental education.

The problem in defining the number of environmental education programs in the state is brought about by the lack of precision in the definitions of the terms "environmental education" and "program." A questionnaire will be distributed to the schools this fall however in an attempt to get some quantitative data on activities in this area.

Towns and cities which have made particular efforts to provide environmental education experiences for their youngsters include: Norwich, Stamford, Fairfield, Wilton, Greenwich, Westport, Hamden, Norwalk, West Hartford, Manchester, Stonington, Hartford, Bridgeport, Rocky Hill, Enfield, and Bloomfield. This list is by no means all inclusive. Activities in these and other towns and cities range from course offerings with titles such as Environmental Education, Ecology, Science and Society, and Science and Man, to club and field activities involving both school and community.

Many towns in Connecticut are working with the 34 nature centers which are situated in various regions throughout the state.

Professional teacher, supervisor, and administrator's groups have played an important role in environmental education particularly in the conference and workshop area. Science, social studies, library, art and mathematics organizations have conducted many workshops and conferences or devoted parts of these events to environmental concerns.

### GROUPS AND AGENCIES WITH INTEREST IN E.E.:

Hamden League of Women Voters  
Mrs. Joyce Phipps  
Solid Waste Chairman  
52 Westerfield Road  
Hamden, Connecticut 06514

Guilford Free Library  
 Guilford, Connecticut 06437  
 Laurence Kingsbury

This library through the efforts of an assistant librarian, has responded to a need to identify the various activities, to pool information and establish a reference resource in support of various environmental activities. In addition to the environmental information center which has been in operation for the past year, the assistant librarian has managed a successful recycling program, has become the consultant to a number of adult and student groups, writes a weekly article in the local newspaper, The Shoreline Times, entitled "Environmental Hotline."

New Canaan Nature Center Association, Inc.  
 Melville C. Thomason, Director  
 144 Oenoke Ridge  
 New Canaan, Connecticut 06840

Member of the Consortium of E.E. Councils, AAAS Commission of Science Education. "Seeks to provide natural science, conservation, and horticulture education services for the youth of the area." The Association conducts programs in 41 categories, many involving local schools.

Save the Wetlands Committee, Inc.  
 103 Bingham Laboratory  
 Yale University  
 New Haven, Connecticut 06520

To inform the people of Connecticut of the value and importance of tidal wetlands, their current status, the threat to their future, and what can be done to protect and preserve them in the public interest.

The Center for the Environment and Man  
 250 Constitution Plaza  
 Hartford, Connecticut 06103  
 Executive Vice-President: Robert Ellis  
 (203) 277-0133

One of their publications: "Toward a New System of Education." CEM is an independent, non-profit organization which incorporated in order to engage in scientific investigations of the phenomena and processes relevant to the reciprocal relationships between man and his environment, both natural and man-made. CEM conducts research in the areas of air and water pollution, land use, urban crises, transportation systems, health care systems, and law enforcement systems.

STOP  
25 Sunny Valley Road  
New Milford, Connecticut 06776

Sharon Audubon Center  
Sharon, Connecticut

Teacher-naturalists here have helped in preparation of teaching materials.

Connecticut Audubon Center  
2325 Burr Street  
Fairfield, Connecticut 06430  
259-6305

To become more aware of the immediate environment, teachers, volunteers and students can take a field trip in the area of the school, investigating the web of life that exists in a city and discovering together the variety of both natural and man made beauty in urban environments.

Also using live animals and plants, another program is an in-class discussion of basic characteristics and requirements of all living things. To have a reverence for life is the basis of environmental responsibility.

The Connecticut Audubon also conducts school tours of the Larsen Sanctuary for grades 1, 3, and 5 in the Spring and for grades 2, 4, and 6 in the Fall. Information concerning the tours can be obtained from the Principal's office or by calling the Audubon Center.

The Center was awarded FY 1972 monies under the E.E. Act.

Faith-Man-Nature Group  
Cider Mill Road  
Andover, Connecticut 06232  
Philip Joranson

Development of written supplemental curriculum materials focusing on environmental values and their foundations in theology, philosophy, ethics, and environmental science. This group was awarded FY 1972 monies under the E.E. Act.

West Rock Nature Recreation Center  
New Haven Parks and Recreation Commission  
New Haven, Connecticut

Mayor's Anti-Pollution Task Force  
City Hall  
Hamden, Connecticut 06517

Windward Oceanography Institute  
119 Rowayton Avenue  
Rowayton, Connecticut  
Director: Dr. Howard M. Weiss  
(203) 853-2202

Attempts to improve E.E. Curricula and teacher training by encouraging students and teachers to respond to real problems. Assisting the Director is a faculty of marine scientists; college, secondary and elementary teachers experienced in E.E.; and marine technicians. The Institute is a division of the Herman R. and Carol R. Shepherd Foundation, a non-profit Connecticut corporation. It is located in the waterfront community of Rowayton in Norwalk, on Long Island Sound. Its facilities include a marine laboratory with a sea water system, research vessels, floating ocean science laboratory and a wide range of laboratory and field equipment. The Institute functions as a year-round marine resource center for elementary and secondary schools, colleges, universities and general public. It enables students to participate in active on-the-water oceanographic investigations. Interdisciplinary approaches to E.E. are emphasized. Facilities are also available to marine scientists for research in all areas of oceanography. Studies dealing with the ecology of Long Island Sound are of special interest at the Institute. Programs have been or are being developed with the following: public and private school systems in Fairfield County and throughout Connecticut, cooperative educational agencies, University of Bridgeport Departments of Biology and Education, Fairfield University, Eastern Connecticut State College, Southern Connecticut State College, Connecticut State Technical Colleges, Columbia Teachers College, and many organizations interested in the environment. It also provides in-service workshops for teachers, academic programs to enrich school curricula, summer institutes and facilities for independent research.

Audubon Center  
613 Riversville Road  
Greenwich, Connecticut 06830

Teacher-naturalists here have helped in preparation of teaching materials.

Natural Science for Youth Foundation  
763 Silvermine Road  
New Canaan, Connecticut 06840  
Director of Operations: Alan R. Mahl

Purpose of the Foundation is to encourage the establishment of new

natural science centers, youth museums, wildlife preserves and trailside museums in the nation. It makes available professional staff, without cost, for advice and consultation to organizations and communities.

Thames Science Center, Inc.  
Gallows Lane  
New London, Connecticut 06320  
Executive Director: Robert Treat

League of Women Voters of West Hartford  
19 Sunset Terrace  
West Hartford, Connecticut 06107  
Alice Kugelman, Director, Environmental Quality  
(203) 521-6482

Planned Parenthood League of Connecticut  
406 Orange Street  
New Haven, Connecticut 06411  
Executive Director: Jack Hillary Smith  
(203) 865-0595

#### UNIVERSITY AND COLLEGE PROGRAMS AND ACTIVITIES:

Connecticut College  
New London, Connecticut 06320  
Dr. Richard H. Goodwin, Professor of Botany

Interdepartmental major offered to develop an understanding of the environmental problems facing mankind. Core courses taken from traditional discipline.

Mr. Glenn R. Harris  
c/o Dr. Jelle de Boer  
Department of Geology  
Wesleyan University  
Middletown, Connecticut 06457

Mr. Harris developed a project, "Feasibility Study of Quarries as Dumping Sites for Disposal of Solid Wastes," and presented a paper on it at the December 1971 meeting of the American Association for the Advancement of Science.

#### RESOURCE MATERIALS AVAILABLE:

1. State Department of Education:

- a) "Recommendations for Adapting Art to E.E." by Robert Saunders, Art Consultant.
- b) "Recommendations for the Science Education Component of an Environmental Education Program."
- c) Man & His Environment, A Curriculum Unit for Grade 7 or 8.

2. American Education Publications  
 Science Division  
 55 High Street  
 Middletown, Connecticut 06457

OTHER PUBLICATIONS:

"Outdoor Education in Connecticut" - describes programs conducted by Project RESCUE, Project OUTDOORS in Manchester, and the Connecticut Outdoor Projects in Education Services ( C.O.P.E.S.)

"Social Studies Concepts and Generalizations - A Framework for Curriculum Development" - an outgrowth of Project DISCUSS which includes a number of topics concerned with environmental education under the headings of the various social science disciplines.

