

Cleveland Lakefront Nature Preserve: A Unique Urban Wildlife Haven on Lake Erie

2012 AAPA Environmental Awards Competition

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Contact

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In February 2012 the Cleveland-Cuyahoga County Port Authority opened the Cleveland Lakefront Nature Preserve to the public. The Preserve, formerly known as Dike 14, is an 88-acre peninsula that has become a haven for diverse species of migratory birds, butterflies and animals. The Preserve provides one-of-a-kind recreational, research, and educational opportunities for children and adults to connect with nature on the waterfront.



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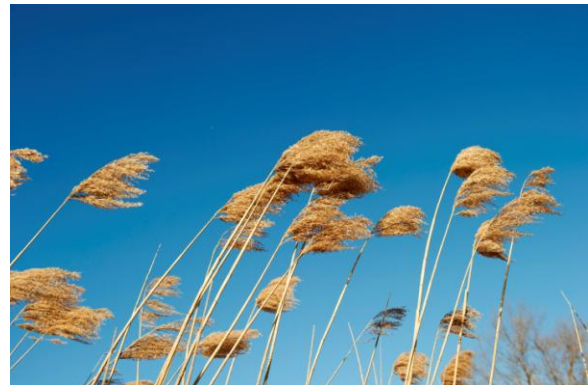


Introduction: The Cleveland Lakefront Nature Preserve

In February 2012 the Cleveland-Cuyahoga County Port Authority opened the Cleveland Lakefront Nature Preserve to the public.

The Preserve – formerly known as Dike 14 – is an 88-acre peninsula that has become a haven for diverse species of migratory birds, butterflies and animals. The Preserve provides one-of-a-kind recreational, research, and educational opportunities for children and adults to connect with nature on the waterfront.

The Preserve is a land mass that was created over time as sediment dredged from the Cuyahoga River and the downtown Lake Erie shoreline was placed within dike walls along the lakeshore. From 1979 to 1999 the U.S. Army Corps of Engineers managed the site as a confined disposal facility (CDF) for the



placement of dredged sediment. After the site was at capacity and closed to dredge sediment in 1999, nature took hold. The site remained largely untouched by people for more than a decade.

The Preserve has only been open to the public a few months, but the benefit to the community has been meaningful. The Preserve is a unique community asset. Located in the heart of the City of Cleveland, it is the only lakefront wildlife preserve in Cuyahoga County. In the initial months the Preserve has seen more than 500 visitors per week. At a recent community open house event, nearly 70



species of birds were sighted. The site is also home to several research projects and serves as an outdoor classroom for some local students.

The Port Authority manages this civic asset and is in the early stages of establishing long-range wildlife

and habitat restoration plans.

The Port of Cleveland is proud of the environmental enhancements it has made for the community and is entering the Cleveland Lakefront Nature Preserve into the 2012 AAPA Environmental Awards Competition for the “Environmental Enhancement” category.

Creating the land mass

The Preserve’s land mass began taking shape in the late 1970s as the U.S. Army Corps of Engineers disposed of sediment dredged from the Cuyahoga River in a walled-off area that juts out from the Lake Erie shoreline. Prior to this the shoreline at the site was part of the land William Gordon willed to the City of Cleveland in 1896 for use as a public park (now Gordon Park). In 1962, two old freighters were sunk offshore to create a breakwall to protect the park’s beach. During this time it was not uncommon for solid waste to be dumped along the lakeshore. The waste eventually formed an approximately 8-acre area between the sunken freighters and the shoreline. The Corps designed the contours of Dike 14 to encompass the entire area.



The Corps continues to dredge the Cuyahoga River to preserve the width and depth of the ship channel for movement of goods and raw materials roughly 210,000 cubic yards of sediment annually – an amount that could fill most of a sports stadium. This material is currently placed in other CDFs along the lake.

