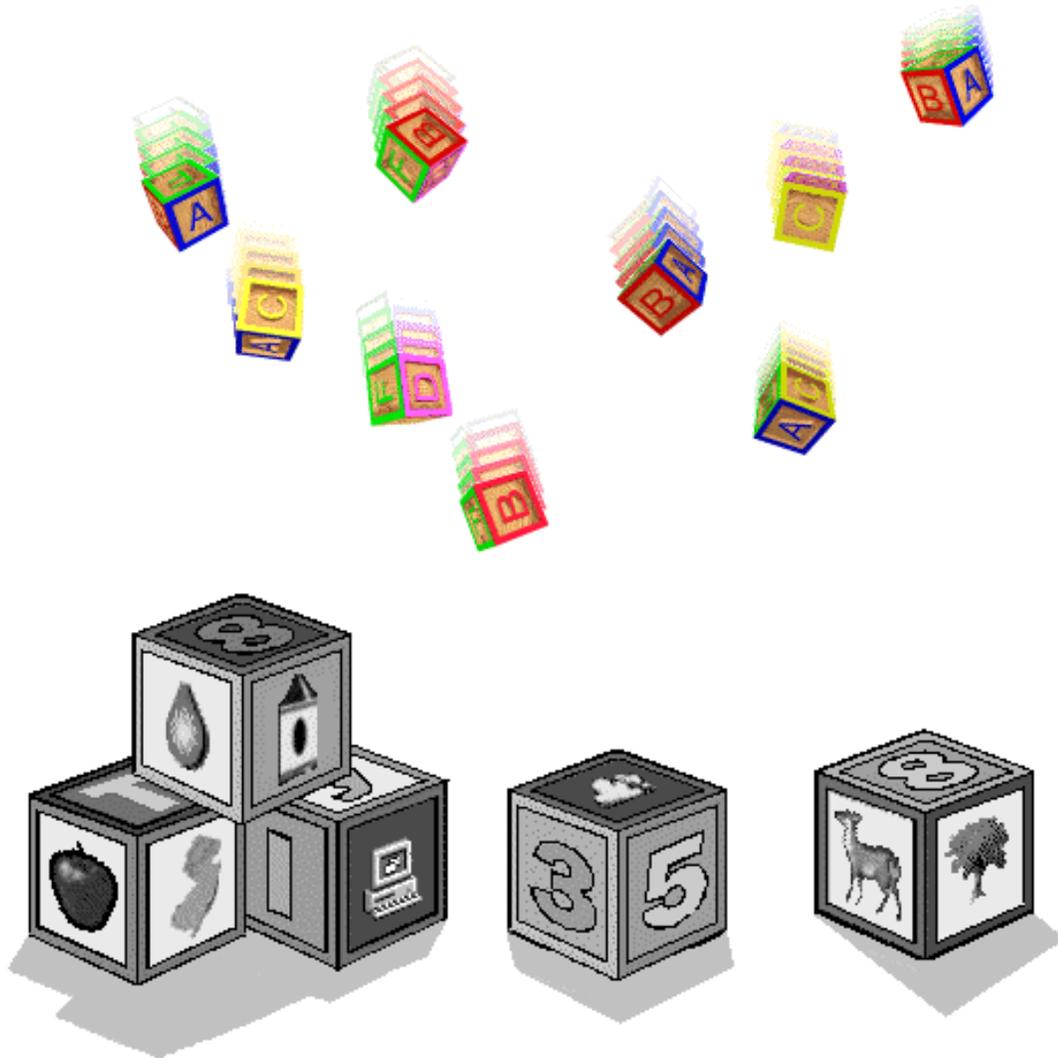


Building Blocks for the Future

Environmental Education in New Jersey



**The New Jersey Commission on
Environmental Education
And Interagency Work Group**

1999 – 2000

*“If we do not take the time to review the past
We shall not have sufficient insight to understand the present
Or command the future;
For the past never leaves us, and the future is already here.”*

- Lewis Mumford, **“The Myth of the Machine: Technics and Human Development”**
(New York: Harcourt, Brace & World, Inc., 1966) pg. 13.



To learn more about the work of the
New Jersey Commission on Environmental Education and
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Building Blocks for the Future
Environmental Education in New Jersey

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Building Blocks for the Future

Environmental Education in New Jersey

New Jersey Commission on Environmental Education, 1999 - 2000

Louis Iozzi, Ed.D. (Chair, 1999)

Cook College, Rutgers University

Fred Ellerbusch (2000)

New Jersey Institute of Technology

John Kirk, Ph.D. (Vice Chair, 1999 – 2000)

New Jersey School of Conservation, Montclair State University

Helen Skerratt (1999 – 2000)

Sharon School

Kathleen McLaughlin (1999 – 2000)

Arthur Rann Middle School

Suzanne Willis (1999)

Hunterdon Central Regional High School

Gracelynn Johnson (2000)

Camden High School

Patricia Hanratty, Ed.D. (1999)

George Washington School

John Lysko (2000)

Ocean Township High School

David Nash (1999 – 2000)

New Jersey Principals and Supervisors Association

Robert DeCicco (2000)

New Jersey School Boards Association

Don Haberstroh (1999 – 2000)

Partners for Environmental Quality

James Shissias (1999 – 2000)

PSE&G

Frank Gallagher (1999 – 2000, Chair)

Alliance for New Jersey Environmental Education

Barbara Rich (1999 – 2000)

Association for New Jersey Environmental Commissions

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Environmental Education in New Jersey

New Jersey Commission on Environmental Education, 1999 - 2000

Pat Kane (1999 – 2000)
New Jersey Audubon Society

Elaine Puzo-Castoro (1999)
Newark Museum

Erin Dougherty (2000)
Morris Museum

Karen Wintress (1999 – 2000)
American Re-Insurance Co.

