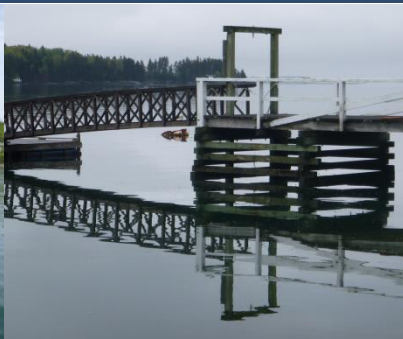
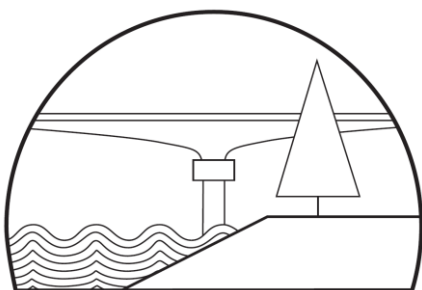


# Town of Brunswick, Maine

# Harbor Management Plan



January 2014



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# *Acknowledgements*

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Steve Walker – Town Council  
Anna Breinich – Director of Planning & Development  
Thomas Farrell – Director of Parks & Recreation  
Marine Resources Committee

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Paul's Marina  
New Meadows Marina  
The significant number of residents who have attended meetings and contributed their input

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## *Preface*

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This Harbor Management Plan serves to address the growing need for effective management of the Town of Brunswick's coastal and navigable waters. The plan should be considered a guidance document and a tool for the Town, the Marine Resource Committee, and future committees.

The plan consists of five major components:

- **INVENTORY:** Documents existing conditions within Brunswick's major harbor areas, including (but not limited to): physical features, natural resources, habitats, uses, access points, moorings, and marine infrastructure.
- **MAPPING:** The previous section is supported by mapping of inventoried features. The maps are provided in an appendix to this report and GIS based mapping data generated during this project (e.g. locations of moorings, piers, and access points) have been provided electronically to the Town.
- **PRIMARY GOALS:** Four broad goals are put forth that encompass the overall management objectives presented. These goals can be used as general guiding principles in effective harbor planning and decision making.
- **HARBOR & WATERFRONT OBJECTIVES:** Documents the specific issues and objectives identified through this study. Topics are discussed with reference to successful examples from other towns and organizations and recommendations are provided. The commentary in this section supplements the list of objectives and priorities found in the appendices.
- **HARBOR ORDINANCE UPDATES:** The Town's Harbor Ordinance, enacted in 2005, stands to be improved in a number of areas. This section provides draft language for improving the ordinance to follow the recommendations of this plan. Relevant ordinance provisions from several Maine municipalities have been referenced for this section.

This plan is only one step towards improved harbor management. The concerted efforts of individual Residents, Town staff, and Committees will ultimately be what make the Town's harbor management goals come to fruition.

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## 1. Background, Purpose, and Need

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The Town of Brunswick, Maine is located in Cumberland County on Northern Casco Bay. Along the coast it is bordered by the neighboring Towns of Freeport to the west, Harpswell to the south and east, and West Bath to the east. The Town's northern border is provided by the Androscoggin River, and Topsham is located across the river to the north (See location map, Figure 1).

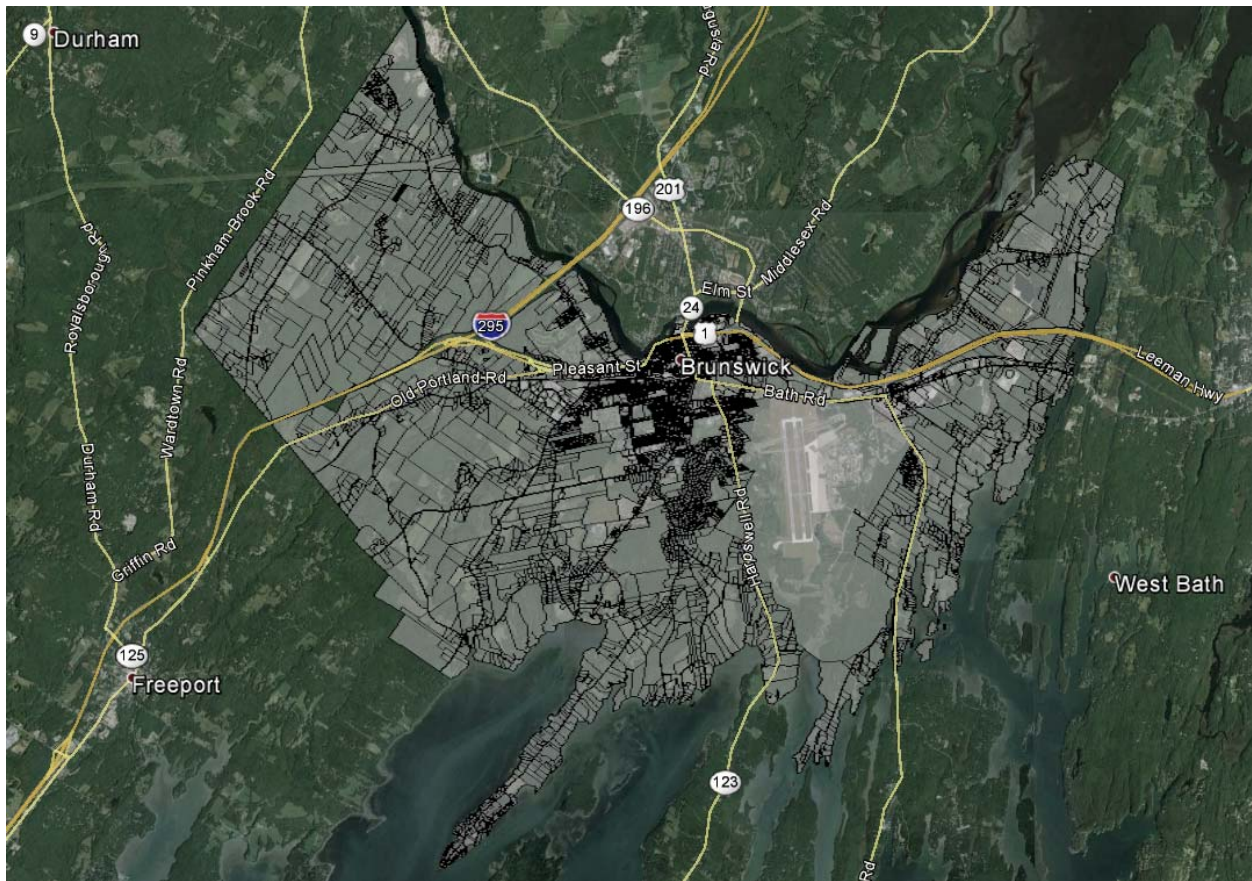


Figure 1 – Location Map of Brunswick, Maine (Source: Google Earth/MEGIS)

For many years the Town's coastal location has been a significant contributor to both its vibrancy as a community, and the local and regional economy. From the historic shipping and fishing port activities near Bunganuc, and the renowned shipbuilding that took place at Pennell Brothers Shipyard in Middle Bay, to the current commercial fishing and shellfish harvesting, working waterfront and boatbuilding, to residential property development and short

term rental properties, there are a great number of individuals, companies, and industries that draw economic value from the Town's coastal location. Residents, businesses, and institutions also enjoy the waters for a wide range of recreational uses, including sailing, canoeing/kayaking, swimming, hunting/fishing, and nature/wildlife observation.

Brunswick, like many towns along Maine's coast, has seen significant growth in interest and use of Town waters in recent years. Coastal development and recreational boating are on the rise, and commercial uses remain vitally important to the Town. This combination places additional demand and pressure on resources, space, and traditional uses. While growth is welcomed and encouraged, the resulting increased demand on the Town's coastal resources must be carefully managed in order to minimize any negative effects.

The need to manage coastal resources prompted the Town to issue a Request for Proposals in January 2013 for consultants to work with the Town to develop a Harbor Management Plan. Through this process, the team of Baker Design Consultants and Normandeau Associates was selected. This plan represents the efforts of the two firms, as well as numerous Town staff, stakeholders, and the input of numerous citizens and groups.

The following two quotes from the Maine Harbormasters Association and State Statute MRSA Title 38 summarize the need for harbor management, and capture the purpose and goals of this study:

*“Maine’s ports and harbors are a limited and irreplaceable State resource uniquely capable of supporting fishing, waterborne transportation, water-based recreation, and other uses dependent on a shoreside location...These areas are experiencing unprecedented pressure from a variety of development activities. Government agencies have a responsibility to assure that new or expanded activities in these areas will be compatible with, and will not degrade their current and future use...”*

*Maine Harbormasters Association*

*“...the Maine coast is an asset of immeasurable value to the people of the State and the nation...the well-being of the citizens of this State depends on striking a carefully considered and well-reasoned balance among the competing uses of the State's coastal area.”*

*Title 38, Chapter 19*

## 1.a. Project Approach

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The approach taken throughout the project focused heavily on gaining an understanding of existing conditions, issues, and opportunities, to develop a detailed inventory and an informed list of recommendations to guide the Town in future Harbor Management.



This process involved review of numerous existing reports (cataloged in Appendix A), working with the Town to complete a GPS survey of the Town's moorings, mapping existing piers, wharves, and access points, and gathering input of stakeholders through a process of public forums and individual meetings. The public process included three public forums which allowed opportunities for public input, as well as review of plan and inventory progress.

**Public Forum 1**, held on June 5, 2013, provided a general overview of the Harbor Management Plan purpose, schedule, and work plan and served as an introduction of the project to the public. An opportunity was provided for open public comment.

**Public Forum 2**, held on August 12, 2013, provided an in-depth look at the Harbor Inventory. Full size maps were available for review and an "open-house" style review allowed for those in attendance to walk around, discuss with the project team, and record comments directly on maps. An introduction to a wide range of harbor management issues was presented. Attendees were given a survey to rank the importance of these issues and provide general comments on their use of various harbor areas. Following this meeting, the survey was also placed online, which generated a significant number of additional responses (survey results are presented in Section 3).

**Public Forum 3**, held on October 2, 2013, presented additional "big-picture" data inventory, a summary of preliminary survey results and information sources used, and the preliminary harbor management goals and recommendations.

Input gained through the three public forums and the online survey was compiled with guidance from Town staff, and stakeholders. Collectively, these formed the basis for the recommendations presented in this plan.

## 2. Inventory

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This inventory serves to identify and document existing conditions and uses of Brunswick's coastal and river waters, and land use near the coastline.

For the purpose of this Inventory, Brunswick's waters have been divided into six major harbor areas, as follows:

1. Maquoit Bay
2. Mere Point Bay
3. Middle Bay
4. Harpswell Sound
5. New Meadows River
6. Androscoggin River (a & b)
  - a. Tidal (downstream of dam)
  - b. Non-tidal (upstream of dam)



Figure 2 identifies the six inventory areas. The red rectangles represent the boundaries of the detail maps presented in Section 6. Features documented by the inventory include: physical features, environmental resources, notable habitats, infrastructure, moorings, access points, and landside and marine usage, among others. The maps in Section 6 supplement the inventory by documenting land and water use (including open space parcels, moorings, piers, and access points), intertidal habitats, wildlife habitat, water quality, flood zones, and coastal bluff hazards.

While the aim of this inventory is to be as complete as possible, features and uses of the coast are ever-changing, and much of the data has been gathered from public domain sources. In order to maintain the most representative inventory possible, the Town should continue to update the inventory as new or improved information becomes available.

This inventory is necessarily broad in nature, which makes detailed investigation of any specific item beyond the scope of this planning document. Items that are of high importance to the Town should be investigated in greater detail for a more thorough understanding of on-the-ground conditions.



## 2.a. Big Picture Characteristics

The Town of Brunswick is nearly surrounded by water, with over 61 miles of coastline on Northern Casco Bay, as well as approximately 20<sup>1</sup> miles of frontage along the Androscoggin River. The Town’s coast and waterfront vary greatly in character, and in a broad sense include: steep coastal bluffs, expansive mudflats, shallow and deep waters, tidal estuaries, impoundments, and riverine and tidal freshwater river conditions. The complex coast/shoreline includes many minor coves and peninsulas, as well as 13 islands or rock outcrops listed in the Maine Coastal Island Registry.

Brunswick has jurisdiction over approximately 3,900 acres of waters on Northern Casco Bay, of which approximately 41% (1,600 acres) is intertidal, 37% (1,450 acres) is shallow water<sup>2</sup>, and 22% (850 acres) is deep water<sup>3</sup>. A breakdown of intertidal, shallow, and deep water quantities for each coastal harbor area is given in Table 1. The bathymetry map shown in Figure 3 further demonstrates the water depths throughout Brunswick.

Table 1 – Harbor Area Water Depths

Harbor Area		Total (acre)	Intertidal (% , acre)	Shallow (% , acre)	Deep (% , acre)
1	Maquoit Bay	1,570	32% (510)	39% (610)	29% (450)
2	Merepoint Bay	420	38% (160)	22% (90)	40% (170)
3	Middle Bay	640	56% (360)	41% (260)	3% (20)
4	Harpswell Sound	410	69% (280)	24% (100)	7% (30)
5	New Meadows River	830	33% (270)	45% (370)	22% (180)
	<b>Total Coastal</b>	<b>3,900</b>	<b>41% (1,600)</b>	<b>37% (1,450)</b>	<b>22% (850)</b>
6	Androscoggin River	1,050	---	---	---
	Tidal	810	300 (37%)	460 (57%)	50 (6%)
	Non-Tidal	240	---	---	---

Water depth is a significant indicator of the character of Brunswick’s coastal waters. For example, the significant areas of intertidal flats throughout the coast have made the Town a major player in Maine’s shellfish industry. Brunswick has a limited amount of deep water, more than half of which is located in southern

<sup>1</sup> Measured along shoreline. Approx. 11.5 miles along thread of river.

<sup>2</sup> Less than 6-ft at MLW, measured from NOAA nautical chart.

<sup>3</sup> Greater than 6-ft at MLW, measured from NOAA nautical chart.

Maquoit Bay, with the remainder mainly located in Merepoint Bay, and along the length of the New Meadows River. As a result, activities dependent on deep water have focused in these areas: Over 90% of Brunswick moorings are in either Maquoit Bay or Merepoint Bay (includes 148 at Paul’s Marina). The two commercial marinas in Brunswick are located in Merepoint Bay (Paul’s Marina), and the New Meadows River (New Meadows Marina, which currently provides 60 slips).

Waterfront and water dependent land uses occur in most of Brunswick’s zoning districts. In general, the majority of coastal frontage is represented by private residential uses or conserved lands. Commercially developed waterfront is limited to only a handful of sites in Town. GIS mapping provided by the Town<sup>4</sup> identifies Open Space in the following categories: Brunswick Topsham Land Trust, Privately Owned, Town Owned, State Owned, Bowdoin, Walking Easement, Water District, Cemeteries, Easements, Parks & Recreation, and Miscellaneous. Based on these designations, approximately 39% of the Casco Bay coastline and 45% of Androscoggin River shoreline represent Open Space in some form. However, this data must cautiously be used as an indicator of ‘public access’ sites available. This site subset (central to the goal of increasing waterfront access) will be significantly less than the number identified as Open Space and will need to be evaluated on a site by site basis.

Table 2 – Shoreline Frontage

Harbor Area		Total (mi)	Private (mi, %)	Open Space (mi, %)
1	Maquoit Bay	13.7	6.4 (47%)	7.3 (53%)
2	Merepoint Bay	3.6	2.5 (68%)	1.2 (32%)
3	Middle Bay	10.4	5.0 (48%)	5.4 (52%)
4	Harpswell Sound	14.0	10.3 (73%)	3.7 (27%)
5	New Meadows River	19.1	12.9 (67%)	6.3 (33%)
	<b>Total Coastal</b>	<b>60.9</b>	<b>37.0 (61%)</b>	<b>23.8 (39%)</b>
6	Androscoggin River	20.6	8.0 (39%)	12.7 (61%)
	<b>Total Shoreline</b>	<b>81.5</b>	<b>45.0 (55%)</b>	<b>36.5 (45%)</b>

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<sup>4</sup> Based on Town of Brunswick 2013 GIS Mapping.

There are currently 57 commercial fishermen licensed by the Town, approximately 30 of which are full-time. A number of worm harvesters also use the Town's mudflats, however these licenses are provided by the state and are not Town specific so the exact number is unknown.

The Town's coast and waters are also enjoyed by a wide range of recreational uses. These include canoeing and kayaking, recreational sailing and motorboating, jetskiing, fishing, hunting, birdwatching and nature observation, and others. Swimming is enjoyed by a large number of residents, both in saltwater and freshwater areas.



Access to the water is a critical issue in Brunswick. As coastal development increases, traditional access points tend to be closed or restricted. This places additional pressure on existing public access points, and on the users desiring access. Figure 5 shows the existing public access locations throughout the Town. These access points vary in scale from the new two-lane all-tide Merepoint Boat Launch, to relatively unknown, traditionally established walking paths to the mudflats located throughout the Town. With the exception of Middle Bay, there is at least one boat launch located in each of the harbor inventory areas (Simpson's Point Landing, which historically provided access to Middle Bay is currently closed as part of an eelgrass mitigation effort).

The term "traditional access points" has been used throughout this study to refer to those locations throughout the Town which have historically been used for water access, but are not formally established as public access points. In some cases, these occur on private property based on "hand-shake" agreements, and in some cases permission has not been granted. In an effort to respect the rights of property owners, traditional access points have not been included in the inventory or mapping.

