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Environmental Education in Wisconsin

Environmental Education in Wisconsin

A Foundation for Conserving Environmental Quality

Prepared by

The Wisconsin Environmental Education Council
and its Advisory Committee

December 1974

First Edition



WISCONSIN ENVIRONMENTAL EDUCATION COUNCIL

Lowell Hall, 511 Langdon Street, Madison, Wisconsin 53706, (608) 263-3327

David W. Walker, Executive Secretary

December 2, 1974

The Honorable Patrick J. Lucey
Governor of Wisconsin
State Capitol
Madison, Wisconsin 53702

Dear Governor Lucey:

I am pleased to transmit to you Wisconsin's first environmental education plan. This plan fulfills your assignment of such responsibility by creation of this Council in 1971.

The Council believes this plan is especially timely because of increasingly complex environmental issues now confronting us. Environmental education is a vital tool. Only through a knowledgeable citizenry can Wisconsin continue to benefit from its productive resources, be enriched by its landscape, and be protected from the hazards of environmental degradation. Further, the viability of our society is affected by new national and international resource conditions, so we need to understand and act upon new circumstances. Many long-standing values, attitudes and assumptions are being challenged and assumptions about resource adequacy are falling.

Although environmental education is no panacea to the dilemmas before us, we believe the priority recommendations and the suggested activities in this plan are a minimum essential base for assuring environmental stewardship and thereby human survival.

Its comprehensive content encompasses the mounting problems of the entire state from its urban environments to its wild and natural places, forests and fields.

We look forward to your guidance in its implementation.

Sincerely,

Eugene Lehrmann
Eugene Lehrmann,
Chairman

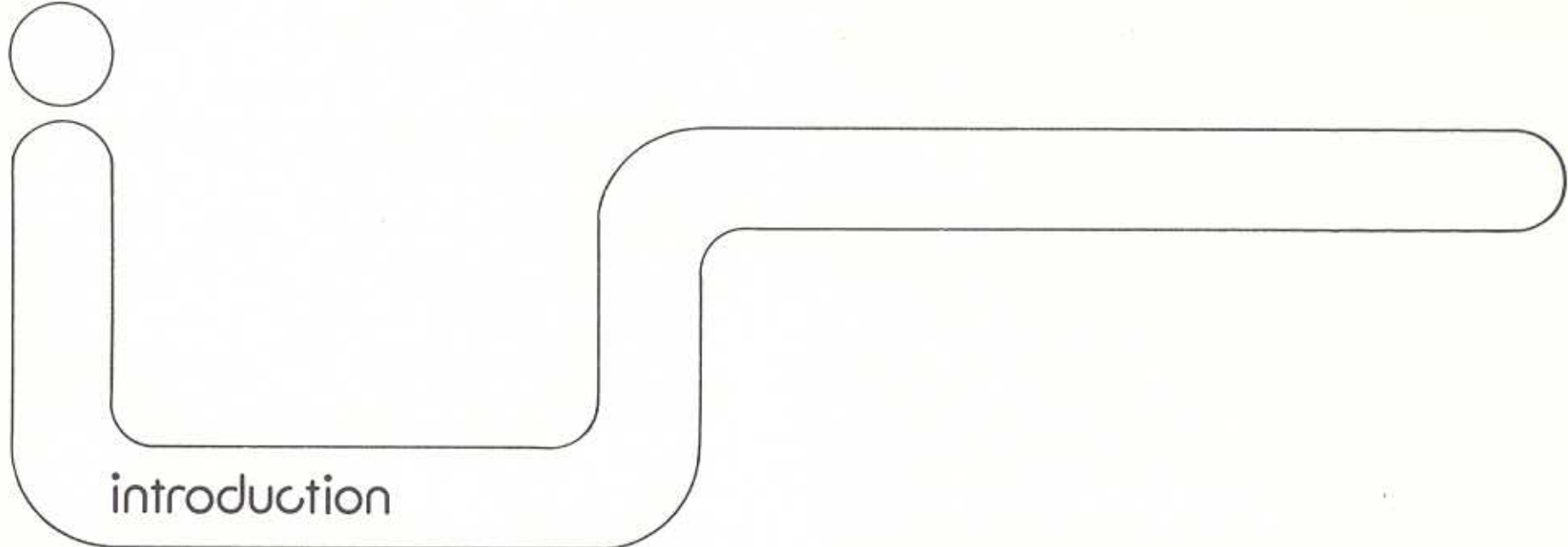
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... all the dangers we have examined—population growth, war, environmental damage, scientific technology—are social problems, originating in human behavior and capable of amelioration by the alteration of that behavior.

Robert Heilbroner



introduction

environmental education defined. . .

Wisconsin is a scenic and productive land. It has suffered less from pollution, crowding, visual blight and other forms of environmental degradation than many places. Yet that is not a basis for complacency because Wisconsin's citizens face two types of challenges in maintaining the quality of natural and man-made environments. One challenge comes from growth and development in Wisconsin and the resulting conflicts among uses and potential adverse environmental impacts of change. The other is from the effects of national and international events which affect Wisconsin's markets and the availability and price of needed products and resources.

The purpose of environmental education planning in Wisconsin is to assure that adequate, effective programs are provided for the state's residents to become aware of such challenges, to analyze the alternative means to meet them and to become skilled and motivated to achieve solutions.

This plan describes a systematic effort to begin improving and expanding environmental education activities through a wide range of projects recommended for implementation by state agencies, other governmental units, by private organizations and by individuals.

Implied in this whole environmental education process is a new environmental ethic. As the State Planning Office has observed:

Wisconsin's history of legislative environmental leadership, its growing citizen involvement in public planning, the state court's progressive attitude towards water and land use issues, and the attitudes of its citizens strongly suggest the existence of an emerging "environmental ethic" in the state—one which demands greater environmental sensitivity in society's developmental efforts and is prepared to support reasonable new public measures toward this end.

The development of this new ethic will require man to accept values based on ecological principles and environmental protection, in which he realizes his dependence upon natural systems for his survival. He must come to understand that much economic growth is achieved at the expense of the environment, and that some growth should be rejected if the environmental cost is too high.

Environmental education, then, is the learning process for acquiring attitudes and values and choosing practices which maintain a healthy and productive natural environment in a harmonious relationship with man's economic, political, social, cultural and aesthetic systems. Such education must be multi-faceted, help resolve issues and actively encompass all segments of society through formal and informal approaches.

Environmental education should not be confused with conservation, nature or outdoor education. It is a broader approach to learning about man in relation to his urban, rural, natural and man-made living spaces. It also concerns the capability of these habitats to meet the challenges of human survival.

the beginnings. . .

Wisconsin has a long tradition of concern for conservation, which originated with Charles Van Hise and Aldo Leopold and has been carried on by such groups as the Izaak Walton League, Wisconsin Wildlife Federation, the League of Women Voters and many others. But efforts have not kept pace with the increasing and complex environmental problems. Particularly, educational efforts have reached too few of the state's citizens and often those reached are already concerned and involved.

A landmark year, 1970, began with the Governor's Conference on Environmental Education, which resulted in the formulation of nineteen recommendations to strengthen instruction, curriculum, materials and activities. Late in the year the federal Environmental Education Act was passed, and as a result the U.S. Office of Education promoted broader involvement and cooperation among state educational agencies and other organizations with environmental education responsibilities and objectives. Wisconsin's response was an ad hoc committee of representatives from various state agencies and the University of Wisconsin to consider a state plan for environmental education and to begin drafting a state environmental education act. Further drafting occurred in an Education Committee of the Governor's Task Force on the Environment. A final version was included in the Task Force Report of March 19, 1971.

Governor Lucey responded two months later by signing Executive Order Number 18, which created a Wisconsin Environmental Education Council and charged it with coordinating the state's efforts and with formulating a state plan for environmental education. This report is an initial response to that charge.

