

SHELLFISH MANAGEMENT PLAN for Brunswick, Maine

Brunswick submits the following information as required by DMR Chapter 7.20 Shellfish Management Plan.

Statement of Management Goals and Objectives:

The Town of Brunswick has a seven-member Shellfish Committee (BSC) appointed by the Town Council in accordance with local ordinance Chapter 11, Article III Shellfishing. For further details on the responsibilities of the Shellfish Committee, please refer to the Brunswick Municipal Code of Ordinances.

In Brunswick, specific attention is given to the biology of shellfish resources, their interactions and vital roles within the surrounding ecosystem, the impacts of a changing climate and warming waters, and the cultural and economic significance of shellfishing. To learn more about the shellfishing program please visit the Brunswick Shellfishing Webpage.

This plan covers the following commercially and recreationally harvested shellfish:

- Quahogs (*Mercenaria mercenaria*)
- American Oysters (*Crassostrea virginica*)
- European Oysters (*Ostrea edulis*)
- Razor Clams (*Ensis directus*)
- Softshell Clams (*Mya arenaria*)

This plan addresses shellfish management with a focus on the 1,640 acres of intertidal land encompassed along Brunswick's 61 miles of coastline. FMI visit GIS Hub.



Goals:

- Enhance the economic, environmental, and community benefits of shellfish resources in Brunswick.
- Implement shellfish and land management practices that support coastal shellfish resiliency and equitable access to local shellfish resources.
- Maintain, restore, and enhance populations of quahogs, softshell clams, razor clams, American oysters, and European oysters.
- Improve shellfish habitat and water quality to sustain a healthy shellfishery.

Objectives:

- **Licensing:** A limited-entry commercial licensing program regulates harvesting effort. Annual shellfish inventory surveys determine the number of commercial licenses issued each year. Recreational licenses are sold on an annual and day by day basis. Student licenses are issued on an annual basis. FMI visit [Brunswick Shellfish Licensing Program](#)
- **Economic:** Brunswick has been one of the leading shellfish producers in Maine for over 50 years, emphasizing programs tailored to commercial shellfishing. A 2020 Gulf of Maine Research Institute economic analysis highlighted that the local shellfishing industry contributes millions of dollars and hundreds of jobs to the local economy annually. FMI visit [Brunswick Softshell Clam Landing Characteristics & Brunswick Shellfishing Economic Analysis](#)
- **Conservation:** The Town conducts various conservation, propagation, and enhancement projects to restore existing populations and promote climate-resilient shellfish species.

Description of Conservation, Propagation, and Restoration Measures:

The Town of Brunswick actively conducts shellfish conservation and restoration projects year-round. While participation in conservation activities is not mandatory for fishermen, volunteer involvement is encouraged.

PROTECTIONS:

1. **Habitat Protection:** In 2018, Brunswick established the Coastal Resource Office to oversee coastal marine habitat, including environmental assessments of proposed coastal development that may impact shellfish habitat or water quality. Evaluations are conducted as applications are received. FMI visit [Mapping Coastal Septic Systems](#)
2. **Water Quality Monitoring:** The Town collaborates with the Brunswick Sewer District and academic partners to conduct additional water quality testing in streams outside DMR-defined shellfish growing areas to identify sources of pollution affecting water quality.
3. **Enforcement:** Enforcement of the shellfish ordinance and existing management plans is conducted by the Brunswick Police Department Marine Patrol Division. Over 500 hours are dedicated to direct contact with commercial and recreational shellfish harvesters and farmers. FMI visit the [Brunswick Police Marine Patrol Webpage](#).