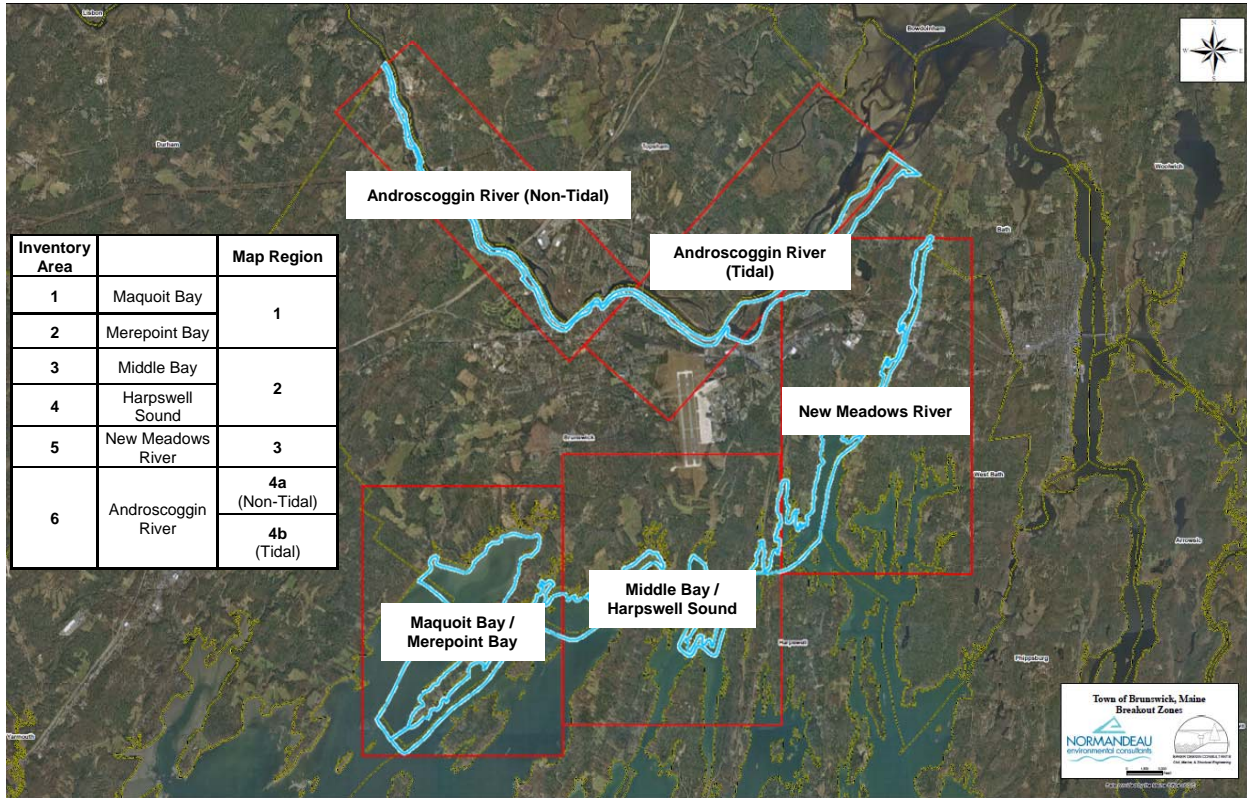


Figure 2 – Inventory Areas and Map Regions

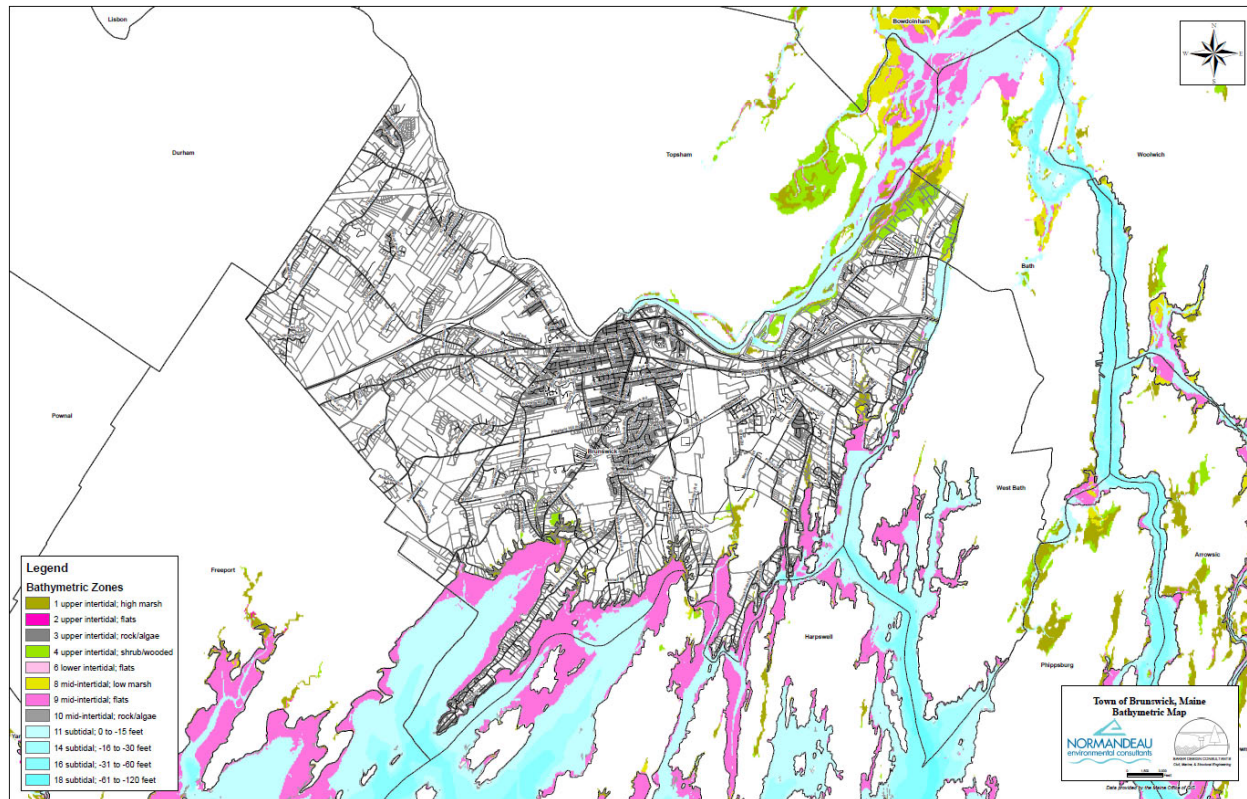


Figure 3 – Bathymetry Map



Figure 4 – Open Space Map

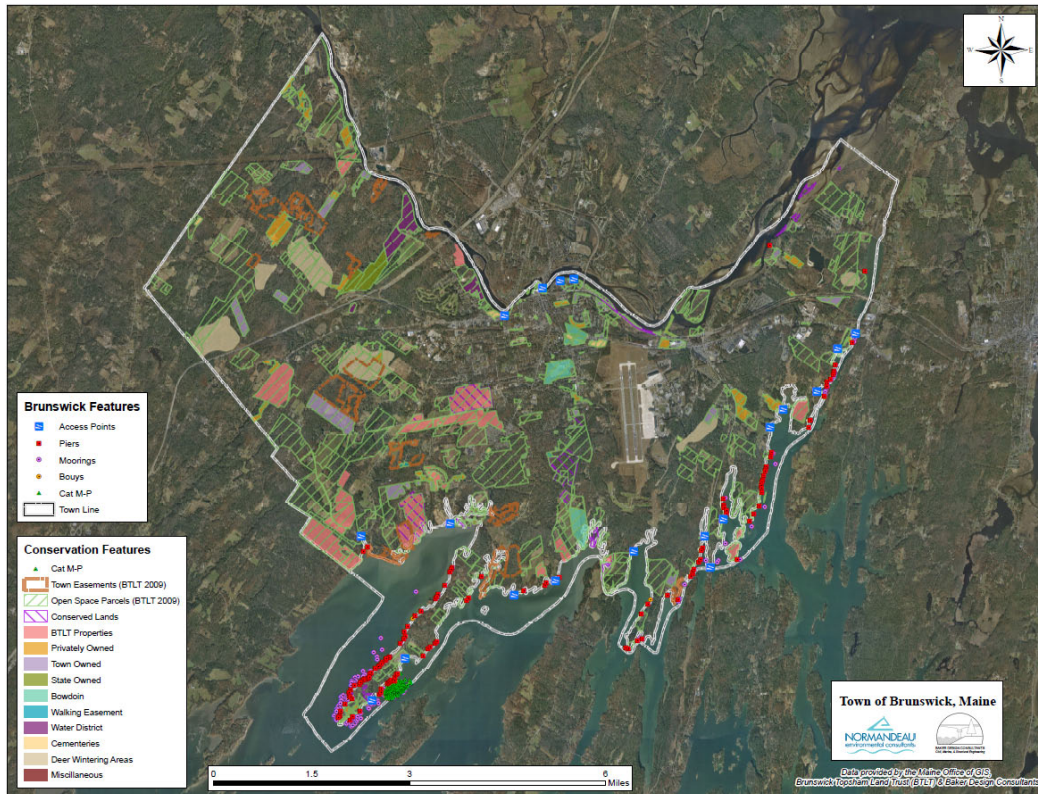


Figure 5 – Open Space Map w/Moorings, Piers, and Access Points

## 2.b. Maquoit Bay

Maquoit Bay is the western extent of Brunswick’s coastal waters, bounded by Freeport on the west and Merepoint Neck on the East. The outlet of Bunganuc Stream is located in the northwest of the Bay. To the east, residential properties and conservation lands occupy the coastal lands through Bunganuc Point and the upper Bay.

Western Merepoint is dominated by residential properties, many of which have permanent and/or seasonal piers or docks, as well as moorings accessed from the adjacent properties.

The upper bay is predominantly intertidal, with significant areas of high value salt marsh and productive mudflats.

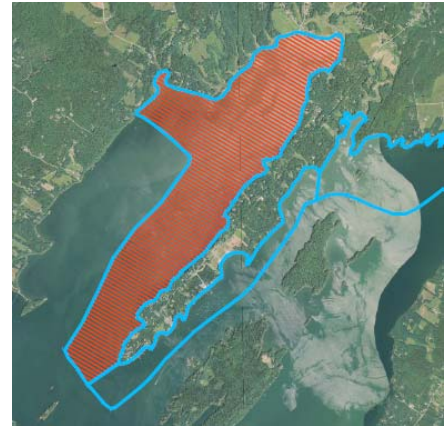
Boater access is provided at Maquoit Landing, a high-tide public launch located at Wharton’s Point. Traditional access points allow access to the mudflats at several locations.

Maquoit Bay is historically significant, with harbor activities at Bunganuc recorded as early as the mid 1700’s. Today, recreational boating and commercial fishing occur on the waters in Maquoit Bay, while the vast intertidal areas are major harvest areas for softshell clams and quahogs.


**Top:** Aerial Photo, Maquoit Bay shaded red

**Middle:** Southern Merepoint from Maquoit Bay

**Bottom:** Private lobster pier on Western Merepoint



<b>Physical Characteristics</b>	Total Harbor Area – 1,570 acre Intertidal – 510 (32%) Shallow – 610 (39%) Deep – 450 (29%)  Unstable/highly unstable coastal bluffs at Bunganuc Point and western Merepoint
<b>Natural and Cultural Resources</b>	Designated Focus Area of Statewide Ecological Significance, designated Important Bird Area, high scenic qualities, wildlife observation, several historic sites including Wharton Point, Bunganuc Landing, etc.
<b>Fisheries &amp; Habitats</b>	Softshell Clams, Quahogs, Razor Clams, Marine Worms  Shellfishing Management Areas: <ul style="list-style-type: none"> <li>• Bunganuc – 25 acres</li> <li>• Upper Maquoit Bay – 50 acres</li> </ul> Tidal Wading Waterfowl Habitat, Shorebird Feeding & Roosting  State listed rare plant and animal species.

<b>Water Quality</b>	<p>Bunganuc and Upper Bay are subject to reduced water quality from upland runoff during heavy rain events. Rainfall dependent shellfish closures.</p> <p>Expansive eelgrass habitat, however actual eelgrass population is in decline.</p> <p>Overboard discharge sites.</p>
<b>Usage</b>	<p>Shellfish, Marine Worm Harvesting</p> <p>Commercial Fishing, Recreational Fishing</p> <p>Recreational Boating, Canoeing/Kayaking</p> <p>Oyster Aquaculture (located in Freeport Waters)</p>
<b>Moorings</b>	59 Moorings
<b>Access Points</b> <i>(Aerial photos at right)</i>	<p><b>Maquoit Landing</b> at Wharton Point: Public high tide launch for trailered and hand-carry boats, 10-12 parking spaces. Walking access to mudflats.</p> 
<b>Land Use/Zoning</b>	<p>Coastal Protection, Natural Resource Protection Zone</p> <p>Primarily residential, public lands, conservation lands</p> <p>Maquoit Bay Conservation Land, located on Bunganuc Point, provides 124 acres of wooded parks and hiking trails open to the public.</p>
<b>Infrastructure</b>	48 Total Piers/Wharves
<b>Navigation</b>	<p>Navigable waters throughout Maquoit Bay. Water depths to 24 ft in southern bay. Upper Bay is comprised of shallow waters (generally &lt; 6ft) and intertidal, depths may be insufficient for navigation near low tide.</p>
<b>Specific Issues/Goals Identified</b>	<p>Preserve access to mudflats.</p> <p>Improve water quality to reduce shellfish closures.</p> <p>Eelgrass restoration.</p> <p>Possible municipal mooring field site.</p>

## 2.c. Merepoint Bay

Merepoint Bay comprises an area within Middle Bay that is bounded by Merepoint on the west, and Birch and White Islands (of Harpswell) on the east. Much of the Bay is deep water, with charted depths up to 20 ft.

Land use along eastern Merepoint is mixed, with many residential properties, as well as water-dependent businesses/uses including Paul’s Marina, Smith’s Boat Yard, and Merepoint Yacht Club.

A significant number of the Town’s moorings are located within Merepoint Bay, including the ACOE permitted mooring field operated by Paul’s Marina.

Access is provided at multiple public and private boat launch sites, including the new Merepoint Boat Launch, a public all-tide deep-water facility open to recreational users.

The waters in Mere Point Bay are used heavily by recreational boaters and commercial fishermen. There are two small but productive areas of mud flats within the Bay (Smith Cove and Bean’s Cove).

While physically contained within Middle Bay, Merepoint Bay is addressed individually in this inventory due to its distinct physical features, usage, and management goals.

**Top:** Aerial Photo, Merepoint Bay shaded red


**Middle:** Boat moored in southern Merepoint Bay

**Bottom:** Kayaker at Merepoint Boat Launch



<b>Physical Characteristics</b>	<p>Total Harbor Area – 420 acre Intertidal – 160 (38%), Shallow – 90 (22%), Deep – 170 acre (40%)</p> <p>A significant percentage of eastern Merepoint is classified unstable coastal bluff, with selected areas identified as highly-unstable.</p>
<b>Natural and Cultural Resources</b>	<p>Designated Focus Area of Statewide Ecological Significance, high value scenic qualities, birdwatching, wildlife observation</p>
<b>Fisheries &amp; Habitats</b>	<p>Softshell Clams, Quahogs, Marine Worms</p> <p>Shellfishing Management Areas:</p> <ul style="list-style-type: none"> <li>• Smith Cove – 7 acres</li> <li>• Several small areas contained in the 150 acre Middle Bay area</li> </ul> <p>Tidal Wading Waterfowl Habitat</p>



<b>Water Quality</b>	<p>Significant eelgrass habitats which affect use of Merepoint Boat Launch, as well as mooring locations (particularly in northern Bay)</p> <p>Overboard Discharge Sites</p> <p>Wastewater Facility Outfalls</p> <p>Sewage pumpout at Paul's Marina</p>
<b>Usage</b>	<p>Shellfish/worm harvesting</p> <p>Commercial Fishing</p> <p>Recreational Boating, Canoeing/Kayaking, swimming, birdwatching</p>
<b>Moorings</b>	<p>197 Total Moorings</p> <p>49 Private</p> <p>148 Moorings within Army Corps Permitted Field at Paul's Marina</p>
<b>Access Points</b> <i>(Aerial photos at right)</i>	<p><b>Merepoint Boat Launch:</b> Public all-tide launch with deep water access. Two launch lanes for trailered boats, as well as hand carry access. Use restricted to recreational boaters. Parking for 52 truck/trailer units and 3 cars. Open space/picnic space.</p> 
<b>Land Use/Zoning</b>	<p>Coastal Protection, Natural Resource Protection Zone</p> <p>Public residential, commercial waterfront, marinas/boatyards</p>
<b>Infrastructure</b>	<p>25 Piers/Wharves</p>
<b>Navigation</b>	<p>Deep water exists throughout most of Mere Point Bay. Navigation Buoys mark approach channel to Mere Point Boat Launch.</p>
<b>Specific Issues/Goals Identified</b>	<p>Management of moorings (siting, density, public availability)</p> <p>Regulation of commercial uses</p> <p>Possible municipal mooring field site</p> <p>Evaluate current and future uses of Merepoint Boat Launch</p>

## 2.d. Middle Bay

Middle Bay, as a whole, comprises the waters between Mere Point and Harpswell Neck. The extent of Brunswick waters in Middle Bay based on jurisdictional boundaries is limited to areas east of Merepoint Neck, north of White Island, and upper Middle Bay through Middle Bay Cove. (Merepoint Bay was addressed in the prior section).

More than half of Middle Bay is intertidal, with over 150 acres of managed shellfish areas, as such, Middle Bay is the Town's major producer of softshell clams and has recently been particularly productive for Quahogs.

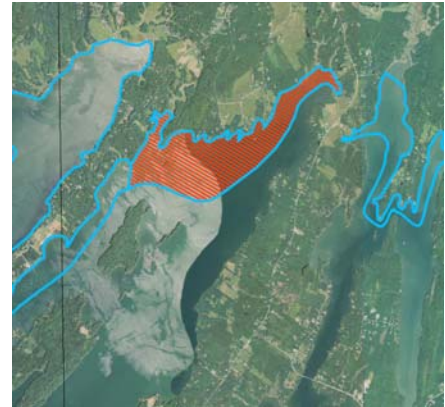
Due to the closure of Simpson's Point Landing as a boat launch site, boater access to Middle Bay is limited. Boaters must travel several miles from Merepoint Boat Launch, or a further facility in Harpswell to access the upper Bay. There are several locations for hand-carry and pedestrian access, including Simpson's Point and Barnes Landing. Several traditional access points located on Merepoint Neck and around Upper Middle Bay provide access to the mudflats.

Much of the land use surrounding Middle Bay is residential, there are also several areas of conservation lands. Due to the limited amount of deep water, there are few piers or moorings within the Bay.