Barry Schlegel, CIH (1999 – 2000)
Environmental and Occupational Health Sciences Institute

Emile DeVito, Ph.D. (1999 – 2000)
New Jersey Conservation Foundation

Anne Galli (1999 – 2000)
Hackensack Meadowlands Development Commission Environment Center

Joan Elliot (1999 – 2000)
New Jersey Department of Agriculture

Sam Race (1999 – 2000)
New Jersey Department of Agriculture

Christine Keresztury (1999 – 2000)
West Deptford Public Library

Eileen McGinnis (1999)
Policy and Planning, Office of the Governor

Connie Hughes (2000)
Policy and Planning, Office of the Governor

Tanya Oznovich (1999 – 2000)
New Jersey Department of Environmental Protection

Joseph Eldridge (1999 – 2000)
New Jersey Department of Health and Senior Services

Toni Hendricksen (1999 – 2000)
New Jersey Department of Law and Public Safety

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Environmental Education in New Jersey

New Jersey Commission on Environmental Education, 1999 - 2000

Raymond Mueller, Ph.D. (1999 – 2000)

The New Jersey Commission on Higher Education

Arthur Mitchell (1999 – 2000)

The New Jersey Department of Education

Interagency Work Group, 1999 - 2000

Rodney Groff (1999 – 2000)

New Jersey Department of Community Affairs

Mimi Dunne (1999 – 2000)

New Jersey Department of Environmental Protection

Lynn Keepers (1999 – 2000)

New Jersey Department of Human Services

Paul Kaleda (1999)

New Jersey Department of Labor

Carol Hoeman (2000)

New Jersey Department of Labor

George Schlosser (1999 – 2000)

New Jersey Department of Law and Public Safety

Richard Belcher (1999 – 2000)

New Jersey Department of Agriculture

John Dougherty (1999 – 2000)

New Jersey Department of Education

Elizabeth Faircloth (2000)

New Jersey Department of Environmental Protection

Marc Rogoff (2000)

New Jersey Department of Environmental Protection

Building Blocks for the Future

Environmental Education in New Jersey

About this Report, The New Jersey Commission on Environmental Education And the Interagency Work Group

This report serves three functions: To highlight the accomplishments of the New Jersey Commission on Environmental Education and Interagency Work Group in 1999 – 2000; identify key groups, services and resources in the field of environmental education that will facilitate its implementation in New Jersey during this new century; and provide insight regarding future interests of the commission and work group.

The New Jersey Commission on Environmental Education has formally existed through Executive and Administrative Orders since 1989 and is administered as an “in but not of” commission of the New Jersey Department of Environmental Protection. Its membership is diverse and includes representation from environmental, conservation, civic, youth and faith-based organizations, public and private school teachers and administrators, colleges and universities, businesses and industry, and government.

Beginning in 1990 the commission researched the status of environmental education in New Jersey and compared it with implementation nationwide. They were then asked to develop a master plan for the delivery of environmental education in New Jersey. Entitled *Environmental Education in New Jersey: A Plan of Action*, the final plan was presented to state officials in 1993.

This Plan of Action continues to be a living and evolving document – a collection of goals, guiding principles and recommendations designed to foster environmental literacy amongst all ages and audiences statewide. In 1996 The New Jersey Environmental Education Act (N.J.S.A. 18A:6-91.1 et seq.) was passed and the commission was statutorily established and charged with the implementation of this plan.

The goal of the Plan of Action is to “develop in the citizens of New Jersey the knowledge, attitudes and values, skills and behaviors needed to maintain, protect and improve the environment.” Components of the plan and/or the act include the following:

- Coordination, promotion, development and enhancement of environmental education training and programs for all ages and in all types of learning situations;
- Creation of an electronic directory of environmental education resources and information;
- Celebration of annual Earth Day activities statewide;
- Creation of an environmental education trust fund; and
- Production of an annual report regarding the status of environmental education in New Jersey.

The state’s environmental education act created a second entity – the Interagency Work Group. Originally assigned to conduct an inventory of environmental education resources offered by state government, work group members have been instrumental in assisting commission members with tasks and responsibilities during the past five years. Membership currently includes representation from seven state government agencies.

Building Blocks for the Future

Environmental Education in New Jersey

The commission and work group meet jointly six to seven times per year (usually in September, October, November, February, March and May). Periodically, members of the work group meet separately if working on a specific task or addressing an issue directed towards state and/or local government. All of these meetings are usually held in Trenton or in another central location in New Jersey.

In addition, there are ongoing active committees made up of both commission and work group members. Committee meetings are held on an 'as needed' basis at various locations throughout the state. These committees include the following:

- Legislative and Finance;
- Publications;
- Program; and
- Environmental Education (Electronic) Network.

Commission and work group members are recognized as members of the Alliance for New Jersey Environmental Education, the state's nonprofit membership association for environmental education professionals and supporters. One interest of the commission is to assure that their own efforts are coordinated as closely as possible with alliance goals and activities. As a result, commission and work group members are invited to be active participants in the alliance's statewide environmental education conference held annually in January, as well as the annual leadership retreat held in March. Members from the alliance are also in regular attendance at commission meetings and committee meetings. Finally, a summer joint planning meeting is held each year for interested members of the alliance, the commission and work group.

Building Blocks for the Future

Environmental Education in New Jersey

About the Field of Environmental Education

The goal of professionals and other persons interested in the field of environmental education is the nurturing of an environmentally literate citizenry. An environmentally literate person understands the complex relationships that exist between people and societal needs and activities, and the impacts they have on natural resources and ecological systems. These individuals would use that understanding to make balanced and sound decisions and plans, or to take appropriate actions, that serve to protect the environment, human health, the economy, and overall quality of life in long-term sustainable fashion.

