



# **Environmental Literacy in New Jersey: A Call to Action**



## **Section 4 Environmental Education Priorities at State and National Levels**

New Jersey typically stands out from other states due to numerous environmental concerns linked to its high population density, building and development patterns, legal and political subdivisions, industrial history and economy, and many of the individualized actions and behaviors of its citizenry. These concerns are numerous and complex, and often impact the state's richly diverse natural resources and fragile ecosystems, human health and quality of life issues, and overall environmental quality. The consequences of these environmental concerns cannot be resolved solely by the enforcement of federal or state regulations and local ordinances.

New Jersey is neither alone with these struggles nor does it stand alone regarding solutions. Scientists, educators and other professionals worldwide agree that people must be more informed and understand how their decisions and lifestyles affect the natural and built systems that people require in order to live. They must get involved with implementing solutions leading to constructive and sustainable change through formal and informal learning, research and investigation, workplace practices and vocational pursuits, private and public sector leadership, community planning and public discussion, and enjoyment of the natural world.

Since the early 1900s, New Jersey has pioneered pursuits in nature study, outdoor science and ecology, conservation and natural resource education, residential environmental education, teacher training, camps and outdoor recreation, and agriculture. Numerous natural and cultural history interpretive centers, as well as outdoor education programs, were established in public and private parks, forests and protected open space areas. Most of these facilities, organizations and programs are still active and thriving today.

Environmental education policy and practice began to flourish in New Jersey during the 1960s – 70s, when Earth Day attracted international attention regarding air and water pollution, noise and waste. Since that time the scope of environmental education learning opportunities has grown to include resources on ecological systems, natural resource management, biodiversity of species, air and water quality, solid and hazardous waste, recycling and waste reduction, pollution prevention, energy and global climate change, watershed and stormwater education, and numerous environmental health issues. Hundreds of New Jersey organizations, facilities, consultants, government agencies, companies and public institutions now offer expertise, programs and services on these topics, for students as well as for residents of all ages. A plethora of New Jersey educational media and technology-based resources also exist on these topics.

Finally, environmental education supplements New Jersey's emerging green school and campus efforts and its green buildings activities, its adult and community-based stewardship and leadership programs, and its community-based sustainability education efforts. The field's existing resources that attract youth to environmental careers are beginning to embrace the cutting edge needs and interests regarding green collar jobs and training.

The common thread running through these necessary and valuable initiatives is education about the environment. Yet, the state known for its environmental challenges still must strengthen its statewide infrastructure of support for environmental education so that the solutions to these challenges that require public education are attainable. The environmental literacy of New Jersey's residents rests upon the opportunities and resources made available to them for high quality environmental education learning experiences throughout their lifetime.

Why the growing urgency for environmental education? One reason is because many of today's environmental challenges cannot be solved by government regulations alone. Numerous remedies require the public to take action because problems are caused in part by contributions from, or the actions of, many individuals. Healthy ecosystems, habitat protection, global climate change, nonpoint source pollution and waste reduction all have potential solutions but require the regulated community as well as private citizens to be informed and responsive.

Second, there are a growing number of environmental challenges with direct effects on human health and quality of life for all citizens and especially those who can suffer greater from risk of exposure, such as the elderly, children, pregnant women, and persons living in developed communities. Air and water quality, water supply, and pesticide use are just some of the environmental challenges with human health implications. These understandably stimulate public concern and increase the need for people to understand the causes, consequences and risks associated with them and, when appropriate, to take actions to minimize or prevent exposures.

Third, the growing emphasis on sustainable green building and green practices foster opportunities for companies, businesses, institutions, communities and individuals to develop or adopt new processes, designs, products, services and technologies to reduce their impact on the environment while often stimulating the economy and community development. The need for environmentally literate educators, planners, architects, medical and health experts, engineers, lawyers, business managers, economists, journalists and other professionals is growing. The need for a workforce trained to respond to emerging green collar job and environmental career requirements is also emerging. Finally, the inclusion of courses that incorporate environmental and sustainability principles and learning experiences as part of all formal, higher and adult education learning opportunities will help ensure that future decision-makers and employees act as informed environmental stewards in the professions they pursue.

Fourth, studies have suggested that students who participate in environmental education programs have improved performance on tests, increased interest in subject matter, and reduced issues with discipline and absenteeism. Throughout the United States as well as in New Jersey, environmental education is being incorporated into school curriculum as a focus of study and as interdisciplinary themes, in addition to being part of outdoor learning experiences, community service and student action projects and field trip opportunities. Environmental education experiences are recognized as opportunities for the use of inquiry, critical and creative thinking, investigative research, and laboratory and field studies.

Finally, studies also have suggested that outdoor activity may provide solutions for certain health concerns, such as childhood obesity, attention deficit disorder, social isolation and childhood depression. Children who participate in passive outdoor play and exploration, along with structured outdoor activities like gardening, enjoy and learn about nature while being physically active. These "hands-on,

minds-on” activities can help reduce their dependence on computer and electronic games, cell phones and social networking, and television.