**Top:** Aerial Photo, Middle Bay shaded red

**Middle:** Canoes and Kayaks at Simpson's Point Landing

**Bottom:** Rock outcrops near Barnes Landing at low tide



<b>Physical Characteristics</b>	Total Harbor Area – 640 acre Intertidal – 360 (56%), Shallow – 260 (41%), Deep – 20 acre (3%)  Areas of unstable and highly-unstable coastal bluffs, mainly in mid to western middle-bay.
<b>Natural and Cultural Resources</b>	Designated Focus Area of Statewide Ecological Significance, high value scenic qualities, birdwatching, wildlife observation  Historically significant areas in Pennellville
<b>Fisheries &amp; Habitats</b>	Softshell Clams, Hard Clams (Quahogs), Blue Mussels, Marine Worms  Shellfishing Management Areas: <ul style="list-style-type: none"> <li>• Middle Bay (Includes Minot Shore, Catlin Shore, Miller Creek, Clay Cove, Upper Middle Bay, Penneville, Beans Cove) – 150 acres</li> </ul>

	<ul style="list-style-type: none"> <li>• Barnes Landing – 5 acres</li> <li>• Smith Cove – 7 acres</li> </ul> <p>Tidal Wading Waterfowl Habitat, Shorebird Feeding &amp; Roosting</p>
<b>Water Quality</b>	<p>Stable water quality, no closures.</p> <p>Large eelgrass beds throughout upper Bay.</p>
<b>Usage</b>	<p>Shellfish Harvesting, Marine Worm Harvesting</p> <p>Recreational Boating, Canoeing/Kayaking,</p> <p>Swimming at Simpson’s Point Landing</p> <p>Commercial Fishing</p>
<b>Moorings</b>	<p>Few moorings, unable to survey during study</p>
<p><b>Access Points</b></p> <p><i>(Aerial photos at right)</i></p>	<p><b>Simpson’s Point Landing:</b> Access to upper middle-bay for hand-carry boats and saltwater swimming and recreation. Boat launch currently closed to motor boats as eelgrass mitigation measure. Very limited parking at site.</p>  <p><b>Barnes Landing:</b> Hand-carry access to Middle Bay Cove and the adjacent mudflats, limited parking at site.</p> 
<b>Land Use/Zoning</b>	<p>Coastal Protection, Natural Resource Protection Zone</p>
<b>Infrastructure</b>	<p>7 Piers/Wharves</p>
<b>Navigation</b>	<p>Access from Middle Bay or Mere Point Bay. Much of Middle Bay is intertidal and water depths may be insufficient for navigation except near high tide.</p>
<b>Specific Issues/Goals Identified</b>	<p>Assess need for safe boater access to upper Middle Bay and compatibility with growing demand for saltwater swimming opportunities.</p>

**2.e. Harpswell Sound**

Brunswick’s waters in Harpswell Sound include: The Skolfields, Harpswell Cove, Gurnet Straits, Long Reach, and Buttermilk Cove. The channel connecting Harpswell Cove to Long Reach and continuing through Gurnet Straits marks the boundary between Brunswick and Harpswell. With the exception of this channel, there is little deep water.

Boater access is provided at Princess Point Landing, as well as at facilities in neighboring Towns. Traditional access points situated throughout the area provide access to the intertidal resource.

Waterfront land use surrounding this area is primarily residential. Additionally, the Kate Furbush Preserve (located on former BNAS) property, is a 591 acre conservation land with frontage on Harpswell Cove and Buttermilk Cove.


This area supports extensive intertidal saltmarshes and mudflats. There are several notably productive areas of mud flats located in the Sound, including Buttermilk Cove, Gurnet Straits, Harpswell Cove, and Long Reach.



**Top:** Aerial Photo, Harpswell Sound shaded red

**Bottom:** Pier in Buttermilk Cove

<b>Physical Characteristics</b>	Total Harbor Area – 410 acre Intertidal – 280 (68%), Shallow – 100 (25%), Deep – 30 acre (7%)  Limited areas of unstable and highly-unstable coastal bluffs
<b>Natural and Cultural Resources</b>	Excellent scenic qualities, Birdwatching, nature observation  Kate Furbush Preserve, located within the BNAS Public Benefit Conveyance, provides 591 acres of conserved lands, with significant frontage on Harpswell Cove
<b>Fisheries &amp; Habitats</b>	Softshell Clams, Blue Mussels, Marine Worms  Shellfishing Management Areas: <ul style="list-style-type: none"> <li>• Buttermilk Cove &amp; Gurnet Straits – 15 acres</li> <li>• Harpswell Cove – 70 acres (<i>Partially Closed – DMR Restricted</i>)</li> <li>• Long Reach – 35 acres</li> </ul> Tidal Wading Waterfowl Habitat  State listed rare plant and animal species present
<b>Water Quality</b>	Limited eelgrass habitat  Overboard discharge sites

<b>Usage</b>	Shellfish and Marine Worm Harvesting Recreational boating, canoeing/kayaking
<b>Moorings</b>	5 Moorings
<b>Access Points</b> <i>(Aerial photos at right)</i>	<p><b>Princes Point Landing:</b> Half-tide launch, parking for ~5 trucks/trailers.</p> 
<b>Land Use/Zoning</b>	Farm Forest, BNAS Conservation District, Natural Resource Protection Zone, Restrictive Flight Zone
<b>Infrastructure</b>	16 Piers/Wharves
<b>Navigation</b>	With the exception of the navigation channel, water depths are shallow. Fixed bridge with limited vertical clearance (10 ft) and cable area at Gurnet Strait.
<b>Specific Issues/Goals Identified</b>	<p>Preserve access to intertidal areas through conservations lands, easements, and/or establishment of new municipal access sites.</p> <p>Develop hand-carry launch site near former bunkers.</p>

**2.f. New Meadows River**

The New Meadows River is the easternmost extent of Brunswick’s coastal waters, and provides the border between Brunswick and the neighboring towns of Harpswell and West Bath. The river is navigable from the sea up to the Bath Road crossing, where flow is directed through a narrow culvert. Upstream of Bath Road, the artificially impounded yet still partially tidally-influenced New Meadows “lake” is suitable for small craft navigation.

A variety of landside uses exist along the River, including: New Meadows Marina which offers rental slips and launch services, the Bowdoin College Crew facility, Thomas Point Beach and campground, a large number of private residential properties, and others.

Boater access is provided at Sawyer Park, as well as launch locations in neighboring Towns. Several traditional access points are used for pedestrian access to the mud flats.

Several of Brunswick’s major shellfish areas are contained within the River, including: Woodward Cove (“The Bull Pen”), Coombs Island, Thomas Point Beach, Bullrock, Horse Pen Cove, and the Lakes.


**Top:** Aerial Photo, New Meadows River shaded red

**Middle:** Canoe at Sawyer Park Boat Launch

**Bottom:** Boats at New Meadows Marina



<b>Physical Characteristics</b>	Total Harbor Area – 830 acre Intertidal – 270 (32%), Shallow – 380 (46%), Deep – 180 acre (22%)  Limited areas of unstable and highly-unstable coastal bluffs
<b>Natural and Cultural Resources</b>	High value scenic qualities, wildlife observation, several historic sites from Peterson Canal to Gurnet Strait
<b>Fisheries &amp; Habitats</b>	Softshell Clams, Quahogs, Razor Clams, Mussels, Marine Worms  Shellfish Management Areas: <ul style="list-style-type: none"> <li>• Big Bull Pen – 40 acres</li> <li>• Little Bull Pen – 10 acres</li> <li>• Coombs Island – 15 acres</li> <li>• New Meadows – multiple small areas</li> <li>• Thomas Point Beach – 40 acres</li> </ul> Tidal Wading Waterfowl Habitat, Shorebird Feeding & Roosting

	Multiple state listed rare species present including bald eagle nests, heron colony, Barrow's goldeneye, and saltmarsh sparrow
<b>Water Quality</b>	<p>Past shellfish closures due to water quality (Woodward Cove restricted 2006-2011, currently tolerable).</p> <p>Limited eelgrass habitat, Overboard discharge sites, sewage pumpout at New Meadows Marina</p> <p>Tidal barrier at Bath Road long known to negatively impact water quality both in the River and "lakes".</p>
<b>Usage</b>	<p>Commercial Marinas, Recreational Boating, Kayaking/Canoeing, Fishing</p> <p>Shellfish, Marine Worm harvesting</p> <p>Upwellers used for oyster farming</p>
<b>Moorings</b>	21 Moorings
<p><b>Access Points</b></p> <p><i>(Aerial photos at right)</i></p>	<p><b>Sawyer Park:</b> All-tide, ADA accessible launch site. Parking for 33 trucks/trailers, 7 cars. Open space with picnic area, toilet facilities.</p> 
<b>Land Use/Zoning</b>	Farm Forest, NRPZ
<b>Infrastructure</b>	34 Piers/Wharves
<b>Navigation</b>	<p>Narrow deepwater channel extends to Bath Road, otherwise mainly intertidal and shallow subtidal. Historically navigable waters extended to Old Bath Road with numerous moorings and piers upstream of the present day Bath Road impoundment.</p> <p>Charted cable areas south of Lower Coombs Island and Bath Road, Bridge Ruins south of Bath Road.</p>
<b>Specific Issues/Goals Identified</b>	<p>Tidal restoration of New Meadows "lake" to restore intertidal saltmarshes and mudflats and navigation values.</p> <p>Preserve access to intertidal areas through conservations lands, easements, and/or establishment of new municipal access sites.</p>

**2.g. Androscoggin River**

The Androscoggin River forms the northern border for Brunswick, flowing a distance of approximately 12.5 miles from the Town’s western border with Durham to the outlet into Merrymeeting Bay near the eastern border with Bath.

The hydroelectric dam located upstream of the Frank Wood Bridge (Route 201) crossing represents the head of tide. Historically a series of waterfalls was present in this area preventing upstream navigation. The entire river is freshwater, however the lower section between the dam and Merrymeeting Bay is tidally influenced.

Land use along the River varies greatly, with most of the Town’s development zones (from Farm Forest to Residential to Highway Commercial) represented at some point along the river frontage.

In recent years, the Town has seen a substantial increase in use of the River by recreational boaters. There are several public launches located along the river that provide hand-carry and small vessel access, boaters may also access the river from Merrymeeting Bay. Fishing is popular along the banks of the River. Elver fishing is also becoming an increasingly common activity.





**Top:** Aerial Photo, Androscoggin River shaded red

**Bottom:** View downstream from Mill Street Canoe Portage

	Non-Tidal (upstream of dam)	Tidal (downstream of dam)
<b>Physical Characteristics</b>	Total Area – 240 acres Freshwater, riverine	Total Area – 810 acres Intertidal – 300 (37%), Shallow – 460 (57%), Deep – 50 acre (6%) Freshwater, tidal Limited areas of unstable and highly-unstable coastal bluffs
<b>Natural and Cultural Resources</b>	Supports a wide range of wildlife habitats and fish species, the focus of multiple habitat restoration and water quality improvement efforts.  Many historically significant areas	Designated Focus Area of Statewide Ecological Significance
<b>Habitat</b>	State listed rare animals include bald eagles and high interest fish habitats	State listed rare animals include tidewater mucket, bald eagles (nest



**Harbor Management Plan**  
Town of Brunswick, Maine

<p>noted below:</p> <ul style="list-style-type: none"> <li>• Atlantic sturgeon</li> <li>• Short-nosed sturgeon</li> <li>• Atlantic Salmon</li> <li>• Alewife</li> <li>• Wild Eastern Brook Trout</li> </ul> <p>Non-Native Fish Species</p>	<p>sites at Freyee Island and Driscoll Island), and high interest fish habitats noted below:</p> <ul style="list-style-type: none"> <li>• Atlantic sturgeon</li> <li>• Short-nosed sturgeon</li> <li>• Atlantic Salmon (Merrymeeting Bay Salmon Habitat Recovery Unit)</li> <li>• Alewife</li> <li>• Sea-Run Rainbow Smelt</li> </ul> <p>Non-Native Fish Species</p> <p>Elver fishing</p> <p>Rare freshwater tidal marshes that support globally rare plant species</p> <p>Tidal and Inland Wading Waterfowl</p>
<p><b>Land Use/Zoning</b></p> <p>Country Residential, Farm Forest, Mixed Use, Residential, Highway Commercial, Town Residential, Town Center</p> <p>NRPZ, Aquifer Protection, Conservation lands</p>	<p>Town Center, Town Residential, Highway Commercial, Country Residential</p> <p>NRPZ, Aquifer Protection, Restrictive Flight Zones</p> <p>Conservation lands</p>
<p><b>Infrastructure</b></p> <p>0 Piers</p>	<p>2 Piers</p>
<p><b>Navigation</b></p> <p>Only hand-carry access is available between FPL Dam and Pajepscot Dam. Waters upstream of Pajepscot Dam can be accessed from sites in neighboring towns.</p>	<p>Navigable waters between FPL Dam and Merrymeeting Bay.</p>
<p><b>Moorings</b></p> <p>Unable to survey during study (few moorings)</p>	<p>Unable to survey during study (few moorings)</p>
<p><b>Access Points</b></p> <p><i>(Aerial photos below descriptions. Ordered from upstream to downstream)</i></p> <p><b>Pajepscot Dam Recreation Area</b> – Hand-carry boat launch and seasonal parking. Recreational space, hiking trails.</p> 	<p><b>250<sup>th</sup> Anniversary Park</b> – Hand-carry access downstream of hydroelectric dam.</p> 

**Mill Street Canoe Portage** – Hand-carry access to the Androscoggin river upstream of the hydroelectric dam.



**Water Street Boat Landing #1** – Small-craft and hand-carry access, parking limited



**Water Street Boat Landing #2** – Improved ramp for larger trailered vessels and a paved parking area for ~16 trucks/trailers, and 40+ cars.



**Bay Bridge Landing Wetland Park** – Small craft access to Merrymeeting Bay with public recreation lands at site.



<b>Water Quality</b>	Wastewater facilities, outfalls, overboard discharge sites  Historically, water quality was very poor, significant improvements since the Clean Water Act (1972), as a result of multiple restoration and pollution reduction efforts. Concerns remain of water quality for recreation/swimming	
<b>Usage</b>	Canoeing/Kayaking, recreational boating, jetskiing, recreational fishing	
<b>Specific Issues/Goals Identified</b>	Improve water quality  Improve access upstream of FPL Dam, including at existing sites (e.g. Mill St. Canoe Portage)	Improve water quality

## 2.h. Coastal Islands

The Maine Island Registry lists thirteen islands or outcrops within the Town of Brunswick (see Table 3), along with their current conservation status. Crow Island, located in Middle Bay, is pictured below.



Table 3 – List of Islands in Brunswick

Registry Number	Island Name	Conservation Status	Acreage	Harbor Area
55-028	Blackies Ledge	---	---	New Meadows River
55-230	Bunganuc	---	0.5	Maquoit Bay
55-089	Coombs (Lower)	BTLT	---	New Meadows River
55-088	Coombs (Upper)	BTLT	8.6	New Meadows River
55-098	Crow	---	---	Middle Bay
55-014	Freyee	ME IF&W	2	Androscoggin River
55-015	Freyee	ME IF&W	2	Androscoggin River
55-012	Freyee	ME IF&W	9.6	Androscoggin River
55-013	Freyee	ME IF&W	3	Androscoggin River
55-019	Great (a.k.a. Driscoll)	Town	---	Androscoggin River
55-087	Iron (Little)	---	---	New Meadows River
55-027	Mason Rock	---	---	Androscoggin River
55-010	Sandy Isle	---	---	Androscoggin River

### 3. Public Input Survey

As part of the public input process, a survey was generated to gather information regarding harbor conditions, uses, issues, and priorities. The survey was initially provided to the attendees of Public Forum 2. Following the Public Forum, the survey was circulated online to increase the exposure and gather further responses. The survey served as a valuable means to reach a wide range of user groups.

The survey consisted of three sections. The first asked respondents to indicate how they use Brunswick’s waters by selecting applicable categories from a list. This provided insight into the demographics of respondents. Results are summarized in Table 4. Because these questions were optional, the results should be considered representative only, and primarily demonstrate that a wide range of users took part in the survey.

Table 4 – Survey Respondent Demographics

Category	Percent of Respondents <sup>5</sup>
Brunswick Resident	78%
Commercial Fishermen	9%
Recreational Fishermen	38%
Shellfish Harvester	12%
Worm Harvester	7%
Recreational Boater	73%
Canoer/Kayaker	61%
Mooring Holder	42%
Waterfront Property Owner	47%
Swimmer – Saltwater	79%
Swimmer – Freshwater	33%

The second section of the survey asked respondents to provide any comments specific to each of the harbor areas, e.g. how the area is used, any known issues, opportunities, etc. These questions generated a significant number of comments and dialogue which helped to gain an understanding of public

<sup>5</sup> Multiple categories could be selected by a single respondent, and responses were optional, results should not add up to 100%. In total, 98 responses were received.

opinion regarding a number of issues. The third section of the survey presented a list of harbor management issues, and asked user to rank the issues in terms of importance. This information provided a gauge of public opinion on a number of issues and helped to guide the recommendations and priorities presented in the following sections. The full list of comments received from Section 2 is provided in Appendix C – Survey Responses. A Summary of the issue ranking from Section 3 is presented in Table 5.

**Table 5 – Summary of Issue Rankings**

<b>Issue/Recommendation Category</b>	<b>Average Ranking 5 = Most Important 1 = Least Important</b>
1. Resource Monitoring & Mitigation	5.0
2. Respond to Climate Change	4.2
3. Preserve Working Waterfront ( Fishing, Shellfish Harvesting, Worming)	4.2
4. Provide Education & Training	4.4
5. Improve Public Access to Waterfront	4.6
6. Institute Mooring Management	3.1
7. Establish Municipal Goals	2.5
8. Support Marine Resource Committee	3.0

## 4. Primary Goals

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As the team developed an understanding through completing background research, harbor inventory, and public surveys for issue identification, a number of common themes emerged that capture the core of the Town's management objectives. These lead to the development of the following four Primary Goals:

1. Coordinate Harbor & Waterfront Efforts with Town & Regional Programs
2. Balance Shared Uses of Brunswick's Waterfront
3. Pursue a Sustainable Waterfront
4. Manage, Promote, and Preserve Brunswick's Coastal and River Environment

The Primary Goals can be used to support the broad goal of improved harbor management, and support the specific recommendations put forth by this study. Further discussion of the Primary Goals is provided in the following sections.

### 1. Coordinate Harbor & Waterfront Efforts with Town & Regional Programs

Prior to this study, there has been a significant amount of work done by a variety of Town Staff, Departments, Committees, Citizen Groups, and outside organizations. Coordinating efforts between these groups will take advantage of the vast body of past work that has been done, and will help to ensure that the diverse user groups with



interest in the waters and waterfront are represented. The following resources were consulted during the preparation of this report:

- Town Programs & Groups: Marine Resource Committee, Parks & Recreation, Planning & Development, Conservation Commission
- Studies & Documents: Comprehensive Plan, Open Space Plan, etc. (see Appendix A)

- Organizations: Brunswick Topsham Land Trust, Maine Coast Heritage Trust, Casco Bay Estuary Partnership, Androscoggin River Watershed Council, New Meadows River Partnership
- Regional Initiatives:
  - Freeport Greencrab Study
  - Invasive Species Eradication
  - Estuary Quality Resource Monitoring

## **2. Balance Shared Uses of Brunswick's Waterfront**

The coastal and marine resources in Brunswick draw a wide range of users. As several examples of shared-use. The intertidal areas attract harvesters of several species of shellfish as well as marine worms. In the waters, commercial fishing, recreational boating, canoeing, kayaking, swimming, and nature/bird watching are all activities that place demands on resources. Key waterfront sites (e.g. Simpson's Point Landing) that are popular among recreational users are also important for access by harvesters. With this range of uses comes a need for balance, for example:

- Recreational and commercial boat landings, launches, and moorings.
- Competing Town Programs & Groups: Parks & Recreation, Planning & Development, Conservation Commission, Marine Resource Committee
- Public access opportunities and respect for private property

## **3. Pursue a Sustainable Waterfront**

Sustainability can take on many forms with relation to the waterfront.