From disposal facility to wildlife refuge

After the Corps stopped using Dike 14 as a CDF, nature took hold and – with little human intervention – the peninsula became filled with plants, trees and shrubs that attracted diverse species of birds and other wildlife. Over time, visitors have identified more than 280 species of birds, numerous species of butterflies, 16 species of mammals (including red fox, coyote, mink, deer) 2 species of reptiles, 26 Ohio plant species (including wildflowers and grasses), and 9 species of trees and shrubs.

The site was designated as an Important Bird Area by Audubon Ohio because it provides essential habitat for birds. The Preserve is located at the intersection of four migratory bird routes.

In 2003, 11 environmental education organizations came together to form the Dike 14 Environmental Education Collaborative (EEC) to provide multi-interdisciplinary environmental education for students, teachers and families, and promote environmental stewardship of Dike 14. Members of the Collaborative are: Cleveland Botanical Garden, Cleveland Metroparks, Cleveland Museum of Natural History, Cuyahoga Soil and Water Conservation District, Conservancy for Cuyahoga Valley National Park, Earth Day Coalition, and The Nature Center at Shaker Lakes, Ohio Department of Natural Resources at



Cleveland Lakefront State Park, The Ohio Lepidopterists, Western Cuyahoga Audubon Society, and The Garden Club of Cleveland.

In 2006 the Cuyahoga Soil and Water Conservation District secured a U.S. Environmental Protection Agency grant for an environmental assessment that showed the site was safe for passive recreation and education.





Goals and Objectives

The Port's objectives for the site are threefold:

1. Open the Preserve to connect people with nature on the Lake Erie shoreline
2. Develop a long-term wildlife and habitat plan to improve the site and manage invasive species
3. Effectively manage the Preserve to demonstrate the extraordinary transition from CDF to world-class habitat

Opening the Preserve

In 2011 the Port Authority official changed the name of Dike 14 to the Cleveland Lakefront Nature Preserve and committed to opening the site to the public. On February 6, 2012 the agency formally opened the Preserve to the public daily during daylight hours. The Preserve has 1.2 miles of shoreline and a 1.3 mile loop trail. It is intended for passive recreation such as walking, observing nature, research and education.

The Port Authority is also leading initiatives to use the site as a model to demonstrate that sediment can be a resource to benefit the community instead of a waste material disposed of in large lakefront CDFs.

In 2010, sediment was used to cover a Cleveland brownfield slated for redevelopment. Other opportunities for beneficial use could include roadway construction projects, landfill cover, and even creation of new aquatic habitat or beach nourishment. After all it was nutrient-rich sediment that led nature to the transformation of Dike 14 into a wildlife habitat in the first place.



The Port Authority is pleased to manage this unique asset for the community and will continue to lead efforts to beneficially use sediment in the future, work that could save the region millions of dollars in disposal costs, help revitalize a range of sites, and further enhance our community.



Connecting people with nature

The Preserve connects people with nature on Cleveland's lakeshore. It connects people via passive recreation (e.g. hiking, walking, and bird watching) with its loop trail complete with trail markers. There remains room to create a network of trails.

Secondly, the Preserve has proven to be an excellent location for environmental research efforts.

Specific studies to-date include:

- Amphibian Survey, Baldwin Wallace College
- Invertebrate Survey, Baldwin Wallace College-Dr. R. Christopher Stanton
- Plant Inventory, Cleveland Museum of Natural History-Renee Boronka
- Snake Survey, Baldwin Wallace College
- Display Garden, Cleveland Metropolitan School District
- Sample garden, John Hay High School-Student Environmental Congress. Students have designed and partially planted a 'sample garden' that contains a small collection of