SHELLFISH EVALUATION:

3. **Spring Shellfish Growing Area Assessments:** Conducted in March and April by the Coastal Resource Office and Brunswick Police Marine Patrol, these assessments provide critical data on winter mortality and help identify priority areas for seasonal restoration.
4. **Shellfish Inventory Surveys:** Performed according to the *Maine Shellfish Handbook*, these surveys involve the Coastal Resource Office, Shellfish Committee members, community volunteers, and the Brunswick Police Marine Patrol. The surveys are conducted June – November and guide annual licensing decisions and emphasize resource sustainability over economic exploitation, benefiting local shellfish populations and harvesters longer term. FMI visit [DMR Maine Shellfish Handbook](#)

SHELLFISH PROPAGATION:

5. **Shellfish Upweller:** From May to October, the Coastal Resource Office collaborates with shellfish farmers, private landowners, harvesters, community members, and nonprofits to operate a shellfish upweller. Hundreds of thousands of baby quahogs are provided to harvesters for planting in designated areas, which are reevaluated annually. This initiative has successfully restored quahog populations in several growing areas. FMI visit [Town Shellfish Upweller](#).
6. **Floating Shellfish Nursery:** From June to November, the Coastal Resource Office operates a floating shellfish nursery, growing shellfish from spat in bags until they reach plantable size. Harvesters collaboratively plant them in the fall, and success is monitored through annual spot surveys.

SHELLFISH CLOSURES:

7. **Winter Conservation Closure:** Brunswick was the first town to implement a winter quahog harvesting prohibition (January 1 – March 31). This closure helps conserve quahog populations by preventing exposure to extreme air temperatures, which can negatively impact survival.
8. **Sunday Conservation Closures:** Shellfish harvesting is prohibited on Sundays from June through October to manage harvesting pressure in high-density areas.
9. **Size Distribution Closures:** Conservation closures are enacted when undersized shellfish exceed harvestable populations, based on percentages set in the town's shellfishing ordinance. These areas are routinely surveyed, and reopening is considered when harvestable populations meet the required thresholds.

FMI on Municipal Closures Visit [DMR Town Shellfishing Information Website](#)

RESEARCH/EDUCATION:

10. The town participates in various research projects annually, including shellfish sampling for PFAS testing and developing restoration propagation methods. Ongoing research projects include:

- **Softshell Clam Recruitment Monitoring (Downeast Institute):** Examining shellfish recruitment (clams & quahogs) in two Brunswick growing areas to inform resilient management strategies. FMI [DEI Shellfish Recruitment Monitoring Results](#)
- **Fecundity Study (Downeast Institute):** Investigating softshell clam spawning rates to guide conservation efforts. FMI [Softshell Clam Fecundity Study](#)
- **Shellfish Upweller Performance (Manomet Fisheries):** Assessing growth rates of clam seed in upweller's to optimize survivability.
- **Intertidal Growth in Protective Nets (Manomet Fisheries):** Evaluating clam growth in predator-protected bags to improve conservation outcomes.
- **Intertidal Harvester Access:** In Southern Maine commercial and recreational harvesters are losing walk in access to many areas due to gentrification of the coast. The town has participated and will continue to participate with NPO/NGO's and others in finding ways to preserve walk in access to shellfish growing areas inside the intertidal regions. FMI [Mapping Intertidal Access](#)
- **Living Shorelines:** Partnering with state and federal agencies to explore natural shoreline stabilization methods that support sediment replenishment of mudflats. FMI visit [Living Shorelines](#).
- **Education and Outreach:** The Coastal Resource Office organizes coastal field trips and classroom visits to introduce students to the economic and ecological importance of shellfish. FMI on [Shellfishing in Brunswick](#) & [Guide to shellfishing in Brunswick](#).
- **Collaborative Approach to Bolster Quahog Populations:** The Shellfish Committee in collaboration with the Coastal Resource Office worked with area shellfish farmers to help grow juvenile quahogs to a plantable size as well as working to transplant quahogs from high density areas to low density areas. FMI visit [Mudflat Maine](#)

CONCLUSION

Brunswick shellfisheries are significant locally, regionally, and nationally. Shellfishing has played a critical role in the town's coastal character, history, culture, and economy since established as a town. The Town of Brunswick is well known as one of Maine leading producers of shellfish. There is growing concern over health, diversity, overall population, and the sustainability of these species as well as the overall health of the coastal waters. Given the importance of the shellfisheries in Brunswick and continuing declines of native shellfish populations the town is compelled to ensure shellfishing areas are managed to sustain both the economic and ecological values of filter feeding shellfish.