



B-120 Shellfish Restoration Project Buzzards Bay, MA

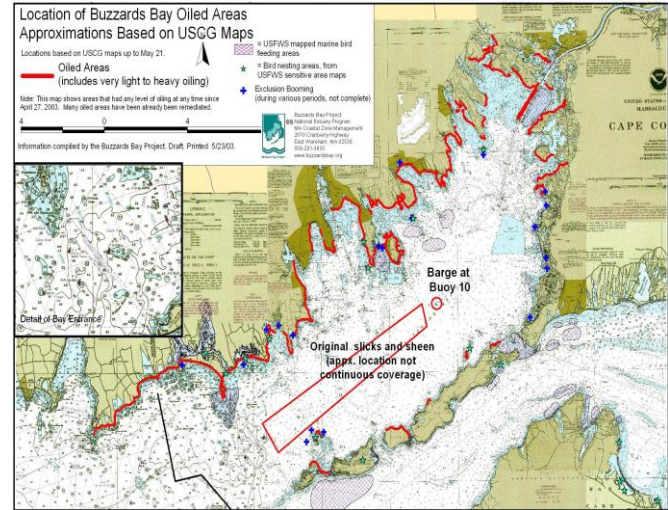
MA Division Of Marine Fisheries



The Bouchard Barge No. 120

Introduction

On April 28th, 2003, the Bouchard Barge tanker No. 120 hit rocks in Buzzards Bay causing a 12-foot rupture to the ship's hull. As a result, 98,000 gallons of fuel oil spilled into the bay, which affected over 100 miles of shoreline and nearby coastal waters in Massachusetts and Rhode Island and caused substantial environmental and economic damage.



Map of the area impacted by the B-120 oil spill.

Impacts of the oil spill

- 100 miles of MA and RI shoreline were oiled.
- Tidal marshes, mudflats, rocky shores, and beaches were impacted.
- Shellfish beds were damaged and restricted for harvest.
- Injury and mortality to shellfish, finfish, and federally protected shorebirds.
- Beaches and boating access was restricted.

Restoration Objectives

The B-120 Trustees released a Programmatic Restoration Plan and Environmental Assessment (PRP/EA) to address aquatic resource injury and loss of recreational uses resulting from the oil spill. The Massachusetts Division of Marine Fisheries (DMF, in conjunction with municipal Shellfish Department personnel, was directed to implement a work plan to restore shellfish resources and recreational shell fishing to nine Buzzards Bay coastal communities that were affected by the incident: Bourne, Dartmouth, Fairhaven, Gosnold, Marion, Mattapoisett, New Bedford, Wareham, and Westport. The B-120 shellfish restoration project consists of four strategies 1) a project in which contaminated quahog broodstock are transferred from donor areas in the Taunton River into designated sites within the nine municipalities, 2) out-planting of hatchery quahog seed reared in municipally maintained upwellers, 3) out-planting of hatchery oyster seed reared in municipally maintained upwellers, and 4) assisting The Nature Conservancy (TNC) in monitoring bay scallop restoration efforts in Bourne, MA.

1. Contaminated Quahog Relays

In October 2015, DMF initiated a five-year quahog relay and transplant project to oversee the planned and scheduled transplant of quahog broodstock secured from a fecal coliform-contaminated closure area in the Taunton River and placement into designated transplant sites within Buzzards Bay municipalities. This project funds local commercial fishermen to harvest and deliver up to 800 bushels of quahogs annually to each town, who then plants them for natural purification and propagation. Each site is closed to shellfishing for 1-3 years to ensure public health safety and to allow the quahogs to spawn. Pre-relay surveys are conducted at all nine sites each year to ensure the proposed area is an Approved or Conditionally Approved shellfish growing area, has suitable quahog substrate and habitat, and that it is a designated recreational shellfishing-only area and has adequate public access. During the relay and planting process, DMF samples the quahogs for size and counts per bushel, and performs additional sampling to quantify general health and condition of the shellfish at a subsample of towns.



A team of 700 workers and volunteers responded to the oil spill. Cleanup techniques varied based on the habitat type impacted.



Planting relay quahogs in Wareham



Oyster broadcasting in Marion



Raking during a quahog site survey



Quahog seed growth monitoring and out-planting

2. Quahog Seed Purchase and Out-Planting

In 2016, the towns of Dartmouth, Fairhaven, and Wareham received B-120 funding to purchase FLUPSY-style upwellers for quahog seed grow-out. Each town will receive two years of hatchery-raised quahog seed purchases in an effort to boost their shellfish stock for recreational purposes. In 2017, each town received approximately 185,000 seed for intermediate grow-out, and this will be repeated in 2019. Once the quahogs grow to approximately 15-20mm, they are planted under predator-exclusion nets at pre-surveyed sites. The nets are removed the following spring and these planting sites are closed to shellfishing for 1-3 years.

3. Single Oyster Seed Purchase and Out-Planting

Similar to the quahog seed project, the towns of Bourne, Marion, and Wareham purchased FLUPSY-style upwellers for oyster seed grow-out. In 2017 and 2018, B-120 funds were utilized to purchase hatchery-reared single oysters from Muscongus Bay Aquaculture in Maine. Each town received two orders of oysters each year, placing the small seed (>2 mm) in upwellers and the larger seed (9-13 mm) directly into floating bags and cages. All oysters were monitored for growth and survival during the grow-out period and then broadcast planted in the fall in designated pre-surveyed sites. Each planted site will be closed to shellfishing for 1-3 years.

The municipal Shellfish Departments and DMF collaborate frequently to create and maintain sustainable recreationally-available oyster resources. Because of their hard work and dedication to the project, over 1 million single oysters were planted into Buzzards Bay in 2018.

Monitoring

In addition to pre-planting surveys that are conducted at every restoration planting site, all planted shellfish populations are monitored for growth, survival, and reproduction/recruitment at least one year post-planting. For the contaminated quahog relays, the adult quahogs generally have very high survival rates and surveys are conducted just one year following the transplant. For the out-planted oyster and quahog seed, surveys are conducted every year following planting to document growth and survival. Surveys are discontinued once the sites have been re-opened for recreational shell fishing.

Collaboration

All B-120 shellfish restoration projects are a collaborative effort between the Trustees, DMF, and participating Buzzards Bay municipalities, and we are grateful for the hard work of everyone involved. Additionally, we often have wonderful volunteers helping with various aspects of these projects, and we are always looking for more help during the busy summer/fall season. If you would like to get involved, see contact details below!

Get Involved!

Interested in volunteering for quahog relays or quahog seed planting?

We always need help with planting projects in late summer/fall!

Contact: Tom Shields, B-120 Project Leader, (508) 742-0767, Thomas.Shields@mass.gov; or Harriet Booth, B-120 Shellfish Restoration Biologist, (508) 742-9762, Harriet.Booth@mass.gov