Prior to the development of this plan, Wisconsin did not have a strategy for coordinating its diverse environmental education programs. It lacked a set of common goals through which cooperation would be achieved among the many public and private agencies. This first edition is offered as a vehicle for widespread discussion and is only the first step toward a comprehensive master plan. Environmental education planning is a continuous process; this plan's success is dependent upon the sustained efforts by all involved.

Readers have a dual role in considering the recommendations—one personal, one institutional. The recommendations which follow focus, for the main part, on various groups and their input into environmental education. Yet it is the collective impact of our individual life styles which has caused quality and quantity problems in our environment. Our energy uses, our diet, our recreational pursuits and the form of our commodity purchases are contributing to a degraded human environment.

the plan. . .

To accomplish its responsibility for preparing a state environmental plan, the Wisconsin Environmental Education Council turned to its fifteen-member Advisory Committee. Members are chosen to be broadly representative of Wisconsin's citizens and the various organized interests in environmental education (current and past members are identified in the Appendix).

This report was prepared by the committee with the assistance of staff from member agencies and the council itself. The planning process incorporated many demonstration projects utilizing different approaches to environmental education. Teacher in-service training took the form of courses, workshops and field trips. Several other projects sought to expand communications about the environment through public radio and television—a radio series for second grade students was developed, for example. For more detail of these and other projects, see the Wisconsin Environmental Education Council Annual Report for 1973, pages 6-14.

Specific objectives of this plan are to:

- (1) Define the initial priorities for improving environmental education
- (2) Identify those groups, or sectors, who are vital to environmental education and spell out their roles
- (3) Provide a list of basic environmental issues as current topics for environmental education

an overview. . .

Progress can begin through current staffs of member agencies, with existing budgetary levels and with presently available materials and

facilities. While significant expansion of the state commitment is essential and feasible, it will likely be incremental. Therefore, the approach of this plan is conditioned by the belief that immediate progress can best come through improving the performance and effectiveness of existing programs and by adding vital new activities and abolishing less effective activities, reallocating personnel and funds to more promising programs.

As part of its initial efforts, the committee collected and analyzed available information on existing efforts in environmental education in Wisconsin. The following are the conclusions.

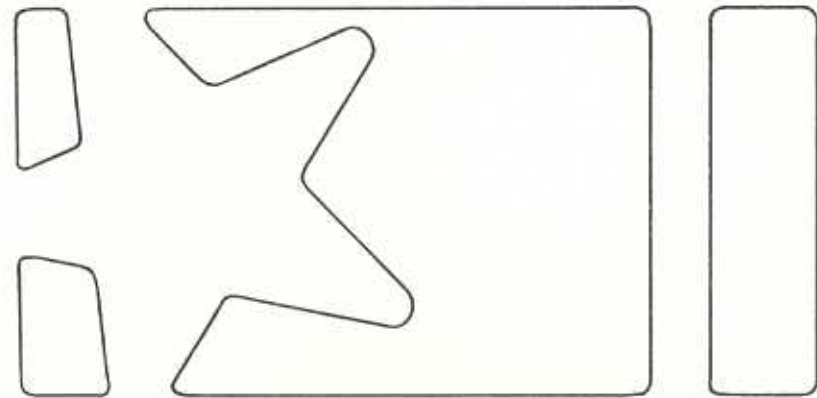
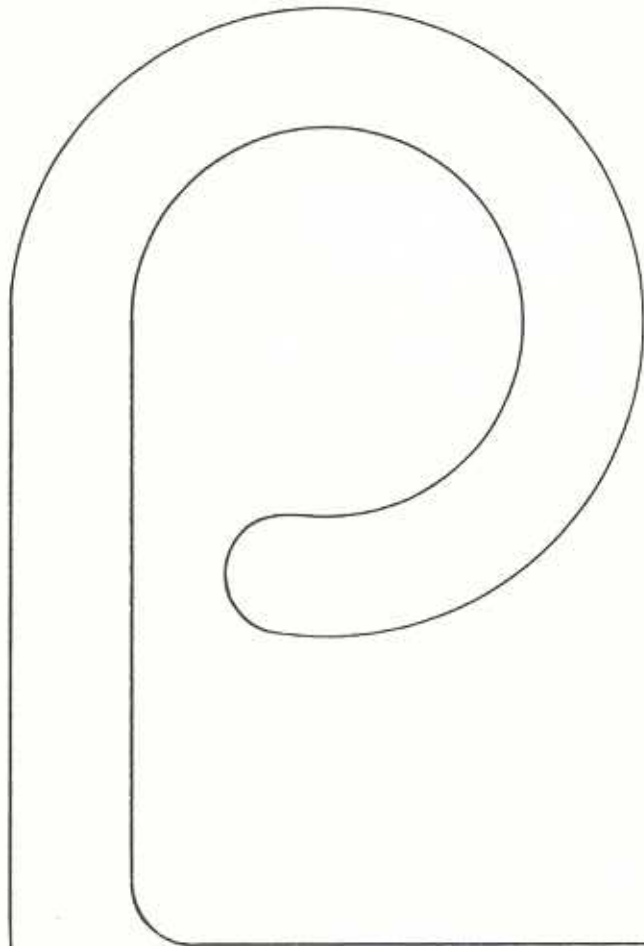
- (1) Dynamic public concern for human environments has outpaced the state's environmental education resources.
- (2) Viewing activities in the state as a whole, there are many strong programs, yet overall the activities are insufficient in strength and distribution.
- (3) Lacking a state program or policy, the activities are often uncoordinated and without consensus on goals, objectives or methods. A great opportunity exists to further state performance by enhancing cooperation and complementary effort and by sharing innovations, results and materials. The value of cooperation is demonstrated in many current joint activities among state agencies.
- (4) Evaluations of environmental and conservation education have been limited in recent years, with the result that valuable feedback on needed changes is insufficient to guide planning for improvement.
- (5) Programs have relied too much on a scientific or biological base for gaining environmental awareness to the detriment of social and economic considerations. Understanding and motivation cannot be achieved solely through science-based programs.
- (6) The statutory requirements for teacher training in conservation and for instruction of students in conservation are not adequate or effective in providing environmental education as an interdisciplinary experience in Wisconsin schools.
- (7) Environmental education has not yet begun to cope with the complexity of the issues: there is general misunderstanding, antagonism and polarity stemming from personal interests and values.



It does little good to vilify segments of our national and international life, such as large corporations, unless there is a strong collective will to take positive steps that will make it possible for those corporations to correct their behavior. Nor can a permanent cure for urban blight be effected by a mass "rush to the hills."

THE UNITED NATIONS AND THE HUMAN ENVIRONMENT

p. 19



the priorities

In order to succeed, any plan or effort must point toward those guiding elements which are crucial to its implementation. This section defines six elements for a successful environmental education program. There is no rank order among the items; indeed most are complementary. Major emphasis is placed upon the leadership of state agencies, with suggested supporting participation by other groups. In some instances the work can be conducted by reallocation of existing personnel, facilities and materials, but to accomplish other projects, additional funding will be essential.

The following list of sectors, or groups that provide and benefit from environmental education, will be discussed later in detail. They are

plan for environmental education

mentioned here since the role of these groups is touched upon in this section. Included are a few examples of members of these sectors.

