

10 EDUCATION



“Every child should have mud pies, grasshoppers, waterbugs, tadpoles, frogs and turtles, elderberries, wild strawberries, acorns, hickory nuts, trees to climb, animals to pet, hayfields, pine cones, rocks to roll, sand, snakes, huckleberries and hornets -- and any child who has been deprived of these has been deprived of the best part of his education.” Luther Burbank, 1849-1926

Background

While there is growing public support for protecting and restoring natural areas and biodiversity, there also are some questions and uncertainty about how to accomplish this goal. As indicated throughout this guidebook, improved public education will be essential to expanding the use and effectiveness of recommended techniques. Counties,

municipalities, park districts, and wastewater authorities have a crucial role in this effort.

Residents not only influence larger community decisions with their votes but also make daily decisions affecting the health of natural ecosystems. These decisions range from the plants they choose to landscape around their homes to whether they support local initiatives to acquire open space and habitat. The future of our native landscapes depends upon the support and involvement of our citizenry, which in turn depends upon the degree to which they are educated about those landscapes.

Some schools have already incorporated environmental education into their curricula, and local governments should encourage them to continue these efforts. It is important to understand, however, that people get the information that forms their attitudes and behaviors from a wide range of sources beyond just the education programs of schools.

Conservation organizations, the media, and community leaders contribute in important ways to the knowledge and values held by the public, and they help interpret conservation issues. Outreach and education is crucial to developing public support for activities such as ecological restoration. Thus, marketing and use of the media are important strategies for promoting ecological literacy and an appreciation of nature, and for demonstrating the community's commitment to its long-term vision, including biodiversity protection.

Local governments also can play a significant direct role in the educational effort. The purpose of this chapter is to identify opportunities where local governments can most effectively utilize education to implement biodiversity programs and to identify some resources and organizations that can assist them.

Recommended Approaches

Techniques that counties, municipalities and park districts can use to better educate their constituents include the following.

- Foster neighborhood-based programs aimed at improving the environment and biodiversity locally. Natural landscaping, natural area management, and restoration are appropriate for all ages and provide good opportunities for neighborhoods to become involved with the preservation effort.
- Develop links between school-based programs and community projects. Many schools are incorporating nature and ecology into science and other subject curricula. Local projects (e.g., restoration of a detention basin with native plants) may be used to satisfy community service requirements that many students must fulfill in order to graduate.

- Identify and support community leaders who can lead the educational effort to protect biodiversity. Successful preservation efforts are often the result of one or a few dedicated individuals who encourage and inspire communities to get involved.
- Inform the public about restoration efforts. Some common restoration techniques, such as prescribed burns or removing invasive brush, may initially seem destructive to some residents. However, these activities ultimately lead to more healthy, functioning ecosystems. It is essential to clarify potential misconceptions about nature and the management needed to preserve it.
- Sponsor and promote an annual event that promotes biodiversity and natural areas.
- Use the media and other communication efforts (interpretive signs, brochures, newsletters) to get the word out on restoration and other land management activities.
- Involve residents in monitoring, restoration, and land management efforts. Target local garden clubs, but also include groups that may not normally be involved in these activities, such as church groups or book clubs. Activities that bring people together help build strong bonds and foster greater public involvement in efforts to enhance the community's image and quality of life.
- Restore public facilities such as parks and stormwater ponds to conditions that support natural habitat. This demonstrates the local government's commitment to preserving nature, and sets a good example for the rest of the community to follow.
- Encourage organizations to offer a variety of hands-on educational and volunteer experiences to a wide diversity of people including seniors, pre-schoolers, special needs residents, and stay-at-home mothers.

Summary of Benefits

The ultimate goal of environmental education is to help develop environmentally literate citizens and elected officials, capable of making well-informed decisions about protecting local natural resources. Benefits of these educational efforts include the following:

- Increased public support for measures to protect natural areas and habitats initiated by public agencies.
- Improved public understanding of how nature and wildlife contribute to our sense of community, our sense of place, and to sustainable, livable communities.
- Improved understanding of the public's capability to act to conserve nature and to motivate them to take action.
- Improved awareness of, and concern about, economic, social, political, and ecological interdependence in urban and rural areas.

Chicago Wilderness: Tools for Communication and Education Efforts

(Adapted from the Chicago Wilderness *Biodiversity Recovery Plan*.)

Contact Chicago Wilderness at 312/346-2540 ext. 30, or visit the website at www.chiwild.org.)

Tools for Individuals, Agencies and Organizations	Description	Purpose/Audience
Chicago Wilderness: An Atlas of Biodiversity	Full-color, 64-page book describing the natural communities of the region.	For the general public, educators, media, elected officials, corporate and community leaders.
Chicago WILDERNESS Magazine	Quarterly magazine celebrating the rich natural heritage of the region (see <i>Additional Information</i> in the introduction for subscription information.).	To convey the messages of local biodiversity protection in a popular format; for all general audiences.
Chicago Wilderness "Portable Resources"	Fifteen-minute video called "This is Chicago Wilderness"; colorful and informative tabletop display; slide show presentation.	To give organizations the means for both internal and external communication about Chicago Wilderness.
Chicagoland Environmental Network (CEN)	Public point-of-contact for volunteer opportunities and events, managed by Brookfield Zoo.	To provide means for public to become informed about and involved in local conservation activities.
Chicago Wilderness Web Site at www.chiwild.org	Comprehensive resource for issues related to biodiversity protection, managed by Chicago Academy of Sciences.	To increase public awareness and provide forum for scientists, educators and land managers to share information.

