

Edward Hale, Ph.D.

ehale@udel.edu

Advisory Specialist & Assistant Professor
Delaware Sea Grant, University of Delaware

Program Need:

Delaware's commercial fishing and aquaculture industries have a demonstrated need for a university-based raw seawater facility. The facility will serve as a shellfish hatchery/laboratory to help augment natural production of the Eastern Oyster (*Crassostrea virginica*) to revitalize and supplement a historic commercial fishery, while simultaneously serving nonprofit organizations to provide restorative ecological functions to the bay, and as a learning/workforce development space for students and industry. After establishing protocols for Eastern Oyster other species such as Hard Clams will be produced.

Background:

Commercial oyster fishing dates back to the nineteenth century and helped form an important economic and social component to the fabric of Delaware. Today, commercial quotas represent small fractions of historical catches, demonstrating a unique opportunity to use innovative, applied technology (hatchery, remote setting) to enhance economic and learning opportunities, improving sustainability in coastal communities for all.

Oysters can be grown using either cage culture for individual oysters or bottom culture creating large concentrations—or reefs—of harvestable oysters. Remote setting uses oyster larvae to jump start the creation of an oyster reef in a relatively short time frame (about two weeks).

Currently, oyster larvae and seed present a statewide bottleneck for the development of a larger, more resilient aquaculture industry in Delaware. This bottleneck is creating delays in planting, requires expensive disease testing for out-of-state imports, and hampers shellfish farmers from competing with growers in other states. With no such facility in Delaware, building a shellfish hatchery will help to increase opportunities for new entrepreneurs.



Shellfish farmers and the public alike need educational opportunities to learn about the methods and benefits associated with growing oysters and clams.



Remote setting oyster larvae can increase profitability, but larvae are expensive and represent a bottleneck.



By increasing larval production, we can increase economic opportunities for existing fishermen and new oyster farmers.