

# LIVING SHORELINE CASE STUDY

## IN PARTNERSHIP WITH THE ELIZABETH RIVER PROJECT

### *Elizabeth River Living Shoreline*



### PARTNERSHIP TO PROTECTION

*Homeowner Jenn worked closely with her neighbor on a joint project that addresses the unique needs of their individual shoreline properties.*

Jenn's home once featured a traditional design with concrete bulkheads and large hedges along the edge of her backyard. Over time these two structures began to cause serious issues. Nearly three feet of Jenn's backyard was taken out by rising water levels and her hedges became overgrown and consumed by invasive weeds. It seemed that the features put in place to protect her home were doing the very opposite. Jenn was not the only person facing these issues; her next door neighbor, Julie, was also experiencing problems with erosion. Julie's home was located in an area with continuous wave action and her wooden bulkhead was failing against increased boat traffic. Both Jenn and Julie were part of the River Star Home program with the Elizabeth River Project (ERP)—a homeowner pledge to protect the Elizabeth River. Given their familiarity with the ERP's work, the homeowners decided to pursue a collaborative living shoreline project to protect their homes from further erosion.

*"Part of my yard was just washing away, and we were trying to figure out how to deal with that...and we ended up with not just doing the shoreline, we did a full oyster reef with our next-door neighbor."*

**– JENN, HOMEOWNER**

To combat erosion, the ERP designed a hybrid living shoreline, which utilized Oyster Castles™—interlocking blocks made from a blend of concrete and oyster shells—as an oyster reef to slow down erosion and establish a wetland. The Oyster Castle™ reefs and the living shorelines were designed to fit the contours of each property. Julie, whose home is more impacted by wave action, required a longer oyster reef that connected to Jenn's oyster reef situated on slightly higher ground. The areas extending from each of their backyards were updated with a wetland area and lowland plantings. The hedges that once crowded Jenn's backyard were replaced with native grasses, perennials and shrubs that frame her river view. Jenn lauds these features as making the space much more open and enjoyable.





In addition to the living shoreline in Jenn's backyard, she decided to install native plants at the front of her house. The native plants will protect her home from stormwater runoff.

*"It really has held up, the backfill from the oyster reef and the sand has held up. The grasses are all growing in really nicely. And it seems to be stopping where that part of our yard was washing away every time we had a big storm."*

**– JENN, HOMEOWNER**

In the three months since the two homeowners have installed their living shorelines, they have seen major improvements in erosion prevention and the overall look of their homes. According to Jenn, the ERP made the process easy by providing 50% of funding through a partnership with the City of Norfolk and a National Fish and Wildlife Foundation Innovative Nutrient & Sediment Reduction grant. The ERP also facilitated the permitting, design and installation of the project. The overall planning and construction took a few months to complete.

Jenn also noted that these activities have made for excellent family-time and restored her family's connection to the natural environment. She was pleasantly surprised to see her son become engaged in the project—he and other neighborhood kids assisted with transporting sand and planting native grasses. Since then, Jenn's whole family has become more involved in the maintenance of their home by working on the yard weekly.

Jenn states that the success of her project is owed to the ERP. She highly recommends that other waterfront homeowners work with organizations like them, who are well-versed in acquiring funding and completing living shoreline projects. Jenn also notes that by working with her next-door neighbor they were both able to achieve more protection from erosion and safeguard the river they call home.

**"I love that we're helping keep the river clean and stop runoff , but it's also an improvement in how our yard looks."**

**- JENN, HOMEOWNER**