Elementary and Secondary Education	The public and private school systems of the state, the professional education groups and cooperative educational service agencies
Vocational, Technical and Adult Education	The post-secondary adult, vocational and technical training programs
University and College Education	The University of Wisconsin System and the state's private colleges and universities
Youth and Student Groups	4-H, Scouts, Campfire Girls, FFA
Environmental, Conservation and Sportsmen Organizations	The Citizens Natural Resources Association, Environment Wisconsin, Garden Club, Sierra Club, Wisconsin Wildlife Federation, Izaak Walton League
Civic, Religious, Fraternal and Service Organizations	The Kiwanis, Lions, Rotary, Elks, Masons, Knights of Columbus, the League of Women Voters, Senior Citizens, Jaycees, Churches
Labor	AFL-CIO, Teamsters, UAW
Instructional and Commercial Media	Newspapers, magazines, commercial radio and television, public radio and television
Agriculture	Farm Bureau, Grange, Soil and Water Conservation Districts, Farmers' Union, NFO
Business and Industry	Chamber of Commerce, Trees for Tomorrow, American Institute of Architects
Government	Local, state and federal agencies

Priority One: ADOPT STATE POLICY

Recommended Activity: Using the following elements, gain introduction and enactment of state legislation for a Wisconsin policy and program for environmental education

1. Continue the efforts of the interagency council and the citizen advisory group
2. Define environmental education and describe a state policy to foster environmental education among all the interests
3. Provide for a small program of financial assistance to local and regional projects
4. Encourage a cooperative system of regional resource centers to facilitate assistance to teachers and citizens
5. Undertake general activities to improve environmental education

Participants:

Coordinating responsibility—Environmental Education Council
Support responsibility—all sectors

Steps to Accomplishment:

1. Draft legislation
2. Circulate to appropriate interests for review
3. Revise and seek executive and legislative support
4. Develop appropriate support for enactment

Proposed Schedule: Enactment during 1975 session

Priority Two: DEVELOP EDUCATOR PROGRAMS

Recommended Activities:

- A. Identify key environmental educators who by profession, experience or interest are a basic group of resource people

Participants:

Coordinating responsibility—Department of Public Instruction (DPI)

Support responsibility—other member agencies

Steps to Accomplishment:

1. Prepare a basic list of resource people
2. Publicize the list and initiate improvement programs through resource people

Proposed Schedule: Initiate by spring 1975

- B. Improve communication about environmental education to elucidate its purposes and potential contribution

Participants:

Coordinating responsibility—Wisconsin Environmental Education Council

Support responsibility—Department of Natural Resources (DNR), DPI, Educational Communications Board (ECB), UW System, Board of Vocational, Technical and Adult Education (VTAE)

Steps to Accomplishment:

1. Revise existing Department of Public Instruction newsletter with regular distribution and upgraded format
2. Prepare releases for radio, television and newspapers on newsworthy activities
3. Prepare reports on environmental education activities, methods, materials and assistance
4. Contact educational organizations for cooperative information exchange
5. Provide staff for preparation of newsletters, reports and releases on an interagency basis
6. Improve coverage of environmental education in VTAE and DNR newsletters and magazines

Proposed Schedule: Initiate by spring 1975

- C. Evaluate existing environmental education in-service programs to identify gaps and deficiencies which can be overcome

Participants:

Coordinating responsibility—DPI

Support responsibility—DNR, ECB, UW System, VTAE

Steps to Accomplishment:

1. Formulate criteria and guidelines for optimum in-service programs
2. Apply criteria to identify needed additions
3. Review programs in other states and sponsor demonstrations of additional approaches
4. Formulate an overall program to meet needs

Proposed Schedule: Initiate by winter 1975

- D. Form and train a cadre of experienced educators and specialists to assist school programs and conduct specific in-service programs

Participants:

Coordinating responsibility—DPI

Support responsibility—DNR, ECB, UW System, VTAE

Steps to Accomplishment:

1. Use resource people identified above as a nucleus
2. Form teams by geographic areas
3. Develop programs for areas according to need and interest

Proposed Schedule: Initiate by summer 1975

- E. Explore use of instructional media for in-service education

Participants:

Coordinating responsibility—ECB

Support responsibility—DNR, DPI, UW System, VTAE

Steps to Accomplishment:

1. Investigate feasibility of computer assisted instruction for teachers to provide specific information tailored to needs
2. Prepare pilot radio and video programs on environmental education methods and on exemplary programs as illustrations

Proposed Schedule: Initiate by summer 1975

Priority Three: ENRICH CONTINUING EDUCATION

Recommended Activity: Initiate more programs to make Wisconsin citizens better equipped to participate in public decisions affecting man's working, living and recreational environments. The purpose of this category is to provide people with the skills and information necessary to lead more stimulating and sensitive personal lives through environmental appreciation, to equip them to be more effective citizens and to upgrade workers' skills in environmental fields.

Participants:

Coordinating responsibility—UW System

Support responsibility—DNR, ECB, VTAE

Steps to Accomplishment:

1. Sponsor activities to acquaint citizens with procedures for environmental impact review and standards setting for air and water quality in which public review is encouraged
2. Conduct programs which examine the social, economic and ecological effects of alternative solutions to environmental problems

3. Assist groups and communities seeking to survey and improve environmental quality
4. Work with professional groups, unions and related groups to determine the most effective approaches to inclusion of environmental quality concepts in continuing education and for procedures to continually inform personnel of emerging environmental problems and changes in policies
5. Devise programs for public officials which increase awareness of environmental quality implications of governmental policies and programs
6. Foster programs which encourage aesthetic appreciation and enjoyment of natural and man-made environments

Proposed Schedule: Initiate by spring 1975

Priority Four: DEVELOP LOCAL RESOURCE CENTERS

Recommended Activity: Seek establishment of several new local or regional resource centers through cooperative arrangements among existing field units of state programs and through local public and private efforts

Participants:

Coordinating responsibility—Wisconsin Environmental Education Council

Support responsibility—DNR, DPI, UW System, VTAE

Steps to Accomplishment:

1. Establish criteria and functions for local centers, emphasizing increased accessibility to advice, assistance and materials
2. Assess existing centers according to the criteria
3. Investigate the needs, interests and opportunities for additional centers
4. Formulate a statewide system for information exchange and assistance based on interagency participation and local support

Proposed Schedule: Initiate by fall 1975

Priority Five: PROVIDE FOR PUBLIC AWARENESS

Recommended Activity: Improve the regular communication about environmental problems and issues through improved understanding by the media and provision of timely, objective information

Participants:

Coordinating responsibility—ECB

Support responsibility—DNR, UW System, VTAE

Steps to Accomplishment:

1. Undertake activity to increase awareness of media to the urgency and complexity of environmental issues and provide background on social, economic and ecological implications of alternative decisions
2. Provide information on current issues which includes the range of views affecting decisions
3. Provide information on strong programs and activities in environmental education to encourage recognition and to offer examples
4. Emphasize Wisconsin's unique environmental heritage as an element of the state's bicentennial program by developing informational materials describing the contributions of Wisconsin's early conservationists

Proposed Schedule: Initiate by spring 1975

Priority Six: EXPAND RESEARCH AND DEMONSTRATION

Recommended Activity: Emphasize progress and improvement by a commitment to evaluation and demonstrations which assess current activities and provide for new approaches.

Participants:

Coordinating responsibility—UW System

Support responsibility—DNR, DPI, ECB, VTAE

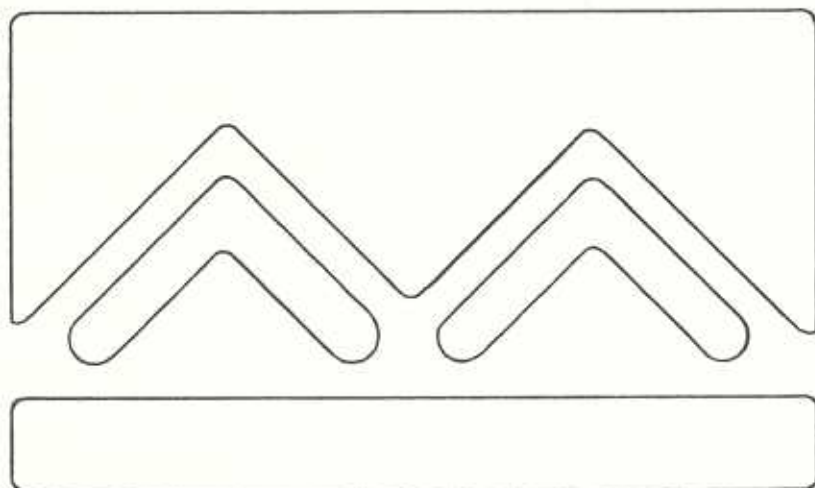
Steps to Accomplishment:

1. Include evaluation as an element of all activities
2. Sponsor research in the formal and nonformal elements of environmental education to identify promising approaches
3. Provide technical and financial assistance to local projects seeking to expand and improve environmental education
4. Annually review the status of existing and new efforts to determine the feasibility of more widespread application
5. Consider the opportunities for additional cooperation among sectors to help overcome the constraint of complexity in most environmental issues

Proposed Schedule: Initiate by fall 1975

The usual answer . . . is more conservation education. No one will debate this, but is it certain that only the volume of education needs stepping up? Is something lacking in the content as well?

