

James Clarkson Environmental Discovery Center

White Lake Township, Michigan, U.S.A.

The James Clarkson Environmental Discovery Center is a museum and learning center dedicated to the exploration and celebration of the natural environment. Located 30 miles outside of Detroit, Michigan, the 70-acre property was once used for agricultural production. Years of cultivating a single crop has destroyed the land's diverse native plants and wildlife. The site has now become incorporated into Detroit's regional park system as part of 2,215-acre Indian Springs Metropark.

To increase biodiversity, the land first had to be restored to its natural state. Landscape architects utilized the site's 40-foot grade change to reestablish fourteen distinct ecosystems that are native to the region, including wetland marshes, prairies, woodlands, and open water. Prior to planting, the quality of the soil needed to be restored in order to support native plant growth. Controlled burning, a technique commonly used in prairie maintenance, destroyed remnant weeds and invasive seed banks. Native seed mixes of 170 plant species were added to the soil. As a result, a beautiful prairie emerged. The newly restored ecosystems welcome the Eastern Mountain Rattlesnake, Blanding's Turtle, Karnar Blue Butterfly and Sand Hill Crane, all endangered species.

The project celebrates the complexities of the natural landscape and the inter-relationships among all living creatures. Throughout the site, educational engagement with the landscape allows visitors to learn about the unique, but connected habitats. The Environmental Education Center sits atop the ridgeline of the site. The structure melds seamlessly with the site's natural beauty, and provides a space to present educational workshops and activities to teachers and students. Students can explore the intricacies of the aquatic landscape from within the building's submerged plexiglass classroom, which extends beneath the surface of Kettle Pond. Precast stone benches, large stone

terraces, and wooden boardwalks are set throughout the landscape, acting as outdoor laboratories and informal gathering places. Teachers and tour guides stop in these areas to highlight interesting features about each ecosystem. Visitors can also learn about different species located throughout the site by exploring the demonstration garden filled with native plants.

The landscape architect utilizes low impact development techniques to maintain the site in a resourceful manner. A geothermal system provides renewable energy to heat and cool the Environmental Education Center building. In summer, wastewater from the system is piped off-site and used for irrigation at a nearby golf course. This reduces the need for clean water to irrigate the course. Grass filtration swales, located around the parking lot, collect and filter rainwater before releasing it to the wetland. This initial filtration system cleans the water and protects aquatic plants and animals from pollution and toxins present in stormwater runoff.

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Project Resources

OWNER

Huron-Clinton Metropolitan Authority
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LANDSCAPE ARCHITECT

MSI Design

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ENVIRONMENTAL CONSULTANT

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ARCHITECT

SmithGroup Inc.

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ENVIRONMENTAL ENGINEERING

Eco-Design & Engineering

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CIVIL ENGINEER

Johnson & Anderson, Inc.

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EDUCATION CONSULTANT

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WILDLIFE HABITAT CONSULTANT

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GEOTECHNICAL ENGINEER

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GENERAL CONTRACTOR BUILDING

JM Olson Corporation

GENERAL CONTRACTOR SITE

Warren Contractors