POSSIBLE RESOURCE PEOPLE:

Thomas Baker, Director  
 Mid-Fairfield County Youth Museum  
 Westport, Connecticut

Myron Browning  
 Environmental Protection Research Institute  
 P. O. Box 4711  
 Waterbury, Connecticut 06714

Marshal Case  
 Mrs. C. B. Barnes  
 Connecticut Audubon Society  
 2325 Fun Street  
 Fairfield, Connecticut

Bill Guerrera  
1 Nicholas Circle  
Wolcott, Connecticut 06716

Interested in community action projects to deal with local environmental problems.

Bette Del Giorno  
Project LIFE  
Fairfield Public Schools  
Fairfield, Connecticut

Odvard Egil Dyrli  
Professor of Science Education  
University of Connecticut  
Storrs, Connecticut

Wrote "W.W." (The Clearing House, April, 1971).

Stanley J. Idzerda  
Wesleyan University  
Middletown, Connecticut 06457

Dr. John Klimas  
Fairfield University  
Fairfield, Connecticut 06430

Deborah B. Hill \*  
East Ridge Jr. High  
Ridgefield, Connecticut 06877

Robert J. Stein \*  
Barlow Mountain School  
115 Ballow Mountain Road  
Ridgefield, Connecticut 06877

J. M. Trout \*  
Director of Curriculum  
Board of Education  
400 Main Street  
Ridegfield, Connecticut 06877

\* These persons are familiar with and/or have used the Group for E.E. Curriculum materials, developed in Philadelphia, Pennsylvania.



Lewis Mumford  
Yale University  
New Haven, Connecticut

Arthur D. Roberts  
Professor of Foundations and Curriculum  
University of Connecticut  
Storrs, Connecticut

Wrote "E.E." (The Clearing House, April, 1971).

Paul Sears  
Yale University  
New Haven, Connecticut

Mrs. Rosalyn Switzer  
Mrs. Phyllis Wallace  
Watt Porowski  
National Education Ombudsmen's Association  
Box 311  
Unionville, Connecticut 06085

Tom Malone  
Dean, Graduate School  
University of Connecticut  
Storrs, Connecticut

Was one of the key planners for the International UN Conference on the Human Environment in Stockholm.

Thomas Tinsely, Jr.  
Science Coordinator, K-12  
Trumbull Public Schools  
401 Stonehouse Road  
Trumbull, Connecticut 06611  
261-0335

## MAINE

STATE E.E. CONTACT:

Wallace LaFountain  
Curriculum Consultant  
Maine Department of Educational and Cultural Services  
Augusta, Maine 04330  
(207) 289-2541

SCHOOL PROGRAMS AND ACTIVITIES:

Regional E.E. Program (REEP)  
Wesley Willink  
Yarmouth Intermediate School  
Yarmouth, Maine

The Town of Yarmouth initiated a K-12 pilot program in 1968 utilizing a full-time coordinator financed by local funds. This program drew the attention of surrounding communities and the following year expanded to include the school systems of Freeport, Falmouth, and Cumberland-North Yarmouth. Today the program still continues with each system contributing one quarter of the expenses.

UNIVERSITY AND COLLEGE PROGRAMS AND ACTIVITIES:

Land and Water Resources Center  
University of Maine  
Orono, Maine

Mr. Joseph M. Wunderle, Jr.  
c/o Dr. Ronald B. Davis  
Department of Botany and Geology  
University of Maine at Orono  
Orono, Maine 04473

Did a study "Physical, Ecological, Economic and Sociological Effects of Residence Patterns of Recreationists on Four Maine Lakes" and reported on it at the December 1971 meeting of the American Association for the Advancement of Science.

Mr. Richard Alan Cohen  
c/o Dr. Dana W. Mayo  
Department of Chemistry  
Bowdoin College  
Brunswick, Maine 04011

He did a study "Detection and Estimation of Natural Regeneration Processes in the Upper Androscoggin River, Maine" and reported on it at the December 1971 meeting of the American Association for the Advancement of Science.

GROUPS AND AGENCIES WITH INTEREST IN E.E.:

Department of Parks and Recreation  
Keep Maine Scenic Division  
Marshall T. Wiehe, Coordinator

Kennebec Valley Conservation Association  
Vernon Keene, President

Maine Environmental Education Project, Title III, ESEA  
Dr. Dean B. Bennett, Director  
Yarmouth Intermediate School  
Yarmouth, Maine 04096

The purpose of this project is to establish in the K-12 curriculums of Maine's schools interdisciplinary learning experiences which aim to develop in students a knowledge of the total environment and the role of man, an ability to participate in activities for maintaining and improving the quality of the environment while meeting human needs, and a motivation to do so. The project provides for the training of coordinators to implement demonstration programs and assists communities in the establishment of programs through a variety of other approaches. In the area of teacher education the project staff develops and teaches in-service courses, undergraduate preservice and student teaching courses, and graduate programs.

Maine Division of the American Association of University Women  
Box 114  
York, Maine  
President: Sally Bailey

Northeastern Environmental Education Development

"Environmental Education Instructional Activities" booklets were developed in the Fall of 1971 under a Title V grant by NEED, a nine state consortium. These booklets utilize basic environmental concepts - interdependence, scarcity, right vs. responsibility.

Maine Public Broadcasting Network  
Alumni Hall  
University of Maine  
Orono, Maine 04473  
General Manager: John Morison  
(207) 581-7551

Mr. Morison is project director of activities leading to the development of demonstration model of statewide participation in the solution of a simulated environmental crisis through television programming; with FY 1972, E.E. Act monies.

Research Institute of the Gulf of Maine (TRIGOM)  
96 Falmouth Street  
Portland, Maine  
(207) 773-2981

Natural Resources Council of Maine  
20 Willow Street  
Augusta, Maine 04330  
Dr. Robert G. Mohlar, President  
(208) 266-3101

The Natural Resources Council publishes a bulletin entitled, "Maine Environmental Bulletin," each month. It usually covers matters concerning the environment that are relevant to the public.

Conservation Education Foundation  
Marshall T. Wiebe  
Executive Director  
Bryant Pond, Maine  
(207) 289-2871, Bryant Pond 39

Bryant Pond Conservation School is being used for training of teachers from the University of Maine. The course(s) are taught by Dean Bennett. There is also a special teacher workshop to train elementary and secondary teachers in conservation education.

The Maine Highway Commission has been authorized to spend \$510,000 in federal funds to remove non-conforming signs from along interstate, primary and scenic highways in the state. It will pay one billboard company an average of \$100 each to remove 69 signs from roads in 29 communities.

RESOURCE MATERIALS AVAILABLE:

Environmental Education Program - Organization and Operation  
Regional Environmental Education Program  
Wesley Willink  
Yarmouth Intermediate School  
Yarmouth, Maine 04096

POSSIBLE RESOURCE PEOPLE:

Dean Bennett, Director  
Maine E.E. Project  
111 West Main Street  
Yarmouth, Maine 04096

He is also director of the Conservation Education Association.

Erik Van de Bogart  
Director, Educational Services  
Maine Public Broadcasting Network  
Alumni Hall  
Orono, Maine 04473

Samuel Eliot  
College of the Atlantic  
Box 3  
Bar Harbor, Maine 04609

## MASSACHUSETTS

STATE E.E. CONTACT:

Raymond Gehling, Jr.  
Sr. Supervisor of Conservation Education  
State Department of Education  
182 Tremont Street  
Boston, Massachusetts 02111  
(617) 727-5742

STATE PLAN ACTIVITIES:

A proposal to develop a state plan for E.E. was funded under the E.E. Act with FY 1972 monies.

Charles E. Roth  
Massachusetts Advisory Committee on Conservation Education  
Massachusetts Audubon Society  
South Great Road  
Lincoln, Massachusetts 01773  
(617) 259-9500

SCHOOL PROGRAMS AND ACTIVITIES:

ECOS (Environment Center for Our Schools)  
195 State Street  
Springfield, Massachusetts 01103  
733-8161  
Director: Mr. Cliff Phaneuf

This program is funded by Title III (since 1971). It is an environmental school located in Forest Park which is a 745 acre city park located in the middle of the city. Children (200 a day) come here every day from the Springfield schools. Thirty per cent are either Black or Puerto Rican. The focus is outdoor education that uses an approach of four steps: first, students learn how to use their senses in the outdoor environment; then they study the interrelationships of the field community; then the water and forest communities. Lastly they compare the principles of all three communities. Teacher teams go from the center before and after student visits for preparation and follow up activities in the schools.