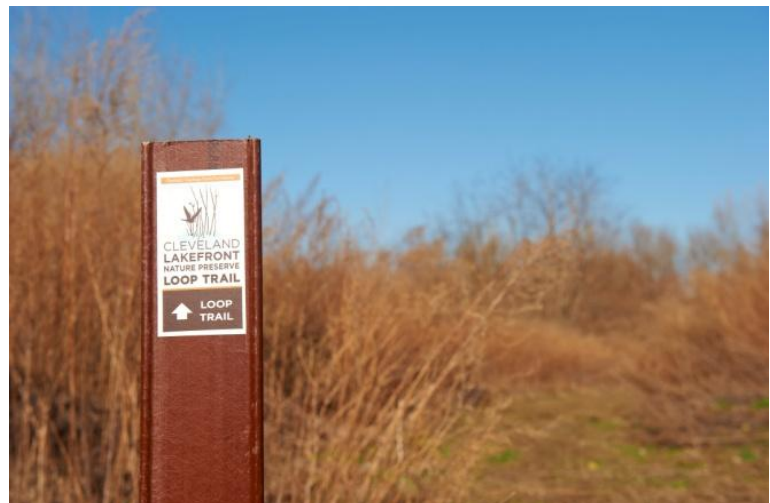
plants that grow on the Nature Preserve. Students will also print, and mount signs with information on their chosen plant species to educate visitors to the site

- Bird Banding, The Nature Center at Shaker Lakes. Study of migratory and resident bird populations.
- Long Term Butterfly Population Monitoring Project, conducted by a local lepidopterists.

Finally, the Port is in discussions with the Cleveland Metropolitan School District, as well as suburban districts, to utilize the Preserve as an outdoor classroom. We aim to explore other educational opportunities as well that could be related to local industry and the history of the site.

Wildlife and habitat planning

The Port is in the early phases of developing a comprehensive wildlife and habitat plan for the site. This would include controlling invasive plant species, managing wildlife and improving the terrain to the benefit of the existing wildlife, new wildlife and visitors. The Port is leading this effort, but working closely with local and regional experts.





Fulfilling the AAPA Environmental Enhancement Award Criteria

The opening of the Cleveland Lakefront Nature Preserve has provided many benefits to the community. Cleveland. It is easily accessible to residents of the region, particularly adults and children in Cleveland, and it gives them the opportunity to, expand their understanding and appreciation of ecology, as well as environmental stewardship and challenges. The Preserve also provides additional opportunities for eco-tourism.

Level and nature of benefits to environmental quality

Environmental quality

The Preserve's prime location, size and diverse habitats are important attributes and make the site a crucial resting place for migratory birds. The site sits at the intersection of four migratory bird routes: Lake Erie, the shore of Lake Erie, the Cuyahoga River Valley and the Doan Brook Valley. Audubon Ohio has deemed the Preserve an Important Bird Area because of the number and diversity of birds using the site. The Preserve provides migratory birds with diverse wildlife habitats (grasslands, forest, meadows, mudflats, shrublands, and wetlands). Simply put, there is no better stopover site along a 60-mile stretch of the Lake Erie shoreline. The closest other sites are in Mentor, 24 miles to the east and Huron, 54 miles to the west.

Beautification

The opening of 88 acres of publicly accessible lakefront is an important accomplishment. The Preserve provides inner-city Cleveland residents with unparalleled access to the beauty of the shoreline and of nature throughout four seasons. It also offers wonderful views of the downtown Cleveland skyline.



Community involvement

Before the Port opened the Preserve in February the site was opened a few times each year, mostly for events held by the Environmental Education Collaborative. That organization's members as well as other passionate citizens had shown tremendous interest in the environmental and educational opportunities at the site. In recent months, the Preserve has seen an average of more than 500 visitors per week. This is sure to increase as word spreads that the Nature Preserve is open daily to the public. The Port in collaboration with the Collaborative recently hosted a community open house and "Migration Mania" event for the public to enjoy the variety of birds passing through during the spring migration. Currently the Port is evaluating numerous requests for volunteer opportunities at the Preserve.

As the Preserve has evolved into an important staging area for migrating birds, it has become both a civic asset and destination for birding enthusiasts. Birding is one of the fastest growing leisure activities in the United States and can generate more eco-tourism and economic activity. A study completed before the opening of the Preserve found that six natural areas on Lake Erie generated over \$26 million in economic impact and created 283 local jobs. Birding enthusiasts will travel far and wide to visit sites where birds congregate, and they support the businesses that provide services nearby. The Port hopes that the Preserve will be an economic driver of eco-tourism in the region.