Aldo Leopold



sector activities

Many of the activities proposed here are related to the priority processes just described. Further, few of the activities are new and untested; rather most are being used by groups, but not widely enough or with enough support or cooperation. This interrelated framework offers groups and individuals a systematic way to learn and act on the state's environmental problems.

To aid the sectors consider their role and functions, two charts of the planning process are provided. One illustrates the overall environmental education process used in Wisconsin; the other is an example of one sector analysis, which can serve as a model for analysis and planning by other sectors.

Of course, the planning process is seldom complete. There are deficiencies in the state effort, for example, because information on existing activities is incomplete. That, however, is not a deterrent to proceeding on readily identifiable needs. Not all needs can be addressed in an initial plan. Sectors should concentrate on those items for which information, interest and assistance are available.

It is crucial to realize that the sector activities are interdependent. Improvements in the elementary and secondary sector, for example, are not the sole responsibility of teachers and administrators. They need support and assistance, even the demands, of concerned citizens and organizations in order to accomplish the deeply penetrating changes necessary to build environmental education into a school curriculum. The primary activity in elementary and secondary education is, of course, performed by local school districts. State responsibility rests principally with the Department of Public Instruction and is expanded by responsibilities of the Department of Natural Resources and the University of Wisconsin. Instructional television and radio are provided by the Educational Communications Board. Further, environmental organizations have an opportunity to directly assist and reinforce efforts in ways that will enrich curricula and support teachers and administrators seeking to include environmental education. Industry too can play a role, as illustrated by the pioneering contribution of Trees for Tomorrow, sponsored by a group of paper and power companies, to provide an educational camping experience for school children and other groups. The same opportunity and challenge prevail in each sector.

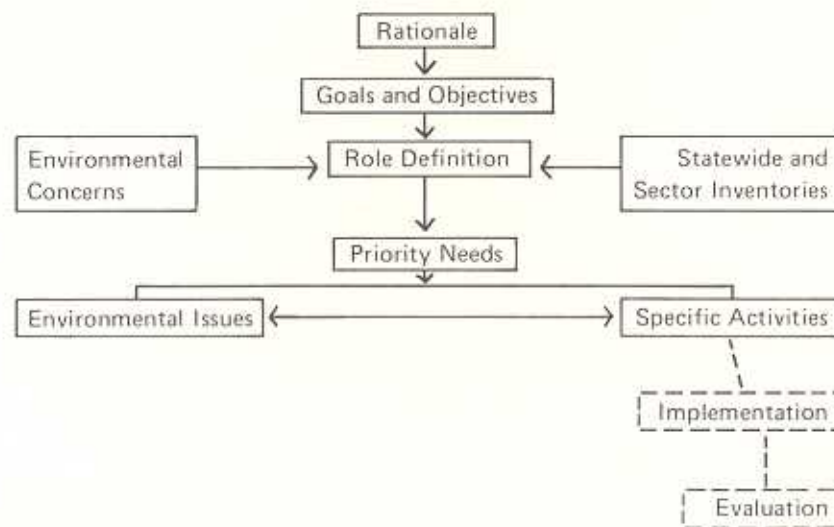


Chart 1.

ENVIRONMENTAL EDUCATION PLANNING PROCESS

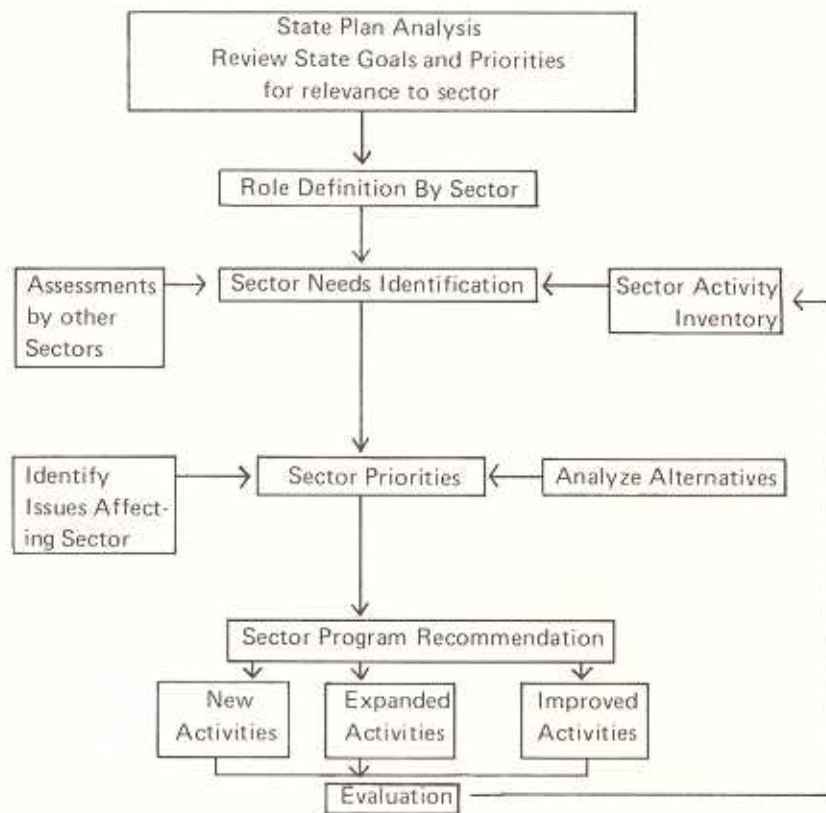


Chart 2.

SECTOR PLANNING FOR ENVIRONMENTAL EDUCATION

Elementary and Secondary Education

1. Expand and upgrade in-service assistance and training for educators
 - a. Identify key environmental educators as resource people
 - b. Improve communication about environmental education with information on the concept of environmental education, current activities, training opportunities and available materials—to be distributed by newsletters, media reports, meetings and journals

- c. Evaluate existing in-service programs to determine additional opportunities
 - d. Form a cadre of environmental specialists to provide in-service assistance
 - e. Use media-based approaches to augment traditional in-service formats
2. Guide school program improvement
 - a. Develop state guidelines for program evaluation
 - b. Publish a handbook of materials on Wisconsin's environment
 - c. Report on exemplary programs
 - d. Expand assistance available through DPI, Cooperative Educational Service Areas (CESAs), UW System, VTAE, ECB and local information centers
 - e. Develop guidelines for extracurricular activities
3. Through an interagency program, increase usefulness of school grounds and outdoor laboratories
 - a. Demonstrate environmental responsibility at school sites by reducing heat loss and noise, visual screening, aesthetics and habitat improvement and soil conservation
 - b. Furnish students with an on-site facility for exploration, research and environmental experience in site development and management
 - c. Increase use and value of school forests and outdoor laboratories by developing guidelines for involvement of students in site development and management and for recreational and instructional use
4. Focus educational process on current community, state, national and international environmental problems
 - a. Establish liaison between schools and community public agencies, civic and environmental groups, labor, business and industry and cooperate for solution to environmental problems
 - b. Utilize out-of-class trips to increase awareness of natural and man-made resources and problems affecting both rural and urban areas
 - c. Examine practices in school system concerning energy use, recycling and use of expendable products to determine possible ways of reducing consumption without jeopardizing educational performance or safety
 - d. Gather together comprehensive information representing all points of view on problems and issues and identify the effects of alternative choices