Economically it can mean considering potential revenue sources, user fees, and funding programs to keep up with demand for waterfront improvements and programs.

From a resource standpoint, it includes managing current uses in such a way that impacts are minimized or avoided. For example, limiting harvesting of shellfish to account for declining populations, identifying and mitigating pollution



sources that compromise water quality, and regulating activities that impact coastal bird and wildlife habitat.

From a planning perspective, a sustainable waterfront means managing future growth, and planning for climate-change related factors like sea-level rise, seawater acidification, coastal erosion, and fringing marsh degradation. Specific opportunities include:

- Prepare long-term waterfront capital improvement program to match existing needs and projected demand for commercial and recreational use of the waterfront.
  - Designate a portion of the proposed Land for Brunswick's Future fund for water access and improvements.
  - Review existing recreation impact fee program, and proposed open space impact fee to identify opportunities for supporting waterfront needs
  - Develop User Fee income to support waterfront improvements and to generate grant seed monies. (e.g. Mooring, Launch, Parking, License Fee structure)
- Identify Grant Opportunities and Programs
  - State and Federal Working Waterfront initiatives.
  - Small Harbor Improvement Program (SHIP), and Federal Boating Infrastructure Grant (BIG) programs
  - State and Federal Conservation, Enhancement and Restoration programs.
- Sustainable management of environmental and marine resources
  - Allocate additional staff and committee resources to monitoring the health of Brunswick's nearshore waters
  - Provide boaters and commercial users the information necessary to minimize unintended impacts to coastal resources
  - Utilize current zoning ordinance rewrite as an opportunity to improve wetland and coastal water protections





#### **4. Manage, Promote, and Preserve Brunswick's Coastal and River Environment**

Establishing a long-term successful course for Brunswick's Coastal and River environment will require effective management, ongoing education and promotion, and a commitment to preservation. These efforts will work towards ensuring resources are available for the enjoyment of future generations, and that Brunswick will remain a valued location on Casco Bay. Some specific items in support of this goal include:

- Establish a Harbor Committee including Town Staff, Committee Members, and Stakeholders concerned with the waters and waterfront.
- Encourage waterfront access for all
  - Develop existing town waterfront holdings to the fullest potential for recreational opportunities that will not conflict with natural resources protection areas.
  - Review and update current management approaches at existing waterfront parks to better balance diverse uses
  - Alleviate pressure on existing public waterfront by obtaining additional property
  - Accommodate shared uses at key waterfront sites
- Increase public knowledge of waterfront resources through education and promotion of the waterfront

## 5. Harbor & Waterfront Objectives

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A list of Harbor & Waterfront objectives has been developed to guide the Town in ongoing planning and management of the Harbors and Waterfront. The items contained in the list are ranked in terms of priority based on a 10 year projected implementation timeframe in the following categories:

- Ongoing
- 1-3 Year (2014-2017)
- 1-5 Year (2014-2019)
- 1-10 Year (2014-2024)

The full list of objectives and priorities is provided in Appendix B – Management Objectives and Priorities. In the following sections, further commentary on several of the major issues/objectives is provided in the following categories:

- Coastal Waters and River Management (5A)
- Mooring Management (5B)
- Waterfront Access (5C)
- Resource Monitoring and Mitigation (5D)
- Respond to Climate Change (5E)
- Preserve Working Waterfront (5F)
- Harbor Ordinance Updates (5G)

Within each of these categories, specific goals and recommendations that have been identified throughout this study are presented and discussed.

### 5.a. Coastal Waters and River Management

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The first category of recommendations deals with the need for ongoing management of the Town's coastal and navigable freshwaters to ensure that the goals developed through this study, and those identified in the future, receive their necessary attention and proper execution.

The Maine Harbormasters Association identifies the following four elements as "essential to the successful regulation of a municipal harbor:

- A. An ordinance which gives legal validity to the rules of harbor usage which local officials would like to see enforced;*
- B. A harbor committee, made up of interested and knowledgeable citizens who will contribute time and close attention;*
- C. A harbormaster familiar with the area, its people and its waters, who is skilled in the arts of boating and mooring seamanship and who can be trusted to enforce regulations with even-handed justice and understanding; and,*
- D. Supportive elected officials who will stand behind the harbormaster so long as the holder of that office measures up to its demands."*

There are recommended areas for improvement associated with each of these essential items.

The Town's Harbor Ordinance, enacted in 2005, is very limited in scope. Updates to the Ordinance are suggested throughout the following sections and addressed specifically in Section 5.g.

The Town of Brunswick currently does not have a Harbor Committee. As a result, the primary responsibility for Harbor Management presently rests on the Brunswick Marine Resource Committee (BMRC). While the BMRC is very effective at regulating shellfish harvesting and shellfish habitat related issues, a more general harbor committee may be able to supplement with a more broad-based representation, as well as alleviate pressure on the BMRC due to the current responsibilities that are ancillary to its primary purpose. Recommendations regarding establishment of a Harbor Committee are given in the following section.

## Recommendations

- ***Establish a River and Coastal Waters Commission***

Management of the waterfront and coastal/navigable waters involves a broad range of issues. Presently, the Town of Brunswick does not have a Harbor Committee, and this responsibility falls primarily on the Town Harbormaster, and the Brunswick Marine Resource Committee (BMRC).

While the BMRC is a very capable and effective committee, its intended focus is more on specific commercial resource issues (namely, shellfish management), and less on the general issues surrounding the waterfront (such as access, moorings, wharf applications, etc.). This is especially true at a time when there are several major concerns with the Town's marine resources, for example, the infestation of European Green Crab, and the widespread decline in eelgrass. It is important that the BMRC is able to continue to focus on the critical issues facing commercial shellfish management. The overwhelming sentiment throughout this study has been that general harbor issues would be best addressed by a supplemental committee that can support the Harbormaster and the BMRC.

In order to address these broad issues, it is recommended that the Town establish a "River and Coastal Waters Commission." The commission would function similarly to existing Town Committees, that is, it would be an advisory committee to the Town Council, who would ultimately set policy and consider/approve actions. An example of the role of the municipal Harbor Committee is provided below from the Town of Falmouth Harbor Ordinance:

*"The Falmouth Harbor/Waterfront Committee exists for the general purpose of studying and evaluating public use and access to coastal waters; to advise the town council on policy matters and proposed regulations concerning the town's coastal waters; to oversee the maintenance and care of Town owned waterfront facilities through the harbormaster and in conjunction with state and federal authorities."*

It is recommended that the committee be made up of a diverse group of individuals that represent a variety of interest areas. This will help to ensure that established recommendations and goals are consistent with Town-wide programs. Previously, the Merepoint Boat Launch Citizens Advisory

Committee was set up by the town council following a similar mandate as a coastal waters commission would have. This committee functioned well to address the multitude of issues stakeholders brought to the table regarding the Merepoint project. A recommended organizational structure for the coastal waters commission could have a similar make up as suggested in Figure 6. As a supplemental committee consisting of many representatives from other Town committees, we suggest that the commission meet quarterly, and depending on demand and current issues, adjust the schedule to more or less frequently.

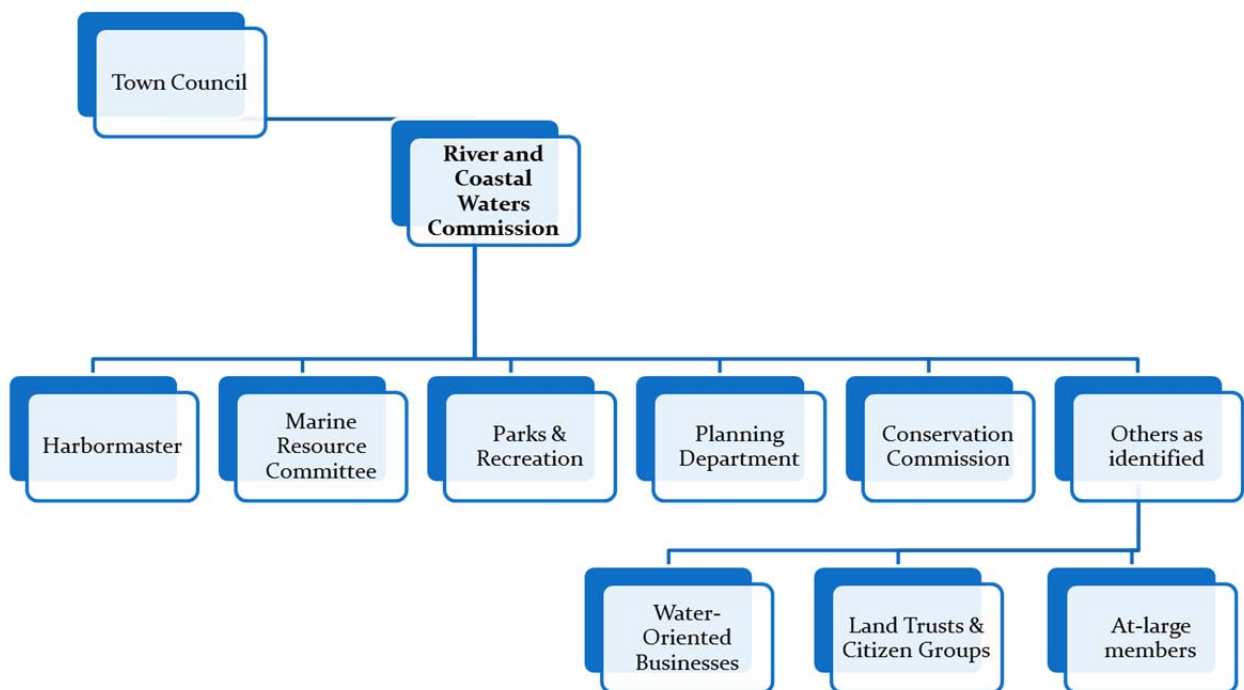


Figure 6 – River and Coastal Waters Commission Possible Organizational Structure

- ***Update Harbor Ordinance***

As the primary basis for local harbor regulation, the Town’s Harbor Ordinance provides both a framework for rules and regulations, and establishes authority to carry out regulation. In order to do so, the document must contain adequate provisions consistent to with the Town’s desired management practices. Harbor ordinance updates are addressed in more detail in Section 5.g of this report.

- ***Assess Need For Full-time Harbormaster Position***

Currently, the Marine Resource Officer is the town's designated Harbor Master and has become the de facto Natural Resource Planner since that position was eliminated several years ago. Given the scope of diverse commercial shellfish management issues, natural resource concerns, and increasing duties associated with the management of the town's harbors and waters, it is perhaps time to consider additional staff to address these responsibilities more effectively than one position can provide.

- ***Provide Education & Training***

A number of recommendations related to education and training have been identified in support of the Town's effective management. The following items can serve to educate the public, as well as Town staff and committee members.

- Support programs that promote responsible management and use of the waterfront
- Participate in Casco Bay water quality monitoring initiatives
- Educate on importance of marsh and coastal embankment vegetation as an effective erosion control.
- Provide sea level rise information to the public to initiate local planning and adaptation discussions
- Promote bay friendly landscaping approaches and low impact development techniques
- Review efforts to educate homeowners regarding responsible septic system maintenance in Coastal Protection Zones

## 5.b. Institute Mooring Management

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State and federal law place the authority for mooring regulation substantially at the local level. As such it is the responsibility of the Town to establish ordinance provisions that support the appropriate use of moorings in the Town's harbor areas. Current mooring management in Brunswick is fairly limited. At present count there are nearly 300 moorings in the Town's waters, and with demand for moorings steadily increasing, improvements to management practices should be considered.



### Current Practices

The Town has only recently begun to manage moorings through the adoption of the Harbor Ordinance in 2005 and by conducting voluntary mooring registration on an intermittent basis since 2009. With the exception of permitted mooring fields, mooring rights are available only to residents of Brunswick with at least 100' of coastal frontage. Mooring locations have historically not been closely regulated, and as a result some have been located in areas with insufficient water depth, in intertidal areas, and/or outside of the frontage of the corresponding property. There is no requirement for regular mooring inspection, or regulation on boat size or mooring construction (type, weight, chain/pennant length, etc.). There is no fee to keep a mooring. Prior to this study, the Town did not have a detailed inventory of moorings with locations mapped.

### Recommendations

- *Institute Mooring Registration*

Registration has been conducted several times on a voluntary basis in past years. Mandatory annual mooring registration would allow the Town

to keep an up-to-date inventory, and better regulate location, use, and construction of moorings. While this process can create a significant workload for Town Staff, there are online resources available that, for a nominal fee, can facilitate the process (e.g. [www.onlinemooring.com](http://www.onlinemooring.com) which is used by Portland, Falmouth, Yarmouth, Wells, and several other Maine communities).

- ***Maintain Mooring Inventory***

As part of this study existing moorings have been surveyed via GPS, and GIS based mapping has been prepared. When possible, mapping has been correlated with information from mooring registration records, however a lack of complete registration information has resulted in many gaps in this database. As information is gathered and improved through regular registration, the database should be maintained to ensure that the data stays up-to-date and accurate.

- ***Define Mooring Construction Standards***

Brunswick's current Ordinance provisions specify only that moorings be "reasonably adequate for the size, weight, and windage of the watercraft." Many ordinances include minimum mooring construction standards such as: anchor type (mushroom, block, helix), minimum anchor/block weight, chain size, mooring scope, pennant length, mooring ball size, color, markings, etc. to better ensure adequacy of installed moorings. The town is advised to develop and implement minimum standards that will help to ensure adequate construction. Working with a local mooring contractor (e.g. Coastal Barge & Mooring), as well as Paul's Marina (where approximately half of the Town's moorings are located), should be considered to help to develop standards appropriate to the existing practices, uses, and exposure in Brunswick.

- ***Define Mooring Inspection Requirements***

The Town does not currently require regular mooring inspection, and states only that the owner is responsible for inspecting their mooring. It is common for municipalities to require regular inspection of moorings (e.g. every 2-3 years), by a qualified mooring inspector.

- ***Investigate Mooring Fees***

There is currently no fee to keep a mooring in Brunswick waters. Mooring fees can provide a means to support the costs associated with harbor



management and regulation, and provide funding for Harbor & Waterfront related programs and improvements.

Many municipalities in Maine charge an annual mooring registration fee, which varies depending on location, services provided, type of use, etc. A summary of mooring fees from a number of municipalities is provided in Table 6. It is recommended that the Town investigate the suitability of mooring fees as part of the effort for improved mooring management, as well as to support the goal of a more economically sustainable waterfront.

**Table 6 – Mooring Fees in Maine Municipalities**

Town	Resident	Non-Resident	Commercial	Marinas/ Corporations
Boothbay Harbor	\$40	\$80	---	\$65
Bath	\$25	\$50	\$75	---
Harpswell	\$18	\$90	---	---
Freeport	\$105 + \$2.25*LOA	\$105 + \$2.25*LOA	\$385 + \$2.25*LOA	\$180 + \$2.25*LOA
Yarmouth	\$100	\$100 - \$175	\$50	\$425
Cumberland	\$50	\$250	---	---
Falmouth	\$57	\$257	---	---
Portland	\$78	\$145	---	---
Wiscasset	\$50	\$150	---	\$200

- ***Define Anchorage Areas/Municipal Mooring Field***

By establishing defined anchorage areas the Town creates the opportunity to offer moorings to a wider range of users, and to regulate moorings within those areas. Factors to consider in siting these areas include: water depth, impacts with habitats and natural resources, landside parking and access, availability of dinghy storage, and impacts with existing activities in the area.

Areas providing adequate water depth for a municipal mooring field exist in southern Maquoit Bay and in Merepoint Bay. Further consideration should be given to desired mooring field size, location, and what opportunities exist for landside parking and access (either at an existing municipal/state owned site or at a new Town Landing facility).

- ***Mooring Availability, Priority, Wait List***

Currently, moorings are only available to riparian owners. Interest in moorings by non-riparian residents, and non-residents, is expressed often. Typically, Towns will make moorings available to the general public within defined anchorage areas. Because the space within these areas is often limited, a limit to the number of moorings and a priority for assignment should be established. Assignment priority may consider residency, usage (recreational, commercial), private use vs. marina or boatyard, and other factors. Because there is a limit to the number of moorings available, a wait list should also be established to allow for managing demand for moorings that is beyond the available supply. Along with establishing defined anchorage areas, it is recommended that the Town adopt practices for determining layout and capacity, for setting priority, and maintain a wait list.



- ***Develop Mooring Plans for High Density Areas***

The survey conducted through this study provides the Town with the data to create wide-scale as well as detail maps for specific areas. As the demand for moorings increases, it may be beneficial to develop plans for high density mooring areas to facilitate management of existing moorings and siting of new moorings.

### 5.c. Waterfront Access

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Access to the waterfront is necessary for all forms of use, and is critically important both to the commercial fishing industries and recreational opportunities in Brunswick, among others. The following recommendations have been identified related to waterfront access:

- ***Investigate Opportunities to Expand Recreational Offerings at All Town Owned Waterfront Parcels***

There are a significant number of waterfront parcels in Brunswick that are mapped as Open Space, however there is a lack of public recreation area along the waterfront. It is a commonly expressed opinion that the Town lacks in public recreation, particularly for saltwater uses. In order to best utilize the existing Town owned parcels to support a diversity of uses, it is recommended that the Town consider opportunities to expand recreation opportunities, either through policy changes, infrastructure improvements, or other means.

- ***Review and Update Current Management Approaches at Existing Waterfront Parks to Better Balance Diverse Uses***

Along with the previous recommendation to expand recreational offerings at existing sites, policies and management approaches that limit recreational usage at existing waterfront sites should be reconsidered as demand for public saltwater recreation sites has increased, and where appropriate, policies should be updated.

- ***Study Best-Uses of Simpson's Point Landing***

Simpson's Point Landing has received significant attention during the timeframe of this study. The small public site has an existing boat launch that was closed in 2008 as part of an eelgrass mitigation effort associated with the Merepoint Boat Launch construction. The site has since become a popular recreation spot as the water quality, depth, and exposure at the site offer desirable conditions for swimming, canoeing/kayaking, and other recreational uses, all within a short distance of downtown.

With the boat launch closed, the nearest boat launch site is at southern Merepoint, which is a ~4 mile trip to reach upper Middle Bay. This has created a safety concern for harvesters who make this trip in small skiffs in what can be fairly treacherous waters. Recently, there have been discussions about reopening the boat launch. There has been division on

the issue, as any increased use as a launch site will impact the recreational usage.

