



## Honor Award

### MSI

**Category:** Environmental / Sustainable Design

**Client:** Huron-Clinton Metropolitan Authority

**Environmental Consultant:** Envirotech Consultants, Inc.

**Architect:** Smith Group Inc.

**Environmental Engineer:** Eco-Design & Engineering

**Civil Engineer:** Johnson & Anderson, Inc.

The James Clarkson Environmental Discovery Center is envisioned as a place of learning, play, and gathering that seeks to open a window on the beauty and diversity of the natural world that exists in Southeast Michigan. The 70-acre center, located within Huron-Clinton Metropolitan Authority's (HCMA) 2,215-acre Indian Springs Metropark is dedicated to the exploration and celebration of the natural environment. Situated at the headwaters to the Huron River, the interpretation of the area's hydrology is articulated through the rehabilitation and creation of wetland, prairie, and forest ecosystems.

The landscape architect led a multi-disciplinary team of designers, scientists, engineers, educators, and architects in the creation of the project. At the outset, the project team collaborated with an educational committee, HCMA and research scientists in designing a master plan to be used by the park system to achieve educational goals set for the site. The center is used to teach about ecosystems and to give visitors an appreciation of the complexity of natural systems and the interrelationships between all aspects of nature, including the role of human beings.

Based on the master plan, the bio-diversity of the site is celebrated and augmented through the restorations of the following ecosystems: prairie barrens, shortgrass prairie, tallgrass prairie, and a sedge-fen-lake complex. This large-scale ecosystem restoration required the landscape architect to coordinate the expertise of the entire team, understanding complex issues related to site hydrology, native plant species, stormwater control, and endangered species preservation. This work has allowed the reestablishment of more than 170 plant species and preservation of endangered species (Eastern Massasauga Rattlesnake, Blanding's Turtle, Henslow's Sparrow).

The building is designed as an extension of the site with the landscape architect locating the building as a continuation of a ridgeline, visually separating the parking area from the restored ecosystems. Students can submerge themselves in the middle of the kettle pond, because the classroom itself is a plexiglass room extending to the middle of the pond, an idea originated in the master plan by the landscape architect.

Sustainable practices were utilized throughout the site and building development efforts. In particular, a geothermal system is used to heat and cool the building, and bioswales are utilized within the parking area to collect and clean the stormwater runoff prior to releasing it into the site's various wetland systems. Years of farming and fertilization required extensive remedial work to eliminate the dormant weed and invasive seed bank through the use of fire and herbicides. The seed mixes were then integrated into the top 1/4" of soil and the prairie began to take form with the arrival of spring.

The James Clarkson Environmental Discovery Center is a celebration of nature and a gateway to understanding through education. The ecosystems and gardens are celebrated as places of gathering and knowledge, which open a window on the diversity and beauty of the native world. It is a center of learning and discovery where appreciation for the interdependency of living organisms is renewed with each visit.

**Plan:** The James Clarkson Environmental Discovery Center is envisioned as a place of learning, play, and gathering that seeks to open a window on the beauty and diversity of the natural world that exists in Southeast Michigan.

**Figure A:** The Kettle Lake ecosystem was slowly created as the site and building became ready to hold water. Tree stumps and boulders were salvaged from other Metroparks and used to create the habitats around the underwater classroom.

**Figure B:** The curving forms of the wetland paths and Council Rings provide a visual harmony with the native surroundings.

**Figure C:** Landscape elements are carefully designed to complement the native landscape, while letting the ecosystems natural beauty remain the focus.

**Figure D:** The wetlands boardwalk at the sedge fen lake is an ideal location for environmental exploration or to be used as an outdoor classroom.

**Figure E:** The Kettle Lake ecosystem was slowly created as the site and building became ready to hold water. Tree stumps and boulders were salvaged from other Metroparks and used to create the habitats around the underwater classroom.



Figure A



Figure B



Figure D



Figure C



Figure E