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Conservation: Oyster Gardens in the Tide

Dock owners install vertical oyster gardens attractive to fish and beneficial to water quality.



Vertical oyster garden is self-sustaining and functions as habitat for numerous critters (how many crabs can you spot?). (Photo by G. E. McGrath)

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By G. E. MaGrath

Vertical Oyster Gardens (VOGs) are a positive trend in Florida and a way for waterfront homeowners to help improve coastal water quality with the bonus of creating a fish-friendly habitat. Components for assembling these simple, self-maintaining arrays are available from many organizations throughout the state, such as Tampa Bay Watch, Tampa Bay Estuary Program, Sarasota Bay Estuary Program, and Calusa Waterkeeper. VOGs are constructed by drilling holes into clean, recycled oyster shells and stringing them onto rope. They are easy to install, and progress can be seen in the first few months.

The VOGs work by providing hard substrate that juvenile oysters and other fouling organisms need to grow. Larvae float through the water seeking a place to attach themselves. Once attached, these organisms begin to create their own shells as they develop. They filter water in the process, which is why their presence can indicate a healthy ecosystem.

“Oysters are keystone species of our estuarine habitats,” said Rick Radigan, Tampa Bay Watch Oyster Shell Program Manager. “While our VOGs aren’t a solution to habitat loss, they are definitely a step in the right direction.”



Sheepshead are among fish that favor these structures. (Photo by G. E. McGrath)

We pulled a VOG out of the water, and I saw it was home to oysters, mussels, barnacles, anemones, mud crabs, and tiny shrimp. The overall increase in food and water quality attracts baitfish, crustaceans, and larger inshore species such as sheepshead, snook, speckled trout, mangrove snapper, redfish, black drum, and jack crevalle.

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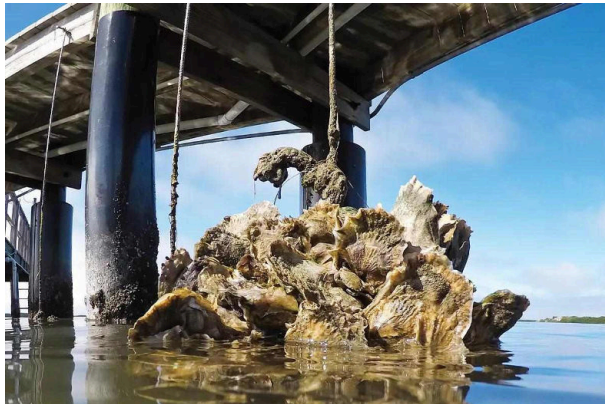
Radigan recommends installing VOGs equipped with marine-grade line that you will not have to worry about after installation. While coconut fiber is a popular alternative, it will eventually disintegrate, and the VOG will need to be replaced.

After several years of red tide events impacting fish populations in the canal around his dock, St. Petersburg resident Glen Richard installed VOGs in 2021. He said, “Once I saw the VOGs were available, I said, ‘Yeah, that’s definitely something I want on my dock.’ As an angler, I recognize that the crustiest, oldest docks are the ones with the most fish. After having to wrap my pilings with PVC due to boring worms, the oyster and barnacle populations I had on my old dock just aren’t there.” Richard said he has seen a lot of fish hanging around since installing the VOGs. Sheepshead can often be seen feeding on the VOG, crushing the hard substrate with their teeth to reach the food inside.

One popular installation method is drilling eyelets to the side of the dock to affix the VOGs. They can also be wrapped around railing support beams. They should be hung between pilings and away from vessels. The shells must be underwater at high tide but can withstand exposure during the tidal cycle.