The field of environmental education is established and growing nationally as well as globally and has existed in various forms in New Jersey since the early half of this past century. Its beginnings trace back to early Science and Geography education efforts, as well as nature study. Its background also includes conservation and outdoor education efforts of the mid-1900s. The field of environmental education as we know it today was impacted by Earth Day, 1970, as well as by a series of international environmental education forums coordinated in the 1970s by the United Nations. This field continues to evolve into a comprehensive arena for research, educational methodology and technological advancement that is being implemented through a variety of approaches for all ages and in all subject areas and instructional settings.

People that study, practice or support environmental education include educators at museums, nature centers, parks, zoos, aquariums, camps and environmental education facilities; classroom teachers; college and university faculty; government representatives in federal, state and municipal government as well as soil conservation districts and county extension services; educators employed by conservation, environmental, civic, volunteer and religious organizations; youth and community service leadership; and professionals employed by corporations and businesses.

Examples of environmental education programs, resources and services include school, family and community-based projects; curriculum supplements and classroom materials; professional development opportunities for educators; community, adult, family and children's programs; innovative uses of technology; and outdoor experiences and pursuits.

The educational process is the necessary and valuable thread that is woven between environmental information and data and its application to people's daily activities and levels of understanding. *Environmental Education in New Jersey: A Plan of Action*, includes goals, guiding principles and recommendations for environmental education and is designed to improve and coordinate environmental education efforts in New Jersey. Copies of the Plan and related publications are available from the commission through the New Jersey Department of Environmental Protection.

Building Blocks for the Future

Environmental Education in New Jersey

Building Capacity for Environmental Education in New Jersey

The environmental literacy of the nation will depend on the success of environmental education practitioners to implement strong programs at state and local levels. What is needed is the supportive infrastructure provided by ‘capacity building’ – that is, the development of comprehensive environmental education programs at state and local levels.

In the early 1990s national research was conducted by environmental education professionals at the University of Wisconsin-Stevens Point to study the various levels of implementation in the states. What resulted from these findings was the first state-level environmental education program model to guide states’ efforts to achieve quality programs and environmental literacy. Using this model, two national surveys have since been conducted (1995 and 1998) to establish baseline data and track the status of environmental education within the states.

The status of these components in New Jersey are described below and are recognized nationally as cornerstones for a comprehensive statewide environmental education program. While the authors agree that the model is not conclusive and still evolving, it has been that the more components a state has in place, the more successful that state’s efforts will be.

The commission and work group members determined that using this model to gauge the health of environmental education in the state would be a reflective and useful planning tool to strengthen and further environmental education during this new century.

Sources used for the above text:

Ruskey, A., Richard Wilke and Tracie Beasley. “*A Survey of the Status of State-Level Environmental Education in the United States – 1998 Update.*” *The Journal of Environmental Education*, Volume 32, Number 3; Spring, 2001. Pgs. 4 – 14

“**A Guide to the Components of Comprehensive Environmental Education Programs at the State Level.**” *Environmental Education & Training Partnership - States Program*. 2001.

1. **State Environmental Education Master Plan:** Through an Executive Order signed in 1989 the New Jersey Commission on Environmental Education was convened to develop a statewide environmental education plan. In final form, *Environmental Education in New Jersey: A Plan of Action*, was completed in 1993 and is still circulated. Plan components include recommendations for environmental education implementation for diverse facets of the state's citizenry; environmental education guiding principles and goals (knowledge, attitudes & values, skills & behaviors); mission statement; and background information. In 1996 the New Jersey Environmental Education Act was passed (N.J.S.A. 18A:6-91.1 et seq.) that created the commission and the state's first Interagency Work Group and charged them with plan oversight and implementation. In 2000 the commission and work group began the process of updating the Plan of Action, which will be completed in 2002. Plan accomplishments can be found in the areas of classroom, family and community-based initiatives. Focus areas that require attention include adult education, pre-service training, programming with local government, public education and increased partnerships with the corporate and business community.

Building Blocks for the Future

Environmental Education in New Jersey

2. **State Requirement for K-12 Environmental Education Instruction:** In 1996 the core curriculum content standards were adopted, thereby defining what all students must "know and be able to do upon graduation." Environmental content is prominent in Science and Social Studies. The inclusion of environmental content has helped ensure its instruction in all grades for all students, though its actual delivery is accomplished in various ways within the school districts. In the late 1990s the goals and objectives of most environmental education curriculum supplements and programs available in New Jersey were cross-referenced with these standards, in order to depict their applicability. The classroom standards are now undergoing a formal review process, which will be monitored by the commission and work group through 2003.
3. **Coordinated In-service Training in Environmental Education:** In 1999 the State Board of Education mandated a professional development program that requires teachers to secure 100 hours of professional development every 5 years to maintain their certification. New Jersey's environmental education leadership was instrumental in informing environmental education providers about this directive. Dozens of such providers have since registered with the New Jersey Department of Education and are promoted through the department's homepage. Each year dozens of environmental education enrichment opportunities are offered statewide.
4. **Required Environmental Education Professional Development for Teacher Certification:** This requirement does not exist in New Jersey. However, it has been a priority during the past three years to increase pre-service activity by working individually with university and college faculty, especially those offering elementary and secondary education programs.
5. **Environmental Education Professional Development for Environmental Education Professional Development Providers:** New Jersey's Department of Environmental Protection maintains facilitators who implement the four Project professional development workshops sponsored by the agency and the Wetlands Institute (WET co-sponsor). The department provides annual reunions, advanced workshops and publications for this group. The New Jersey Audubon Society provides yearly training for its education staff that is related to its two curriculum supplements on ecological systems and watersheds. The annual conference, regional programs, publications and leadership retreat sponsored by the Alliance for New Jersey Environmental Education offers opportunities for enrichment to educators statewide. Finally, there are numerous nonprofit and professional organizations, universities, consultants, facilities and companies that offer professional development experiences in such fields as environmental science, earth science, geography, environmental technologies and environmental studies.