There are several additional considerations with the use of Simpson's Point Landing. First, there is very limited parking on site with no defined parking area. Second, the public land is limited to only the right-of-way of Simpson's Point Road and adjacent property is privately owned. The small site has little capacity for expanded use in any form. Regulatory issues will also have to be considered with any proposed change to the use at Simpson's Point landing.

The use of Simpson's Point Landing is clearly a complex issue, and it is recommended that the Town study in greater detail the best uses of the site in order to support informed decision making. Ideally, a solution would consider the goals of shared-uses and sustainable management as identified in the Primary Goals of this study.



- ***Establish Policies for use of Simpson's Point Landing***

Following a study of the best uses of Simpson's Point Landing, it is recommended that the Town establish policies for this site that will ensure an accommodation of appropriate uses and minimize conflicts and impacts between differing user groups.

- ***Revisit Uses of Merepoint Boat Launch***

A number of residents responded at public forums and through the survey that the Town should consider revising the usage policies at Merepoint Boat Launch to allow for uses such as swimming, commercial launching, mooring field access, and overnight parking. Now that the Town has had the opportunity to observe actual facility usage for several years, it is positioned with greater information to revisit the existing policies and revise as appropriate.

- ***Increase Opportunities for Saltwater Recreation for Non-Coastal Residents***

There is significant interest in saltwater recreation among local residents. While some opportunities do exist (for example, Thomas Point Beach, Simpson's Point Landing), interest has been expressed in recreational access to other Harbor areas, including Maquoit Bay and Harpswell Cove. The Town should consider expanding recreational offerings at existing properties, as well as potential new sites in order to increase options for recreational access.

- ***Identify Waterfront Property For Development of a Municipal Landing***

While there are many existing access points, the Town does not currently have a public municipal landing site that is currently managed to serve as an access point to public moorings. If this use cannot be achieved at an existing facility, the Town should conduct a search for potential property for development as a municipal landing site.

- ***Adopt A Routine of Inspection of Public Waterfront Sites to Identify Maintenance and Improvement Needs***

The existing waterfront sites maintained by the Town should be cataloged and a routine of regular inspection should be established. This will allow for the Town to identify any maintenance needs, and



to observe usage to understand adequacy of the existing facilities and any needs for improvement, upgrade, and/or expansion.

- ***Develop Informational Materials For Coastal Property Owners Regarding Private Property Rights and Rights of the Public***

It is important for waterfront property owners to understand their rights. For example, access to the waters, riparian moorings, and rights of the public to access intertidal and beach areas adjacent their private upland properties. The Town could develop an informational flyer with clarification on these issues, which could be provided to owners as questions arise. The town web-site and a dedicated web-page for the

future harbor commission would be an efficient way to provide updatable information to the public.

- ***Develop Information Materials For Users of Intertidal Resources that Identify Public Access, Legal Rights, and Etiquette Regarding Use of Intertidal Resource***

Similar to educating landowners on their rights, it is important to educate users of the intertidal resources of their rights, as well as etiquette for use of these resources as well as the adjacent public and private lands. Informational materials could be developed and shared along with the license application process and/or through marine resource committee meetings. The town web-site and a dedicated web-page for the future harbor commission would be an efficient way to provide updatable information to the public.

- ***Pursue Property Acquisition and/or Establishment of Public Rights-Of-Way in Areas where Public Access is Difficult and/or Unavailable***

As additional access needs are identified, it is recommended that the Town pursue either property acquisition or establishment of public rights-of-way to improve the availability of safe, and where appropriate handicap accessible public access.



#### 5.d. Resource Monitoring & Mitigation

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The value of a marine area is directly linked to the health of its resources. This includes water quality, health of wildlife and marine habitats, and other natural and cultural resources. The following specific goals have been identified related to resource monitoring and mitigation:

- ***Adopt Management Practices for Non-point Source Pollution***

Town-owned facilities should exemplify best practices for non-point source pollution control. Practices for controlling erosion, managing pet waste, handling stormwater runoff, and addressing winter snow and ice removal on town water access sites should utilize the best available techniques. Additionally, best practices for non-point pollution control should be promoted regularly by the town on-line and through printed materials to improve landowner awareness of the threats to our public waters and steps that can be taken by each citizen.

- ***Study causes for town-wide decline in eelgrass***

The town should dedicate staff resources and pursue outside funding to further evaluate the causes of the rapid loss of eelgrass beds throughout the town's tidal waters. Work on this issue was started in Maquoit by in September 2013. Additional efforts are necessary as eelgrass is a keystone species for much on Brunswick's marine environment.

- ***Protect Wildlife and Bird Habitat***

Brunswick's Natural Resource Protection Zone is a good starting point for local marine and intertidal wildlife habitat conservation efforts, but additional efforts are warranted including the acquisition of key parcels, restoration of impounded tidal waters, and protection of upland buffers.

- ***Identify and Preserve Existing Cultural Resources***

As a follow-up action to this plan, the proposed Waters Commission should prepare an inventory of known significant historic and pre-historic features along Brunswick's shoreline. This information should be used to further refine approaches to future waterfront use and protection.

- ***Pursue Tidal Restoration of the New Meadows Lakes***

The New Meadows River Watershed Partnership has been exploring the feasibility of restoring natural tidal flow to the upper New Meadows River since 2001. Water quality and habitat impacts have been well-

documented since the late 1960's. Restoration has clear economic and ecological benefits for the town and its citizens who depend on the local marine environment.

- ***Identify and Address Barriers to Fish Passage***

Poorly sized and installed culverts as well as dams, have contributed significantly to the decline of local finfish populations and populations of other native aquatic organisms important to marine ecosystems. The town should utilize recent stream and aquatic barrier inventory work to identify and prioritize sites for restoration.

- ***Identify and implement methods for the eradication of invasive species***

The town should commit resources necessary for the early detection and control of invasive plant and animal species that impact public riverine and marine resources. This approach should include a public awareness campaign as well as dedicated staff time to pursue sources of funding to address existing problems.

- ***Study the Causes for Loss of Fringing Marsh***

Sea level rise, invasive species, shoreline development, and shoreline rip-rapping all contribute to the on-going loss of saltmarsh habitat, especially fringe marsh or bluff toe marsh. The town should establish a detailed baseline map of existing salt marsh habitat in order to monitor declines and to inform necessary policy changes to slow these declines.



### 5.e. Respond to Climate Change

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While there is much debate over the cause and nature of climate change, the effects are undeniable and must be dealt with. Discussion of climate change within this report is necessarily brief; however there is a significant knowledge base on the topic, including literature, experts in the state of Maine, and conferences held on the topic. These sources should be consulted for further information. Some of the specific items impacting the waters and coastal areas include:

- ***Sea Water Acidification***

Address sources of seawater acidification and identify opportunities to buffer against ocean acidification.

- ***Address Coastal Erosion Appropriately***

Identify locations where hard approaches should be limited, promote soft approaches to addressing coastal erosion to limit the impacts to coastal resources

- ***Plan For Sea Level Rise***

Historic data documents the increasing sea level elevation (citation needed). FEMA mapping throughout the Maine coast is indicating higher base flood elevations than in the past. Long term planning should incorporate sea level rise projections into town planning efforts and update local ordinances and open space priorities appropriately. The Maine Geological Survey has recently completed coast-wide sea level rise mapping under multiple scenarios. This data is available for use by Brunswick.

## 5.f. Preserve the Working Waterfront

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- ***Identify Access Needs For Commercial Fishermen***

As more property gets developed under private ownership, there is a tendency for traditional access locations to be restricted or closed. There has been significant effort locally by groups such as Brunswick-Topsham Land Trust to establish access easements with property owners. It is recommended that the Town work with

commercial fishermen to determine what access is currently being used and what needs currently exist, so that options for improved access can be investigated.

- ***Create New Access Points, Easements in Key Locations***

As public access deficiencies are identified, the Town should investigate opportunities to create new access points through property acquisition, easement, and/or redevelopment. The Land for Brunswick's Future program originally envisioned as part of the 2002 open space plan should be capitalized and implemented for this purpose.

- ***Promote Conservation***

The Town currently has a conservation program specific to shellfish licensing that allows harvesters to earn points towards their required total for license renewal through participation in various conservation activities. This program has proven effective, and has mobilized harvesters to participate in eradication efforts, reseeding, shellfish surveys, and many informational meetings. With shellfish populations currently at low levels due to the Green Crab infestation, conservation is extremely important to ensure a sustainable resource. It is recommended that



the Town continue with its effective conservation efforts, increasing efforts when found necessary. Additional efforts are necessary to inform private waterfront landowners how they can contribute towards the conservation of other harbor resources.

- ***Regulate to Address Harvesting Conflicts***

The softshell clam has historically been the primary species harvested from Brunswick's intertidal areas. Increases in harvesting of other species (e.g. marine worms) have recently resulted in conflicts between competing fisheries. It is recommended that the Town consider regulation that will support and encourage mixed use of the intertidal resources, while also working to minimize negative impacts of harvesting activities on populations of differing species.

### **5.g. Harbor Ordinance Updates**

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The Town of Brunswick Municipal Code of Ordinances, Chapter 11 covers Marine Activities, Structures, and Ways. Article I – Harbor, Coastal, Tidal, and Navigable Fresh Waters, adopted in 2005 and updated in 2008, is herein referred to as the Town’s Harbor Ordinance.

In a general sense, a Town’s harbor ordinance exists in order to legally define rules and regulations related to the Town’s waters, and establish authority to carry out regulation. The ordinance defines the role of the Harbormaster, as well as (if applicable) the harbor committee. Ordinance requirements are considered supplemental to those of Title 38 (the state of Maine statute on Waters and Navigation), and should not contradict Title 38.

Recommendations put forth in this study cover a wide range of topics. The vehicle that will allow for many of those recommendations to be implemented is the Harbor Ordinance. As a next step to achieving the Town’s management goals, it is recommended that a thorough process of reviewing and updating the harbor ordinance be undertaken in consideration of the recommendations of this plan.

The language of the ordinance needs to be carefully considered prior to adoption by the Town. The task of revising the Harbor Ordinance could be taken on by the proposed River and Coastal Waters Commission after its formation.

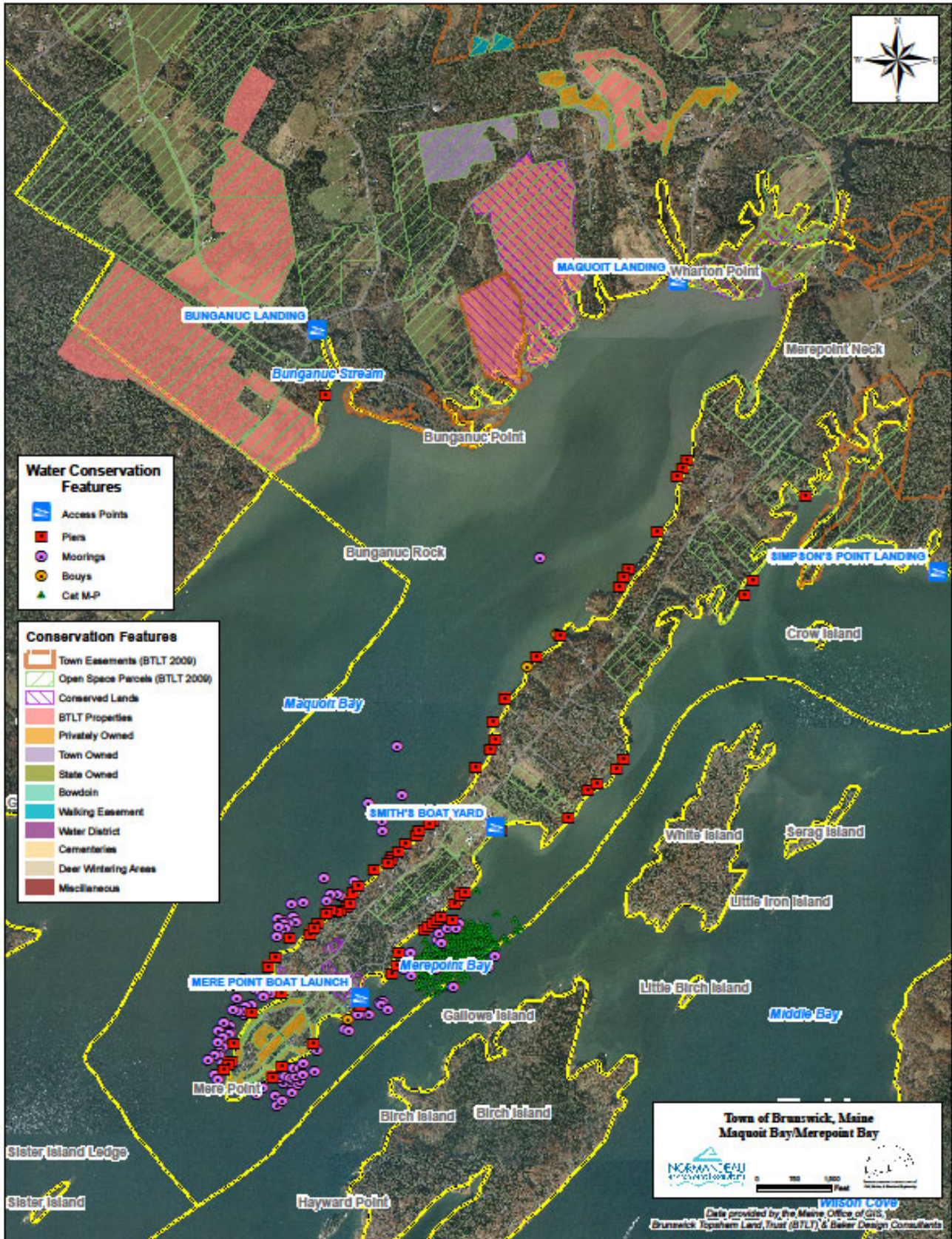
To support the process of updating the Harbor Ordinance, sample language for several areas of revision is provided in Appendix D. The language provided in Appendix D can form the initial basis of revisions, to be revised and supplemented by the Commission. Once an updated version of the ordinance has been thoroughly vetted, it can be put forth to the Town Council for approval and adoption.

## 6. Mapping

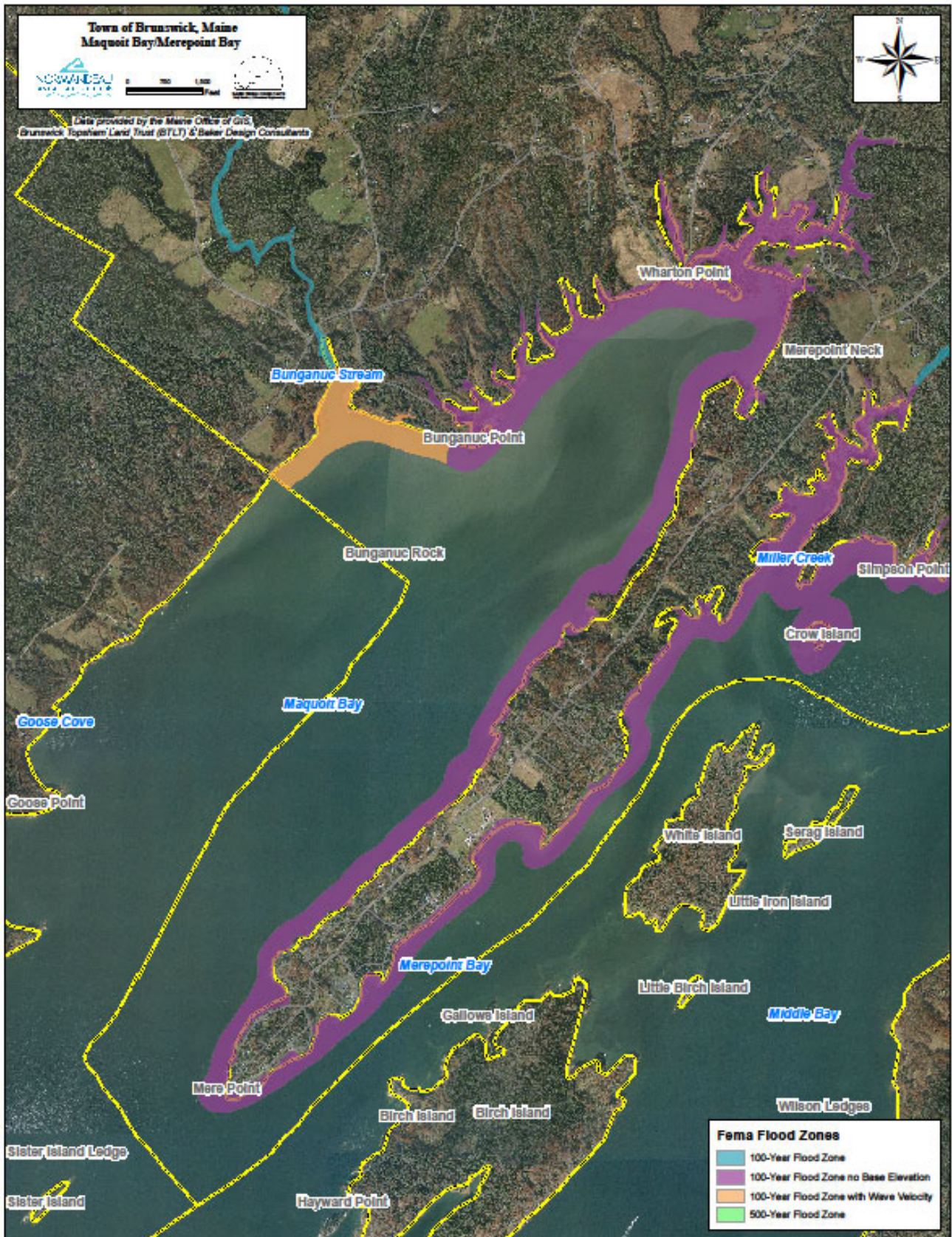
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1. SERIES 1 – MAQUOIT BAY AND MEREPOINT BAY
  - a. Conservation, Piers, Wharves, Access Points
  - b. 100 Year Flood Zone
  - c. Intertidal Habitat
  - d. Wildlife Habitat
  - e. Water Quality
2. SERIES 2 – MIDDLE BAY AND HARPSWELL SOUND
  - a. Conservation, Piers, Wharves, Access Points
  - b. 100 Year Flood Zone
  - c. Intertidal Habitat
  - d. Wildlife Habitat
  - e. Water Quality
3. SERIES 3 – NEW MEADOWS RIVER
  - a. Conservation, Piers, Wharves, Access Points
  - b. 100 Year Flood Zone
  - c. Intertidal Habitat
  - d. Wildlife Habitat
  - e. Water Quality
4. SERIES 4 – ANDROSCOGGIN RIVER (A – UPSTREAM, B - DOWNSTREAM)
  - a. Conservation, Piers, Wharves, Access Points
  - b. 100 Year Flood Zone
  - c. Intertidal Habitat
  - d. Wildlife Habitat
  - e. Water Quality