5. Initiate exchanges and internships for teachers, other educators and students to foster appreciation of conditions and programs in other places and emphasize interchange between rural, urban and metropolitan areas
6. Put together a program improvement plan (by each school system) to analyze and recommend steps for implementing recommendations of this plan, including what assistance will be necessary for implementation

Vocational, Technical and Adult Education

1. Expand the integration of environmental and conservation concepts into full time vocational and technical curricula to emphasize to students the relevancy of their effort in fostering environmental improvement
2. Make training available to citizens through field service programs which:
 - a. Encourage them to evaluate alternatives, attitudes and life styles and to participate in governmental processes to solve environmental problems
 - b. Expand offerings emphasizing environmental awareness and appreciation
3. Add to number of instructors receiving in-service training in the integration of environmental concepts into all disciplines
4. Investigate the potential contribution of vocational institutions to the expansion of local resource centers
5. Develop a cooperative mechanism through the regional councils with University of Wisconsin-Extension to provide special programs that will acquaint citizens with alternate solutions
6. Participate in community surveys of environmental quality

University and College Education

1. Improve environmental instruction for students not specializing in environmental professions
2. Expand outreach to general public, teachers, officials and community leaders through demonstrations, expert assistance, event sponsorship, provision of materials and communication of research findings

3. Intensify research on environmental education methods
4. Form campus committees consisting of representatives of natural and social sciences, planning, agriculture, engineering and communications programs to:
 - a. Discuss inclusion of environmental concepts and examples in all courses
 - b. Design and conduct interdisciplinary courses on environmental issues
 - c. Review the relevancy of professional certification requirements for teachers and other specialists
 - d. Assess the feasibility of establishing an environmental information center in cooperation with state agencies and other potential supporters and users
 - e. Examine and improve the use of natural and man-made elements of the campus and the use of materials, energy and transportation
5. Sponsor forums and workshops with industry, labor, civic and environmental interests to explore common interests, consider implications of tradeoffs and alternative solutions to problems and the foreseeable environmental problems which may require substantial changes in public and personal attitudes toward use of resources

Youth and Student Groups

1. Undertake community surveys which are carefully organized and directed to analyze environmental quality conditions—then develop programs for improvement
2. Initiate projects, such as bike or hiking trail development, cycling clinics and printed guides to available facilities, as ways to emphasize and demonstrate alternatives to consumptive and polluting practices
3. Conduct events and prepare displays to make communities more aware of emerging long-term problems of resource availability and of the potential effects on individual life styles.
4. Integrate environmental quality concern into other activities to make environmental implications a basic consideration in overall programs

Environmental, Conservation and Sportsmen Organizations

1. Look at state and local action programs on land, water and air quality and evaluate state and local government decisions on environmental health, waste disposal and management, roads, streams and lake management, soil and water conservation, open space and park procurement and management and disseminate findings and recommendations to responsible agencies, governing bodies and the public
2. Sponsor community surveys of environmental problems and identify solutions to such matters as environmental health, energy production and conservation, land use regulations and provision for outdoor recreation, open space and transportation
3. Cultivate stronger expertise among group members for participation in reviewing environmental impact statements, establishing air and water quality standards and formulating land use and watershed plans
4. Support educators at all levels by:
 - a. Offering materials and speakers
 - b. Sponsoring field trips, providing for use of any suitable lands held by such organizations
 - c. Awarding scholarships
 - d. Supporting need for funding in school budgets
5. Consider how the group can contribute information on environmental problems to the media—establish training workshops for members to provide necessary skills in communication
6. Recognize those groups and individuals who demonstrate leadership and action in environmental improvement and protection, including not only environmental groups, but public agencies, communities and industries
7. Put together community environmental handbooks which describe natural and man-made elements of the environment, list agencies responsible for environmental activities, identify private groups organized to promote environmental improvement, describe facilities for environmental education and sources of information

Civic, Religious, Fraternal and Service Organizations

1. Participate in community surveys of environmental conditions
2. Sponsor environmental improvement projects

3. Undertake activities to increase awareness of the significance of values and attitudes in maintaining and improving environmental quality
4. Offer scholarships, materials and other needed support for school programs
5. Help organize demonstrations of alternative life styles to dramatize how people can adjust to such emerging problems as energy shortages and solid waste accumulation

Labor

1. Participate in community surveys, with particular emphasis on pollution control, transportation, recreation and planning and zoning elements
2. Support improvement in environmental education in the schools through scholarships and awards and through support for school/community activities
3. Become active in workshops to consider environmental values and ethics to guide future use of the environment, taking into consideration limitations of energy and other resources and necessary adjustments in attitudes toward resource consumption
4. Supply speakers and materials for environmental programs, particularly through regional centers
5. Analyze the opportunities for enhancement of living and working environments and propose programs in concert with groups having similar objectives

Instructional and Commercial Media

1. Expand the availability of visual and printed materials on Wisconsin's environmental resources such as:
 - a. Materials emphasizing understanding of man's living, working and recreational environments
 - b. Television programming on current issues and the debatable alternatives
 - c. Materials describing the pioneering people and concepts which have guided environmental use and protection
2. Participate in or sponsor workshops helping persons from other sectors become more proficient in utilizing media for environmental education

3. Develop instructional programming for teachers on educational channels which emphasizes environmental education, illustrates needed techniques and develops man's awareness and values concerning human and physical environments

Agriculture

1. Sponsor workshops to acquaint persons in this sector with the agricultural implications of changing resource availability and costs and the issues of land use, water pollution and energy conservation
2. Work with other sectors to gain better understanding of rural agricultural and related land use problems by an urban public
3. Consider existing environmental education programs of agricultural groups as they relate to this plan and formulate a program for improvement
4. Arrange agricultural trips for schools and other groups
5. Advise and assist financially the development of environmental education programs
6. Provide recognition to those who demonstrate progress in environmental conservation and education

Business and Industry

1. Participate in community surveys of environmental problems with special regard for comprehensive analysis of the beneficial and detrimental economic implications of alternatives
2. Provide recognition to outstanding local, state, public and voluntary efforts to foster environmental education
3. Join in workshops, seminars and advisory groups with other sectors to consider long-term implications of resource supplies, environmental improvement and protection and alternative attitudes and values on resource consumption
4. Improve the availability of industrial sites for environmental education trips and support development of industrial environmental education programs
5. Expand the number of materials and speakers for environmental education, particularly through contribution to regional centers
6. Assist in gaining adequate funding for environmental education
7. Work out an industrial perspective on environmental education and provide advisory assistance in program development

Government

Local

1. Prepare and disseminate an annual quality of the environment report to document progress of public programs and to acquaint the public with anticipated problems requiring public choices
2. Institute an annual event such as an "Environment" or "Earth Day" to emphasize the significance and contribution of natural and man-made elements of the community environment and to consider efforts to remedy any environmental problems
3. Review official policies and practices having environmental impact to evaluate potential for reducing consumption, increasing recycling and enhancing environmental quality without reducing essential services.
4. Support environmental education in community schools by budgetary allocations, by encouraging local agencies to augment school environmental activities and by making community facilities such as parks, waste treatment and recycling plants available for field trip use
5. Formulate an official policy to guide planning and program formation and execution which is based upon an attitude of optimum environmental enhancement in all public activity, particularly in transportation, land use, open space, housing, waste management, recreation, environmental health, surface water management and soil conservation

State

1. Prepare an interagency guide to facilities available for environmental education and assist in expanded use
2. Increase environmental programming on educational television through cooperative production, utilizing capabilities of the Educational Communications Board, University of Wisconsin—Extension, Department of Public Instruction and the Department of Natural Resources—programming emphasis should be on increasing awareness of environmental assets for recreation, environmental problems and issues.
3. Prepare more frequent reports to update information available to the public on environmental resources and on current issues and problems; prepare an annual report on the state of the environment
4. Continue efforts to conserve energy and promote recycling and identify additional measures to make state government a leading example of environmental responsibility
5. Review existing legislation, administrative codes and procedures relevant to implementation of this plan and consider changes where implementation would be prohibited or inhibited