Building Blocks for the Future

Environmental Education in New Jersey

6. **Environmental Education Professional Development for Environmental Education Non-formal Providers:** As described in #5, environmental education leaders in New Jersey have utilized various means for providing enrichment for non-formal environmental education providers for years. Such methods include the annual environmental education conference, leadership retreat, regional programs, publications and specialized seminars sponsored by the Alliance for New Jersey Environmental Education, in addition to enrichment programs offered by other various environmental education and education-based institutions.
7. **Environmental Education Professional Development for University Faculty:** This is not formally done in New Jersey. However, environmental education leaders do work on an individual basis with college and university faculty and encourage them to join the Alliance for New Jersey Environmental Education or to attend environmental education programming.
8. **State Environmental Education Curriculum Guide/Guidelines for Districts:** New Jersey does not have such a guide or set of guidelines. Once New Jersey's classroom standards have been updated (#2) and the districts have adjusted their curricula accordingly, a statewide survey of environmental education delivery may be an informative exercise for environmental education leadership. At that time the development of a state environmental education curriculum guide may be feasible, pending survey results.
9. **Environmental Education Learning Objectives/Outcomes:** New Jersey does have such learning objectives for grades K-12, as defined by the state's classroom standards (#2).
10. **Environmental Education Correlation to State Content Standards:** The New Jersey Department of Environmental Protection has correlated the Projects (#5) and most state-specific curriculum resources with the state's classroom standards. The New Jersey Audubon Society and other providers that offer environmental education professional development opportunities or programming also performed this process. This process must be undertaken again after the updated classroom standards are established in code sometime in 2003.
11. **Environmental Education Model/Resource Schools:** New Jersey schools that have incorporated environmental education into their curricula or practices have not been formally identified and recognized as resource schools within a district or county. However, the New Jersey Department of Environmental Protection, in partnership with the commission, work group and the Alliance for New Jersey Environmental Education, is administering a two-year grant to implement the **EIC** (Using the Environment as an Integrating Context) Approach in 10 schools. It is hoped that these schools will serve as resource schools to further implementation of this approach. In addition, the alliance hosts an affiliate organization called the "Coalition for New Jersey Schoolyard Habitats." The coalition includes representation from dozens of schools that maintain an outdoor learning lab on or near school property.

Building Blocks for the Future

Environmental Education in New Jersey

12. **State Assessment that Includes Environmental Education:** The New Jersey Department of Education annually conducts statewide assessment in grades 4, 8 and 11. Because of the environmental content included in the Science and Social Studies standards, there are related questions included in these standardized tests. There has been discussion in recent years regarding if and how assessment results and trends related to environment-based questions could be accessed on a yearly basis. This may be further explored after the revised standards are established in 2002.
13. **State Environmental Education Board/Advisory Council:** As mentioned in #1, the New Jersey Commission on Environmental Education was formed in 1989 and statutorily established in 1996 to implement the state's environmental education master plan. The commission is currently comprised of 29 voting members and includes a diverse representation of environmental, conservation, civic, youth and faith-based organizations, public and private school teachers and administrators, colleges and universities, businesses and industry, and government. The commission meets at least six times during the school year and maintains four active committees that focus on legislation and finances; programming; publications; and an electronic directory and network. The commission is also charged with producing this report.
14. **State Environmental Education Office, Coordinator and Staff:** The New Jersey Department of Environmental Protection has two full-time professionals in its Office of Communications that respond to the environmental education needs of the agency, the commission and work group, and the public at large. They have access to three support staff whose responsibilities include public outreach. The department has additional employees in its various divisions who have interpretation, communications or outreach responsibilities of some type.
15. **State Level Environmental Education Centers/Regional Offices:** New Jersey has a variety of sites that serve in this capacity. The Department's Division of Parks & Forestry has state interpretive centers at which the state naturalists serve as local environmental education resources. The division also established regional naturalist positions to respond to regional education and interpretive needs. The Bureau of Forestry operates the state's Forest Resource Education Center that serves the state's forestry education needs, and the Division of Fish & Wildlife maintains the Pequest Natural Resource Education Center, that focuses on natural resources, habitat and wildlife. The New Jersey Department of Community Affairs oversees the New Jersey Meadowlands Center, a regional environmental education facility that focuses on education about the Hackensack Meadowlands. The nonprofit New Jersey Audubon Society maintains nine environmental education centers in the state with staff trained to respond to local educational needs. Finally, New Jersey has a wealth of other private, county and federal facilities that serve as educational centers, parks, residential facilities, museums, zoos and camps.

Building Blocks for the Future

Environmental Education in New Jersey

16. **State Environmental Education Interagency Committee:** As mentioned in #1, New Jersey has an Environmental Education Interagency Work Group that was established by law in 1996. Originally charged with surveying state resources and assisting with a statewide inventory of educational resources, work group members are extremely active and attend commission meetings, state functions and committee activities. Currently, seven agencies are represented on the work group. There are plans to increase this representation and to elevate awareness of this group within state government in 2002 - 2003.
17. **State Environmental Education Association:** The Alliance for New Jersey Environmental Education is the state's only nonprofit, membership and volunteer-led environmental education association. Established in 1985, active membership fluctuates between 300 – 400 educators primarily in formal and non-formal education professions. The organization maintains an established organizational structure that includes executive and advisory committees, a constitution and organizational handbook, and standing committees. The alliance offers its members a variety of services, such as the state conference, annual leadership retreat, regional activities and events, publications, an e-mail service, and a formal awards program.
18. **Statewide Annual Conference:** The alliance has sponsored the state's only environmental education conference since the mid-1980s. Designed to meet membership needs in enrichment, networking and resource sharing, this 2-day theme-based event includes formal speakers, workshops, field trips, exhibits, free resources, auctions, entertainment, and the annual awards banquet. It is held in January at a central location in the state.
19. **Statewide Semi-annual Workshops/Meetings for Practitioners:** The Alliance for New Jersey Environmental Education often co-sponsors regional programs, enrichment opportunities and educational events, either with the commission and work group or other agencies and organizations, throughout the year. Examples cited in this listing are described in #3 - #6.
20. **Computerized Environmental Education Networking System:** New Jersey has the beginning of a statewide web site for environmental education housed at Cook College, Rutgers University. A need for it has existed in the Plan of Action since the early 1990s. It has not been completed due to a lack of stable resources and expertise, as well as inconsistent support for, and recognition of, the commission prior to 1996. Currently, the commission and work group, the Alliance for New Jersey Environmental Education and the New Jersey Department of Environmental Protection have a network committee designing, developing and implementing such a site, which will include resource directories, calendars, data and information sources, contacts, lesson plans, field trip sites, links, etc.