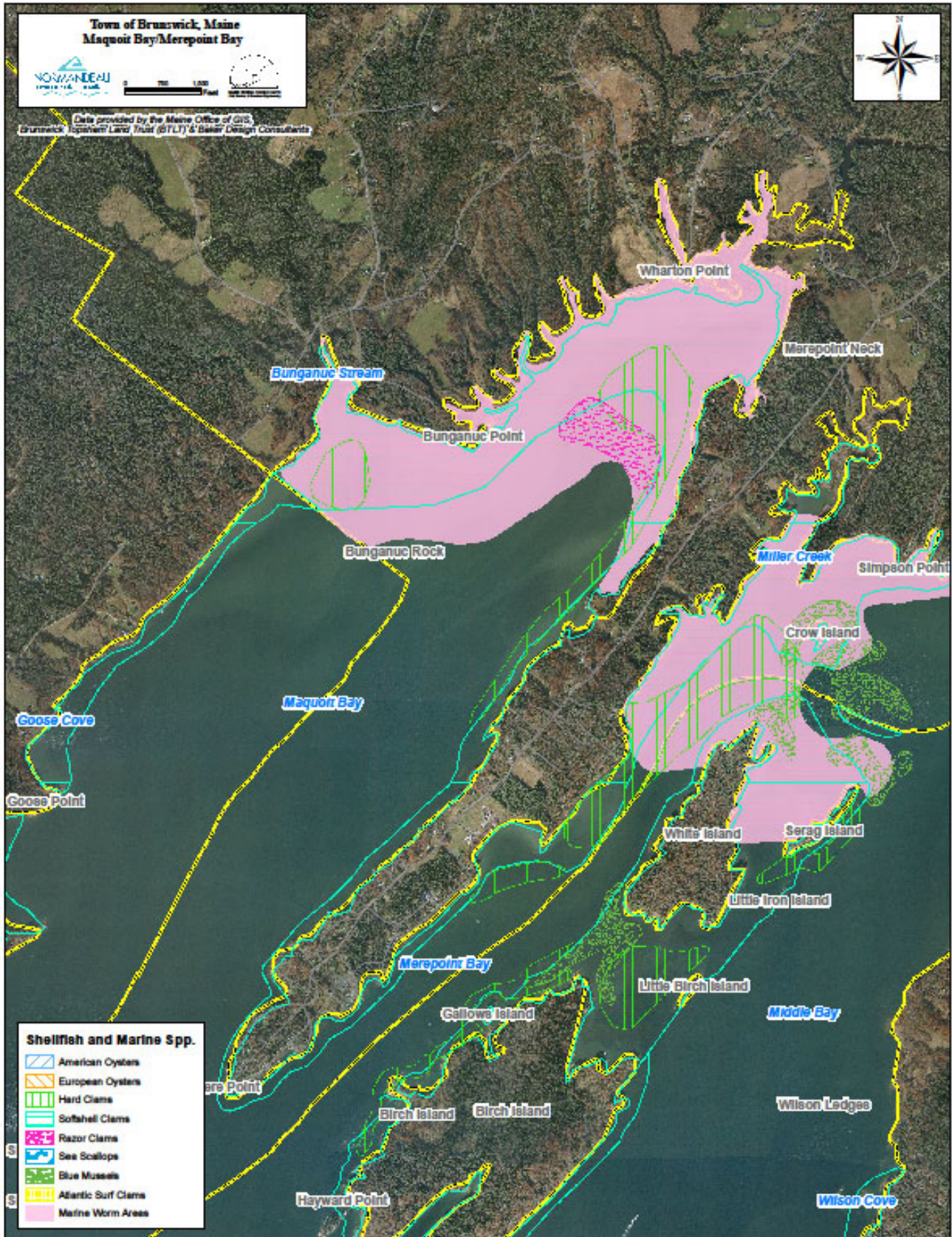
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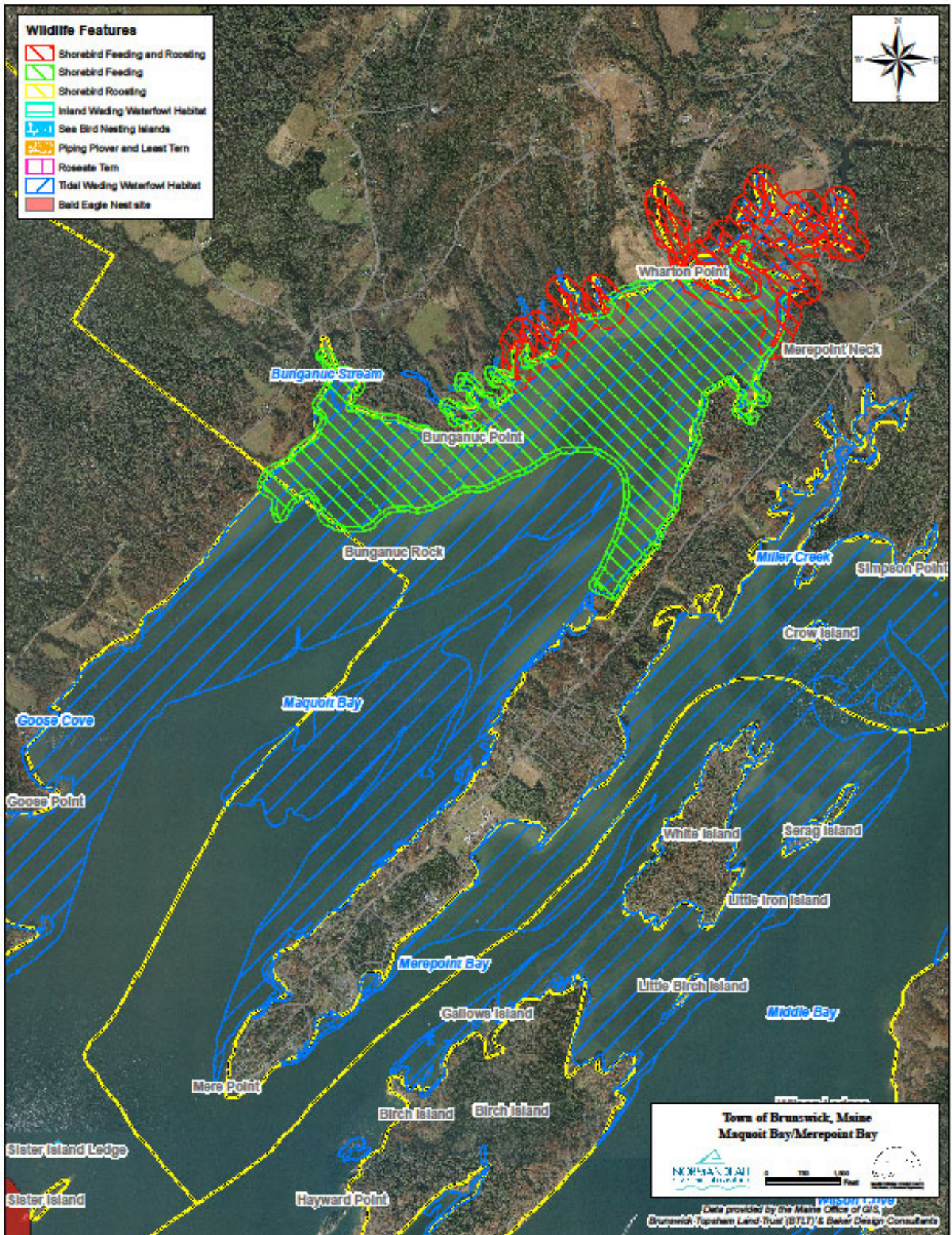


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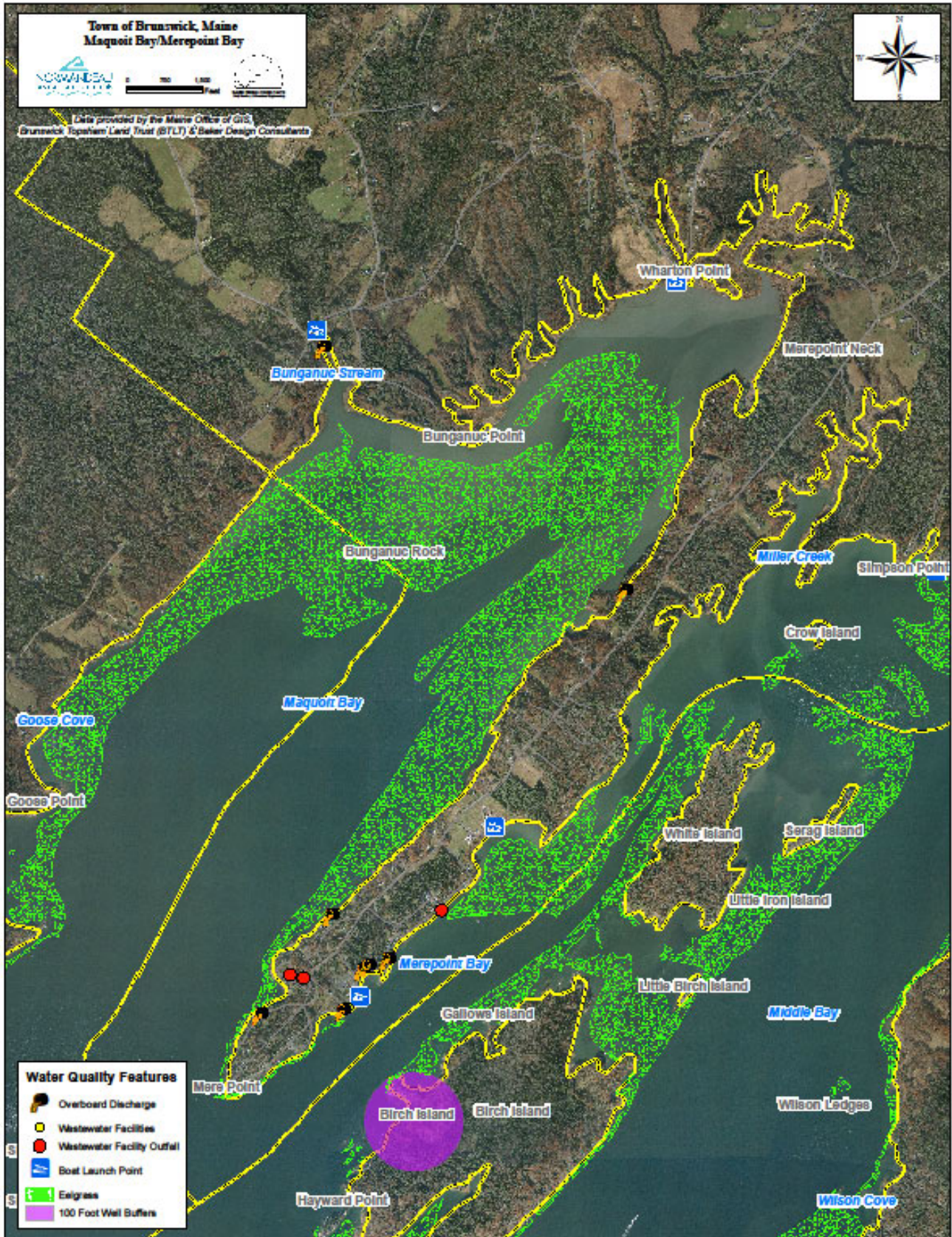