Seven staff members help on the program; in addition, they are on call for training activities for those wanting to set up similar programs.

The Center has developed a curriculum, and its own tests which test objectives - they found an increase in knowledge of 15% over a four day program.

The staff and facility are not able to handle requests from other schools outside the Springfield area. The Center is trying to help such schools locate local facilities, etc.

The Center has also administered teacher attitude tests in order to pinpoint what their needs are - training workshops are planned on the basis of the findings.

At the present time there are no summer activities at the Center.

Project EPIC

Donald Lambert, Director  
Westfield, Massachusetts 01085  
(413) 568-3759

Project SCENIC

Randall School  
Auburn, Massachusetts 01501  
(617) 832-2715

Project QUEST

Brockton High School  
Brockton, Massachusetts 02402  
(617) 588-7800

Project ADVENTURE

Robert Lentz, Director  
775 Bay Road  
Hamilton, Massachusetts 01936  
(617) 468-1766

Thomas Eastman, Director

Science Department  
Needham High School  
Needham, Massachusetts 02192  
(617) 449-4750

Conducts an E.E. program for the town, involving the use of an outdoor classroom at the Newman Junior High School.

# UNIVERSITY AND COLLEGE PROGRAMS AND ACTIVITIES:

Center for Environmental Studies  
 Carl H. Reidell, Assistant Director  
 Williams College  
 Williamstown, Massachusetts 01267  
 (413) 458-7131, Ext. 336

CES is an interdepartmental research and educational facility which provides a focal point for undergraduate teaching and faculty research in environmental sciences. The Center relates the academic resources of the college to planning and development needs of the surrounding region, with emphasis upon the metropolitan hinterland. The Center also directs the Coordinate Program in Environmental Studies, an elective undergraduate program available to all students, regardless of major, which seeks to provide a broad liberal arts perspective on environmental issues.

Master of Arts Degree Program in Environmental and Urban Geology  
 Department of Geology  
 Professor D. W. Caldwell  
 Boston University

Students work with various agencies in fulfillment of requirements of the program. For instance, two students worked with the U.S. Department of the Interior, Geological Survey in Boston, and two worked with Roy Mann Associates, Landscape Architects and Environmental Planners of Cambridge.

## Boston University Undergraduate Research Center for Environmental Studies

A completely student directed research group oriented towards cooperation of science and humanities students. Eventually Boston University will be petitioned to grant academic course credit for active participation in BUURC. A model program is "Accelerated Eutrophication: A Man-Made Problem" in that by examining this environmental problem from a multidisciplinary approach, "students will begin to appreciate diverse criteria inherent in many environmental situations." (OEE has this study on file.) Students are in the process of making the program more consumer-oriented, focusing attention on a program of consumer-awareness. In cooperation with the School of Public Communications at Boston University, the students are planning to produce a film on Accelerated Eutrophication. They will also begin to educate the consumer in cooperation with industry.



Boston College Environmental Center (BCEC)  
 Chestnut Hills  
 Massachusetts  
 Rev. Prof. James W. Skehan, S. J., Director  
 (617) 969-0100

The primary purpose of the Boston College Environmental Center is to foster and conduct research in interdisciplinary fields of environmental studies. Graduate as well as undergraduates participate in the activities. The center also serves a coordinating role in curriculum and degree program development in environmental and other interdisciplinary areas.

Environmental Center  
 Berkshire Community College  
 Massachusetts  
 Contact: George Hamilton

The Center is being constructed through State, Regional, and Federal grants. It has been designated as a "Regional Environmental Technical Training Center" by the Environmental Protection Agency. The College currently offers programs both in E.E. and in training for environmental occupations.

Paul Buckley  
 North Shore Community College  
 3 Essex Street  
 Beverly, Massachusetts 01915

Mr. Buckley is director of activities leading to the development of a process curriculum for community leaders with FY 1972 E.E. Act monies.

#### Hampshire College

The entire college exudes a down-on-the-farm atmosphere and is seemingly run under a philosophy of "practice what you teach." The school has several working farms on campus and is moving toward the goal of providing its own food supply. Work is also under way to build a microbiological sewage treatment facility to reclaim the college's sludge. And the school intends to landscape its hedgerows and forest borders in order to encourage wildlife to move on campus. In short, Hampshire aims to become as closed an ecosystem as possible. An Environmental Quality Program - offering lectures, seminars and research projects - adds formalized structure to the outdoor classroom experience.

### Massachusetts Institute of Technology

For the slide-rule and test-tube set MIT offers extensive interdepartmental courses and laboratory research under the direction of the Interdisciplinary Environmental Council. Although no separate degree program in environmental science or engineering is offered, most departments have educational and research opportunities in environmental fields relating to their own disciplines. A few examples of courses offered: Cycles in the Ocean and Atmosphere, Environmental Impact of Nuclear Power, and Environmental Measurements Project Laboratory.

### Southeastern Massachusetts University

SMU's Marine Biology and Marine Engineering programs provide an opportunity to "get more than just your feet wet." Both programs offer not only courses ranging from water pollution to larval fish development, but also "wet course work" that can involve scuba diving. Research facilities supporting the programs include a 20-acre waterfront site on nearby Gooseberry Island, special marine labs, and a 65-foot research vessel serving as a floating laboratory.

### Springfield College

Geared to students preparing for environmental careers, the college offers a B.A. in Environmental Studies. Depending on their interests, students can take the technically oriented Nature Interpretation Program or the Conservation Program that emphasizes the social sciences. Both programs are designed to prepare students for positions in environmental planning, teaching and administration. Courses are also required in geology, education and psychology, as well as in such specialized areas as aquatic conservation and environmental design. A little frosting on the academic cake: a two-week study tour of New England called "Conservation Caravan."

### University of Massachusetts

"Something for everybody," including a B.S. or two-year associate degree in environmental science, would seem to be U. Mass's underlying environmental studies motto. The Environmental Technology Program offers courses from other departments in the university, such as forestry and soil management, park administration, wood technology, wildlife management and public health. Other environmental organizations on campus include the Technical Guidance Center for Environmental Quality, the Environmental Quality Executive Council of the College of Agriculture, the Water Resources Research Center, the Committee on Environmental Quality and the popular and growing Institute for Man and His Environment, an interdisciplinary program of courses and research for the undergraduate.

# Worcester Polytechnic Institute

WPI has introduced into its curricula environmental engineering, which is essentially a merging of civil engineering and biological sciences. WPI's Environmental Systems Study Program does not grant a degree though. Under the program students may concentrate in interdisciplinary environmental courses such as aquatic biology, thermal pollution, stream ecology and systems analyses. The program is designed to encourage students to work on interdisciplinary teams and on real engineering problems.

## GROUPS AND AGENCIES WITH INTEREST IN E.E.

Ronald C. Broman  
West Bridgewater Student Conservation Group, Inc.  
P. O. Box 259  
West Bridgewater, Massachusetts 02379

Mr. Broman is project director of a program involving student development of a process curriculum for the Community with E.E. Act FY 1972 monies.

Massachusetts Junior Conservation Camp  
Thompson's Pond  
Spencer, Massachusetts 01562  
Contact: Mr. Arthur Silva, Director  
Elizabeth Street  
Littleton, Massachusetts 01460  
(617) 486-4075

New England Aquarium  
Dr. Warren Little, Director of Education  
Atlantic Street  
Boston, Massachusetts  
(617) 742-8830

Citizens League Against the Sonic Boom  
Dr. William A. Shurcliff, Director  
19 Appleton Street  
Cambridge, Massachusetts 02138  
(617) 876-0764

The League was established by concerned citizens to see that no sonic booms are produced by civilian airplanes (i.e. supersonic transport aircraft.) It also endeavors to inform the public regarding the dangers of such booms and urges them to seek stricter control programs

Sharon League of Women Voters  
Mrs. Gloria Buxbaum, President  
5 Peacock Hill  
Sharon, Massachusetts 02067

Ecology Club  
Steve Sirkis  
Sharon High School  
Sharon, Massachusetts 02067

Greater Boston Ecology Action Center  
188 Prospect  
Cambridge, Massachusetts 02139  
(617) 354-9490

Member of Ecology Center Communications Council, Washington, D.C.