Building Blocks for the Future

Environmental Education in New Jersey

21. **Fees, Fines, Taxes and Lottery:** New Jersey does not have a stable source of funds for environmental education infrastructure and programs. In the early 1990s the commission received a small percentage of one environmental fine - \$50,000. This situation unfortunately did not establish precedent. Less than a third of this amount remains in the state environmental education trust fund and is used for primary functions of the commission and work group.

22. **Environmental Education Trust Fund or State Supported Grants Program:** The New Jersey Environmental Education Act established a trust fund that is administered by the New Jersey Department of Environmental Protection in cooperation with the commission. With the exception of limited funds in the trust fund for commission and work group support, the trust fund is empty. New Jersey does not offer a formal environmental education grants program due to this lack of stable funds. However, when funds have been made available, they are used as mini-grants or stipends in priority areas in the field. One such source of funds was \$50,000 received from the Governor's discretionary funds in late 1999.

23. **Public/Private Grants and Donations:** The only private grant received by the state's Department of Environmental Protection, in partnership with the commission, work group and Alliance, was referenced in #11 and received from the Geraldine R. Dodge Foundation. Obtaining grants to serve state environmental education needs must receive greater focus in the future. Alliance members do solicitation of private and corporate donations in order to benefit the needs of the Alliance. Finally, many environmental organizations within the state conduct fundraising activities that serve to benefit the needs of that particular organization.

24. **General Revenue Funds:** New Jersey environmental education leaders have yet to be successful in obtaining stable environmental education funds through the state's general revenue funding processes or through any other means.

Building Blocks for the Future

Environmental Education in New Jersey

Spotlight 2000: Environmental Education Professional Development

“Once in awhile, time and circumstance play along with our best efforts and create opportunities. It is our responsibility to recognize the convergence and turn it into successful accomplishment. Its very much like surfing the perfect wave – we paddle around in the water and wait for the right time. Feeling the swell of the wave, we follow it to the crest, get into position at the break, and ride the curl to the shore. Such opportunities can and do happen in the field of environmental education.” (See reference below.)

Over fifteen years ago the Alliance for New Jersey Environmental Education began making waves. If environmental education was to have any impact on school curriculum, the expertise and experience of formal classroom educators needed to be brought together with the expertise of the non-formal teacher-naturalists in the outdoor classrooms. These two teaching groups needed to work together, churning the water sufficiently, to begin to create waves of change.

In the early 1990’s Alliance members worked cooperatively with state government for the establishment of the state’s first environmental education commission, which included active representation from the state Departments of Education and Environmental Protection. The waves were gaining in height and force.

In 1996 the state finalized its core curriculum content standards, which included environmental content in both Science and Social Studies. In addition to this important action, the standards created a more equitable balance between the content being taught in different subject areas and the process by which students learn. The Alliance began offering standards-based workshops at its annual conference; its member organizations began aligning programs and curricula to show support for, and application of, these state standards. The commission provided stipends for standards-based environmental education programs.

In the late 1990’s the Department of Education required that teachers acquire 100 hours of professional development within five years, in order to retain their teaching certification. Within one year over 25 environmental education professional development providers were registered with the department as formal providers. By gaining such formal approval, additional classroom teachers became transformed from overseers of receptive students to facilitators of young people who can take ownership for their own learning experiences. Most recently, the Alliance for New Jersey Environmental Education, Interagency Work Group, the New Jersey Commission on Environmental Education and the Department of Environmental Protection are working together to offer stipends for professional development training for teachers and teachers-in-training, as well as education-based training for non-formal environmental educators and naturalists.

“This is the moment that needs our attention and steady focus so that we can get into position and ride the wave... Surf’s up!” (See reference below.)

- Quotes and excerpts taken with permission from “Make Waves, Then Ride Them,” written by Pat Kane (commission member) for the Spring, 2001 newsletter of the Alliance for New Jersey Environmental Education.

