

ORIOLE ESTATES
CITY OF LAUDERDALE LAKES, FLORIDA



2018 CASE STUDY



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RECONSTRUCTION OF COLLAPSED NEIGHBORHOOD CANAL BANKS

Oriole Estates, Lauderdale Lakes, Florida



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PROBLEM:

ERODING CANAL BANKS CLAIM HOMEOWNERS' YARDS, DOCKS AND POOL

SOLUTION:

CREATE A FORTIFIED LIVING SHORELINE BEHIND 43 HOMES AT ORIOLE ESTATES

Living on a canal loses some of its luster when the canal banks collapse into the water, taking part of the yard, and maybe the fence or a dock with it.



Homeowners in Oriole Estates watched their properties erode away and appealed to the city of Lauderdale Lakes for help.

That's what homeowners in Oriole Estates in the city of Lauderdale Lakes had been facing, after years of erosion and neglect. But now, homeowners have a fortified "living shoreline" behind 43 canal-front homes.



PROJECT PROFILE VIDEO

The eroded canal banks were on city property and it was the city of Lauderdale Lakes that sought solutions to this vexing problem. They had installed Geo-Tube on sections of the canal in the past and it had failed resulting in the present conditions. Officials were advised not to use Geo-filter Tubes again by the Geotechnical Engineering Report by Terracon, an independent consulting firm.

The city officials were all set to move forward with repairing the canal walls with Gabion baskets filled with rock even though the high costs only allowed a portion of the neighborhood to be done – only 12 of 43 homes would get restored banks.

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The savvy general contractor, Abbey Fiallo of Metro Equipment Service Inc. in Miami, already had the job, but he discovered that if the project used Sox Erosion Solutions and their Shoresox living shoreline product, the project could expand to include many more feet of shoreline. He got a bid from Lake and Wetland Management, the exclusive service provider of Sox Erosion Solutions in the State of Florida, and together they were able to demonstrate how all 43 canal-front homes could get restored banks for less money than using the Gabion baskets on just 12 property fronts.



Setting up our staging area behind each home with our stakes before the material arrives.

The city officials and engineers approved Fiallo's plan to lay a foundation of rock rubble base on sections of the shoreline and apply Sox Erosion Solution's Shoresox product on top to create a living shoreline.

The kicker was that this solution would save the city of Lauderdale Lakes \$2.5 Million and all 43 homes would get new shorelines. The Gabion basket plan would have cost \$2.5 million more than using Shoresox and would have provided less reclamation.

"The option is definitely less expensive than other methods like building seawalls," City Manager Phil Alleyne said. The \$1.5 million job to strengthen 3,250 feet of shoreline is the city's largest canal bank restoration effort so far.



The SOX system is filled with blow-in mulch in this area behind the homes.

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The Lake and Wetland crew installed the Shoresox bioengineered erosion control system using their patented subsurface anchoring system. Once staked in and stabilized, the mesh was pumped full of black dirt, compost material and topsoil. The mesh surface was then topped with St. Augustine grass squares. The shoreline is expected to last several decades.

General contractor, Abbey Fiallo, describes the final product as aesthetically pleasing. Working concurrently with the Lake and Wetland crew, Fiallo says the entire project took six to eight weeks with four to five of those weeks concentrating on the Shoresox installation. "Both companies planned together and maximized production time," says Fiallo. "In addition to the \$2.5M saved by the city, we actually saved them another \$24,000 because we never had a change order."

THE RESULT:

Backyards grew by several feet, putting a safer distance between the erosive waters and residents' pools, pool decks, docks and cabanas. "We reclaimed approximately six feet of shoreland in the back of their yards," said Brian Fischer of Sox Erosion Solutions. "It definitely improves home values."



SOX Erosion Solutions is sodded over leaving a seamless look to the shoreline and immediately halting any further erosion.



Once the SOX System is filled it is then staked subsurface to the secure shoreline before it is sodded over.

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