

Restoring the Cat Island Chain

By Kathryn Cawdrey



Man-made gravel dike leads to the lush, partially filled island. *Photo by Kathryn Cawdrey.*

What Happened?

The Cat Islands, located in Lower Green Bay, eroded away in the mid-1970s due to severe storms and high water damage. A few wetlands remained, but much of the habitat for aquatic animals, shorebirds, and 13 different species of colonial nesting birds was lost.

After the islands eroded away, the extensive coastal wetlands in the lower Green Bay weren't protected from high-energy waves and storms.

In 1988, [The Cat Island Chain Project](#) was developed in the [Lower Green Bay Remedial Action Plan](#), and was deemed the top priority project for habitat restoration. Nearly 25 years of planning and securing funding allowed reconstruction to begin in 2012.

The Plan

The chain includes three islands with a connecting dike that serves as a wave barrier. The islands will be reconstructed over the next 20 to 30 years by the [Corps of Engineers using](#)

[clean dredge material](#) from the maintenance of the Green Bay Harbor, a beneficial reuse of the material.

The 4.3 miles of stone dike is eight feet high and acts as a stone wave barrier and mold for the new islands. Five perpendicular dikes, or “legs,” will separate three cells that will be used as a dredged material disposal facility (DMDF), with decades of capacity for the sediments from the lower portion of the navigation channel. Dredged materials deposited in the Cat Island DMDF over the coming years will gradually build three islands, expected to foster vegetation and habitat for fish and wildlife.



An aerial view of the Cat Island Chain in Green Bay, Wisconsin. *Photo by U.S. Army Engineers.*

A gravel road on top of the dike enables truck transport and pipeline placement of the dredged material to the cells. The [project is already ahead of schedule](#); one cell has now been partially filled.

Project Funding

The total cost of the project is approximately \$18.7 million. The funds have contributed to the restoration of 272 acres of island habitat, 2.5 miles of shoreline habitat, and 1,225 acres of backwater habitat. The first phase of Cat Island reconstruction began in 2012, with



Natural Cottonwoods sprout on the clean dredge material used to reconstruct the new island. *Photo by Kathryn Cawdrey.*

funding from a \$1.5 million Environmental Protection Agency (EPA) Great Lakes Restoration Initiative grant. The U.S. Fish and Wildlife Service directed \$210,000 in Great Lakes Restoration, initiative Coastal funds, and \$1.1 million in Natural Resource Damage Assessment (NRDA) settlement funds. Additional funds were provided by a Wisconsin DOT Harbor Assistance Program grant and funds collected by the Port of Green Bay.

The Benefits

Birds

[Migrating birds](#) following the west shore of Wisconsin's Green Bay funnel into the southern tip of the bay, where shallow waters and large beds of aquatic vegetation serve as a major stopover site. The southern edge of Green Bay once contained one of the largest, most diverse wetland habitats in the Great Lakes. There, waterfowl and other migrating birds find much-needed habitat.

Habitats

Reconstructing the Cat islands will protect and restore 1,225 acres of shallow water and wetland habitats. Restoring the islands' habitat will benefit sport and commercial fisheries, waterfowl, water birds and shorebirds, and other wildlife. The wave barrier will protect the barrier islands and restored wetlands from future storm and ice damage.



Vegetation grows behind the protective dike that leads out to the islands. *Photo by Kathryn Cawdrey.*

Progress

The Cat Islands are already beginning to serve their purpose. An endangered whooping crane was spotted on site during the summer of 2016. Another endangered bird, the piping plover, has made an appearance as well. For the first time in over 75 years, [piping plovers fledged three chicks](#) on the newly restored island.

Rufa red knots, ruddy turnstones, white pelicans, and snowy owls have also been taking advantage of the restored islands. Additionally, biologists observed endangered Great Lakes piping plovers nesting on one of the islands. Common and Forster's terns are using nesting structures constructed as part of the restoration. Various fish species are expected to have improved spawning and nursery habitat and the other biotic species associated with coastal wetlands of the area are expected to benefit, too.

Additional benefits of restoration have already been seen in improved water quality, revegetation of near shore areas, and an increase in waterfowl species. Local partners are planning habitat restoration for shorebirds, piping plovers, common terns, fish, and waterfowl.