

Oyster Research and Restoration 2021 Annual Legislative Report

University of North Carolina Wilmington

Oyster Brood Stock Development Program/Shellfish Research Hatchery

The NC General Assembly continues to provide support for operations at the UNCW Shellfish Research Hatchery (SRH) through the Department of Environmental Quality. The hatchery continues to use these funds to expand and strengthen its selective breeding program with the goal of developing lines of oysters that perform well (fast growth, high survival) in North Carolina waters. This year's funds were allocated to support personnel (3 full time technicians, 7 part-time student workers, 2 graduate students: 70%), expendable supplies (5%) and to obtain/replace equipment (14%). Additional funds have been budgeted for the continued monitoring of disease, genetics and water quality, system maintenance and operational support. We anticipate the carry over to be larger than previous years due to the ongoing challenges that are a consequence of the pandemic.

The 2020 production cycle was scheduled to begin March 18, 2020 but was delayed when the University shut down operations on March 24, 2020. Hatchery operations were suspended for 6 weeks, until mid-May when permission was given to execute the planned spawns under strict rules regarding mask-wearing, social distancing and sanitation. Eleven successful spawns were completed over the 9-week season. Support to the industry and research in 2019 continued with over 50,000 seed and 2.7 million larvae being provided by the SRH. Additionally, over 30,000 seed scallops and 140,000 clams were provided to the shellfish community. The 2020 broodstock were reasonably free of the castrating trematode parasite that had complicated the 2019 season (7% in 2020, 20% in 2019), which contributed to a successful season despite the lateness of the start. This year's storm (Isaias) broke 17/20 lines on the farm, tangling gear but few cages were lost. To avoid repetition of the laborious restoration of order on the farm, we have replaced all of the polypropylene lines with Kevlar.

Preparations for the 2021 production season began in January. We have 800 oysters conditioning with the expectation that spawning will start mid-March. Additional broodstock will be brought in after the current experiment on the conditioning of Sunray Venus clams is completed in mid-February.

We are also working on an arrangement for some of our oysters to be supplied to a commercial hatchery to produce seed for the industry. This is the first of what we hope to be many such arrangements and is evidence of the progress we have made in breeding a better growing oyster for North Carolina.

N.C. Division of Marine Fisheries

Restoration Activities

Cultch Planting

In Fiscal Year 2020-2021, the net appropriation for cultch planting is \$798,054, all of which is reoccurring. The division typically purchases shell throughout the year and marl in February, thus some of the expenditures for this fiscal year have not yet been incurred. As of January 26, 2021, the division had purchased 11,478 bushels of oyster shells at a total cost of \$28,828.21, including transportation. The division anticipates purchasing an additional estimated 76,000 bushels of shell at an estimated cost of \$203,081.96, bringing the total number of oyster shells purchased by the division to 87,863 bushels of shell at an estimated cost of \$231,910.16. To supplement purchased shell, the division is currently under contract to receive approximately 194,000 bushels of marine limestone marl for cultch planting at total cost of \$364,680. The combined estimated cost of cultch planting materials (shell and limestone) for FY 20-21 is \$596,590.16 The remaining appropriated funds will be used to support program operations, including material deployments, equipment replacement and repairs as well as other shellfish rehabilitation objectives.

Oyster Sanctuaries

In Fiscal Year 2020-2021, the net appropriation for the Oyster Sanctuary program is \$500,000, all of which is reoccurring. The Oyster Sanctuary Program was also granted carry forward of \$273,988 from the previous FY to support a deployment contract which was delayed by the COVID-19 pandemic. \$90,387 has been spent from those carry forward funds, however the contract has since been terminated due to non-performance by the contractor. Approximately \$183,601 remains of those carry forward funds. Using 2020-2021 appropriated funds, the Oyster Sanctuary program will begin development of a new site, Cedar Island Oyster Sanctuary. The division has reinitiated its partnership with the North Carolina Coastal Federation, splitting material acquisition and deployment costs respectively. As of January 26, 2021, the division had identified a material source and is currently preparing to solicit bids for the purchase and delivery 10,000 tons of Class B crushed concrete, with an alternate option of adding up to 5,000 tons to the purchase depending on partner-funding for deployments. The anticipated total cost of 10,000 tons is approximately \$320,000 and the alternate bid may add up to an additional \$160,000.