Building Blocks for the Future

Environmental Education in New Jersey

Highlights of Activity – 2000

- A proposed bill supporting environmental education training and programs in New Jersey was formalized and introduced to the Assembly Education Committee by Chair David Wolfe in May. It was also co-sponsored by Assemblyman Joseph Mallone. Once released with amendments it was referred to the Assembly Appropriations Committee in November. Also in November it was introduced to the Senate Environment Committee by Senators Robert Littell and Anthony Bucco. The bill called for \$200,000 to further environmental education in New Jersey, in support of the core curriculum content standards. Funds (\$100,000) would be used for professional development in-service and pre-service training with standards-based environmental education resources. Funds (\$100,000) would also be used to establish model projects and initiatives.
- A grant of \$70,000 was received by the New Jersey Department of Environmental Protection to implement an effective approach to environmental study in classrooms, schools and communities. Using the “**E**nvironment as an **I**ntegrating **C**ontext for learning” (the EIC Approach) was coined by the State Education and Environment Roundtable as an effective school improvement approach that uses the environment as a framework for student-centered learning in all subject areas. The grant supports a 2-year initiative (Summer, 2000 – Summer, 2002) designed to establish the EIC Approach in 10 schools. The commission and work group are partners with the department in this initiative.
- Fourteen \$1,000 stipends were awarded in support of environmental education programming and professional development training designed to support the state’s core curriculum content standards. (Recipients are listed on pages 19 - 21). The commission, in partnership with the Department of Environmental Protection, awarded the funds, which were a portion of the discretionary ‘Earth Day Education Funds’ provided by Governor Christine Todd Whitman. In addition, twelve \$100 stipends were provided to schools to be used for teacher participation at an environmental education professional development experience.
- The Interagency Work Group and Environmental Education Network Committee worked together to conduct an inventory of state resources for environmental education and outreach available through appropriate state programs. Over 140 resources were collected. This was done primarily through commission and work group membership. The results are to be integrated into the developing electronic environmental education network.
- Commission and work group members continued two ongoing projects – the development of the state’s first environmental education poster and beginning the updating and revisions process for *Environmental Education in New Jersey: A Plan of Action*.
- Funds were provided to Cook College, Rutgers University, to assist with the development and upgrading of the environmental education network homepage and the state’s Earth Day 2000 web site. Funds were used to upgrade the homepage, reconfigure the hardware, and pay for the site consultant to design, implement and monitor the Earth Day 2000 web site.

Building Blocks for the Future

Environmental Education in New Jersey

- The 2000 Joint Meeting between interested commission and work group members and members of the Alliance for New Jersey Environmental Education was held in August at Island Beach State Park. The full-day program resulted in emerging new priorities, ideas and strategies related to the following topics: membership diversity; networking and promotions; legislative and financial activities; stipend suggestions; and, ideas for the environmental education conference. The commission and Alliance shared costs for the morning and afternoon meals.

Expenditures – 2000

Environmental Education Trust Fund

Resources:

- As of January 2000: \$17,781.45
- As of December 2000: \$17,243.45

Expenditures:

- **\$350.00**
Joint Meeting – ½ of shared morning and afternoon meal needs

- **\$188.00**
Holiday luncheon for commission and work group members

Earth Day Education Fund

Resources:

- As of January 2000: \$50,000.00
- As of December 2000: \$30,600.00

Expenditures:

- **\$2,900.00**
\$100 stipends for professional development offered during the spring (around Earth Day)

- **\$14,000.00**
Fourteen \$1,000 stipends for Earth Day environmental education professional development experiences and programs that support the classroom standards

- **\$2,500.00**
To upgrade the environmental education network homepage housed and maintained at Cook College, Rutgers University and to develop and maintain the Earth Day 2000 web site

Building Blocks for the Future

Environmental Education in New Jersey

Earth Day 2000 Recipients of \$1,000 Stipends

Troubled Waters: The Assunpink Creek in George Page Park – Saturday, April 1, 2000

Stony Brook-Millstone Watershed Association

Students will see that the Assunpink Creek is impacted by human activities that occur locally and upstream. They will perform a service project in their community and learn how it is possible to mitigate these negative impacts while bringing the community together. This program will support the notion that the cumulative effect of personal behaviors impacts a watershed and the community.

Science 5.12.6 and 5.12.4; Social Studies 6.9.5

Wildlife Sunday (April 9) and Earth Week Celebration (April 24 – 28)

Trailside Nature and Science Center

Wildlife Sunday will be an afternoon event for families devoted to celebrating human connections with wild animals. The goal of the event is to promote the awareness of, and appreciation for, wildlife. Activities will include planetarium shows, crafts and games. The week-long event called Earth Week will offer an earth friendly way of living to people of all ages. Throughout the week families will be able to participate in lectures and programs at the Trailside Visitor Center on such topics as the importance of forests and habitats, waste reduction, recycling and native flora.

Science 5.12.7, 6, 5, 4, 3, 2, 1; Science 5.7.4, 3, 1

Cape May County Earth Day Fair – Saturday, April 15

Cape May County 4-H Foundation and the Cape May County Earth Day Coalition

Participants in Earth Day fair activities will learn about environmental issues in a classroom without walls. The long-term goal of the event is to increase the community's environmental consciousness and help develop the knowledge base that citizens need to make sound decisions regarding the environment. Participants will be asked to undertake a year-round environmental project.

Science 5.12.10, 6, 5, 4, 3, 2; Social Studies 6.9.6, 5, 4, 3, 2, 1

Family Science Open House at the Jersey Shore – Saturday, May 6

New Jersey Marine Sciences Consortium

Families will participate in activities that will include watershed mapping, marine food web games, shell taxonomy, fish printing, a sediment lab, papermaking, plant pressing and a plankton exploration lab. Outdoor explorations will include seining, sediment sorting, beach profiling and shell collecting. Goals of the program include increased awareness of the marine environment; practice of basic skills and content emphasized in the classroom standards; and, enjoyment of a family experience.

Science 5.12.10, 9, 8, 7, 6, 5, 4, 3, 2, 1; Science 5.7.13, 9, 7, 6, 4, 3, 2, 1;

Science 5.2.15, 14, 10, 9, 8, 6, 5, 4, 2, 1

Earth Day 2000 – Saturday, April 15

Maplewood Health Department

This event will include a variety of programs, including a clean up of a branch of the Rahway River and presentations on bird habitats, composting, lawn care, recycling, noise control, and watersheds. The goal is to promote awareness of, and support for, such local issues and policies as clean water, toxics and waste reduction, mosquito control, air pollution and sewage treatment.

Science 5.12.6, 5, 2, 1; Social Studies 6.9.5, 2; Comp. Health and Physical Education 2.1.10, 5

Building Blocks for the Future

Environmental Education in New Jersey

Eggstravaganza – Saturday, April 22

Poricy Park Citizens Committee

This program has a focus on birds. The avian education area will offer hands-on activities on nest building, binocular use, migratory adaptations, the anatomy of flight, food chains and video-microscopy. An “eggucation” area will display eggs as food sources, along with egg crafts and cooking demonstrations. Additional Earth Day activities will include horticultural exhibits and activities, live baby animals, historic interpretation, crafts and an egg hunt.