Presented below are recent (2008-09) national activities that demonstrate the increasing need for environmental education to be organized and supported within each state, as well as how most of these national efforts will/are being carried out in New Jersey and are supported by the implementation of this plan (details for most of these can be found in the list of resources and reports included in this plan’s appendices):

- **Inclusion of environmental education in the reauthorization of the federal No Child Left Behind (NCLB) Act through passage of the No Child Left Inside (NCLI) Act.** A coalition of senate and congressional representatives, with over 1,300 environmental education and education organizations representing over 45 million Americans, are spearheading the inclusion of environmental education in the reauthorization of the NCLB Act. If approved, the NCLI Act will make funds available to states like New Jersey that have an Environmental Literacy Plan in place for grades pre-K-12 and that identifies environmental literacy learner goals and directs the use of federal funds in the state for environmental education grants, teacher training, and the integration of environmental education across disciplines. This plan provides details regarding the development of a New Jersey Environmental Literacy Plan. Even if the federal NCLI Act is not passed, such a plan developed with the NJ Department of Education would provide valuable guidance for environmental education professionals that provide services for New Jersey schools in support of the core curriculum content standards, professional development, afterschool programs, career and technical education, and other areas (see **Section 5** for details).
- **Three proposed bills and an amendment, all supportive of environmental education, were introduced in Congress and/or the Senate.** They feature a new grants program for university sustainability programs; increased financial support for environmental education through the Environmental Protection Agency’s environmental education grants program; funds to the National Science Foundation to establish a global warming education program; and, an amendment added to the 2009 energy bill to authorize funds for five years for job training programs for sustainable and alternative energy technologies at the nation’s community colleges, career and technical/vocational programs, trade schools and high schools. In New Jersey, there already exist agencies, organizations and coalitions that are doing work related to these initiatives and that could apply for, and benefit from, these potential funding sources. Strategies in this plan can help guide, align and strengthen such proposals, ensure that appropriate parties learn of these opportunities, help them collaborate with possible partners, promote and communicate these announcements statewide, use and publicize the results of these initiatives, and ensure that these funded projects are leveraged with other funds being pursued.
- **Richard Louv’s book, titled *Last Child in the Woods: Saving Our Children from Nature-Deficit Disorder*, has spearheaded public campaigns to connect youth with nature.** Louv’s recognized publication highlights the reduction of time being spent by youth outside. If children reconnect with nature and the outdoors then this could combat the rise of obesity among children as well as their increased reliance on being indoors to access television and

electronics during leisure time. In New Jersey, the Afterschool Care Coalition was so motivated by Louv's work that they embarked on a multi-year campaign to introduce environmental education in the state's afterschool programs. Implementation of this plan will assist their programs with finding appropriate expertise and resources for their increasing environmental education needs. This plan also recommends that New Jersey implement a "getting kids outdoors" public education campaign so that youth as well as all citizens can appreciate nature and outdoor activities while learning to be effective stewards of the public lands that New Jerseyans strive to preserve. Finally, the NJ Department of Education has a grant-funded healthy schools network that is interested in outdoor play in order to improve upon the physical health and wellbeing of students. Their efforts would be collaborated with the implementation of this plan.

- **The National Association for Environmental Education (NAAEE) added environmental education course standards to protocols used by the National Council for the Accreditation of Teacher Education (NCATE).** Sixty percent of the nation's colleges and universities that certify teachers are accredited by NCATE. To be certified, educational institutions must now document environmental education courses offered by the institution are meeting NAAEE standards – even if they are not offered through the School of Education. This initiative would effect such courses being taught in New Jersey's colleges and universities, and information about these courses would be tracked and shared by the commission and work group.
- **Millions of teachers and students throughout the United States participated in the annual, mid-April National Environmental Education Week in 2009, the largest organized environmental education event in the United States.** This effort increases the educational impact of Earth Day by creating a full week of educational preparation, learning, and activities in K-12 classrooms, nature centers, zoos, museums, and aquariums. Through the efforts of DEP, the commission and work group, New Jersey has celebrated Environmental Education Week and Earth Week annually for over twenty years and an estimated 75 – 125+ New Jersey schools and communities annually conduct some type of environmental learning experience during this time.
- **The National Project for Excellence in Environmental Education was initiated by NAAEE and features a series of guidelines that set standards for high quality environmental education.** These guidelines support the development of balanced, scientifically accurate and comprehensive environmental education resources and can be used for developing or assessing learner outcomes for grades K-12; educational materials and programs; and, professional development and training programs for environmental educators. The Alliance for New Jersey Environmental Education endorsed the use of NAAEE's guidelines for excellence in 2007 and the commission and work group are committed to promoting these guidelines to the state's environmental education providers and practitioners as part of the implementation of this plan.

New Jersey's environmental education providers and practitioners often operate individually or in small groups, are not networked together as a whole, and generally do not receive guidance, information, promotional services and resources, communications or recognition from the state level agencies that

share their goals. A *Call to Action* provides the framework needed to unify, increase, improve, promote and track such efforts throughout the state. It also increases New Jersey's ability to obtain needed federal funds and private funds, as well as utilize and leverage existing environmental education funding opportunities and resources, as effectively and efficiently as possible during the next five years.