Level of involvement by the Port Authority

The Port Authority manages and is responsible for the Preserve. While the Port works with the Environmental Education Collaborative and its members, it is the agency that provides the budget dollars, oversees operations, and is leading the development of long-range plans for the site. The Port spent resources in time and dollars to open the Preserve and continues to provide funding for ongoing management. For example it built a small bridge, installed a turnstile and signs, and made fence



repairs. Without the Port's leadership this community asset would remained gated and rarely accessible to the public.

Creativity of the solution

The opening of the Preserve required considerable creativity. The Port needed to develop new policies, signage, and operating procedures from the ground up, but drew on the experiences and practices of local and state operated parks during that process. The Port demonstrated creative as it worked with its partners on the following in advance of the opening:

- Secured the requisite Local, state, and federal approvals
- Coordinated with safety services (police, fire, EMS)



- Created signage (streets, trails, kiosk)
- Developed trail designs
- Established a maintenance protocol
- Established a new working relationship with EEC
- Developed a budgeting
- Began wildlife and habitat planning
- Established public outreach and communications protocols
- Developed rules and regulations
- Planned events

Project results and success

Approximately 2,000 people visited the Cleveland Lakefront Nature Preserve from February through May.

Visitors have come from more than 20 states and 5 countries. Feedback has been largely positive.

Examples include:

- “Thank you for your hard work- beautiful! We want more!!”
- “Like walking through an impressionist painting! Thanks.”

While a park system rings much of our region, there has been keen interest in opening the Nature Preserve in the heart of the city.

Cost effectiveness



The opening of the Cleveland Lakefront Nature Preserve has been cost effective. The cost to ready the site for the opening was approximately \$50,000. On-going costs will vary as the Port develops long-range wildlife and habitat plans. The Port Authority is also actively reviewing grant opportunities to further improve the site. It is important to note that several individuals and organizations spent a great amount of volunteer time preparing the site, and we expect that this support will continue as we move towards the implementation phase of natural resource management of the site.

Transferability to the port industry



Taking a closed confined disposal facility that was filled with “waste material,” and turning it into a nature preserve or other public amenity is a both an innovative and transferable idea. The transformation of Dike 14 into the Nature Preserve not only created a new civic asset, but demonstrates that ports can

lead the paradigm shift from viewing dredged sediment as a waste product to seeing it as a resource that can be used to benefit a community. Plants colonized the site and wildlife took advantage of this green space, demonstrating that nutrient-rich sediment can be used to generate or regenerate places and spaces for the public and nature. This use of sediment is far more cost effective and environmentally sustainable than creating new CDFs along our waterfronts.

That is not to say that the rebirth of a closed CDF is simple. Port authorities or agencies considering this will likely need to do the following:



- Determine what organization will serve as the lead or sponsoring entity
- Secure federal, state or local regulatory approvals
- Forge effective partnerships with other stakeholders
- Develop an effective public outreach program
- Create appropriate short-term and long-term site plans for managing diverse habitats to benefit and draw more wildlife



Conclusion

The transformation of Dike 14 into Cleveland Lakefront Nature Preserve under the leadership of the Cleveland-Cuyahoga County Port Authority has given both residents and tourists more access and exposure to wildlife and plant life. The Preserve -- the only one in Cuyahoga County – also provides citizens with access to 1.2 miles of Lake Erie shoreline and views of Lake Erie beyond the break wall.



The Preserve is a one-of-a kind lakefront setting for bird watching just a few miles from downtown Cleveland. Audubon Ohio has designated the Nature Preserve as an Important Bird Area due to its location at the integration of four migratory bird routes. The Port Authority has committed to manage the Preserve in a way that enhances the diversity of habitats and wildlife at the site – and in the process benefits wildlife, our citizens and the regional economy.

Although the Preserve has only open to the public for three months feedback has been overwhelmingly positive, and visitor numbers continue to increase as word spreads that the formerly locked Dike 14 is now open to the public for passive recreational enjoyment.