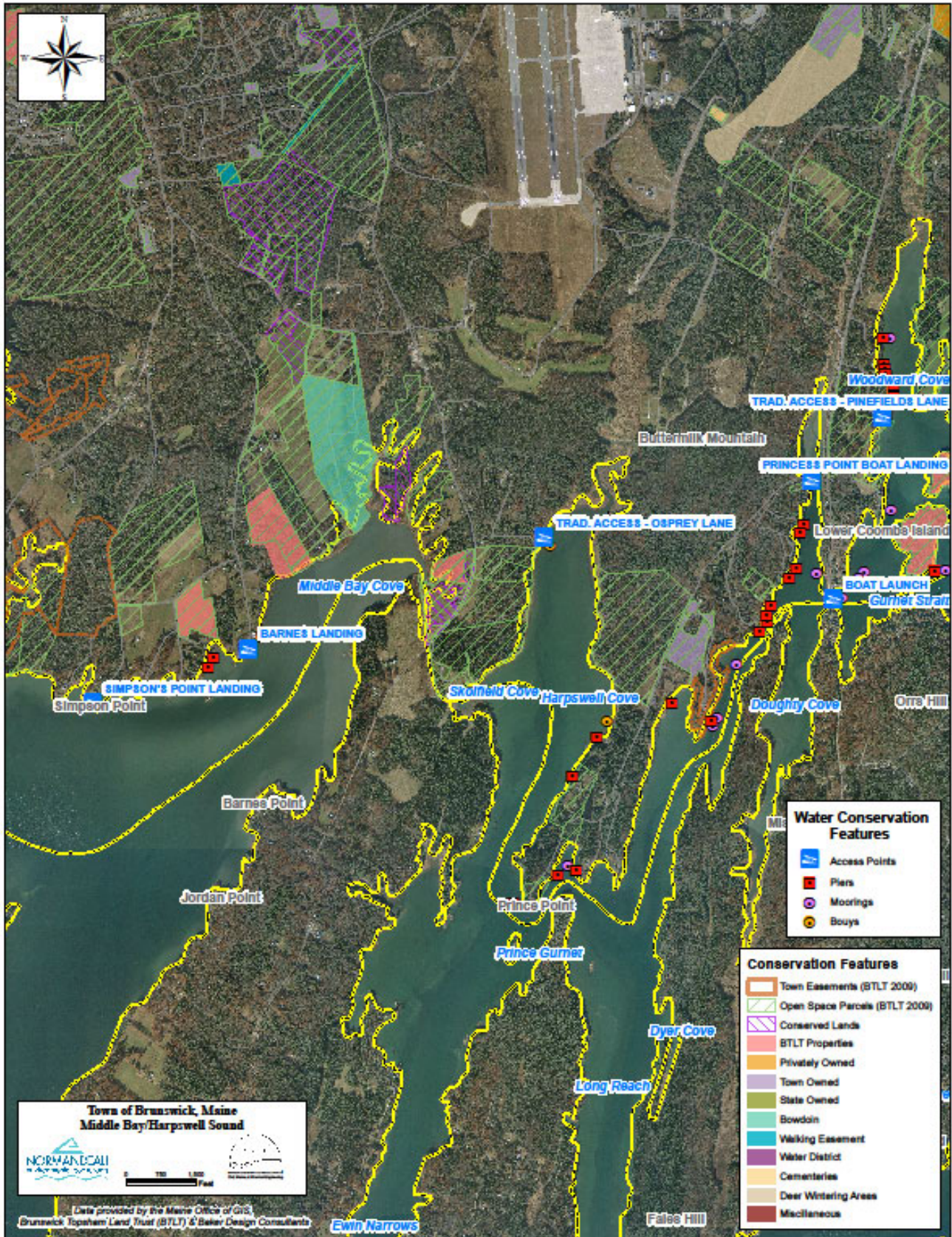
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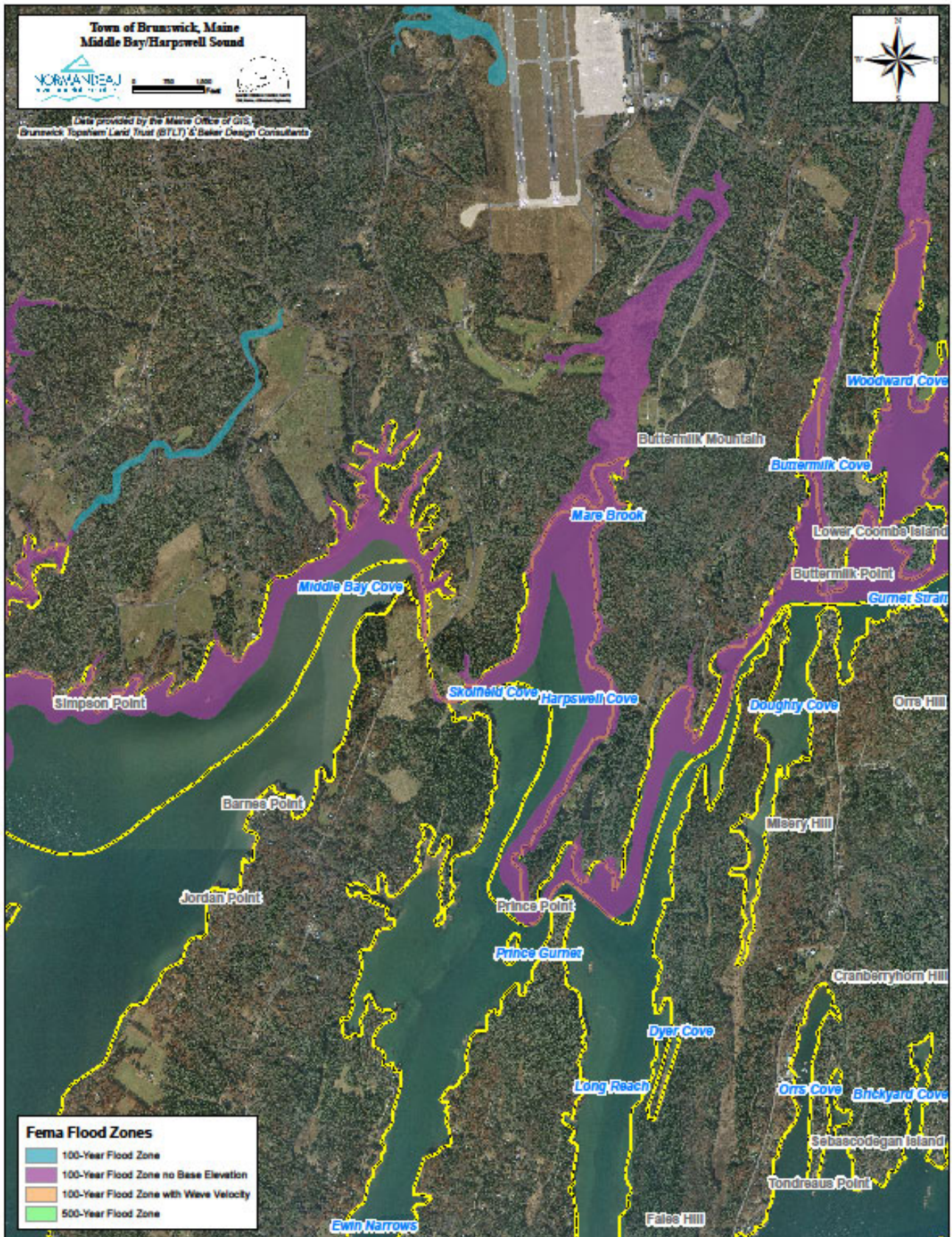
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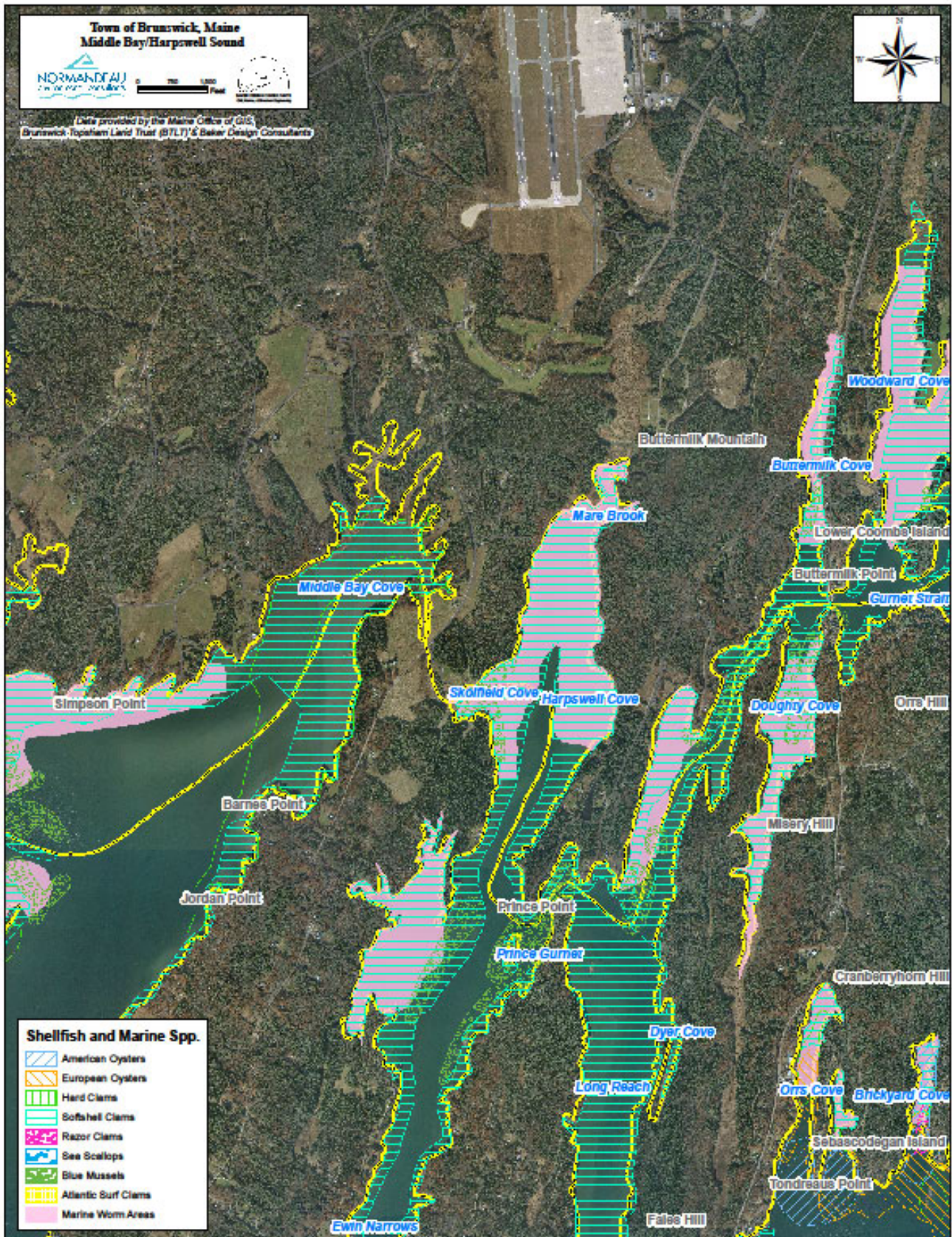
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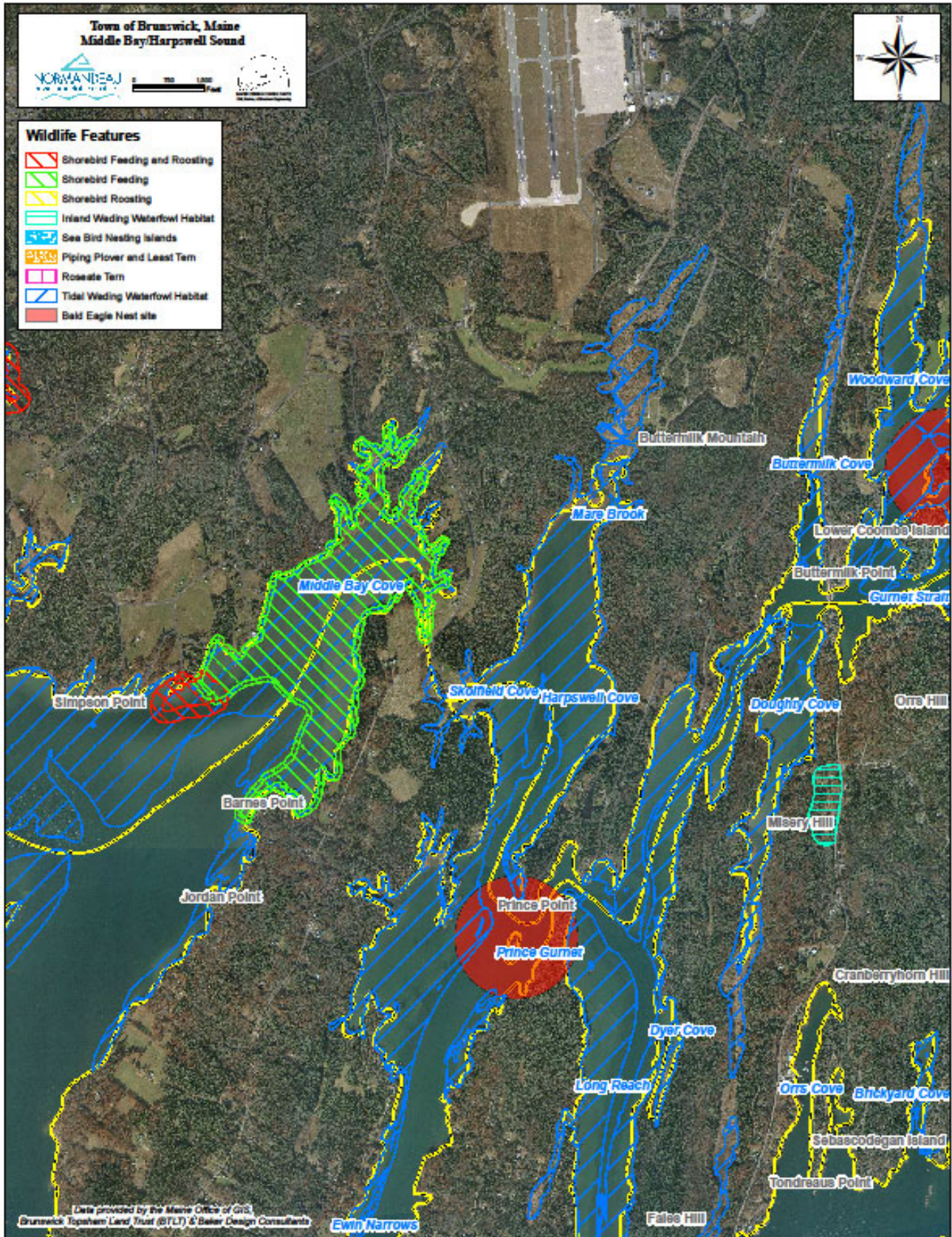


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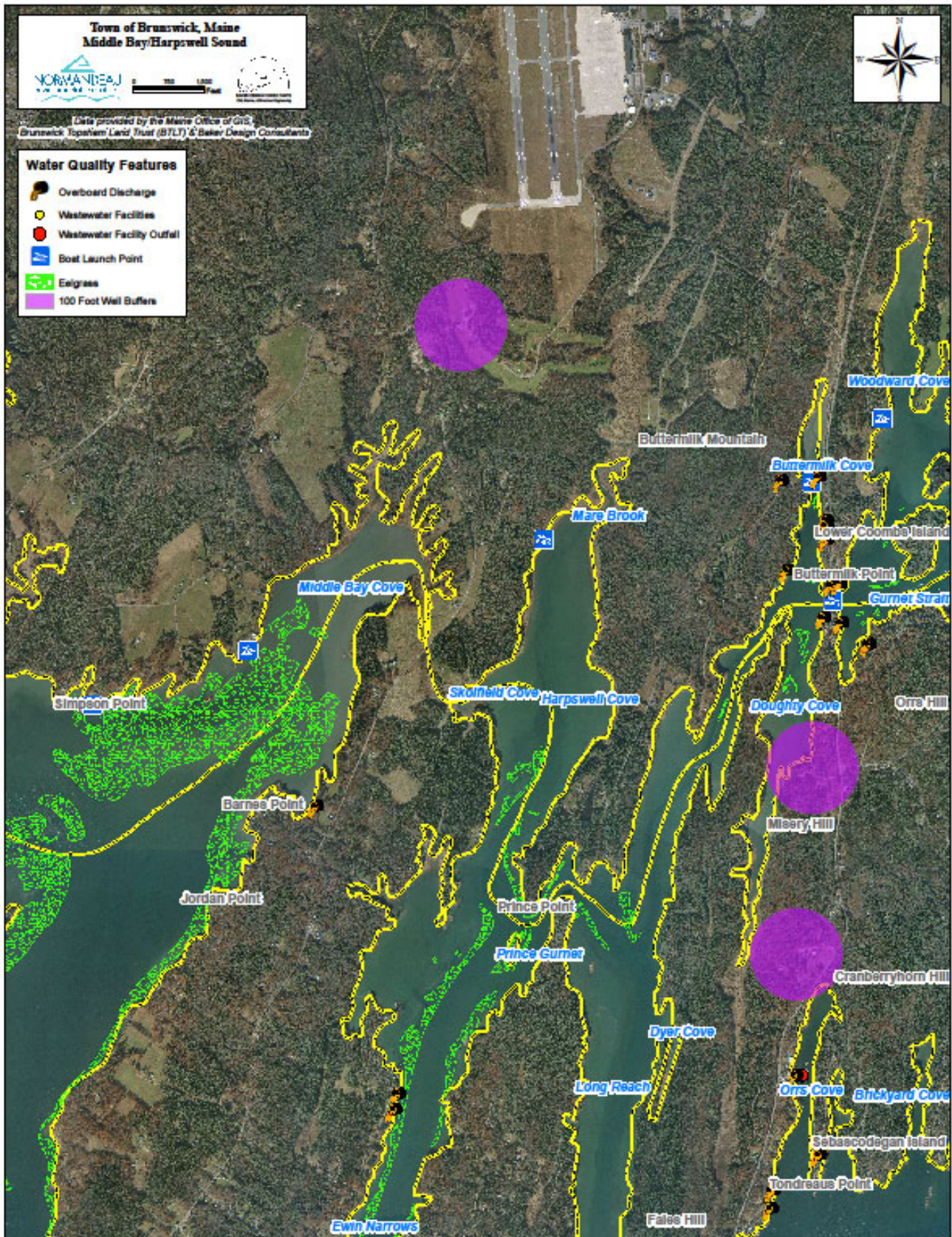


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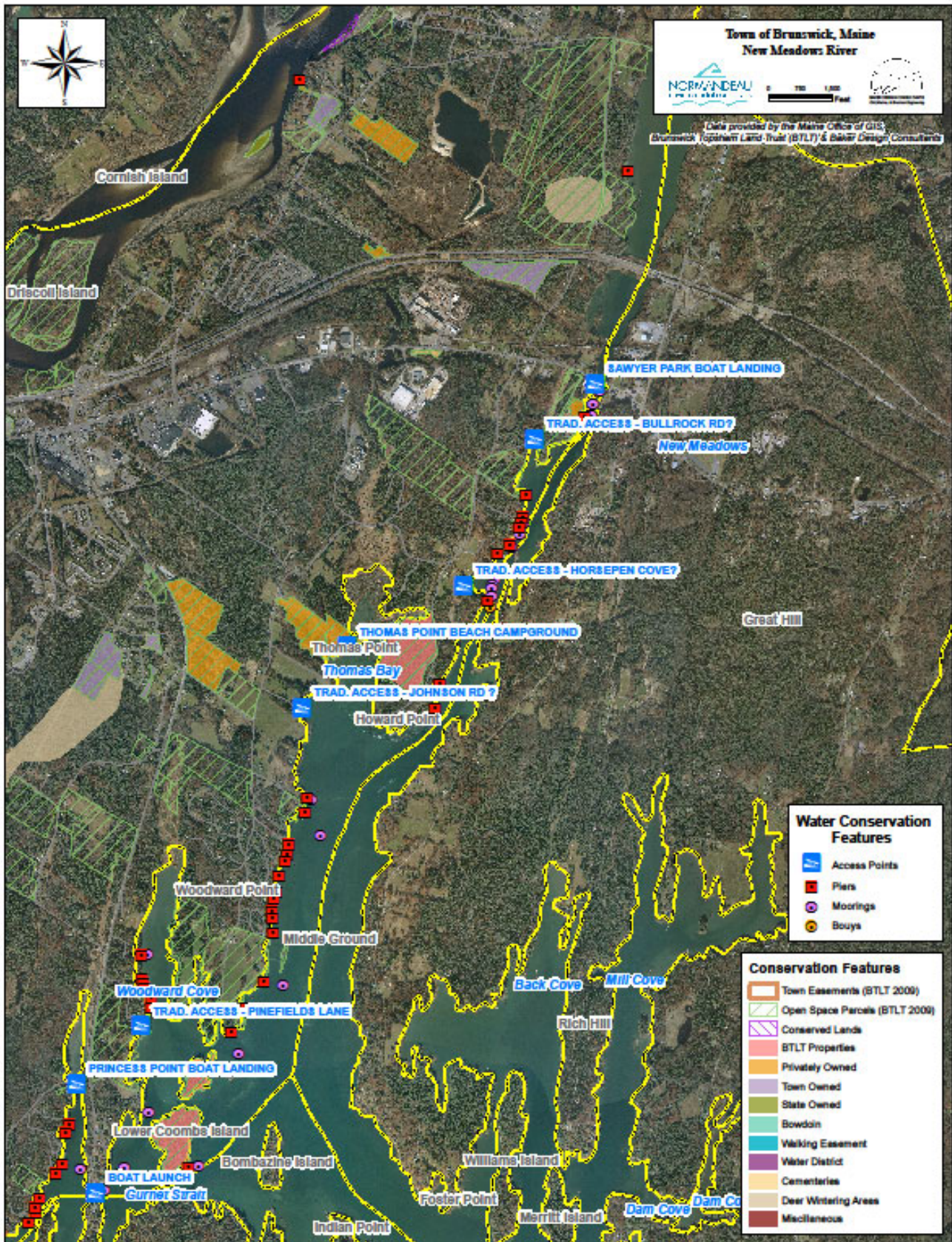




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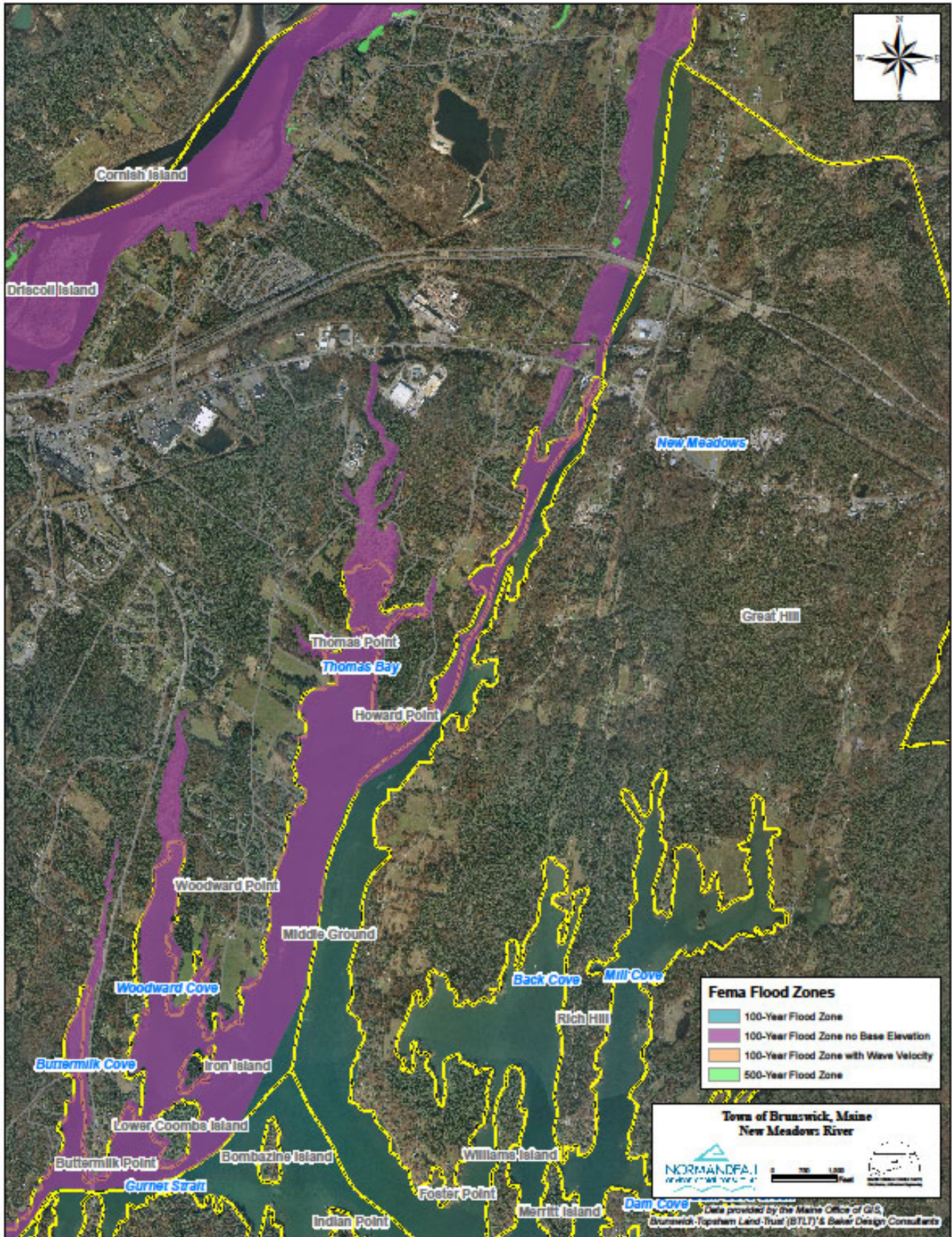