6. Expand availability of audio-visual materials to schools and groups by establishing distribution of additional materials through proposed regional centers
7. Prepare and finance a work program for each agency to implement this plan's recommendations as they relate to a respective agency's functions
8. Formulate and adopt an interagency policy incorporating the concept of minimal deleterious environmental impact in all routine program activities
9. Adopt, as a basic element of state development and management policy, an environmental stewardship goal as a principal consideration in formulation of long-range objectives
10. Fulfill the state's goals for education relating to the physical environment through leadership of the Department of Public Instruction, with appropriate cooperation from other agencies
11. Increase guidance and assistance available to other sectors

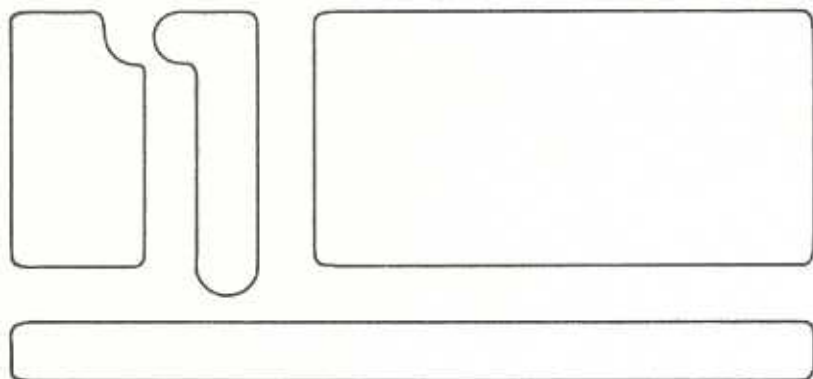
Federal

1. Recognize the overall leadership of the state in determining environmental education priorities and inform the appropriate state agencies before undertaking any new or special activity in the state
2. Apply the goals, priorities and recommendations of this plan in reviewing grant proposals to optimize federal assistance—provide sufficient funds for environmental education support to offer reasonable expectation of funding success among desirable programs
3. Provide information on exemplary programs elsewhere which might be effectively applied in Wisconsin and consider ways to demonstrate such approaches
4. Identify environmental education opportunities at all federal areas and provide for public visitation, ranging from nature appreciation to observing environmental control
5. Provide additional current materials on methods of environmental education, environmental problems, national and international environmental issues, environmental values and ethics.
6. Review of this plan, particularly by the National Park Service, U.S. Forest Service, Soil Conservation Service, Corps of Engineers, Environmental Protection Agency, Bureau of Sport Fisheries and Wildlife and Department of Health Education and Welfare to identify opportunities for collaboration

The Congress of the United States finds that the deterioration of the quality of the Nation's environment and of its ecological balance poses a serious threat to the strength and vitality of the people of the Nation and is in part due to poor understanding of the Nation's environment and of the need for ecological balance . . .

Much of the work that has been done so far has consisted of dealing with immediate threats and halting the worst practices, and we have not always succeeded in doing that. But the task that remains will be incomparably more difficult: We must change the system that makes such crash programs necessary.

William D. Ruckelshaus
THE PROGRESSIVE, Toward a New Ideology



primary environmental issues

This final dimension identifies the deficiencies of environmental protection, use or management which can be best resolved by better public awareness and understanding of issues and alternatives. But the question may be raised: Why concentrate on only a few central and controversial issues?

The essence of environmental education, as a purposeful public activity, is an objective, comprehensive grappling with the direct problems of environmental quality—the conflicts and the choices—which confront us now. We do not yet know what contribution a new environmental ethic can make to our individual lives and to long-range public purposes, but we will begin to understand by focusing on specifics.

These issues clearly spotlight how complex and interrelated environmental problems are. Each issue illustrates the human dilemma of resource use which may result in potentially harmful side effects, misallocation, quality deterioration or involve restoration and other dimensions of improvement. By such an approach, the cooperative, multi-faceted import of this plan, with attention to demonstrations and testing, is reinforced.

Although this list deserves close study throughout Wisconsin, there may be overriding local issues which must be resolved and therefore take precedence. Thus, this list is illustrative, and such pressing local problems are the most essential focus for environmental education.

Another point to be underscored is that a study of these issues does not necessarily involve going out and looking at dirty water. Instead, we must look at the system that was supposed to protect us from that dirty water. Why aren't existing programs being implemented? Why aren't they working?

Population. The size and distribution of population has become a highly controversial topic of paramount concern. Failure of society to objectively analyze population issues hampers effective action on other social problems. Urban and rural planning in the state and by the state must consider trends in population in relation to the impacts on urban and rural environmental quality and land use and productivity.

Land Use. Conflicts between uses are increasing, yet the tools to prevent and reconcile such conflicts appear to be inadequate. The public interest, including environmental protection, may be in conflict with private landowners' rights. In urban areas, there is competition for space for industrial development, housing, freeways and recreational areas. In rural areas there is concern over encroachment onto agricultural land, mining and second home development.

Energy. Production and consumption of energy have emerged as a major problem, with implications far beyond the state's boundaries. Generation of energy, by what means and at what location to meet levels of demand, is a challenge that has to be faced. The use of scarce and costly petroleum requires public allocation.

Solid Waste. Two facets contribute to reexamination of current practices. One is the amount of space used in solid waste disposal along with associated costs of collection and disposal. Another is the recycling opportunities which provide useful raw materials as well as reduce waste volume. We are beginning to understand the profligacy of our approach to materials disposal, but there remain issues over whether to ban nonreturnable beverage containers, how to develop markets for recycling materials and how to administer large-scale recycling programs.

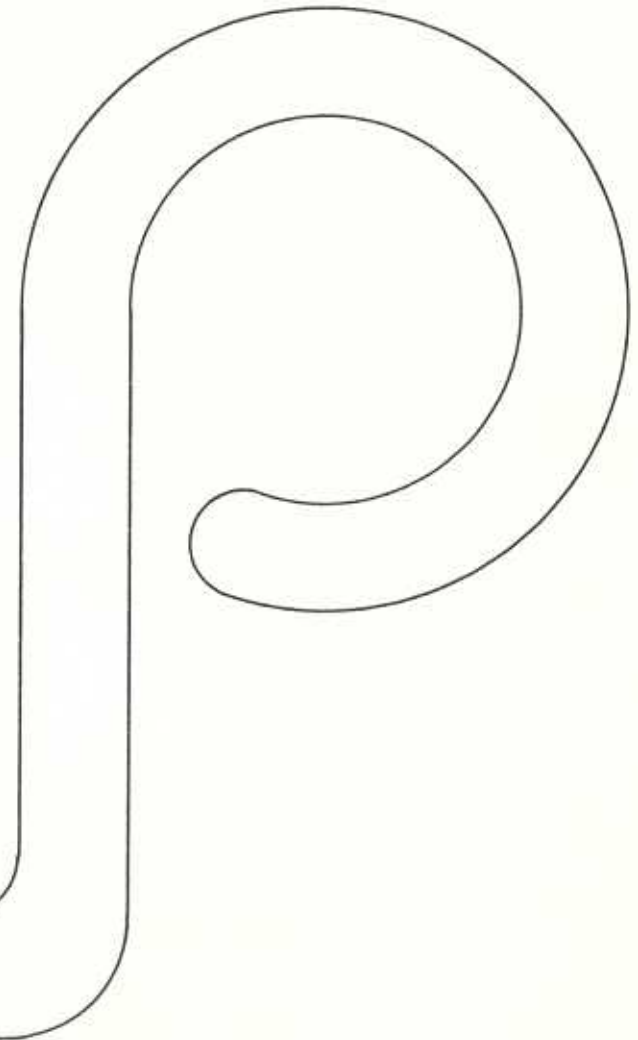
Recreation. Pressures on urban and rural recreation facilities are increasing with more leisure time and greater interest in natural and cultural appreciation and activity. Retention of quality experiences becomes difficult. Designation of wild rivers and lands is being pursued, but there is not adequate balance with urban facilities such as trails. Private development may foreclose public use or alter the natural environment, such as in creation of artificial lakes with the loss of free flowing streams.