Cambridge Ecology Action  
925 Massachusetts Avenue  
Cambridge, Massachusetts 02138

Northampton Ecology Action  
8 Bedford Terrace  
Northampton, Massachusetts 01660

Vineyard Environmental Action Group  
West Tisbury  
Martha's Vineyard Island, Massachusetts 02575

Lowell Ecology  
304 High Street  
Lowell, Massachusetts 01852

Lake Cochituate Watershed Association  
61 Lake Shore Road  
Natick, Massachusetts 01760

Friends of Nature  
 Ellen R. Riggs, Corresponding Secretary  
 92 Arlington  
 Winchester, Massachusetts 01890

Friends of Nature is a non-profit conservation society dedicated to restoring the balance of nature to the mutual benefit of man and his plants and animal friends.

Environmental Problems Committee of the Citizens for Participation  
 Politics  
 Mrs. Catherine Meyer, Chairman  
 11 South Street  
 Boston, Massachusetts 02111

The Committee is lobbying for legislation that they and others have filed concerning environmental problem abatement. It also operates a complaint program for citizens throughout the state. Copies of such grievances are issued to the enforcement agencies, legislators, and the governor.

Creative Studies  
 Dr. Jay Jehel Zif, President  
 167 Corey Road  
 Boston, Massachusetts 02146  
 (617) 277-1830

Other staff: William T. Archey

Concerned Citizens of Martha's Vineyard, Inc.  
 West Tisbury  
 Martha's Vineyard, Massachusetts 02575

Cape Cod Museum of Natural History Inc.  
 Brewster, Massachusetts 02631  
 896-3867  
 Director: Donal Schall  
 Educational Assistant: Robert Lucas

Has an environmental education program - serves Cape schools during the year. It is a center for environmental interpretation.

Association for the Preservation of Cape Cod  
 Peter Brown, Executive Director  
 Box 636  
 Orleans, Massachusetts 02653  
 (617) 255-4142

Regional Director  
 Federal Water Quality Administration  
 Northeast Region  
 J. F. Kennedy Federal Building  
 Room 2303  
 Boston, Massachusetts 02203

The Massachusetts Department of Public Works is now authorized to acquire land for public parks, recreation areas and wildlife preserves to replace land required for use in the federal highway program.

Environmental Concerns Organization  
 P. O. Box 121  
 Groveland, Massachusetts 01830  
 Mr. Osborne  
 (617) 374-6253

The Environmental Concerns Organization is primarily concerned with recycling different materials, containers, etc.

Cape Ann Society for Marine Science  
 Box 128  
 Lanesville Station  
 Gloucester, Massachusetts 01930

A non-profit organization set up by local residents to promote education and research about the marine environment.

#### Cape Ann Environmental Coalition

A united group composed of these: Action, Inc., Cape Ann Concerned Citizens, Cape Ann Sportsman's Club, Cape Ann Strippers, Essex Ct Green Belt Association, Gloucester Garden Club, League of Women Voters, Massachusetts Audubon Society, Rockport Conservation Commission, Rockport League of Women Voters, United Fisherman's Wives Organization, University of Massachusetts Marine Station, Conservation Commission.

Boston Society of Architects  
 320 Newbury Street  
 Boston, Massachusetts 02115  
 Executive Director: Lowell Erickson

The Greater Boston Committee on the Transportation Crisis  
 c/o Boston Industrial Mission  
 Father John Hinkley, Chairman  
 56 Boylston Street  
 Cambridge, Massachusetts 02138

A coalition of community groups committed to developing new transportation priorities.

Environmental Protection Association of Southern New England  
Robert Russell, President  
Box 34  
Renoboth, Massachusetts

Environmental Education Center  
The Elbanobscot Foundation, Inc.  
Janet Staiano, Executive Director  
Weir Hill Road  
Sudbury, Massachusetts 01776  
(617) 443-9931

A private corporation which conducts recreational and educational programs for interested groups and schools from Boston and the surrounding areas.

The Education Collaborative for Greater Boston  
James Howard, Assistant Director  
69 Brattle Street  
Cambridge, Massachusetts 02138  
(617) 495-4656

Has an environmental education committee.

Nashua River Watershed Association  
President, Mrs. Hugh Stoddart  
Groton, Massachusetts 01450

The Nashua River has been classified as one of the dirtiest rivers in the U.S. It has been selected as a model, The Nashua River Basin Water Quality Demonstration Program, and has received federal funding. The Association hopes to initiate an education program to complement clean-up activities.

Student Competitions on Relevant Engineering, Inc. (SCORE)  
George Flint, President  
Room 105, Anderson Hall  
Tufts University  
Medford, Massachusetts 02155  
(617) 864-6900 Ext 6851

Forest Park Zoological Society, Inc.  
David Warren, Executive Director  
Box 295, Forest Park Station  
Springfield, Massachusetts 01108  
(413) 733-2251

The Zoological Society has cooperated with the School Department in its ECOS program by providing volunteers to help outdoors, and to provide docents to take slide shows pertaining to nature and ecology to area schools on a regular basis. The FPZS also provides a Zoomobile which is a special vehicle to transport small animals for on-site demonstrations by the Park Naturalist. The Springfield Park Department provides an interpretive naturalist who conducts educational programs in all phases of natural science for all groups that come into Forest Park.

Springfield Science Museum  
Mr. Korkosz, Director  
Springfield, Massachusetts

Technical Guidance Center for Environmental Quality/ Cooperative  
Extension Service  
Director, Warren Litsky  
University of Massachusetts (Marshall Hall)  
Amherst, Massachusetts 01002  
(413) 545-0347

During the four years in which the Center has been active it has acted as an information and referral service entirely related to environmental problems.

New England Biological Association  
Dr. Donald J. Schmidt  
Fitchburg State College  
Fitchburg, Massachusetts 01420

Founded in 1915 - affiliated with the National Association of Biology Teachers. Membership: high school biology teachers, college biology professors, and their students, and interested citizens. Activities: "primarily educational, carried out during four annual meetings designed to bring teachers and students, and citizens into contact with the biological world about them." Fall and spring meetings are always field trips and outdoor activity. Each winter a joint meeting with the New England Chemistry Teachers Association is held where topics of mutual concern are discussed.

David Ives  
WGBH Educational Foundation  
125 Western Avenue  
Boston, Massachusetts 02134

Received FY 1972 funds under the E.E. Act for development of a TV Program for dissemination to the general public.



Charles E. Roth  
 Massachusetts Audubon Society  
 South Great Road  
 Lincoln, Massachusetts 01773

Received FY 1972 funds under the E.E. Act for development of curriculum materials for use in formal and non-formal activities.

Air Conservation Council, Hampden and Berkshire Counties  
 Chairman, Gary Garrison  
 Massachusetts Mutual Life Insurance Company  
 Springfield, Massachusetts

The Council has worked with George Hamilton at the Environmental Center, Berkshire Community College. It is interested in education outreach programs. Major goal of the Council: education of the general public in order to create a greater awareness of urgency of environmental problems and the role which each individual must play in solutions.

The Council also seeks cooperation with business and industry in achieving a cleaner environment.

RESOURCE MATERIALS AVAILABLE:

Publications available from Center for Environmental Studies, Williams College, Williamstown, Massachusetts:

1. Berkshire Panel for the Public Environment: An Assessment
2. Solid Waste Practices in Berkshire County.
3. Leisure Homes in the Berkshires
4. The Corporation and the Environment: A Report on the October 1968 Conference

Conservation Education Center  
 Contact: Charles Roth  
 Massachusetts Audubon Society  
 Lincoln, Massachusetts 01773

Man and the Environment - Student Text  
Man and the Environment - Teacher's Edition  
Man and the Environment - Laboratory Supplement

Educational Research Council of America

Published by: Houghton Mifflin Company  
 110 Tremont Street  
 Boston, Massachusetts 02107

A Directory of Environmental Groups

A directory of New England groups issued by the New England SCOPE.

