

Great South Bay Reclamation Project

Long Island Chapter, New York



Hard Clam Restoration

The Great South Bay was once world renowned for its hard clam population, supplying over half of the clams eaten in the US. The clams were a foundation species in the bay, which means their high numbers, filtering capacity, and shell production had a big influence upon the entire food web, connecting plankton, seagrass meadows, small invertebrates, fishes, waterfowl, and people. Clams are long-lived, adding stability and resilience to the ecosystem. Numerous scientific studies show that healthy native shellfish populations have many ecological benefits in estuaries like Great South Bay.

Unfortunately, unsustainable harvest of the past, combined with the cumulative impacts of coastal development have decimated the clam population, which has shown few signs of recovery for the past three decades. There are strong cultural ties to both commercial and recreational clamming in many Great South Bay communities. Enhancement of the recreational and economic value of the clam fishery has been an objective for local governments; however, experts recognize a variety of approaches are needed to reverse declining clam populations in Great South Bay. The Nature Conservancy has joined these efforts and made rebuilding clam populations to sustainable levels a focus for making Great South Bay great again.



Fast Facts

- The Conservancy owns and manages 13,400 acres of submerged lands in central Great South Bay
- Since 2004, over 2.7 million adult clams have been stocked on a network of sanctuaries totaling 47 acres
- Accounting for losses due to natural mortality, these clams have increased the adult clam population in the central bay by 18%
- Each clam filters approximately one gallon of water per hour
- Each female clam produces 1.6 to 6.3 million eggs per year
- The added clams are filtering 40,000,000 gallons of water per day and producing trillions of additional eggs per year

Since initiating restoration efforts in 2002, The Nature Conservancy has made significant progress implementing restoration, research, and monitoring to restore hard clams to Great South Bay. Stocking sanctuaries with 2.7 million adult clams on our Bluepoints underwater property, which is a “no-harvest” area has significantly increased the reproduction potential for clams in Great South Bay. Monitoring results suggest that 1.7 million of the adult clams that were stocked since 2004 are still alive, representing a population increase of in the central bay of 18%. We are adapting strategies to further increase survival rates by avoiding areas where predation by whelks was high.

Investigations on clam condition reveals clams are spawning; however, the intensity and frequency of spawning varies from year to year, which appears to be correlated with plankton type and abundance (i.e. food for clams). Comprehensive monitoring of clams and plankton in Great South Bay, Long Island Sound, Peconic Estuary, and Shinnecock Bay have increased our understanding of the impacts of predation and clam food. Assessments of the major sources of land-derived nutrients to Great South Bay is providing us with a tool to evaluate the costs and benefits of various water quality improvement strategies.

Over the next 24 months The Nature Conservancy plans to:

- Expand, enhance, and monitor our network of spawner sanctuaries while focusing on the size and sources of clams and geographic areas that have shown the most successful survival and spawning
- Work with towns and communities to expand shellfish nurseries needed to improve the success of hatchery-based restoration approaches
- Work with agencies to reduce impacts to water quality
- Develop a framework to reduce the threat of unsustainable harvest in the future



Local officials supporting clam restoration

Working Together

The Nature Conservancy has formed the Bluepoints Bottomlands Council, a coalition of 15 agencies and organizations representing local, state, and federal resource managers, scientists, and community stakeholders to participate in the development and implementation of a multi-faceted plan to restore hard clams to Great South Bay by 2020.

For the first time, a goal and coordinated approach to restore shellfish for both its value to the entire ecosystem, as well as sustainable harvest, has been endorsed by such a diverse group of decision makers on Long Island.

The opportunities provided by The Conservancy's acquisition of submerged lands, the desire to implement priority strategies of the South Shore Estuary Reserve Comprehensive Management Plan, and new scientific information linking clams to the health of the entire ecosystem has created enthusiasm and excitement needed to be successful in this endeavor.

The Conservancy's supporters for this project extend well beyond traditional environmental allies to include restaurant owners, marina operators, seafood wholesalers, baymen, recreational fishing groups, and a long list of individual volunteers.

The mission of The Nature Conservancy is to preserve the plants, animals, and natural communities that represent the diversity of life on Earth by protecting the lands and waters they need to survive.

For more information

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Hard clams help clarify water for seagrass and provide food for fish such as winter flounder

The Bluepoints Bottomlands Council: The Nature Conservancy, National Oceanic and Atmospheric Administration, NY Sea Grant, NYS Department of State, NYS Department of Environmental Conservation, Stony Brook University, Cornell Cooperative Extension, Suffolk County, South Shore Estuary Reserve Office, Environmental Defense, Brookhaven Baymen,, Islip, Babylon, and Brookhaven Townships, Bluepoints Company, Fire Island National Seashore.