



Kittery's Marine Resources

KEY WATERWAYS

Kittery's harbor and waterfront areas include approximately 34 miles of shoreline, including rock outcrops, salt marshes, sandy beaches, mud flats, waterfront recreational areas, coves and mooring, commercial marina facilities, and a major federal installation at the Portsmouth Naval Shipyard. The waterfront and marine resources have played an important role in the history and development of Kittery, and the waterways are home to a wide range of commercial and recreational boat traffic. Much of the shoreline is in private ownership, with several large public parks such as Fort Foster and Fort McClary. All moorings, docks, and regulatory enforcement fall under the jurisdiction of the Kittery Port Authority (KPA). Key waterways include:

- **Piscataqua River:** Leading out to Portsmouth Harbor along the Kittery shoreline, the Piscataqua is an authorized navigation channel over 6.2 miles of its 13 length. The Piscataqua has multiple users, including freighters and cargo vessels, US military and Coast Guard, commercial fisherman, and recreational boaters.
- **Spinney Creek:** located just north of the Interstate 95 Bridge, this subtidal creek features a commercial aquaculture facility, several private float landings, and a private marina (in Eliot, ME) at the confluence of the creek with the Piscataqua River.
- **Back Channel:** This waterbody, an offshoot of the main Piscataqua River, runs from the western end of Badger's Island easterly to Spruce Creek between the mainland and Seavey Island, the location of the Portsmouth Naval Shipyard. The Back Channel is important for recreational boaters, particularly those docking on the northern side of Badger's Island. The channel is the waterbody closest to the revitalized commercial area in the Kittery Foreside.
- **Chauncey Creek:** The creek runs from the eastern end of Pepperrell Cove to Seapoint Beach, and due to its shallow depth, is used primarily by small water craft. Several private docks and a popular waterfront restaurant are located on the creek. Recent work has replaced overboard discharge (OBD) systems with septic systems, improving water quality.
- **Spruce Creek:** this three-square mile tidal saltwater estuary is fed by five freshwater streams that run roughly up the middle of Kittery. At low tide, approximately 2.5 miles of clam flats are exposed. Water quality is affected by non-point source pollution and "first flush" (initial surface runoff) during rainfall events.
- **Pepperrell Cove:** Adjacent to Kittery Point and Fort McClary State Park, this is the primary mooring area in the town.
- **Brave Boat Harbor:** Used primarily by small craft due to shallow depths, with limited private landings and no public facilities. It is located within the Brave Boat Harbor Division of the Rachel Carson National Wildlife Refuge.
- **Key waterfront natural areas** include Seapoint Beach, Rachel Carson National Wildlife Refuge, Fort Foster, Fort McClary, the nearshore islands (including the future Wood Island Life-Saving Museum), and the Isles of Shoals.

OPERATING CONDITIONS AND ACCESS

- Demand for access to the waterfront and for boating access is consistently high, and at key times of the season, is greater than the ability of existing landside facilities and moorings to meet.
- A significant portion of the available parking at Frisbee Pier (a primary parking area for Pepperrell Cove) is in a lot across Pepperrell Road. This lot is in private ownership, and the property is currently for sale.



View across Back Channel of the Piscataqua River towards Portsmouth Naval Shipyard

WHAT DOES IT MEAN?

- Kittery has a complex waterfront, with large-scale commercial and military craft, marina and docking facilities, commercial fishing, and recreational boating
- Limitations exist on access to the waterfront from crowded shorefront parking and launching facilities, and long waiting lists for moorings
- Contamination from wastewater treatment outfalls and other sources has affected shellfishing and overall water quality
- Opportunities exist to increase public access to waterfront, and to increase visitation to Kittery by waterborne passengers

OPERATING CONDITIONS AND ACCESS, CONTINUED

- In summer, the parking facilities at Pepperrell Cove can be extremely busy, and can become full. There can be extensive waits for pier/launch space to put dinghies in the water to reach moored vessels.
- Parking shortages also occur at the Traip Academy launching area.
- Other locations for parking and water access along the shoreline are limited, due to extensive private ownership of the shoreline.
- Major anchorages such as Pepperrell Cove have not been dredged in decades, leading to limitations on vessels that can safely moor and transit the area. The Pepperrell Cove anchorage was last dredged in 1916, to a depth of twelve feet. The navigation chart for the area shows depth of 11 to 7 feet at Mean Low Water (MLW), with local sources stating water depths are six to ten feet in half of the anchorage area.
- Storm winds and waves limit opportunities for additional moorings in exposed areas such as Fort Foster. Locations and plans for storage of floating docks during coastal storms should be evaluated, such as setting moorings in Chauncey Creek for temporary storage of the Pepperrell Cove floats.
- The currents occurring in the Kittery area can pose a hazard to small craft, particularly to human-powered craft such as kayaks.



Government Street Pier in the Kittery Foreside

WATER QUALITY

- Run-off and direct source pollution have led to contamination of area waters and led to shellfishing restrictions and prohibitions in certain areas.
- Major sources affecting the Piscataqua River are wastewater treatment plant (WWTP) outfalls from South Berwick and Kittery in Maine, and from Portsmouth and Newington in New Hampshire. The Portsmouth Naval Shipyard is also a major pollution source.
- Development pressure in Spruce Creek watershed further threatens water quality. The watershed is identified by Maine Department of Environmental Protection as a “nonpoint source pollution priority watershed” due to bacterial contamination, low dissolved oxygen, toxic contamination, and a compromised ability to support commercial marine fisheries”.

MUNICIPAL MANAGEMENT OF MARINE RESOURCES

The Kittery Port Authority (KPA) manages the town’s marine facilities including piers, docks, and over 500 moorings. Funding is derived primarily from collection of mooring and docking fees, and the Kittery Town Council approves the Port Authority’s budget. The KPA employs the Kittery Harbor Master, who oversees operations at the facilities, and provides marine law enforcement, rescue and education services to boaters within the tidal waters of the community. On the 2015 mooring registry, there are a total of 513 registered moorings, with approximately 20% assigned to commercial vessels and the remainder to recreational vessels. There is a twelve to fifteen-year waiting list for mooring spaces in Kittery. Major facilities under the jurisdiction of KPA include Pepperrell Cove and Frisbee Pier, Traip Academy boat launch, Government Street Pier, and the Back Channel.

FLOODPLAIN

- In November 2013, FEMA issued a Preliminary Digital FIRM (DFIRM) for York County, using updated flooding frequency and elevation data and modeling analysis. The mapping shows a larger floodplain area than previously mapped, with approximately 75 structures newly included in the floodplain (65 in the coastal area and the remainder in the interior).
- Due to challenges from Kittery and other coastal communities, FEMA withdrew the Preliminary DFIRM in December 2014. It is anticipated that FEMA will issue a revised Preliminary DFIRM for York County in 2016.