

Used oyster shells collected to help next generation grow

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Like much of the other containers and food scraps from the North Baltimore farm-to-table restaurant Woodberry Kitchen, the oyster shells don't go in the trash. The raw bar castoffs -- about 2,000 per week -- are sent to an Eastern Shore oyster hatchery and then back to the Chesapeake Bay.

The restaurant is one of about 20 in the [local food](#) industry working with the University of Maryland and a nonprofit group to recycle the [calcium carbonate](#) encasements for use by another generation of bivalves. The [shells](#) are collected, cleaned and given a spot of [oyster](#) spat, or larvae, before being returned to the water.

Supporters say the effort could bring public attention and support to restoring the once-plentiful species in the bay, with profound environmental and economic impacts.

"At Woodberry, we compost and recycle everything we can, but until now, because the shells don't compost, they were going to the landfill," said owner and chef Spike Gjerde. "We knew there was a better way. I went out on a boat and saw a reef where the shells go, and it gave me a glimmer of hope that this way of life is not lost to us."

The nonprofit Oyster Recovery Partnership, which collects the shells, was formed 15 years ago to help revive Maryland's oyster population. The effort is seen as important to watermen and the bay itself. Oysters help filter the water, and oyster reefs serve as habitat for other [sea life](#).

Volunteers make weekly trips to restaurants, caterers and other businesses in Baltimore, Annapolis and Washington, trucking the haul to the university's hatchery in Cambridge.

The shells are added to piles brought in by the state Department of Natural Resources, which dredges them from the bay's bottom. The process of reusing the shells has been honed over time by scientists who have spun a \$1.5 million budget from government and private sources into a system that saw 650 million would-be oysters planted last year.

The goal is 2 billion next year, which means the program will need 200,000 bushels of shells, up from about 60,000 this year. The restaurants have contributed 3,000 bushels in the year and a half since the effort began as a pilot program.

"The reception is 100 percent in the first five minutes of the conversation," Stephan Abel, the oyster partnership's executive director, said about the businesses asked to participate. "The bull and oyster roasts are unique to Maryland, so we'll want to get all of those shells. For every oyster you enjoy, I can put 10 back on the shell."

Five other states collect shells, but Abel said they charge to haul them away. To keep the local program free, the effort relies mostly on volunteers. The costs, less than \$15,000, have mainly gone to containers to give to restaurants and three large bins placed around Baltimore. The restaurants need to supply about five buckets a week, which equals about two to three bushels, or about 1,000-1,500 shells.

Abel and others working for oyster recovery say it's too soon to judge the success of the restaurant program, and the success of the overall restoration effort is also tough to gauge.

Overfishing, habitat degradation and pollution in the bay watershed have

taken a toll. And while cleanup and oyster planting have increased, so have development and population, which are contributing more polluted runoff. No one can say how many oysters survive the natural or the artificial process, but watermen were able to harvest 100,000 to 200,000 bushels from the bay last year, down from 15 million in the heyday more than a century ago.

Don "Mutt" Meritt, director of the University of Maryland Horn Point Laboratory, where the oyster larvae are grown, said the lab's technology can only do so much.

"We get better every year," said Meritt, who has worked at the lab since it opened in 1973. "But don't get the idea that we can replace Mother Nature's role. We hope to restore healthy populations to select sites on the bay, and we hope others will restore on their own."

The lab works year-round, with about six months used to plant oysters, said Stephanie Alexander, the hatchery manager. She explains the process this way:

About this time of year, adult oysters that had been hibernating are warmed and fed in the lab. They release eggs and sperm, which are collected in tubs and introduced to each other in optimal amounts for fertilization.

The larvae are cultivated in tanks, fed with their favorite green and brown algae _ rich in protein and fatty acids, and grown in the lab's greenhouse. Once the oysters have grown to the right size, they extend a footlike appendage and look for a hard surface on which to attach for the remainder of their lives. That's where the shells come in.

Oysters need a hard surface to call home, and while other surfaces will do, the shells provide some advantages, Alexander said. The oysters are

comfortable on the shells, and once planted, they attract more sea life. The curved edges also provide protection from predators such as crabs.

Oyster Recovery Partnership workers send the shells through a washer to remove leftover material and then collect them in cages that are ready to be lowered into tanks filled with water from the Choptank River near the lab. Oyster larvae are dumped in and attach to the shells, where they become spat. A new collection of tanks under construction will vastly expand the amount of spat available at one time.

Soon after, the spat are loaded onto the deck of a boat and motored to sanctuaries and reefs open to watermen. A hose is used to spray a layer of shells into the bay waters so they don't all land in a clump.

Some spat will not survive because of water conditions or predators, or because the shell lands in the sand and suffocates those on the bottom. The survivors grow their own shells and, at about 4 inches across, are ready to be harvested.

While the lab has also grown sturgeon and striped bass, the oysters remain the largest recovery effort in the state, Alexander said. "Our goal is to put as many oysters as possible back in the bay."

And that's good news to Woodberry Kitchen, Atlantic Catering, InterContinental Harbor Court hotel and others who list oysters on their menus.

Vernon Johnson, a local shucker who volunteers to pick up the empty shells for the Oyster Recovery Partnership, expects that a lot more restaurants will sign on. The restaurants have to pay for trash to be hauled away, so this is a money saver, as well as "the right thing to do," he said.

"My dad had shucked oysters since he was a kid," Johnson said. "I was born to do it. Packinghouses used to be all around the harbor. It would be a shame if we lost it all."

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