

From Grant: (TIM MACKLIN/JOHN SHORT WORK, FAIRFIELD SHELLFISH COMMISSION)

O5B. Establish Four Shell Recycling Case Studies. CT Sea Grant will coordinate with four local shell recycling program managers to develop case studies for inclusion in the shell recycling guidance noted above. There will be models from two towns where there are pilot scale projects (Norwalk and Fairfield), and two towns where plans for programs are underway (Groton and Stamford). Program managers will identify, record and share the following information with the workgroup:

- local sources and recipients of shell; [Shell is sourced from local restaurants and oyster festivals. Shell is used for restoration projects in the town of Fairfield by the Shellfish Commission.](#)

- [Current Sources:](#)
 - [B.R.Y. A.C - 3074 Fairfield Ave, Bridgeport, CT 06605](#)
 - [Nordic Fish - 1499 Post Rd, Fairfield, CT 06824](#)
 - [Milford Oyster Festival](#)

- [Potential Sources:](#)
 - [Martel - 2316 Post Rd, Fairfield, CT 06824](#)
 - [Post Road Tavern - 1418 Post Road, Fairfield, CT 06824](#)
 - [Sinclair - 1229 Post Rd, Fairfield, CT 06824](#)
 - [Bocca - 10 E Main St, Bridgeport, CT 06608](#)

Private and public sector partners such as landscaping and waste management companies and 501c(3) organizations; [We have not established partnerships with any landscape companies or waste management companies. We are currently working on a partnership with Closed Loop Initiative Partners and Curbside Compost.](#)

Current and potential funding sources;

[The program is currently funded from the town's Shellfish Commission budget.](#)

Public or private storages sites;

Our current storage site is on town property located behind the Conservation Workshop. 211 Richard White Way, Fairfield, CT 06824. The storage area is approximately 12' x 50'. The storage area surface is paved/asphalt and is enclosed on the sides and back with concrete blocks.

Locations for maintenance and sanitation of shell collection containers (if not the storage site);

Sanitization of containers is done at our storage site where there is access to running water/hose. Clean, empty containers are stored at the volunteer's home, out of convenience, but can also be stored at our shell storage site. We store our new/unused backup containers in the storage trailer at the Conservation Workshop. During the winter when the weather is below freezing and we are unable to use our water line and hose, containers are brought to a home with a hot water supply. Having access to a hot water supply is necessary during the winter months.

Maintenance, transfer and sanitation procedures for containers and transportation vehicles;

Shell is collected in 5-gallon buckets with screw top lids. At the restaurants, buckets are typically stored outside, in the back of the restaurant. Some restaurants store filled buckets in their walk-in coolers to delay spoilage. Containers are picked up once a week and transported via pickup truck to the storage/curing site. Buckets are emptied into the storage /curing pile. Buckets and lids are sanitized with a bleach solution (1 part water /1 part bleach), applied with a spray bottle. The bleach solution is allowed to sit for 5 minutes and the buckets are hosed out with fresh water. Since the shell is stored and transferred in buckets, the vehicle usually does not need to be cleaned. Occasionally a bucket may fall over in the truck bed. In those cases, the truck bed is hosed out with fresh water.

Transportation options; We use a pickup truck with a 5-foot bed. It's a privately owned vehicle supplied by a shellfish commissioner. The truck can hold approximately 16 5-gallon buckets. In the past, we have had Conservation Workshop

employees do pick-ups in town-owned trucks.

Key costs by category and approximate percentage;

- **Storage Site Set Up:** Do not have these costs
- **Transportation:** The vehicle is privately owned and supplied by a volunteer. We would need to calculate vehicle cost, insurance and maintenance. We do mileage reimbursement (based on the current year IRS mileage rate)
- **Containers:** 5-gallon screw top bucket - \$13.50/per bucket (when you buy 50+) https://www.uline.com/BL_8173/Screw-Top-Pails See image 3
 - Labels / Signage for containers- \$2.25 /labels- Granville Printing,90 Granville St, Fairfield, CT 06824
- **Sanitization:** Bleach, spray bottles, hose, nozzle
- **Labor:** Our program is volunteer-based so there are currently no labor costs

How the program is currently supported (if existing program) and plans for long-term (e.g. town, private sector, non-profit) or plans for funding (proposed programs); Our program is free. Restaurants are not charged a fee for recycling shell. We are volunteer-based and operating costs come out of the Shellfish Commission budgets. The program is supported by the Fairfield Shellfish Commission and Fairfield Conservation Department. Pickup and management is done by a commission member (Tim Macklin) and is all volunteer-based. We are looking to expand the program. Expanding our program would most likely require hiring a part-time or full-time program manager. We did apply for the Sustainable Materials Management (SMM) Grant program but were not accepted.

Town or health district policies or requirements (e.g. sitting in proximity to planning zones); and lessons learned such as hurdles or opportunities.

The town of Fairfield currently does not have any policies or requirements. One of the large hurdles is finding a storage/curing location. Fortunately for our program, the town had an ideal location for shell storage, and the Conservation Department was key in setting up the storage site. I believe there are plenty of restaurants that would get involved in recycling programs, but expanding our recycling program and the

number of pick-up locations would require either more volunteer hours or hiring a person to do pickups.

Using the cured shell for restoration projects and transporting the cured shell to restoration sites on a large scale has been a hurdle.

We are only able to use and transport small quantities of shell for restoration projects. We typically bag the shell in mesh bags and hang them off docks to collect spat. We typically hang around 60 bags of shell per spawning season. Currently, we have a large surplus of shell that we have not been able to use. Having a well-thought-out and clear plan for how the cured shell will eventually be used is a very key component to a successful recycling program.

Establishing and coordinating partnerships with the state, educational organizations, and commercial shellfishing companies to assist in restoration projects and shell transportation and seeding would be necessary for expanding and maintaining a successful recycling program.

Currently working on shell recycling participation signage/stickers for restaurants to display to inform customers that they recycle oyster and clam shells. Finding other opportunities to use the shell other than for restoring projects, could also help sustain a successful recycling program:

- There is a company that uses the recycled oyster shell to make clothing (sweaters)- <https://longwharfsupply.com/pages/seawell-collection>
- Local farms that raise chickens could use crushed oyster shells as a component /supplement in their chicken feed.
- Landscapers can use crushed oyster shells for driveways, walkways, and bocce ball courts.
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