Available from:

Environmental Protection Agency  
Region I  
2303 JFK Building  
Boston, Massachusetts 02203

Environmental Education, Curriculum and Evaluation Report of the Education Collaborative for Greater Boston

Prepared for EdCo by Mrs. Jennifer Pirie, Putnam House, 69 Brattle Street, Cambridge, Massachusetts 02138; \$1.25.

Contents: Why E.E.? Aims of environmental workshops, description of environmental workshops - urban ecology (Dorchester), suburban ecology (Concord), resources and ideas in E.E.

Environmental Center for our Schools (ECOS) Curriculum Guide, Grades 4, 5, and 6.

Available from: ECOS, ESEA Title III  
195 State Street  
Springfield, Massachusetts 01103

Millipore Corporation  
Educational Division  
Ashby Road  
Bedford, Massachusetts 01730

POSSIBLE RESOURCE PEOPLE:

Gary Liss  
S.O.A.P.  
158 Freefer Hall  
Tufts University  
Medford, Massachusetts 02155

Dr. Bradford Washburn  
Director, Boston Science Museum

A nationally prominent figure as an explorer and science museum administrator, who encouraged the establishment of the Squam Lakes Science Center at Holderness, New Hampshire.

Harold Wiper  
Newton High School  
Walnut Street  
Newtonville, Massachusetts 02160

Wrote on water pollution investigations for the secondary or collegiate student for a National Association of Biology Teachers publication.

Bernard I. Sohn  
Director Educational Division  
Millipore Corporation  
Bedford, Massachusetts 01730

Wrote on water pollution investigations for the secondary or collegiate student for a National Association of Biology Teachers publication.

W. Moomaw  
Williams College  
Williamstown, Massachusetts 01267

Frank Manheim  
Woods Hole Oceanographic Institution  
U.S. Geological Survey  
Woods Hole, Massachusetts

Member of advisory committee, Earth Science Education Program.

Douglas McConnell, Coordinator  
POLIS 76  
1000 Massachusetts Avenue  
Cambridge, Massachusetts 02138  
(617) 492-7000

Michael Spock  
Director, Boston Children's Museum

Stephen Winter, Chairman  
 Department of Education  
 Tufts University  
 Medford, Massachusetts 02155  
 (617) 628-5000 Ext. 328

John Brainerd  
 Springfield College  
 Springfield, Massachusetts

Interested in teacher training programs in E.E.

George Hamilton  
 Berkshire Community College  
 Massachusetts

Director, Berkshire Community College Environmental Center. Currently serving on the Board of Directors of the National Association for E.E., The New England Regional Commission Advisory Board for the Tipton, Vermont Environmental Center, The Commonwealth of the Massachusetts Environmental Task Force, Vice Chairman of the Air Conservation Council of Berkshire-Hampden County, Executive Committee of the Berkshire Consortium for Higher Education, and Executive Committee of the Berkshire Manpower Council. His most recent published work is that of a contributing author for the text Man and Environment, edited by McCabe and Mines and published by Prentice Hall, Inc. He attended the April, 1971 meeting of the National Association for E.E. He and his staff at the College's Environmental Center have worked closely with the Air Conservation Council for Hampden and Berkshire Counties in the development of implementation of plans and programs.

Mr. John E. Jacobus  
 Lexington Public Schools  
 146 Maple Street  
 Lexington, Massachusetts

Coordinator of Outdoor Studies - Harrington School.

James Lakis  
 Educational Development Center  
 Newton, Massachusetts

Member of advisory committee, Earth Science Education Program.

Leonard Fein  
Director of Research  
MIT-Harvard Joint Center for Urban Studies

Elaine Heumann Gurian  
240 Clinton Road  
Brookline, Massachusetts 02146  
(617) 106-1729

Specialty: Art. Fields of specialization: training teachers and paraprofessionals, methods and materials in elementary and pre-school art, curriculum development use of low cost, household and scrap materials, urban art and recreation programs.

Other interests include coordinator of programs for interdisciplinary training in urban settings. Has worked with the Children's Museum of Boston, and presently works with "Summerthing" as an art consultant.

Michael Mears  
Executive Director  
Massachusetts Executive Committee for Educational TV.

R. Coppinger  
Hampshire College  
Amherst, Massachusetts

Lynn Miller  
Hampshire College  
Amherst, Massachusetts

Peter Cotton  
National Alternative Schools Program  
University of Massachusetts  
Amherst, Massachusetts 01002

William Mathews  
Professor of Civil Engineering  
Massachusetts Institute of Technology  
Cambridge, Massachusetts 02139

Interested in offering environmental management courses at MIT.

Sidney Simon  
 Professor of Education  
 University of Massachusetts  
 Amherst, Massachusetts

Interested in value clarification and attitudinal analysis and decision making.

William Mayo  
 President, American Society for Ecological Education  
 c/o Curry College  
 Milton, Massachusetts  
 (617) 333-0500

Dr. Arthur Bartfield  
 University of Massachusetts  
 Amherst, Massachusetts

Randolph Bromery  
 Acting Vice Chancellor  
 University of Massachusetts  
 Amherst, Massachusetts

Member of Advisory Committee, Earth Science Education Program.

Anthony Mercurio  
 Bristol Community College  
 Massachusetts

Familiar with Man and Environment - Miami-Dade Jr. College Curriculum.

Dr. Peter A. Franken  
 Bolt, Beranek and Newman  
 Cambridge, Massachusetts

Expert on noise pollution.

John Aiken  
 Harvard University

Expert on philosophy of education.

## NEW HAMPSHIRE

STATE E.E. CONTACT:

Mr. William B. Ewert  
 Consultant, Science Education  
 State Department of Education  
 64 North Main Street  
 Concord, New Hampshire 03301  
 (603) 271-3293

STATE PLAN ACTIVITIES:

The Environmental Education Planning Council of New Hampshire will complete the development of New Hampshire's Environmental Education Plan by September 1973. This plan will contain a statement and prioritization of the State's environmental education needs; an evaluation of statewide and regional resources for environmental education available to local communities; and a Community Environmental Education Model or Models which should lead communities to the implementation of environmental action. For further information contact:

DeWolf Merriam, Executive Secretary  
 Environmental Education Planning Council of New Hampshire  
 5 South State Street  
 Concord, New Hampshire 03301  
 (603) 224-6651

E.E. PROGRAMS FUNDED FOR 1972:

Robert B. Todd  
 Piscataquog River Watershed Association  
 Old Francestown Road  
 New Boston, New Hampshire 03070

The development of a process curriculum with students serving as community instructors.

Roland M. Miller  
 Hanover-Norwich-Vermont  
 Dresden School District  
 Lebanon Street  
 Hanover, New Hampshire 03755

The development of a process curriculum for grades K-12 which utilizes volunteer aids.

Richard Wolfson  
Kearsarge Regional High School  
North Sutton, New Hampshire 03260

The development of written supplemental curriculum materials for use by high school classes and community residents.

James W. Morrison  
St. Anselm's College  
Manchester, New Hampshire 03102  
(602) 669-1030, Ext. 222

The development of a process curriculum for the secondary educational level, focusing on water monitoring and testing of tributaries of the Merrimack River. Several high schools are participating.

William B. Ewert, Chairman  
Environmental Education Planning Council of New Hampshire  
5 South State Street  
Concord, New Hampshire 03301  
(603) 224-6651

Statewide evaluation and dissemination (see STATE PLAN ACTIVITIES above).

#### UNIVERSITY AND COLLEGE PROGRAMS AND ACTIVITIES:

Dr. O. F. Hall, Director  
Institute of Natural and Environmental Resources  
Pettee Hall  
University of New Hampshire  
Durham, New Hampshire 03824  
(603) 862-1020

The organization is a functional unit of the University which combines teaching, research, and community contact work in a single staff of 32 professionals. The undergraduate program offers Bachelor's Degrees in forestry, wildlife management, community development, resource economics, soil science, hydrology, and environmental conservation.

Gordon L. Byers, Chairman  
Water Resources Research Center  
University of New Hampshire  
Durham, New Hampshire 03824  
(603) 862-2144

The Water Resources Research Center conducts research relating to water resources and usage as well as training scientists through this research. It is a focal point for faculty and student projects in this connection.



William Henry, State Director  
 Title I Higher Education Act  
 Resources Development Center  
 Wolff House  
 University of New Hampshire  
 Durham, New Hampshire 03824

Adult environmental education is given a top priority in the distribution of funds to colleges in the state. The Center has funded more than 20 adult programs in environmental education and conservation.