Agriculture. Many assumptions about agricultural practices and productivity are being challenged by side effects of fertilizer and other chemical use, by mounting energy demands, by the relationship between costs and prices and resulting fluctuations in commodity supplies, along with international economic and social implications. A primary matter is how to meet mounting worldwide food demands when we are not safeguarding our productive capacity and lands.

Natural Habitats. There are many aesthetic, recreational and ecological values to be derived from preservation of the state's variety of natural plant and animal communities. Preservation of unique examples has been long sought and progress made, but an increasingly urban population places severe pressure on many areas of less distinction but essential value if a rich variety of plant and animal life is to survive.

Transportation. Travel in Wisconsin is heavily dependent upon the private automobile. Within urban communities, mass transit is often neglected while freeways and parking lots have proliferated. For intercommunity travel, we have not met our needs by larger commitments to highway construction and are now hampered by the reduction in many alternative modes essential to a comprehensive system.

Environmental Health. We are often unaware of insidious but toxic elements discharged into our environment, such as air and water pollution. In urban areas particularly there are also hazards from litter, rats and lead poisoning. Too often our protection is hardly sufficient and tends to be remedial rather than preventive.



WISCONSIN ENVIRONMENTAL EDUCATION ACT—PROPOSED*

AN ACT to amend 15.347 (2); and to create 15.911 (3), 15.915 (3), 20.285 (1) (fb) and 36.21 of the statutes, relating to creating a Wisconsin environmental education board and providing an appropriation.

The people of the state of Wisconsin, represented in senate and assembly, do enact as follows:

SECTION 1. POLICY AND PURPOSE.

(1) POLICY. It is declared to be the policy of the legislature that because environmental deterioration and resource scarcity are threats to the economic and social well-being of Wisconsin's citizens and because such conditions result in more costly and less adequate supplies of natural resources for industrial, commercial, agricultural and individual use; in reduced recreational opportunities; and in lessened scenic value for public enjoyment and tourism; environmental education of Wisconsin citizens is essential. It can best be achieved through state leadership in cooperation with local schools, community and civic organizations, local, state and federal agencies and other environmental education programs.

(2) PURPOSES. The purposes of this act are to:

(a) Reaffirm a state cooperative tradition originating in conservation education and advance Wisconsin's pioneering heritage in environmental stewardship;

(b) Describe and establish a state responsibility for environmental education;

(c) Encourage public values and attitudes

which support maintenance of a productive, safe and enjoyable environment; and

(d) Provide legislative authority for a Wisconsin environmental education board which is to succeed the Wisconsin environmental education council created by executive order number 18 (1971)

SECTION 2. 15.911 (3) of the statutes is created to read:

15.911 (3) WISCONSIN ENVIRONMENTAL EDUCATION BOARD. The Wisconsin environmental education board shall have the program responsibilities specified for the board under s. 36.21.

SECTION 3. 15.915 (3) of the statutes is created to read:

15.915 (3) WISCONSIN ENVIRONMENTAL EDUCATION BOARD. There is created a Wisconsin environmental education board which is attached to the university of Wisconsin under s. 15.03. The board shall consist of the state superintendent of public instruction, the secretary of the department of natural resources, the president of the university of Wisconsin, the director of the state board of vocational, technical and adult education, the executive director of the educational communications board, or their designees, and one senator and one representative to the assembly, appointed as are members of standing committees in each house for 2-year terms, and one member appointed by the governor for a 2-year term. The board shall appoint a full-time executive secretary.

SECTION 4. 20.285 (1) (fb) of the statutes is created to read:

20.285 (1) (fb) Environmental education board. A sum specific for the programs of the Wisconsin environmental education board under s. 36.21, and the administration thereof.

SECTION 5 36.21 of the statutes is created to read:

36.21 WISCONSIN ENVIRONMENTAL EDUCATION BOARD. (1) DEFINITIONS. As used in this section:

(a) "Board" means the Wisconsin environmental education board.

(b) "Council" means the Wisconsin environmental education advisory council.

(c) "Environmental education" is the learning process for acquiring attitudes and values and choosing practices which maintain a healthy and productive natural environment in a harmonious relationship with man's economic, political, social, cultural, and esthetic systems. Environmental education includes conservation and outdoor education.

(d) "Member agencies" means agencies represented by membership on the board.

(2) POWERS AND DUTIES. (a) Generally. The board is responsible for:

1. Providing guidance and assistance to environmental education activities in the state.

2. Preparing and maintaining an environmental education plan.

3. Encouraging and assisting a program of regional environmental education centers.

4. Advising and reporting annually to the governor and legislature on the status of environmental education.

5. Recommending such legislation respecting environmental education as the public interest may require.

(b) Environmental education programs. Program activities of the board shall be directed toward advancing and complementing existing programs of its member agencies, including:

1. Provision of comprehensive balanced information on state environmental issues.

2. Development of improved curricula, guidelines, instructional materials and facilities for environmental education.

3. Training for teachers and other educational personnel, community leaders and public employees with environmental responsibilities.

4. Research and demonstrations concerning improved methods of environmental education.

5. Local and regional programs through which particular needs and interests of areas within the state may be met.

(c) Financial support. The board may support programs within the state with funds appropriated under s. 20.285 (1) (fb) or from public or private gifts and grants. Support shall be provided to advance programs identified in part (b), and may be provided, through grants and contracts, to public agencies and nonprofit private organizations. Support shall not exceed 75% of program costs and shall be provided in accordance with criteria and procedures established by the board.

(d) Program assistance. The board, through its member agencies and staff, shall provide such program assistance as may be feasible for accomplishing cooperative projects

sought by local and regional public agencies and private organizations.

(3) ADVISORY COMMITTEE. The board shall create a broadly representative Wisconsin environmental education advisory council and shall appoint thereto not more than 11 persons selected from public and private life with due regard to their fitness, knowledge and experience. The members of the council shall serve for staggered 3-year terms and may be reappointed to serve one additional term. Section 15.09 applies to the council. The council shall perform such functions as the board may assign, including, but not limited to:

(a) Review and evaluation of state programs and activities in environmental education.

(b) Preparation and revision of a state environmental education plan.

(c) Identification of and assistance in conduct of demonstrations on improved methods.

(d) Liaison with various sectors of environmental education interest.

SECTION 6. 15.347 (2) of the statutes is amended to read:

15.347 (2) NATURAL RESOURCES COUNCIL OF STATE AGENCIES. There is created in the department of natural resources a natural resources council of state agencies consisting of 19 persons. Seventeen of the members shall represent 15 officers, departments or independent institutions and agencies as follows, and each member shall be designated by the respective named officer or head of the department or independent institution or

agency: the governor, the attorney general, the public service commission, the board of regents of the university of Wisconsin system, the board of soil and water conservation districts, the Wisconsin environmental education board, the departments of administration, of agriculture, of local affairs and development, of public instruction and of transportation, and the division of health shall each designate one member and the department of natural resources shall designate 2 members. The university of Wisconsin shall designate 3 members to represent, respectively, the cooperative extension services, the geological and natural history survey and the water resources center. In addition, the chairman of the legislative council shall designate 2 members of the council to be members.

SECTION 7. INITIAL MEMBERSHIP. The initial members of the Wisconsin environmental education advisory council under section 36.21

(3) of the statutes, created by this act, shall be the members, on the effective date of this act, of the advisory committee appointed under executive order number 18 (1971), and the terms of such members shall be the duration of the terms to which they were appointed under the executive order.

