



NJDEP Research and Monitoring Initiative: Project Fact Sheet



Planting and Survival of Juvenile Surfclams for Stock Enhancement

Research Motivation

- The primary objectives of this project are to i) better understand how planting density of surfclams may change the survival and growth of those seed (juvenile) surfclams and ii) to evaluate the predation rates and size preferences of key predators on surfclam seed.
- The data in this study will help guide decision makers in surfclam fishery enhancement planning.

Principal Investigators and Institutions

Lead Principal Investigator: Dr. Daphne Munroe, Rutgers University, Haskin Shellfish Laboratory

Collaborators: Dr. Laura Steeves, Rutgers University, Haskin Shellfish Laboratory

Dr. Sarah Borsetti, Rutgers University, Haskin Shellfish Laboratory

Tom Dameron, Surfside Seafood Products

Rusty Cassway and Ross Baxter, Research Vessel Explorer

RMI Research Priorities Addresses

- (2) Understand how shifting oceanographic conditions will affect fishery resource access and bivalve abundance.
- (13) Examine the changes to fishing practices and access to fishery resources.

Geographic Scope

Field experiments will be located offshore of Cape May, NJ and at the Aquaculture Innovation Center in Cape May.

Methods or Approaches Used

- Researchers will use hatchery-reared surfclams (1 year old) in 3 different density experiments.
- Visual surveys of low, medium, and high-density circular seed plots will be conducted by a SCUBA team to evaluate burial success post-deployment. The team will also collect data on water quality parameters to assess any anomalous conditions. After 6 and 12 months post seeding, they will sample each density plot to evaluate survival and growth.
- Predator exclusion cages will be used to monitor the potential predation pressure on the deployed surfclams of different densities.
- Through multi-factorial, controlled lab-based experiments, researchers will evaluate predator (moon snails and rock crab) predation rates, prey size preferences, and seasonal variation in predation on surfclam seeded at low and high densities.

Expected Outcomes or Deliverables

- Data generated from the seeding density experiment will help determine how small seeds planted at different densities survive and grow. This information will guide optimal planning strategies to maximize survival and growth while minimizing costs and area.
- Understanding predation pressure and size preferences of key predators on seeds, both when they are buried and before, will help interpret field data and guide decisions on the optimal seed size to plant and planting strategies to improve burial success.

Regional Coordination / Collaboration / Data Sharing

- This project involves collaboration between the Haskin Shellfish Laboratory and partners at the Research Vessel Explorer (RVX) and fishing industry advisors.
- The data will be made available through at least one peer-reviewed manuscript and presentations. All summary data will be made publicly available in digital tabular format.

Project Completion Date: January 2028

Total Project Budget: \$862,903