Gordon J. F. MacDonald, Director  
 Dartmouth Environmental Studies Program  
 Dartmouth College  
 Hanover, New Hampshire 03755

The Environmental Studies Program, instituted in 1970-71 and expanded in 1971-72, may be undertaken in addition to a regular major or as part of a modified major. Students may also elect several of the courses individually.

Dr. Robert H. Frey  
 Plymouth Conservation Education Program  
 Natural Science Department  
 Boyd Hall  
 Plymouth State College  
 Plymouth, New Hampshire 03264

A multidisciplinary course in conservation education fulfilling requirements in social studies and/or natural sciences offered both to full-time students and to evening division students.

Ty G. Minton  
 Director of Environmental Education  
 Antioch Graduate Program in Environmental Education  
 Antioch Graduate School of Education  
 Harrisville, New Hampshire 03450

Master's program in conservation and environmental education.

John King  
 Director of Environmental Education  
 Canaan College  
 Canaan, New Hampshire 03741

The search for some answers to basic existential questions constitutes the primary effort of the environmental education program. In their search the faculty and students scrutinize the physical surroundings of the college, the countryside, the region, and the world at large.

GROUPS AND AGENCIES WITH INTEREST IN E.E.:

Charles Buck, 4-H Youth Development Agent  
Hillsborough County 4-H Foundation, Inc.  
Hillsborough County Extension Service  
Box 306  
Milford, New Hampshire 03055

They have a Natural Science Day Camp.

Gilbert E. Merrill, Director  
Robert Searles, Associate Director  
Squam Lakes Science Center  
P. O. Box 146  
Holderness, New Hampshire 03245  
(602) 968-7194

A non-profit venture. Started school programs in January of 1969. Serves schools and the public in providing E.E. and in promoting ecological awareness. The Center publishes a newsletter.

Forrest Bumford, Director  
Air Pollution Control Commission  
61 South Spring Street  
Concord, New Hampshire 03301

William Healy, Executive Director  
Water Supply and Pollution Control Commission  
Prescott Park  
105 Loudon Road  
Concord, New Hampshire 03301

Richard Wentz, Chief  
Information and Education  
New Hampshire Fish & Game Department  
34 Bridge Street  
Concord, New Hampshire 03301

Seacoast Anti-Pollution League  
Route 84  
Hampton Falls, New Hampshire 03844

To promote the wise use of natural resources of the seacoast region and to alert and educate the community and relevant government agencies to threats to the environment.

John Nutter, Education Director  
 Appalachian Mountain Club  
 North Country Regional Office  
 Gorham, New Hampshire 03581

Conducts numerous hands-on outdoor workshops throughout the year for teachers.

George Hamilton, Director  
 New Hampshire Division of Parks  
 State House Annex  
 Concord, New Hampshire 03301

Maintains 47 state parks some of which have specific ecological units.

Ted Natti, Director  
 New Hampshire Division of Resources and Development  
 State House Annex  
 Concord, New Hampshire 03301

Conducts public education on multiple use, fire danger, insect damage, resource value and development.

William Humm, Assistant Planning Director  
 Resource Planning Office  
 Office of State Planning  
 State House Annex  
 Concord, New Hampshire 03301

Coordinates planning and management of the state's land and water resources.

New Hampshire Natural Resources Council  
 5 South State Street  
 Concord, New Hampshire 03301

Fosters common understanding of environmental problems between utilities, businesses, civic groups, and conservation organizations.

Waldo Stone, Director  
 Otter Lake Conservation School  
 Greenfield, New Hampshire 03047

Hands-on resident camp for teachers and their students. An environmental education process experience concerned with all aspects of man, his influence on and interaction with his surroundings.

Marie Tulin, Director  
Pembroke Environmental School  
120 Center Road  
Concord, New Hampshire 03301

Environmental education camping experience for 4th and 5th grade students and their teachers.

Society for the Protection of New Hampshire Forests  
5 South State Street  
Concord, New Hampshire 03301

Maintains 17 reservations totaling 7500 acres. Operates conservation camps for students and teachers. Active in environmental education programs. Publishes several guide books and a quarterly magazine. Manages Monadnock Eco-Center, London Road, East Westmoreland, New Hampshire, and Lost River Interpretive Center, Kinsman Notch, New Hampshire.

Paul Fiske, External Affairs Coordinator  
Cooperative Extension Service  
University of New Hampshire  
Durham, New Hampshire 03824

Environmental quality is the thrust of an extensive public education effort. Workshops are held to assist groups in solid waste management and recycling projects. A technical team is maintained to assist local conservation commissions. School curriculum materials are being produced.

Stephen Harper, Information and Education Officer  
White Mountain National Forest  
P.O. Box 638  
Laconia, New Hampshire 03246

Provides teacher training workshops; curriculum materials and lesson plans for environmental education, and professional help in the development, layout, and use of school-site environmental learning areas.

Delmar Goodwin, Director  
Regional Center for Educational Training  
Wilson Hall  
Dartmouth College  
Hanover, New Hampshire 03755

Offers a course for grade 4-9 teachers in the Hanover area designed to consider the total environment and factors influencing it that are relevant to children's understanding.

Alvord Wildlife Sanctuary  
 Bear Island  
 Lake Winnepesaukee, New Hampshire 03246

A 250-acre sanctuary offering two courses in conservation education for teachers and camp counselors. Operated by the American Humane Education Association through Plymouth State College, Plymouth, New Hampshire.

Richard Fabian, Environmental Education Director  
 Tilton School Environmental Studies Program  
 Tilton School  
 Tilton, New Hampshire 03276

Tilton School is working to implement its Water Pollution and Environmental Studies curriculum in neighboring schools.

David Allen, Director  
 U.S.D.A. Soil Conservation Service  
 Federal Building  
 Durham, New Hampshire 03824

The Soil Conservation Service has consulted with numerous schools in the areas of soil science and conservation, design of school site natural study areas and layout of nature trails.

Tudor Richards, Executive Director  
 Audubon Society of New Hampshire  
 63 North Main Street  
 Concord, New Hampshire 03301  
 (603) 244-1896

Operates Project SEE (School Environmental Education). It is administered by the Audubon Society of New Hampshire for Concord's Union School District. Activities have ranged from a community bus and canoe workshop studying the Merrimack River's flood plain and pollution to a school-community project recycling 2,000 Christmas trees into chips for mulching an eroding school playground. Much material is loaned to teachers, and flyers describing projects or events are sent to a list of several hundred teachers and others. The Audubon Society also maintains and staffs as nature and education centers Spruce Pond Camp in Allenstown, Willard Pond Center in Antrim, and Paradise Point in Hebron.

#### POSSIBLE RESOURCE PEOPLE:

Paul Shepard  
 Environmental Studies Program  
 Dartmouth College  
 Hanover, New Hampshire 03755

Albion Hodgdon  
Professor of Botany  
Nesmith Hall  
Durham, New Hampshire 03824

Co-founder of Natural Preserves Forum  
University of New Hampshire Natural Areas Committee

Dr. Peter Allen, Research Forester  
Division of Resource Development  
State House Annex  
Concord, New Hampshire 03301

Dr. Robert Chaffee  
Dartmouth Museum  
Hanover, New Hampshire 03755

Randall Morse  
Monadnock Eco-Center  
London Road  
East Westmoreland, New Hampshire 03467  
Winter address: Keene High School  
Arch Street  
Keene, New Hampshire 03431

Open weekends, June and September; daily, June 16-September 3.