(End)

Draft—October, 1974

*based on AB 1530 1973 Assembly Session

Analysis by the Legislative Reference Bureau*

There is presently a Wisconsin environmental education council, created by executive order number 18 (1971), which is generally charged to give assistance to and to assist in the coordination of environmental education programs in the state. This bill creates a Wisconsin environmental education board which is to succeed the nonstatutory education council. The board is attached to the university of Wisconsin and consists of 2 legislators and representatives from various state agencies which are concerned with education or environmental protection or both.

The general functions of the board continue to focus on coordination of and assistance to environmental education programs, but the bill also sets out more specific responsibilities, such as the development of an environmental education plan, the improvement of environmental education curricula and teaching methods, and the administration of financial assistance to environmental education programs.

The bill directs the board to create and appoint citizen members to an environmental education advisory council. This council is the counterpart of the environmental education advisory committee which was created under executive order to aid the environmental education council, and the members of that advisory committee are to be the initial members of the advisory council.

For further information, see the appended fiscal note.

AN IMPLEMENTATION BUDGET

Priority 1	Council	\$57,000 annually
Priority 2	no additional request, initiate by budgetary reallocation	
Priority 3	no additional request, initiate by budgetary reallocation	
Priority 4	\$25,000 support for initiating centers	
Priority 5	no additional request, initiate by budgetary reallocation	
Priority 6	\$50,000 grants for demonstrations and research	

Annual Total \$132,000

EXECUTIVE ORDER NO. 44

WHEREAS, United States Public Law 91-516, the Federal Environmental Education Act, recognizes the critical need for developing programs for environmental education; and

WHEREAS, the State of Wisconsin is firmly committed to protect and improve the environment and the quality of life through the furtherance of State programs to restore, preserve, and enhance the environment in the State; and

WHEREAS, a concerted effort to educate and inform the citizens of Wisconsin is vital to the quality of life in this State;

NOW, THEREFORE, I, PATRICK J. LUCEY, Governor of the State of Wisconsin, do hereby create the WISCONSIN ENVIRONMENTAL EDUCATION COUNCIL and charge the Council to develop a state plan

for environmental education, to provide technical assistance to state and local agencies and citizen groups in the development of environmental programs, to assist in the broad coordination of environmental education activities in Wisconsin, to expend and distribute funds allocated to the Council, to implement other environmental education activities required by Wisconsin Statutes and to recommend such changes in the Wisconsin Statutes with respect to environmental education as the public interest may require. The Council shall consist of the head (or his designated alternate) of the state agencies assigned environmental education responsibilities under the Wisconsin Statutes: Presently the State Superintendent of Public Instruction, the Secretary of the Department of Natural Resources, the President of the University of Wisconsin, the Executive Director of the Wisconsin State Universities, and the Director of the State Board of Vocational, Technical and Adult Education. The Director of the Educational Communications Board or his designated representative, and a representative from the office of the governor, shall also be members. The Council shall appoint a full time Executive Secretary, who shall be a voting member of the Council. The Council shall annually elect a chairman. The Council is directed to submit its plan annually to the Governor beginning January 1, 1972, accompanied by a report of its past activities and accomplishments.

The Council is directed to appoint a broadly representative Advisory Committee consisting of not more than 15 persons other than State agency personnel, selected from public and private life with due regard to their fitness, knowledge, and experience in activities as they relate to our society and affect our environment. The members of the Advisory Committee shall serve for a three-year term; provided, that of those first appointed, one-third shall be appointed for one year, one-third for two years, and one-third for three years. Thereafter, the Council shall appoint members for a three-year term. Committee members may be reappointed by the Council to serve an additional term or terms. The members of the Advisory Committee may be compensated for authorized expenses.

In furtherance of the purposes of this order, state agencies are directed, within their fiscal capabilities, to make appropriate resources available to the Council upon request.

July 26, 1972

ADVISORY COMMITTEE MEMBERSHIP

Current Members:

Roger Bauer	Robert Matteson
Johanna Clausen	Julian Modjeski
Richard Hemp	Nancy Noeske-Former Chairman
Vernon Knight	William Rogers-Chairman
George Kupfer-ViceChairman	Gerald Scott
Janet Ladowski	Leah Senff
Jeffrey Littlejohn	Russell Widoe

Former Members:

Reverend Mark Schommer	71-73	Michael Wagner	71-72
John Givens	71-73	Shirley Crinion	71-72
Susan Harris	71-73	Clarence Schoenfeld	71-72
Byron Berg	73	Louise Erickson	71-73
Reginald Smith	71-73	Daniel Trainer	71-72
Roy Durst	71-73	Robert Ellingson	71-72
Karen Kobey	71-73	John Plenke	71-72
William Lamers	71-72	David Engleson	71-72
John Torinus	71-72	Betty MacDonald	71-73

WISCONSIN ENVIRONMENTAL EDUCATION COUNCIL MEMBERSHIP

Current Members:

Farnum Alston, Office of the Governor
 Albert Beaver, University of Wisconsin System
 Senator Walter John Chilsen, Wisconsin Legislature
 Eugene Lehrmann (Chairman), Board of Vocational, Technical & Adult Education
 Norman Michie (Vice-Chairman), Educational Communications Board
 Representative Lewis Mittness, Wisconsin Legislature
 George Strother, University of Wisconsin-Extension
 Robert Van Raalte, Department of Public Instruction
 Lester Voigt, Department of Natural Resources
 David W. Walker, Executive Secretary

Former Members:

William C. Kahl, State Superintendent of Public Instruction, Council Chairman 1971-73
 Allan Slagle, University of Wisconsin System

TECHNICAL ASSISTANCE COMMITTEE

Nancy Bauer, Educational Communications Board
 Marvin Beatty, University of Wisconsin-Extension
 Robert Ellingson, Department of Natural Resources
 David Engleson, Department of Public Instruction
 Allen Linster, Board of Vocational, Technical & Adult Education

GLOSSARY OF TERMS*

Adult education	That portion of an individual's formal and nonformal learning processes which takes place during his adult years.
Curriculum:	A specific course of study within a given subject or several different subject areas.
Environmental education:	Environmental education is the learning process for acquiring attitudes and values and choosing practices which maintain a healthy and productive natural environment in a harmonious relationship with man's economic, political, social, cultural and aesthetic systems.
Environmental ethic:	A value system for guiding individual and social behavior to assure healthy functioning of ecological processes essential to maintenance and enrichment of human life.
Formal education:	That portion of an individual's education which is provided through specific recognized institutions—elementary schools, junior high schools, high schools, vocational schools, junior colleges, colleges and universities.
Implementation:	A term used to mean "to carry into effect" or accomplish a particular program or philosophy (i.e., the implementation of a curriculum.)
In-service teachers:	Term used to describe teachers who are currently employed in public, private or parochial schools.
K-12:	That portion of an individual's formal education which takes place between kindergarten and twelfth grade.
Nonformal education:	Processes by which an individual gains knowledge and experience outside of recognized formal educational institutions.

Post high school, higher education, post-secondary:

All terms used to describe an individual's formal education following graduation from high school.

*Most of these definitions were adapted from "Environmental Education In Minnesota"

ENVIRONMENTAL EDUCATION REFERENCE LIST

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To Live On Earth, Sterling Brubaker, The New American Library, Inc., 1972

You Are an Environment, Noel McInnis, The Center for Curriculum Design, 1972

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The University of Wisconsin Sea Grant College Program is gratefully acknowledged for its assistance in the preparation and design of this report.

In a nutshell, then, while there are a number of approaches to the use of the term ecology, when we "take all the feathers off of it," as the saying goes, ecology is a way of looking at our world that says to us: "I am a part of my environment and my environment is a part of me."

Clay Schoenfeld

OUTLINES OF ENVIRONMENTAL EDUCATION

