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Chicago, Illinois, United States

Rehabilitating a historic park while maintaining its cultural character.

Jackson Park is situated along the Lake Michigan shoreline in Chicago, Illinois. The landscape was designed by Frederick Olmsted in 1890, and the park was home to the 1893 World's Columbian Exposition. More recently, the park suffered from invasive species, impaired geomorphology, and poor native species richness. Therefore, a collaboration between the U.S. Army Corps of Engineers (USACE)-Chicago District, the Chicago Park District, Project 120, Heritage Landscapes, and the Illinois Historic Preservation Agency, restored 16 hectares of habitat while preserving and rehabilitating the historical and cultural character of Jackson Park. The restored habitat includes fringe marsh, sedge meadow, oak savanna, and oak woodlands adjacent to the western shoreline of Lake Michigan, a globally significant migratory bird flyway. Curvilinear walking paths true to Olmstead design principles run through the park to promote visitors' ability to experience an ecologically restored landscape in an urban setting. Both the design and the construction efforts were funded by the Great Lakes Restoration Initiative. Construction for the project began in 2014 and was completed in

2019, but regular operation and maintenance performed by Chicago Park District will ensure long-term project success.

Article cover: Fringe wetland with native emergent plants along the lagoon shore. (Photo by USACE Chicago District)

Producing Efficiencies

The team developed 15 restoration measures, which they analyzed for costs and benefits and combined into a variety of alternative plans. Further cost analysis screened out those options that would produce the same or fewer benefits at a greater cost, allowing the team to select and implement the best plan. One plan element included mimicking the expansive open spaces of Olmsted's vision without the high maintenance of a lawn. To achieve this, the team created a lawn-like look using native oak sedge (*Carex pensylvanica*) and other low-growing species. The successful landscaping drew much public praise.

Using Natural Processes

Much of Jackson Park, particularly the Wooded Island, consisted of degraded oak savanna systems so overgrown with invasive or undesirable tree species that the park provided only very poor-quality habitat. Invasive tree removal allowed more sunlight to reach the ground layer and promoted a more diverse native herbaceous understory. Further, the project team graded over 3,000 linear meters of lagoon shoreline to create a submerged wetland shelf and stabilized it by planting native emergent wetland species. These established wetland shelves help to absorb erosive wave energy and provide valuable fish and wildlife habitat while creating a gentle transition from open water upland areas.





Restored oak savanna with open canopy and herbaceous understory.

(Photo by USACE Chicago District)

Broadening Benefits

The Jackson Park project provides a well-rounded suite of benefits, ranging from the environmental benefits associated with ecosystem restoration to the social and economic benefits created through park improvements such as walking paths and scenic overlooks. The project team undertook significant efforts throughout the planning and construction phases to preserve the historical and cultural character of Jackson Park, including incorporating Olmsted design principles when creating the planting plans and designing the layout of walking paths to promote accessibility throughout the park.



Olmsted-inspired paths through the park.
(Photo by USACE Chicago District)



Herbaceous and woody species are critical for wildlife habitat and erosion control.

(Photo by USACE Chicago District)



The sedge meadow replicates the look of an expansive lawn without the associated maintenance costs. It additionally provides ecological benefits that a lawn does not.

(Photo by USACE Chicago District)

Promoting Collaboration

Jackson Park lies just south of the Museum of Science and Industry, adjacent to the future Obama Presidential Library, and will surround Yoko Ono's public art piece, Sky Landing. Being at the nexus of these resources and amenities demanded extensive collaboration and stakeholder involvement. The participation of the USACE Chicago District, the Chicago

> Park District, Project 120, Illinois Historic Preservation Agency, Heritage Landscapes, and local community representatives ensured that this was a successful Engineering With Nature application in a historic Olmsted Park.













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