James Mullins  
Audubon Society of New Hampshire  
63 North Main Street  
Concord, New Hampshire 03301

John Nutter, Education Director  
Appalachian Mountain Club  
North Country Regional Office  
Gorham, New Hampshire 03581

Kurt Olson, Director  
Beaver Brook Association  
Brown Lane  
Hollis, New Hampshire 03049

Allie Quinn  
Rayton Road  
Hanover, New Hampshire 03755

Ned Therrien  
White Mountain National Forest  
Box 638  
Laconia, New Hampshire 03246

Richard B. Weyrick, Associate Professor  
Pettee Hall  
University of New Hampshire  
Durham, New Hampshire 03824

Brian Chabot  
Professor of Botany and Ecologist  
Nesmith Hall  
University of New Hampshire  
Durham, New Hampshire 03824

William Connell, Chairman  
New Hampshire Chapter of Nature Conservancy  
31 Edgewood Road  
Durham, New Hampshire 03824

Ronald Bailey  
Director of Environmental Studies  
Hanover-Norwich-Vermont-Dresden School District  
Lebanon Street  
Hanover, New Hampshire 03755  
(603) 643-3431

Leslie Clark, Education Director  
Society for the Protection of New Hampshire Forests  
5 South State Street  
Concord, New Hampshire 03301  
(603) 244-9945

Paul Bruns, Professor  
Institute of Natural and Environmental Resources  
Pettee Hall  
University of New Hampshire  
Durham, New Hampshire 03824

## RHODE ISLAND

STATE E.E. CONTACT:

H. Wells French  
 Consultant, Program Development  
 State Department of Education  
 Hayes Street  
 Providence, Rhode Island 02908  
 (401) 277-2821

STATE PLAN ACTIVITIES:

There is at present no formal state plan for environmental education for Rhode Island. After three meetings (December, 1971 - sponsored by the University of Rhode Island; October, 1972 - sponsored by the State Department of Education and URI with funds provided by the Northeast Environmental Education Development Project (NEED); June, 1973 - at the Massachusetts Institute of Technology and funded again by NEED) enough direction emerged and persons/groups recognized so that a group could be operative, given legitimacy and funding. In October, 1973, Ecology Action for Rhode Island, in cooperation with the State Department of Education, URI, and Rhode Island College (RIC), submitted a modest proposal to NEED, which was funded, for a coordinator/writer who would work with a three member task force from Ecology Action and a 40 member advisory committee drawn from concerned individuals, interest groups and the public. The group will assess the state of the art in Rhode Island, assess other states' activities and plans, survey sites and resources within the state, consider the ideas and suggestions of the committee's members and the groups they represent, and develop a list of recommendations concerning environmental education for submission to the State Department of Education. Ecology Action hopes to complete this process in April, 1974.

E.E. PROGRAMS FUNDED FOR 1973-74:

Girl Scouts of Rhode Island	
333 Grotto Avenue	
Providence, Rhode Island 02906	\$15,000

A program, postponed from 1972-73, designed to develop, test and staff a traveling mini-lab for environmental education. The mini-lab will contain testing equipment, a variety of materials and will be staffed by two teachers experienced in environmental education. The mini-lab will visit scout camps throughout Rhode Island during the summer and then extend its activities to the general public.

H. Wells French	
State Department of Education	
Hayes Street	
Providence, Rhode Island 02908	\$ 8,996

"Narragansett Bay Heritage" is an interdisciplinary program designed to



provide a seventh-grade class in 13 communities with the process-oriented training necessary to use the equipment and materials provided. The equipment and materials, composed of water quality test kits, various maps and charts ranging from a 1648 map to the latest NOAA chart, resource materials, ERTS satellite imagery and a camera, will be used by these classes to establish monitoring stations on the bay or its estuaries, to supply that base-line data to the appropriate agencies, to examine the relationship of the bay to the state's development, to investigate land usage, and to become aware of personal and community involvement.

#### SCHOOL PROGRAMS AND ACTIVITIES:

Project EARTH  
c/o Carlo Gamba  
Cranston School System  
Park Avenue  
Cranston, Rhode Island 02910

Project EARTH, a former Title III program initiated in 1968, is an environmental education program designed to allow urban elementary children the opportunity to learn the importance of proper utilization of our natural resources. The field work is conducted within Cranston and at the W. Alton Jones Campus of U.R.I.

Project MALO  
c/o Ida Jackson  
Warwick Veteran's Memorial High School  
Warwick, Rhode Island 02886

This interdisciplinary approach to outdoor education was initiated as a Title III mini-grant last year and incorporated as a regular program for this year. Utilizing the community's resources as well as U.R.I.'s W. Alton Jones Campus the program is intended to let students discover how their school works, in all subject matters, grows from and fits into man's relationship to his environment. The key to the project rests with the investigations and a "quest" period which allows the student to experience creative opportunities.

Project Ocean Study  
c/o August Botelho  
Guiteras School  
Bristol, Rhode Island 02809

Project Ocean Study, another former Title III mini-grant, provides the opportunity for junior high school students to investigate the marine environment, to explore salt marshes, to examine the interrelationship of various components of the environment and to sense the interdisciplinary aspects of environmental education.

Project Marine Environment  
c/o Dave Whittaker  
Tollgate High School  
Warwick, Rhode Island 02888

A Title III project, involving both Warwick and Cranston, is designed to allow students from both communities to elect what is in effect a sophisticated oceanography/environmental education course. The student has an opportunity to investigate the marine environment from a land-based site or from the project's boat which utilizes the project's oceanographic equipment.

The following schools/systems are among those that have developed or are developing either Environmental Study Areas (ESA's) or outdoor environmental activities:

South Kingstown Junior High School c/o Robert Smith, Principal South Kingstown, Rhode Island 02879	-ESA
Jamestown School c/o D. Rogers Chase, Principal Lawn Avenue Jamestown, Rhode Island 02835	-ESA
Middletown Middle School c/o James MacGuire, Principal Aquidneck Avenue Middletown, Rhode Island 02840	-ESA
Western Coventry School c/o John Ruzanski, Principal Summit Rotary Greene, Rhode Island	-ESA
Cumberland School System c/o Robert Condon, Superintendent Mendon Road Cumberland, Rhode Island 02864	Outdoor Learning
Coventry School System c/o Thomas Marron Coventry High School Foster Drive Coventry, Rhode Island	Outdoor Learning
Scituate Jr./Sr. High School c/o Robert Kuhn Rockland Road North Scituate, Rhode Island	Outdoor Learning

#### UNIVERSITY AND COLLEGE PROGRAMS AND ACTIVITIES:

Environmental Education Committee  
Ellsworth Starring Co.  
c/o Richard Green, Chairman

Rhode Island College  
Providence, Rhode Island 02908

In response to the need for an interdisciplinary approach to problems in environmental education, a faculty group representing several departments formed the committee. The committee is concerned with the following functions:

- An identification of resources available to the RIC Environmental Education Committee
- An investigation into the various E.E. models currently available
- A determination of faculty and student views on the goals and purposes of any proposed E.E. program at RIC
- The development of a philosophy and a strategy for implementation of E.E. at RIC, including estimates of the impact on faculty and staff requirements, space and budget.

Environmental Education Program  
c/o William Croasdale  
U.R.I.  
Kingston, Rhode Island 02881

Under the leadership of the Education Department, URI has established an E.E. major, in both the undergraduate and graduate level, by utilizing unique combinations of existing courses. URI is presently developing several new courses, at the undergraduate level, in E.E.

Information concerning many other E.E. activities within different colleges and departments, as well as at the W. Alton Jones Campus' E.E. center, can be obtained from Dr. Croasdale.

GROUPS AND AGENCIES WITH INTEREST IN E.E.:

Norman Bird Sanctuary  
Third Beach Road  
Middletown, Rhode Island 02840

A wildlife refuge with  
a year round Education  
program.

Water Pollution Control Board  
Department of Health  
Davis Street  
Providence, Rhode Island 02908

Water quality monitoring  
and pollution classifying.

Division of Air Pollution Control  
Davis Street  
Providence, Rhode Island 02908

Water Resources Board  
265 Melrose Street  
Providence, Rhode Island 02907

Responsible for the mapping  
and classifying of R.I.'s  
water resources.

Statewide Planning  
265 Melrose Street  
Providence, Rhode Island 02907

Concerned with land usage and long range trends and planning.

Environmental Council of Rhode Island, Inc.  
40 Bowen Street  
Providence, Rhode Island 02903

A representative state-wide organization, affiliated with the National Wildlife Federation, primarily devoted to the wise use, preservation, aesthetical appreciation, and restoration of wildlife and other natural resources.

Ecology Action for Rhode Island  
286 Thayer Street  
Providence, Rhode Island 02906  
(401) 274-9429

Ecology Action for Rhode Island, a non-profit volunteer organization, was founded on the Brown University Campus in 1969 and has since moved into the Providence community. The major goals of this group are 1) to environmentally educate individuals, industry and the community, 2) to create and operate environmental action projects, 3) to encourage research and 4) to encourage the enforcement of laws relating to the conservation of resources and the maintenance of the environment.

