

**Student Name and Class Year:** Jessica Batchelder '17  
**Internship dates:** Summer 2015  
**Sponsoring Agency:** The Nature Conservancy (NH)  
**Location:** Newmarket, NH

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“Being part of this project has been an incredible experience this summer and I have enjoyed working with an amazing team from both TNC and UNH along with the homeowners who volunteer their time because they are passionate about improving water quality in the bay.”

This summer I interned with the New Hampshire chapter of The Nature Conservancy (TNC) working to restore oyster populations in Great Bay. For the past ten years, TNC has teamed with scientists at UNH’s Jackson Estuarine Lab (JEL) and local homeowners who raise oyster spat off of their docks or moorings to restore the local oyster populations.

Historically, there were approximately 900 acres of oyster reef in Great Bay, but due to disease, overharvesting and poor water quality, only 80 acres of the historical oyster reef remain. Since 2006, efforts have been in place to bring oysters back to the bay.



The Oyster Conservationist program began ten years ago as a way to increase the oyster population and to engage local homeowners in protecting the health of the bay. Volunteers who have water access, such as a dock or mooring, house a cage of oyster spat for a ten-week period until they are large enough to be released on artificial reefs in the bay. During the ten-week period volunteers also measure the oyster spat to help understand growth patterns. In 2009, TNC began constructing artificial reefs in the bay. The artificial reefs are made from surf clam shells and provide a hard substrate for the oyster habitat. Together, these two parts of the program have contributed over 25 acres of artificial reef and 3.5 million oysters to the bay.

During my internship I had the opportunity to work on all aspects of the restoration efforts. One of favorite assignments was coordinating the volunteer efforts for the Oyster

Conservationist program.

There were a total of 82 volunteer sites summer, 72 in New Hampshire and 10 in Kittery, ME. Working with the volunteers included visiting potential cage sites, meeting with homeowners and delivering oyster cages. I also conducted individual training sessions on how to care and measure the oysters to the 24 new volunteers in the Oyster Conservationist program this season.



Working directly with the homeowners gave me the opportunity to help them engage in the protection of the bay and to show them how small efforts can go a long way. I was also inspired by the incredibly positive attitude and personal investment all the volunteers showed towards the protection and health of the bay.

When I was not working with the volunteers in the Oyster Conservationist program, I was working in the lab with Dr. Ray Grizzle and his team of researchers at the Jackson Estuarine Lab. This is where the oyster larvae set on recycled oyster shells. The recycled oyster shells come from the Coastal Conservation Program (CCP) that collects oyster shells from local restaurants. Before the larvae can set on the shells, they have to sit for six months and then undergo a cleaning process. The shells are then placed in large outdoor tanks at JEL where the larvae set. While the larvae set on the shells, the water quality has to be closely monitored to preserve the optimal conditions for the larvae.



Being involved with TNC's oyster restoration project this summer allowed me to pursue my interest in marine science and also engage with volunteers in the community. Working with the community as part of this project showed me how important and meaningful the work of volunteers is in conservation and restoration work. I was also lucky to work with an incredible team from both TNC and JEL. The oyster restoration project has been growing for many years and being able to play a role in the ongoing success of the project was an incredible experience. I am especially thankful to the Environmental Studies department for the grant funding that allowed me to intern with TNC this summer.