Science 5.12.5, 4, 2, 1; Science 5.7.4, 3; Science 5.6.6, 4; Social Studies 6.9.3, 2; Visual and Performing Arts 1.3.1

Celebrate the Earth – Saturday, April 29

Reeves Reed Arboretum

Participants will work in family units. They will be assigned a tree to plant and water (on the property) and will learn how to identify their tree and learn about its growing needs. Each tree will receive a label with its botanical and common names, along with the family name. Families will then be encouraged to return to visit their tree. Participants will learn about tree care, the benefits of trees and how trees are managed at the Arboretum.

Science 5.12.1; Science 5.1.4; Social Studies 6.9.6

Earth Day 2000 – The Monarch Project – Saturday, April 22

Greater Newark Conservancy

The goal of the program will be to educate youth about the Monarch Butterfly and how people can replenish habitat for the Monarch. The Monarch migrates over long distances and their habitat in New Jersey is impacted by development, pollution and pollen from transgenic corn crops. Students will make seed balls with plant seeds that will help support the Monarch throughout its life cycle.

Science 5.12.6, 2, 1; Social Studies 6.9.5, 3, 2

Earth Day Everyday – Saturday, April 22

The Wetlands Institute

This event will be an environmental forum for local youth and their families that is part of an open radio broadcast addressing questions and discussion points contributed by the students. The radio broadcast will be followed by an open house at the Institute which will focus on environmental issues pertaining to Cape May County, such as wetlands and species preservation and beach ecology.

Science 5.12.10, 6, 5, 4, 3, 2; Social Studies 6.9.6, 5, 3, 2, 1

Celebrate Earth Week – April 21 – April 28

The Morris Museum

The Museum will present a series of drop-in workshops designed for children and their families. Each workshop will consist of nature-friendly, educational and fun activities and crafts that will celebrate Earth Week. Activities will include garbage art and recycled sculpture; salt water painting; signs of spring scavenger hunt; sun catchers with natural objects; and, origami animals.

Science 5.12.3, 2, 1; Science 5.9.5, 3; Science 5.8.2, 1; Science 5.7.4, 1; Science 5.2.5, 2; Science 5.1.4, 2, 1; Visual and Performing Arts 1.5.4, 1; Visual and Performing Arts 1.3.1; Visual Performing Arts 1.2.3, 2, 1; Visual and Performing Arts 1.1.1

Building Blocks for the Future

Environmental Education in New Jersey

Earth Day 2000 Family Festival – Saturday, April 29

Friends of Liberty State Park

The festival will offer diverse interactive presentations and demonstrations, including live animals, puppet shows, story-telling, musical entertainment, nature walks, a field trip, theatrical performances, and a falconry demonstration. The goal of the festival is to increase citizen awareness of responsible stewardship of the environment, as well as environmental issues related to Liberty State Park and the surrounding communities.

Science 5.12.7, 5, 4, 3, 2, 1; Science 5.6.11, 4, 3, 2, 1; Social Studies 7, 5, 3, 2

Forests, Wetlands and Beyond – May 5 – May 7

Delaware-Raritan Girl Scout Council

This interactive training event for girl scout leaders will have participants exploring habitats and environmental issues through a variety of activities and learning techniques that can be used with their troops. Programs will include activities from Project WILD, Project WET, the Wonders of Wetlands, Elliott Wildlife Values Project, the Teton Science School and the Oak Spring Environmental Education Center (owned by the Council).

Science 5.12.10, 9, 8, 7, 6, 5, 4, 2, 1; Science 5.10.14, 10, 8; Science 5.7.6, 4, 2, 1; Science 5.6.11, 5, 4, 2; Science 5.5.4, 3; Science 5.2.10, 6, 4, 2; Science 5.1.6, 5, 4, 3, 2, 1; Language Arts 3.5.10, 7, 5; Language Arts 3.4.6, 4, 3; Language Arts 3.3.7, 4; Language Arts 3.1.8; Mathematics 4.9.7, 5; Mathematics 4.1.1; Health and Physical Education 2.5.4, 1; Visual and Performing Arts 1.5.10, 9, 8, 7, 5; CCWR 4.2, 3.9, 3.3

Backyard Conservation: Make a Difference – April 15 and April 30

Cape-Atlantic Soil Conservation District

The Backyard Conservation display will be available to teachers and families and will feature conservation practices that homeowners can implement to provide wildlife habitat and conserve natural resources. Kits will be distributed to teachers to use in their classrooms and guidance will be provided for establishing outdoor classrooms on school property or near the school. Information on soil conservation, wildlife habitat and other environmental topics will be focused on.

Science 5.12.5, 1; Science 5.1.5, 2, 1; Social Studies 6.9.5, 2, 1

Earth Day and Arbor Day 2000 – April 14 – April 15

Red Bank Regional High School and the New Jersey Center for the Healing Arts

This two-day event will provide a partnership between the high school and the districts' elementary schools to participate in an environmental activity – tree planting. This will be followed by a community celebration on Saturday. One hundred trees have been donated by the National Tree Trust. The entire effort is a partnership between the high school environmental club, the Center for the Healing Arts and the Red Bank Environmental Commission. The Friday program will include story telling, tree activities and a tree planting. Saturday will include speakers, demonstrations, pet adoption and environmental vendors.

Science 5.12.6, 4, 3, 2, 1; Science 5.10.14, Science 5.1.1; Social Studies 6.9.3, 2, 1; Social Studies 6.6.10, 5; Social Studies 6.1.3, 2; Language Arts 3.4.13, 9, 4, 1; Language Arts 3.3.4, Language Arts 3.1.3; Health and Physical Education 1.6.4, CCWR 4.10, 4.8, 4.3, 4.2, 3.15, 3.4

Building Blocks for the Future

Environmental Education in New Jersey

Spotlight 1999: Watershed Education in New Jersey

A watershed is described as the area of land that drains into a body of water, such as a river, lake, stream or bay. A watershed not only includes the waterway but also the entire land area that drains into it.