Local Examples

❖ *Indiana Dunes Environmental Learning Center*



In a partnership between the National Lakeshore and the Indiana Dunes Environmental Education Consortium, a private not-for-profit organization, Indiana Dunes Environmental Learning Center has been created to continue to enhance the educational mission of the National Lakeshore by providing a residential opportunity for environmental educational activities.

Located at 700 Howe Road in Chesterton, Indiana, the Learning Center offers programs for children such as “Frog in the Bog,” “Winter Survival in the Dunes,” and practically any customized one. These programs are a mixture of free and priced. Some which involve a cost offer overnight stays inside one of the Center’s many air-conditioned and heated cabins. The curriculum meets state and federal education benchmarks in the areas of science, math and history; features outdoor hands-on experience and minds-on discovery; and is an interdisciplinary approach, incorporating multiple learning styles, allows students to learn through integrating language arts, creative arts, math, science, and history.

Program content and design were developed in consultation with Learning Center staff, National Park Service personnel, classroom teachers, and environmental education consultants. Additional assistance was received from Indiana University Northwest, Purdue University-Calumet, The Field Museum of Natural History, and The School of the Art Institute of Chicago.

Interested parties can contact the Indiana Dunes Environmental Learning Center at 219-395-9555 or gpidelc@netnitco.net. (Source: www.nps.gov/indu/learning/programs.htm)

❖ *Educational Signs*



The Village of Orland Park, Illinois, uses naturalized detention ponds as part of their stormwater management plans. In order to help educate the public, the Village posts signs along detention facilities with natural planting to let the public know why native plants have been used instead of a turf lawn.

❖ *Taltree Arboretum Youth Education Program*



Located at the intersection of 450 West and 100 North in Valparaiso, Indiana, Taltree Arboretum and Gardens has established and maintained woody plant collections, gardens, and natural areas for the benefit of those in the northwest Indiana region.

In addition to their extensive collection of plant life, though, Taltree offers interpretive hikes on its grounds. Trained guides discuss topics such as geology of the region, wildlife, habitats, ecology, and horticulture. Hikes, which last 1 to 1 ½ hours and cost \$4/person (\$1/person for members), travel through the prairie, woods, and wetland areas discussing what is happening at that time and relating that to the particular needs of the group. Special activities using Project Learning Tree kits can be incorporated when requested and include some of the following activities for those youths between kindergarten and eighth grade:

- Tree identification
- Food chains
- Microhabitats
- Wetlands
- Life cycles

For more information or to schedule a hike, contact Taltree at 219/462-0025 or info@taltree.org.

(Source: www.taltree.org)

Additional Information

Biodiversity Education Network: A network of biodiversity educators and leaders in the education, science, and museum fields. Contact World Wildlife Fund, Education Department (202/778-9549).

The Biodiversity Project: Missions are: to assess public opinion on biodiversity; to develop collaborative strategies to increase public awareness and engagement; and to lay the groundwork to implement those strategies. Contact The Biodiversity Project in Madison, Wisconsin (608/250-9876, www.biodiversityproject.org).

Center for Biodiversity and Conservation: Dedicated to the study and conservation of biodiversity, and disseminating information to the public. Contact the American Museum of Natural History (212/769-5742).

National Audubon Society: Trains teams of volunteers and professionals to monitor the health of wild species populations and habitats. Has a variety of educational programs for adults and children (847/965-1150).

U.S. Fish and Wildlife Service: Provides training and program support on topics related to ecosystem and natural resource management, including biodiversity and wetlands ecology. Contact U.S. Fish and Wildlife Service, Division of Educational Outreach (304/876-7319).

World Wildlife Fund: Provides “Windows on the Wild,” a biodiversity education initiative that educates the public through traveling exhibitions, formal and informal educator training workshops, and public speaker events. Contact World Wildlife Fund, Education Department (202/778-9549).

Suggested Reading

Animal Tracks Action Packs. National Wildlife Federation. 1996. (A K-8 classroom resource containing information and hands-on projects on wetlands.)

Biodiversity Basics: An Educator's Guide to Exploring the Web of Life. World Wildlife Fund. 1999. Tustin, California.

Engaging the Public on Biodiversity: A Road Map for Education and Communication Strategies. The Biodiversity Project. 1988. Madison, Wisconsin.

Living with Wetlands: A Handbook for Homeowners in Northeastern Illinois. The Wetlands Initiative. 1998. Chicago.

The Rich Diversity of Biodiversity Issues. Norman Myers. 1997. Washington, D.C.

Wetland Discovery Trunk. U.S. Fish and Wildlife Service. The Wetland Discovery Trunk is designed to assist educators in preparing activities for exploring and learning about wetland habitats. Contains lessons, props, videos, pamphlets, publications, and posters.

Wonders of Wetlands Workshop. U.S. Fish and Wildlife Service. (A workshop for educators.)