

50 STATES, 50 FIXES

Shell Recyclers in Connecticut Are Helping Oysters Find Homes

A small team is rescuing a “ridiculous amount” of shells from restaurant trash bins and using them to rebuild oyster habitat in Long Island Sound.

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Summer in New England means lobster rolls, fried seafood and, of course, freshly shucked oysters.

But there’s a problem. Those empty shells usually end up in a dumpster instead of back in the water, where they play a key role in the oyster life cycle. Oyster larvae attach to shells, where they grow into adults and form reefs that improve water quality, prevent coastal erosion and create habitat for other marine life.

Two men in Connecticut are working to fix that. They’ve started a statewide program to collect discarded shells from local restaurants, dry them and return them to Long Island Sound for restoration projects.

50 States, 50 Fixes is a [series about local solutions](#) to environmental problems. More to come this year.

“We fill that missing piece,” said Tim Macklin, a co-founder of Collective Oyster Recycling & Restoration, the nonprofit group leading the effort.

It’s one of several shell recycling programs that have emerged to help reverse the steep decline in oyster populations along U.S. coastlines, a drop that experts largely attribute to overharvesting, habitat degradation and disease. Some of the largest programs process more than a million pounds of shell each year.



A table at the Shell & Bones Oyster Bar and Grill in New Haven, Conn. Tim Macklin, left, and Todd Koehnke, two co-founders of Collective Oyster Recycling & Restoration, get discarded shells from about 50 restaurants across the state, plus a commercial seafood supplier.

The Connecticut group is smaller but growing. In 2024, it collected about 375,000 pounds of shell. This year, working with a network of about 50 restaurants across Connecticut and a commercial seafood supplier, they're on track to surpass 400,000 pounds, with plans to keep expanding.

What further sets their effort apart is that it's essentially a two-man operation. Unlike larger programs that rely on volunteers, most of the day-to-day work falls to Mr. Macklin and Todd Koehnke, who founded the project together with Eric Victor, who is retired but still lends a hand occasionally.

Sandra Brooke, a researcher at Florida State University who has [studied shell recycling efforts](#) in the United States, said the group was among the few collecting a "ridiculous amount of shell for the size of the program." She added, "Good for them."

Mr. Macklin, 51, and Mr. Koehnke, 50, fell into oyster shell recycling about a decade ago. They were members of a local shellfish commission and surprised to learn that Connecticut, unlike other coastal states, did not have a robust shell recycling program. On weekends, they would voluntarily stop by restaurants to collect discarded shells, hoping to one day turn their efforts into something bigger.

That opportunity arrived in 2023 when they secured a \$400,000 state grant. They also received funding from grant-making programs focused on the Long Island Sound. Mr. Macklin, who worked in television production, and Mr. Koehnke, who worked in beverage can recycling, left their full-time jobs. Mr. Victor came partially out of retirement to help. They bought a truck and trailer, and recruited restaurants, which participate in the program free of charge.





Mr. Macklin, front, and Mr. Koehnke moved empty shells to cure in the open air before they can be returned to the Long Island Sound. The piles are occasionally turned with a loader, and buckets are cleaned after each use.

The process is simple but labor-intensive. Collective Oyster Recycling & Restoration supplies restaurants with five-gallon, screw-top buckets for discarded shells, which Mr. Macklin and Mr. Koehnke pick up once a week. Most of the haul is oyster and clam shells, though restaurants occasionally toss in mussels and other shellfish.

“To make it easier, we just say we’ll take any of your shellfish shells,” Mr. Koehnke said. “We try not to say no.”

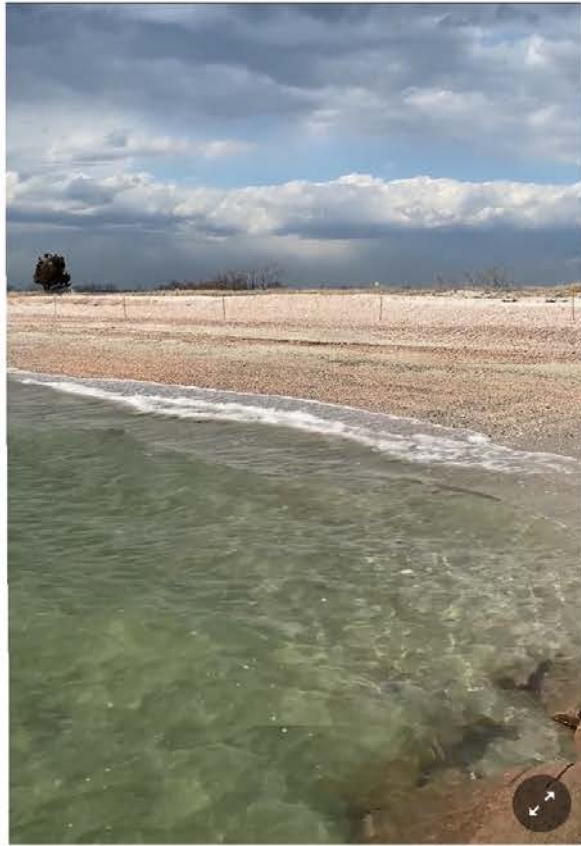
The shells are transported to a storage site in East Haven, a defunct quarry that’s high, dry and far enough from homes to avoid any odor issues. There, the shells sit exposed to the elements for at least six months to kill any lingering pathogens.

When the weather warms, the shells are returned to the water at designated restoration sites. Most are planted in a state-owned oyster bed off the coast of Bridgeport and Stratford that is closed to harvesting. Some also go to a small group of local shellfish harvesters who do their own restoration work.

At the dock, the shells are loaded onto boats using a conveyor belt. Out on the water, they’re either blasted off the boat with a high-

powered hose or shoveled overboard. Oyster larvae can then attach to the shells, their preferred surface, and develop into mature oysters to help rebuild the habitat.

"You're growing on grandpa," Mr. Koehnke said, referring to the old shells. "It's just the perfect environment for them."





Top, young oysters, called spat, that have attached to a shell, and a Long Island Sound oyster bed at low tide. Above, recovered shells on their way back to the sea in a photo provided by Collective Oyster Recycling & Restoration.

Bryan Hurlburt, the state's agriculture commissioner, said Connecticut was tracking the shells placed on the state-owned bed. Since the first shells have only been in the water for about a year, he said it was too early to gauge their impact.

Still, he's optimistic about the program's potential to support not only the environment but the long-term viability of the state's aquaculture industry.

"People think about it as boating and beaches," Mr. Hurlburt said of Long Island Sound. "We think about it as farmland."

Dan Meiser, who owns Oyster Club, an upscale "farm- and sea-to-table" restaurant in Mystic, said he was excited when first approached about the program. But he had questions: What would it cost? Who would pick up the shells? Collective Oyster Recycling & Restoration made it easy to say yes, he said.

Oyster Club shucked nearly 300,000 oysters last year. The shells are collected in the kitchen, and customers learn about the recycling effort on signs and in conversations with staff.

"It's a good tidbit of knowledge that the oysters they eat that night are going to make their way back into Long Island Sound," Mr. Meiser said.

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