Earthrise, Inc.  
P.O. Box 120  
Annex Station  
Providence, Rhode Island 02901

A non-profit organization which is developing a comprehensive approach to futures research, education and design. Futures research is the systematic study of the future consequences of present social and environmental problems.

Audubon Society of Rhode Island  
40 Bowen Street  
Providence, Rhode Island

The purpose of the Audubon Society is to foster conservation of animal life, plant life, habitat, unique areas via a general public conservation education and by focusing the public's attention on resource problems. The Audubon Society provides leadership when resource problems arise. They also provide a full time teacher, made available to R.I.'s public schools on a contract basis, who works in the classroom and helps in the development of ESA's and other outdoor activities.

Save the Bay, Inc.  
655 Main Street  
East Greenwich, Rhode Island 02818

A non-profit organization concerned with the conservation of R.I.'s greatest resource - Narragansett Bay and its estuaries. Save the Bay makes available

resource people for the schools and the general public and provides materials on the Bay as well. It keeps itself and the state aware of environmental questions concerning the Bay.

### E.E. TRAINING ACTIVITIES:

A training team which evolved from "Narragansett Bay Heritage" is in existence in Rhode Island. The team utilizes process education in the environment and deals with such things as problem-solving, developing investigations, teaching/learning strategies and inter-personal relations/communications in their workshops. Their workshops, both content and method, are based upon those proven successful by the U.S. Forest Service in its E.E. activities. Further information can be obtained from the state E.E. contact person.

### POSSIBLE RESOURCE PEOPLE (those whose name or agency is not listed above)

Stuart Hale  
Director, Coastal Resources Center  
Graduate School of Oceanography  
URI, Bay Campus  
Narragansett, Rhode Island 02882

Marcia Miosky  
c/o League of Women Voters  
41 Seekonk Avenue  
Providence, Rhode Island

Thayer Shafer  
Marine Advisory Service  
URI Seagrass Program  
Bay Campus  
Narragansett, Rhode Island 02882

Derek Bradford  
School of Landscape Architecture  
Rhode Island School of Design  
Providence, Rhode Island 02906

Robert E. Lee  
Soil Conservation Service, U.S.D.A.  
Quaker Lane  
West Warwick, Rhode Island

Bradford Monahan  
I & E Officer  
Department of Natural Resources  
Park Street  
Providence, Rhode Island 02908

James Verds  
R.I. Junior College  
East Street  
Warwick, Rhode Island 02888

## VERMONT

STATE E.E. CONTACT:

Dr. Karlene Russell  
Director of Early Childhood, Elementary and Secondary Education  
State Department of Education  
Montpelier, Vermont 05602  
802-223-2311 (Ext. 443)

STATE PLAN ACTIVITIES:

None

ENVIRONMENTAL EDUCATION PROGRAMS FUNDED FOR 1972:

John Horsley  
Bolton Institute  
139 Main Street  
Brattleboro, Vermont 05301

The development of a process curriculum for governmental employees.

Frederick Mold  
Fairbanks Museum of Natural Science  
83 Main Street  
St. Johnsbury, Vermont

A plan for the development of an urban environmental education center to serve both schools and the community.

Seward Weber  
Vermont Natural Resources Council  
97 State Street  
Montpelier, Vermont 05602

For a pilot workshop to encourage conservation groups to make their resources available to local schools.

UNIVERSITY & COLLEGE PROGRAMS & ACTIVITIES:

The University of Vermont  
College of Agriculture and Home Economics  
Environmental Studies Program  
Burlington, Vermont  
Dr. E. C. Schneider, Chairman  
802-656-2000

GROUPS & AGENCIES WITH INTEREST IN E.E.:

Vermont Natural Resources Council  
97 State Street  
Montpelier, Vermont 05602  
Mrs. Garland, Chairman  
Seward Weber, Executive Director  
802-229-9496

Northeast Education Action Center  
P.O. Box 173  
St. Johnsbury, Vermont 05819  
Max Money, Director  
802-626-9306

Vermont Environmental Center, Inc.  
Ripton, Vermont 05766  
Dr. Andrew Nelson  
802-388-7833

The Vermont Environmental Center is a private organization which offers teacher-training workshops in such areas as ecology, water-quality, and natural resource management. It also offers experimental workshops in environmental education. These workshops provide the necessary materials for teachers to develop curricula and to teach environmental subjects in their regular classes. A follow-up program aids and encourages such activity by providing a formal framework and allowing credit for project development.

Vermont Environmental Education Planning Association  
97 State Street  
Montpelier, Vermont 05602  
Chairman: A. John Holden

Agency of Environmental Conservation  
Air Pollution Control  
Montpelier, Vermont 05602

Fairbanks Museum of Natural Science  
St. Johnsbury, Vermont 05819  
Frederick H. Mold, Director  
802-748-3413  
Environmental Education Center

Agency of Environmental Conservation  
 Robert Williams, Secretary  
 State of Vermont  
 Montpelier, Vermont 05602

Conservation Society of Southern Vermont  
 John Stevens: Executive Director  
 Bondville, Vermont 05340

Nature Conservancy  
 Hubert Vogelmann, Chairman, Vermont Chapter  
 Botany Department  
 University of Vermont  
 Burlington, Vermont 05401

Vermont Development Department - a Vermont state agency devoted to disseminating information about the State of Vermont. Can supply a film called "A Thousand Hills" depicting the environmental problems of Vermont.

C-FORCE Action Center  
 "To advance creative learning in Vermont Education" (an ESEA Title III project)  
 P.O. Box 277  
 Lyndonville, Vermont 05851  
 (802) 626-9306 (in Essex-Caledonia District)  
 Committee Chairman: Andrew Fisher 695-2250

One of its projects is: HEED (Human Environment and Ecological Development). Some of the objectives: to develop in students an appreciation for a rural environment in which most will spend their lives by trips into it and working within it, to develop in 5 schools a K-12 program dealing with ecological problems, to establish a Local Advisory Council including students, parents and Lyndon State College faculty to direct and advise the project, to design and construct outdoor labs at each of the 5 target schools, to organize and distribute ecological resource kits to all schools in the district, to provide workshops, using Fairbank Museum personnel for in-district and other interested school districts, to utilize C-FORCE personnel for coordination and dissemination within the region, to plan for implementing, during the second project year, the K-12 program in remaining schools of the district and establishing an "environmental museum" for the district and other interested districts.

The area covered by this school district is highly rural; main industry is a large paper mill. It's a heavily forested region much favored by



hunters and campers thus the emphasis of the project on understanding and caring for wilderness type areas. The present 15 member committee meets monthly and has been concentrating this last year on outdoor lab areas for each school and on selection of appropriate materials such as field guides, soil-testing kits, field glasses and microscopes. The thrust this year will be on establishing an outdoor camping site for overnight or longer trips near Victory Bog, a large natural wilderness environment. Concerned citizens have waged a successful battle against the Army Corps of Engineers who want to dam it up for a developed recreational area. They expect to make the campsite available to children from other districts. Title I funds have been budgeted for sleeping bags, tents, etc. so that no child need feel left out because of lack of equipment. High school students have been involved in a series of mini-courses in hiking, camping, trail blazing, and rock climbing. These were organized sequentially so the simpler ones came first. Students were thus able to drop off when they felt the experiences were getting too strenuous.

#### POSSIBLE RESOURCE PEOPLE:

Happy Nelson  
Vermont Environment Center  
Ripton, Vermont 05766

Member of Ecology Center Communications Council

Bruce Chapman  
Grafton School  
Grafton, Vermont

User of GEE materials

Seward Weber  
Vermont Natural Resources Council  
97 State Street  
Montpelier, Vermont 05602  
802-229-9698

Edwin Schneider, Chairman  
Environmental Studies Program  
Steering Committee, Room 110  
Agricultural Engineering Building  
University of Vermont  
Burlington, Vermont 05401

Mr. Wayne Timura  
c/o Dr. William J. Jewell  
Department of Civil Engineering  
University of Vermont  
Burlington, Vermont 05401

Analysis of Transportation and Environmental Resources of the Water-  
front in Burlington, Vermont. Presented report at December, 1971  
A.A.A.S. meeting.