In 1998, the Division of Watershed Management was created within the New Jersey Department of Environmental Protection to begin to implement a holistic watershed management process statewide. Watershed management is a planning process designed to involve local professionals and residents (stakeholders) in developing a plan for a given watershed while taking into account all potential point and nonpoint sources of water pollution. The state has been divided into 20 watershed management areas, each of which is beginning to develop a management plan.

Maximizing local involvement is the key to the success of the watershed management process. Though the implementation of the process must follow some basic steps, different strategies, activities and solutions will evolve within the individual watershed areas due to the priorities, concerns and participation levels of the stakeholders.

Watershed educators in New Jersey have initiated numerous strategies designed to educate, involve, and meet the needs of, classroom and community-based educators, parents and youth, with a clear focus on water quality, watersheds, water supply and basic ecology. These efforts include:

- Hiring of department outreach staff for each of the watershed regions;
- Training and supporting BATS (Biological Assessment Teams);
- Training and supporting RATS (River Assessment Teams);
- Supporting the delivery of Project WET (Water Education for Teachers) in schools;
- Promoting the classroom-based Clean Water Rangers Program for students;
- Developing and maintaining the DEP Watershed Ambassadors Program; and
- Offering watershed grant opportunities for education and outreach purposes.

Watershed education, resources and opportunities are spreading throughout the state through the combined efforts of environmental organizations, nature centers, parks, watershed groups, environmental commissions, county extension programs, soil conservation districts, scouts, youth programs and volunteer networks. In fact, a statewide coalition of organizations with water-based interests was formed. Entitled the Watershed Partnership for New Jersey, this coalition became an affiliate of the Alliance for New Jersey Environmental Education.

The New Jersey Audubon Society has also assumed a key leadership role in developing and delivering a New Jersey-specific watershed curriculum supplement for middle and high school classroom educators. Entitled *New Jersey Waters*, this unique publication offers watershed information, teaching units, maps, and opportunities for team teaching.

Needless to say, classroom-based watershed education is well on its way in helping to move the state's watershed management process forward in meaningful and effective ways in New Jersey.

Building Blocks for the Future

Environmental Education in New Jersey

Highlights of Activity - 1999

- A proposed bill supporting environmental education training and programs in New Jersey was drafted and primary sponsors were identified. The bill calls for \$200,000 to further environmental education in the state, in support of the core curriculum content standards. Funds (\$100,000) would be used for professional development in-service and pre-service training with standards-based environmental education resources. Funds (\$100,000) would also be used to establish model standards-based projects and initiatives.
- The commission and work group, in partnership with the New Jersey Department of Environmental Protection, received \$50,000 of discretionary funds from Governor Christine Todd Whitman, to be used for Earth Day education activities. The commission approved its spending plan for the funds at the end of the year. Interests included funds for exemplary spring environmental education programs; in-service and pre-service environmental education professional development for teachers; an Earth Day – New Jersey web site; select spring Earth Day events; and, the printing of a promotional environmental education poster. The funds will be administered through the department.
- The commission and work group, in partnership with the Alliance for New Jersey Environmental Education, received a \$5,000 environmental education grant from Region II of the Environmental Protection Agency to establish a web site for the Alliance and to begin to establish the environmental education directory and network for the commission. The grant will be administered by the Alliance. Job description for both needs were developed and promoted for web design and development.
- The commission and work group held their first full-day joint summer meeting with members of the Alliance for New Jersey Environmental Education. The theme of the meeting was “Making Environmental Education a Sustainable Force in New Jersey” and it attracted over thirty participants. Held at Cook College, Rutgers University, in New Brunswick, the group generated recommendations that focused on state environmental education legislation, funding sources and public relations for environmental education. The commission shared costs for the joint meeting with the Alliance.
- Over ninety environmental education and education professionals attended the state’s first Environmental Education Legislative Forum. Held in the State House Annex in Trenton in April, the full-day event was sponsored by the commission and work group, in cooperation with the New Jersey Department of Environmental Protection and the Alliance for New Jersey Environmental Education. Its purpose was to explore and depict how the environment can be used effectively for classroom, youth and family learning and enjoyment. Featured speakers included Dr. Gerald Lieberman with the State Education and Environment Roundtable; DEP Commissioner Robert Shinn, Jr.; Eileen McGinnis, Governor Whitman’s Planning Chief; and Commission Chair Dr. Louis Iozzi. The most effective portion of the event was seven featured presentations by teachers and students who collectively provided examples of various types of environmental education programming being delivered in New Jersey.

Building Blocks for the Future

Environmental Education in New Jersey

- The commission and work group began their involvement with two long-term projects – the development of the state’s first environmental education poster and the updating and revisions process for *Environmental Education in New Jersey: A Plan of Action*. In addition, the group produced its first annual report (1998). In discussing the content of its 1999 – 2000 report, the group agreed that it should focus on “The State of Environmental Education in New Jersey” as well as the field’s long-term goals and challenges moving into the new century.

Expenditures – 1999

Environmental Education Trust Fund

Resources:

- As of January 1999: \$19,000.00
- As of December 1999: \$17,781.45

Expenditures:

- **\$243.75**
Joint Meeting – ½ of shared morning and afternoon meal needs
(shared with the Alliance for New Jersey Environmental Education)
- **\$424.80**
Environmental Education Legislative Forum – ½ of morning and afternoon meal needs
(shared with the Alliance for New Jersey Environmental Education)
- **\$550.00**
Printing of the Environmental Education in New Jersey 1998 annual report entitled *People, Programs and Progress for the New Century – The New Jersey Commission on Environmental Education – 1998 Annual Report*