Oleta River Headwaters Restoration

June 2012

Highland Oaks Park

20459 NE 24th Avenue, Miami, Florida 33180
Park (with Preserve): Protected Natural Area
Size: 8 acres of Restored Wetlands; 1,100 meters (3,608.92 linear feet) of streambed
Restoration Costs: $621,065; **County Population**: 2.4 million

Miami-Dade Parks, Recreation & Open Spaces Department

Jack Kardys, Director
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The overall goal of this project, Oleta River Wetlands Restoration and Environmental Community Outreach, is to re-establish the hydrologic regime at the northern headwaters of the Oleta River located at Highland Oaks Park in MDC while engaging the public in meaningful, hands-on restoration and environmental community outreach activities.

The project site is among the last remaining freshwater wetlands historically located at the headwaters of the Oleta River – a designated "Florida Outstanding Waterway" located within Highland Oaks Park in Northeast Miami Dade County(MDC), 20459 NE 24th Avenue, Miami, Florida 33180; 25°58'04.24 North and 80°09'11.67 West; Sec. 33, Township 51 So., Range 42 E.

Specific on-the-ground restoration activities undertaken at Highland Oaks Park included: removal of approximately five (5) acres of exotic vegetation; widening the existing streambed and excavation of approximately 6,200 cubic yards of excessive accumulated sediment from stream bed (to -2.5 NGVD elevation) to improve the hydrology along 1,100 meters (3,608.92 linear feet) of river; installation and assessment of a new properly functioning 50 foot culvert; transplanting native vegetation and littoral planting of an estimated 34,350 specimens of native riparian and emergent aquatic vegetation to improve water quality and enhance the aquatic habitat along this historic river; promoting environmental and project outreach and education via community volunteers for planting activities.

Prior to restoration the site was primarily a disturbed tidal wetland dominated by the invasive non-native Australian pine (*Casurina equisetifolia*) and Brazilian pepper (*Schinus terebinthifolius*) trees located on the west bank of the Oleta River. Restoration involved clearing exotic woody species, followed by excavation that transformed the property into a mixture of low marsh community and preserved islands of natural vegetation, as well as marginal transitional areas.

Approximately 1,100 meters (or 3,608.92 linear feet) of streambed and 8 acres of estuarine and freshwater marsh have been restored. Anticipated long-term project outcomes (or benefits) include improved freshwater habitat and water quality for a variety of wetland-dependent wildlife and increased public awareness of community's natural resources. Success of outcomes are being determined by monitoring: percent cover; survivorship (minimum 80%); and wildlife species using the project site.

Unique features and community benefits:

The project site is located on the only remaining natural river in Miami-Dade County not dammed for flood water control and provides the necessary low salinity environment to fulfill life history habitat requirement for some important commercial and recreational fishery species. The project provides the only freshwater tributary connection to the Biscayne Bay Aquatic Preserve that does not incorporate some form of flood control structure. Due to rapid urbanization of Miami-Dade County, Highland Oaks Park is now the last remaining segment of this natural tributary. Reestablishing the hydrology of the tributary and reconnecting it with the Oleta River benefits the existing flora and fauna within the area while also creating new habitat for diadromous fish and aquatic wildlife using these waters. This project also increased public awareness of the community's natural resources and community stewardship of the natural environment; and has enhanced and provided additional habitat for for important vertebrate and invertebrate species important to the commercial and recreational fishing industry. Surrounding communities also will benefit over the years from enhanced ecosystem services provided by this restoration.

Project Collaborative Efforts and Partnerships:

Miami-Dade County Department of Environmental Resources Management (DERM)

Gary Milano and Josh Mahoney, Co-Project Managers/Coastal Habitat Restoration Managers (Restoration and Enhancement Section, DERM), restoration management and overseeing volunteer planting;

John M. Ricisak, Project Supervisor (Coastal Resources Section), inspections of permitted activities.

Miami-Dade County Parks Department 275 NW 2nd Street, Miami FL 33128

Karen Cheney, RLA, LEED AP, Co-Project Manager and Landscape Architect (Miami-Dade PROS Capital Programs Division, Design & Construction), project management;

Alicie Warren, Ph.D., Natural Areas Manager (Natural Areas Management Division), oversee planting and tree relocating activities as well as monitor post-project survival;

Jay Forni, Construction Manager 3 (Design and Construction Division), monitor budget and progress of contract;

Daniel F. Crawford, Constriction & Renovation Supervisor 1 (Design & Construction Division), provide day-to-day construction management

Engineering Firm: Consultant Engineering & Science, Inc.

John Guttman, Sr., PE, CEI; 10700 N. Kendall Dr. Ste 400, Miami FL 33176; 305-378-5555

Contractor Firm: Acre Engineering and Construction, Inc. joseangelbustos@acreconstruction.com

Jose Bustos, 2500 SW 7th Ave, Doral Miami, FL 33129; 305-436-5102

Reclamation Project, Miami Science Museum 3280 South Miami Ave, Miami FL 33129
305-968-8457 fbretos@miamisci.org

Fernando Bretos, Director – Coordinates educational activities including 300 volunteers and procurement of native seedlings for restoration;

Xavier Cortada, Artist – Maintains artistic and educational integrity of eco-art projects.

Volunteer workdays at Highland Oaks were conducted with assistance from all other partners. Each workday commenced with registration and a pre-test to gage awareness of the community's wetland and natural resources. An orientation followed with instructions on the day's activities, (i.e., how to plant properly and safety concerns). Volunteers were taught to identify various invasive plant species and how to replant native ones.

Funding Sources:			
City/County Funding: **Miami-Dade County Biscayne Bay Environmental Enhancement Trust Funds**	87%	$539,400	Cash
Grant Funding: **Miami Science Museum (The Reclamation Project)**	2%	$15,375	Cash
NaCO Coastal Counties Restoration Initiative	8%	$50,000	Cash
Sea Grant-Miami Dade County Extension	3%	$16,290	In-kind
Total:		**$621,065**	