Photo Gallery

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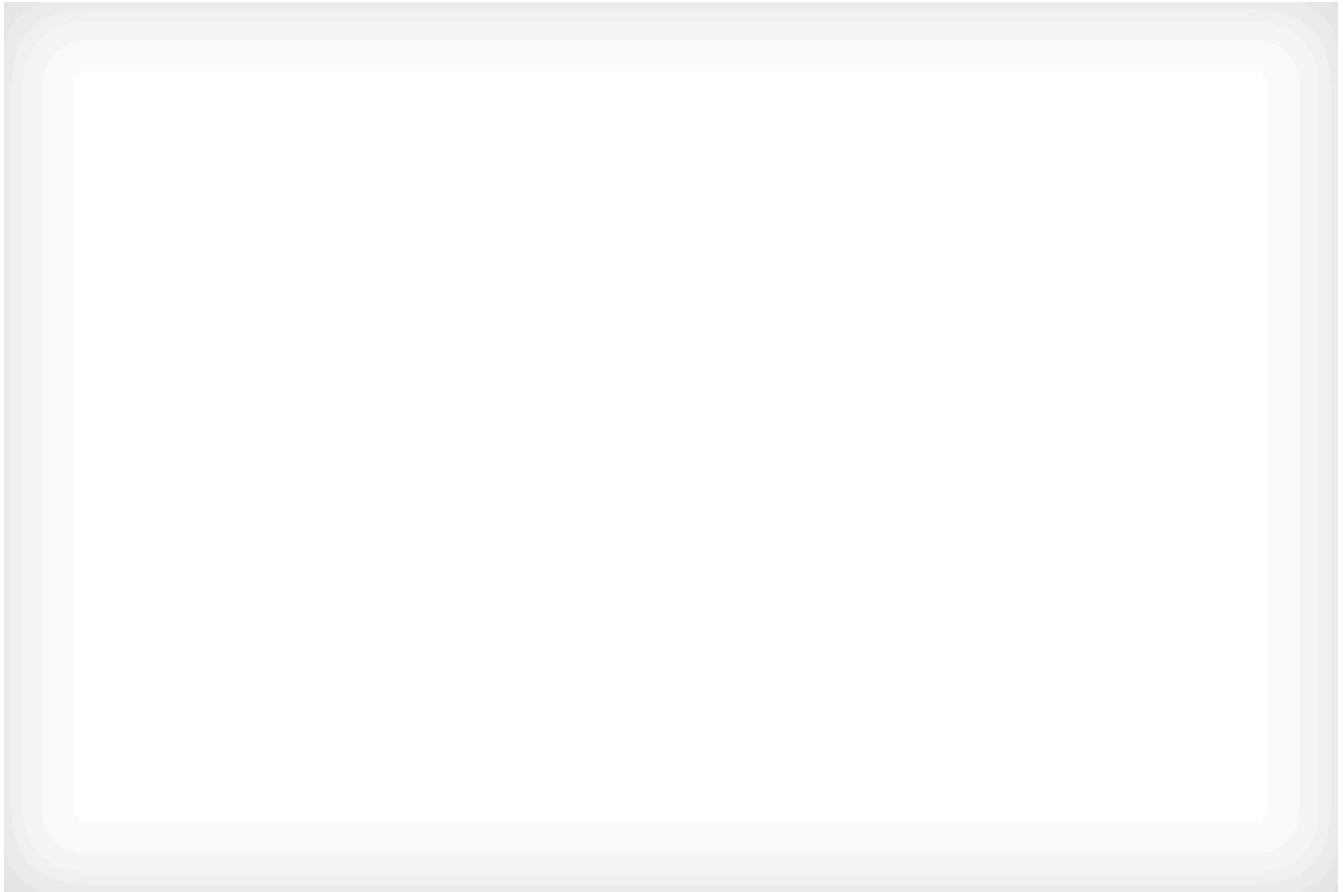


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“If it’s hanging in the water, it’s making good habitat and a positive impact,” said FWC Research Scientist Steve Geiger. “The most important part of what the VOGs are doing is creating structure to attract the organisms and increase biodiversity. This improves the overall health of the estuary.” Geiger also mentioned different communities of organisms

will form depending on the season and conditions where VOGs are installed. All will provide helpful habitat to create cleaner saltwater environments and flourishing ecosystems.

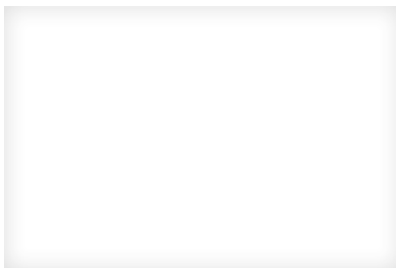


"Adoption box" for VOG shell, Sarasota Bay Estuary Program, Robinson Preserve, Bradenton.

In a state where oyster reefs have faced severe loss due to coastal development and over harvesting, VOGs emerge as a beacon of hope. By installing VOGs, residents can help restore the natural balance of the tidal zones and may mitigate the severity of disturbances such as red tide. As innovation continues to sweep through Florida's coastal waters, VOGs stand as a testament to the power of community-driven conservation, ensuring a healthier, more resilient future for our cherished ecosystems.

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