



# FEMA

## Snake Warrior Island Mitigation and Improvement

**Snake Warrior Island, FL** - Flooding has plagued many of the neighborhoods in this South Broward County, Florida, area since development in the 1940s and 1950s. The area primarily consists of single-family homes and small businesses. Prior to 1997, the subdivisions did not have an appreciable stormwater drainage system. Roadside swales were originally constructed throughout the subdivisions to collect stormwater, but they quickly became clogged with silt, rendering them no longer effective.

The primary means of stormwater runoff disposal consisted of evaporation and percolation. Thus, the residents struggled with frequent street flooding, standing water for extended periods of time, and house flooding under even normal rainfall conditions. County officials recognized that a heavy, sustained downpour from a tropical storm system could be catastrophic.

The flood mitigation initiative began with a conscientious effort to involve groups and individuals who would be most impacted by a project in both the design and implementation phases. The local homeowners associations, local political leaders, and the county commission came together to identify the primary needs and interests of the communities. A drainage project became an integral part of the larger South Broward County Neighborhood Improvement Project.

Drainage improvements were combined with beautification, the construction of a limited-use recreational park, and an effort to provide a centralized sewer system. Warrior's Island is an example of the multidimensional configuration of the project. At completion, the land will play multiple roles as a stormwater retention area, a State archaeological site, and as a public recreation area.

The project has divided the neighborhoods into five sections and corresponding project phases. The drainage system has been designed to internally treat and convey the runoff from low intensity storms (3.5 inches of rainfall over a 24-hour period) without discharging to the wetlands system. In more localized storms, excessive runoff would flow into a canal that drains to the ocean. In more intensive, longer duration storms that raise the height of water in the canal system to full capacity, the water is then routed to the wetland system.

At Snake Warrior Island a series of eight interconnected wetlands are being created. Native wetland species, such as fire flag, pickerel weed, arrowhead, and spikerushes have been planted to support wetland functions. Existing native vegetation is being conserved on-site, and an exotic plant removal program has been implemented. The project as a whole cost \$120 million funded primarily by utility operating funds and the tax-generated general fund. More than \$4.8 million has been designated for wetlands restoration at Snake Warrior's Island and runoff retention. FEMA is providing 50 percent of the Hazard Mitigation Grant Program (HMGP) funds.



Broward County,  
Florida



### Quick Facts

Sector:

**Public**

Cost:

**\$4,810,440.00 (Estimated)**

Primary Activity/Project:

**Wetland Restoration**

Primary Funding:

**Hazard Mitigation Grant Program (HMGP)**