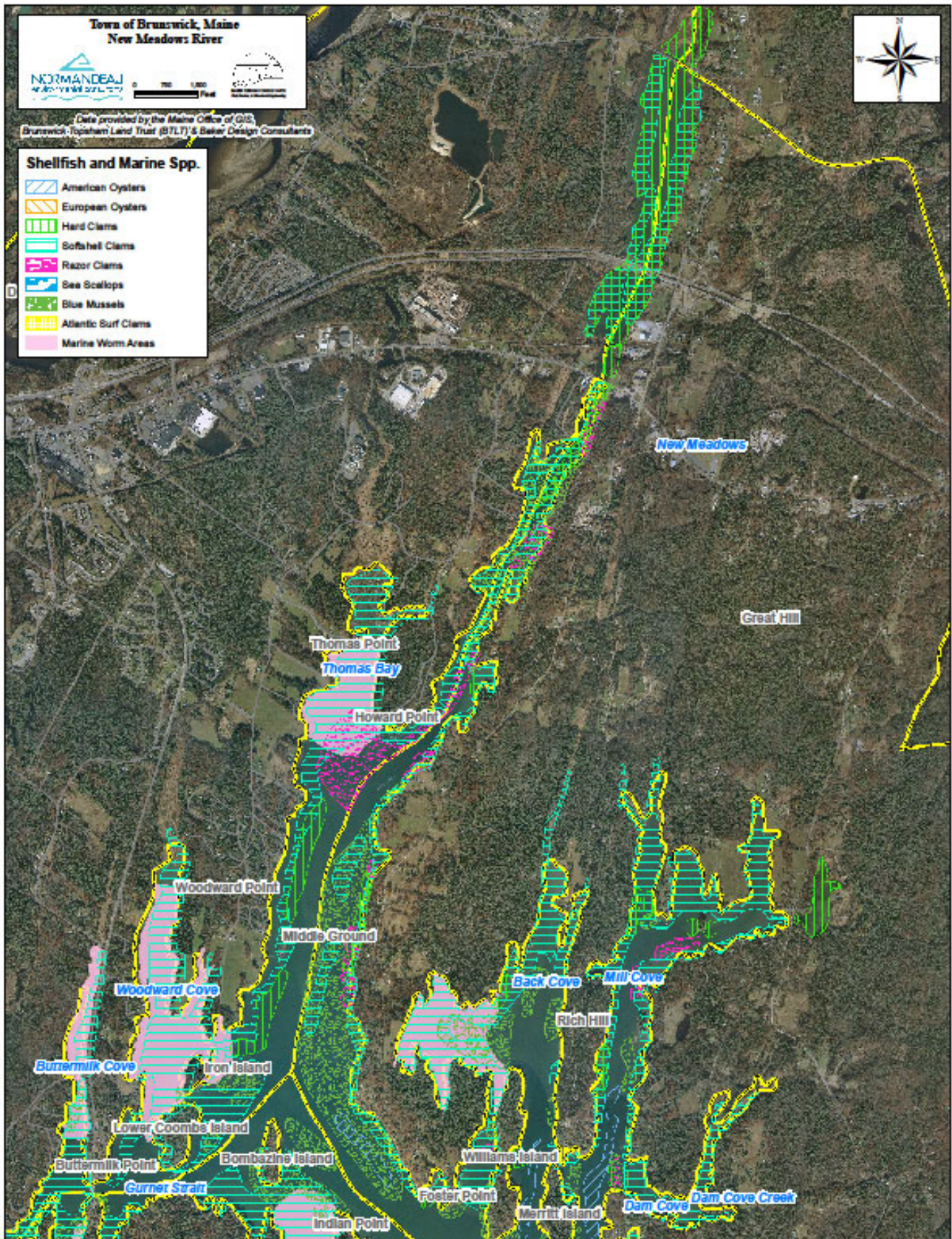
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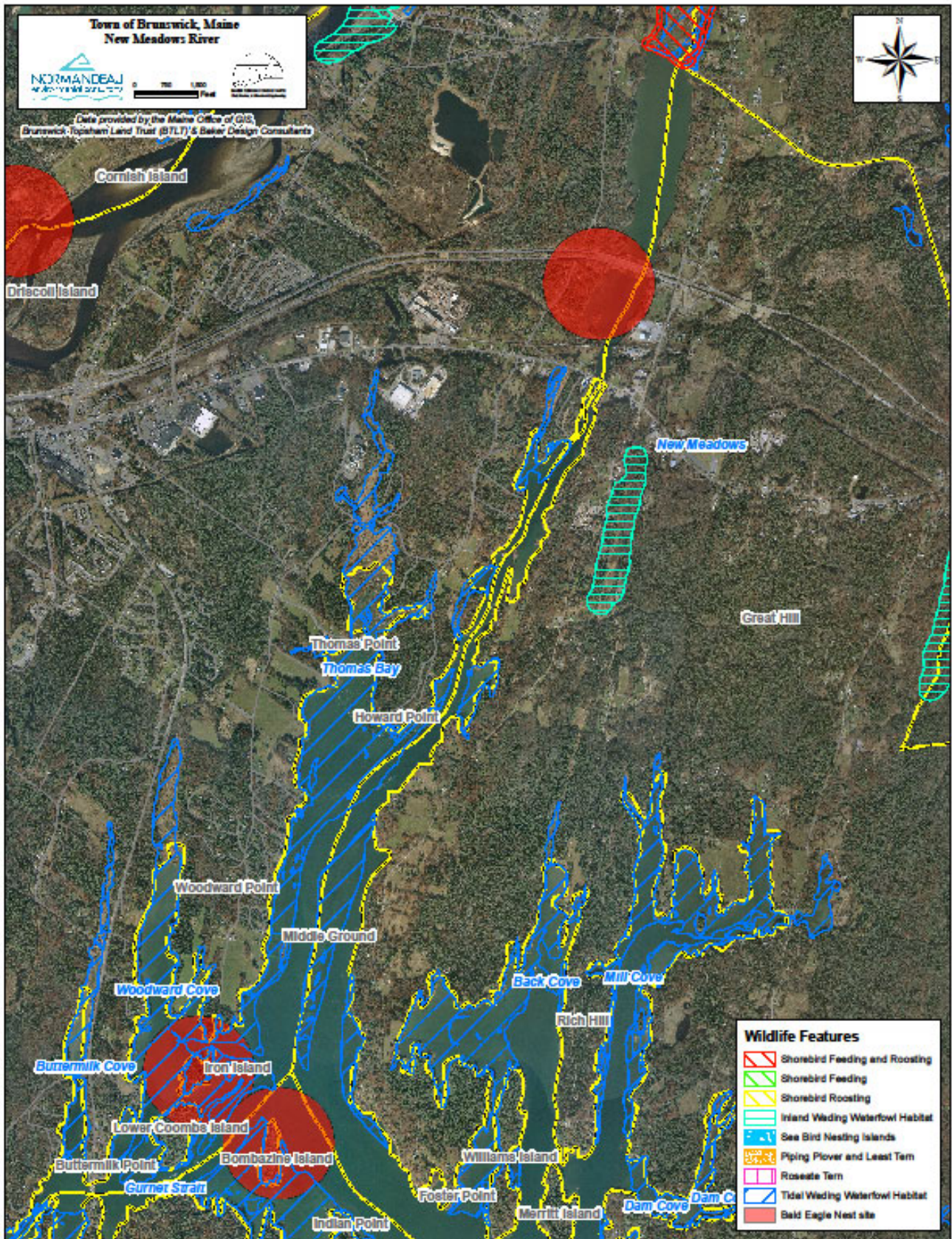




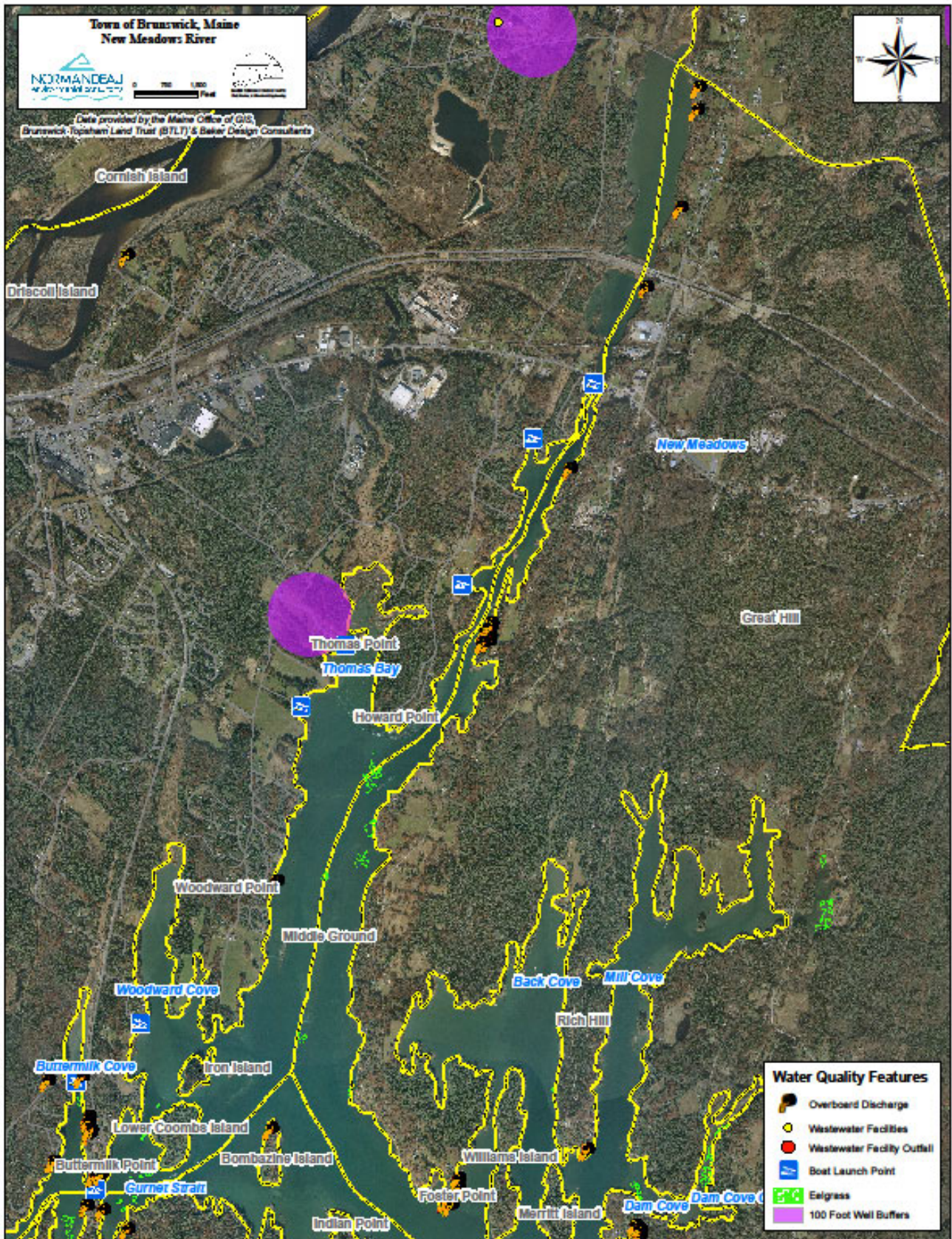
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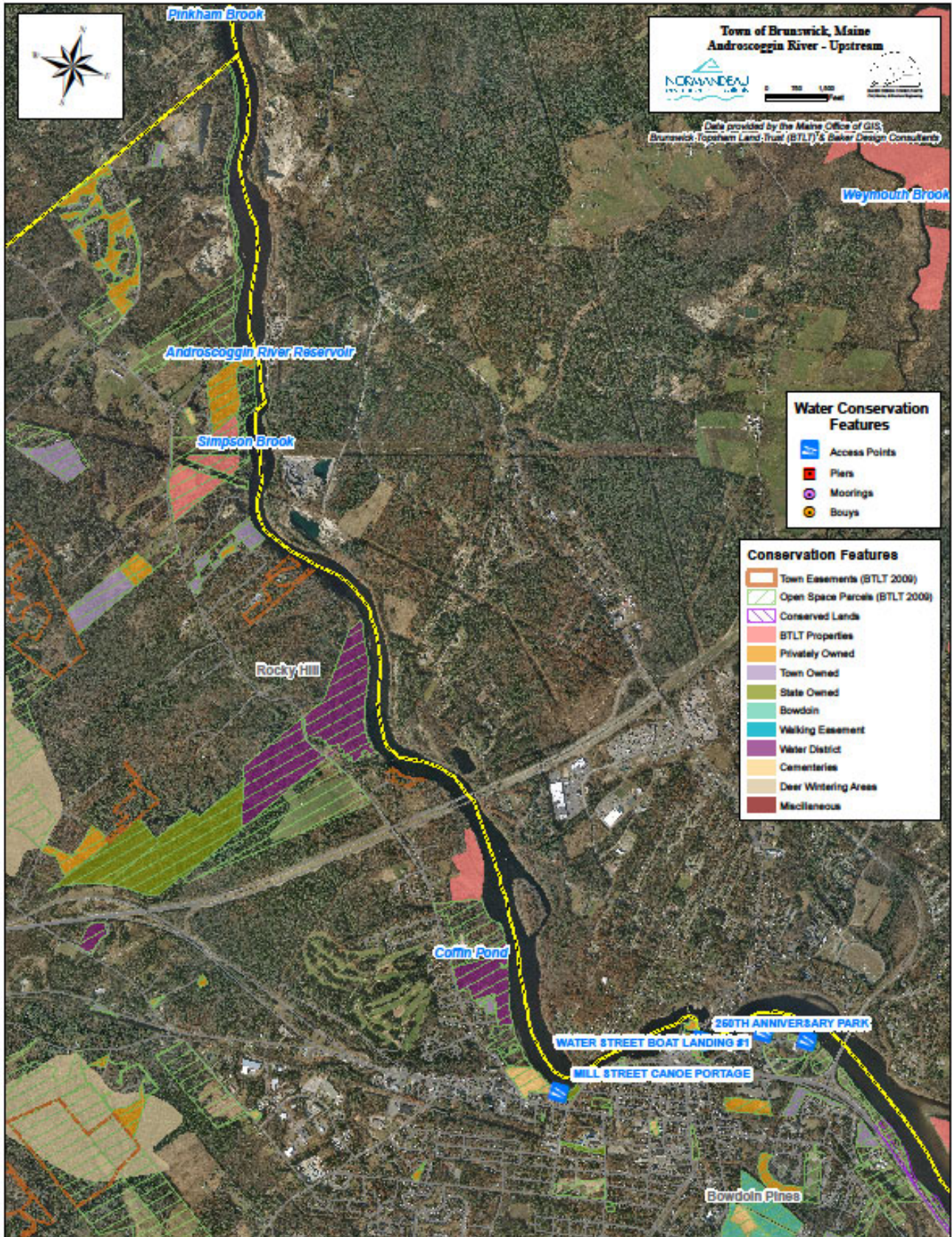




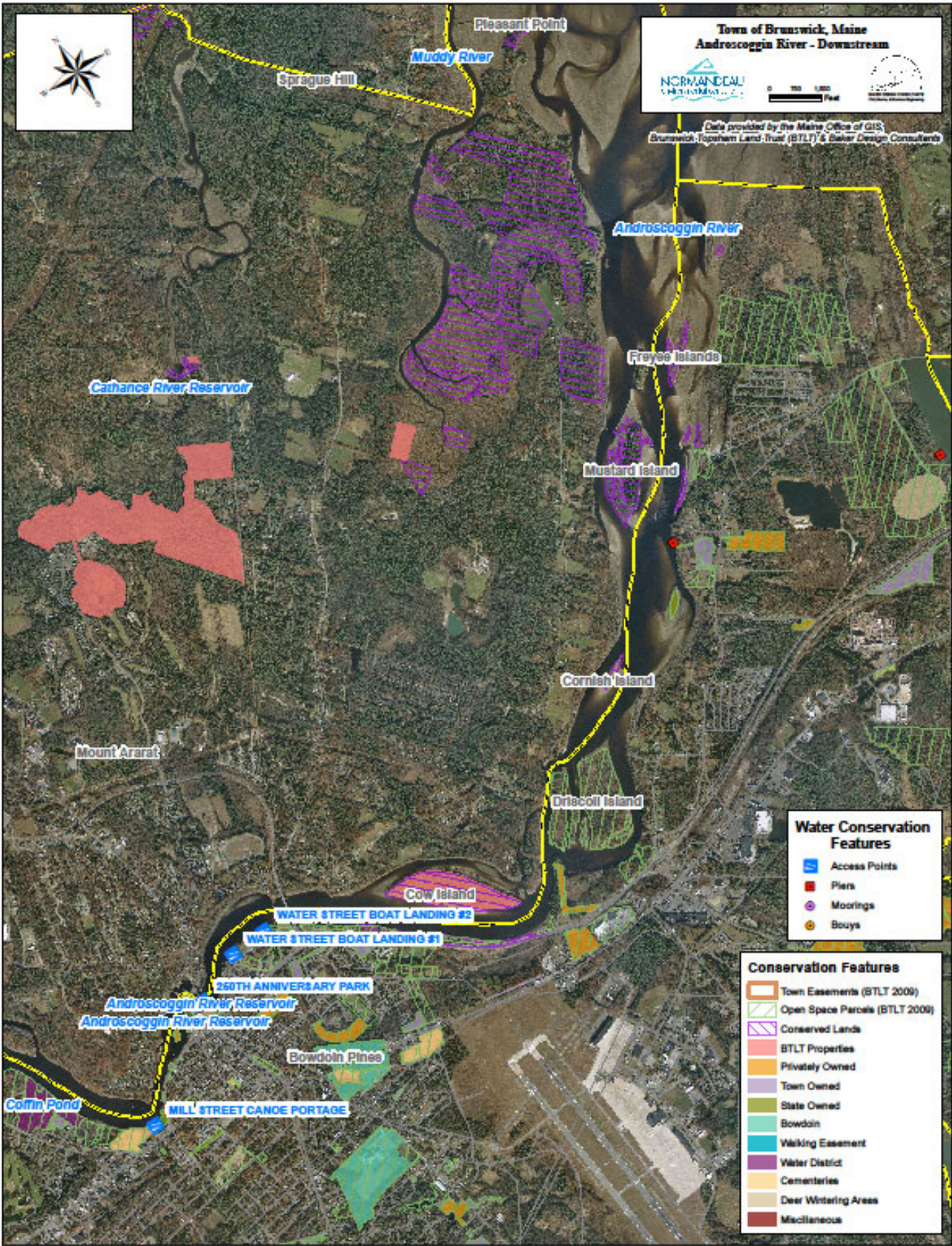
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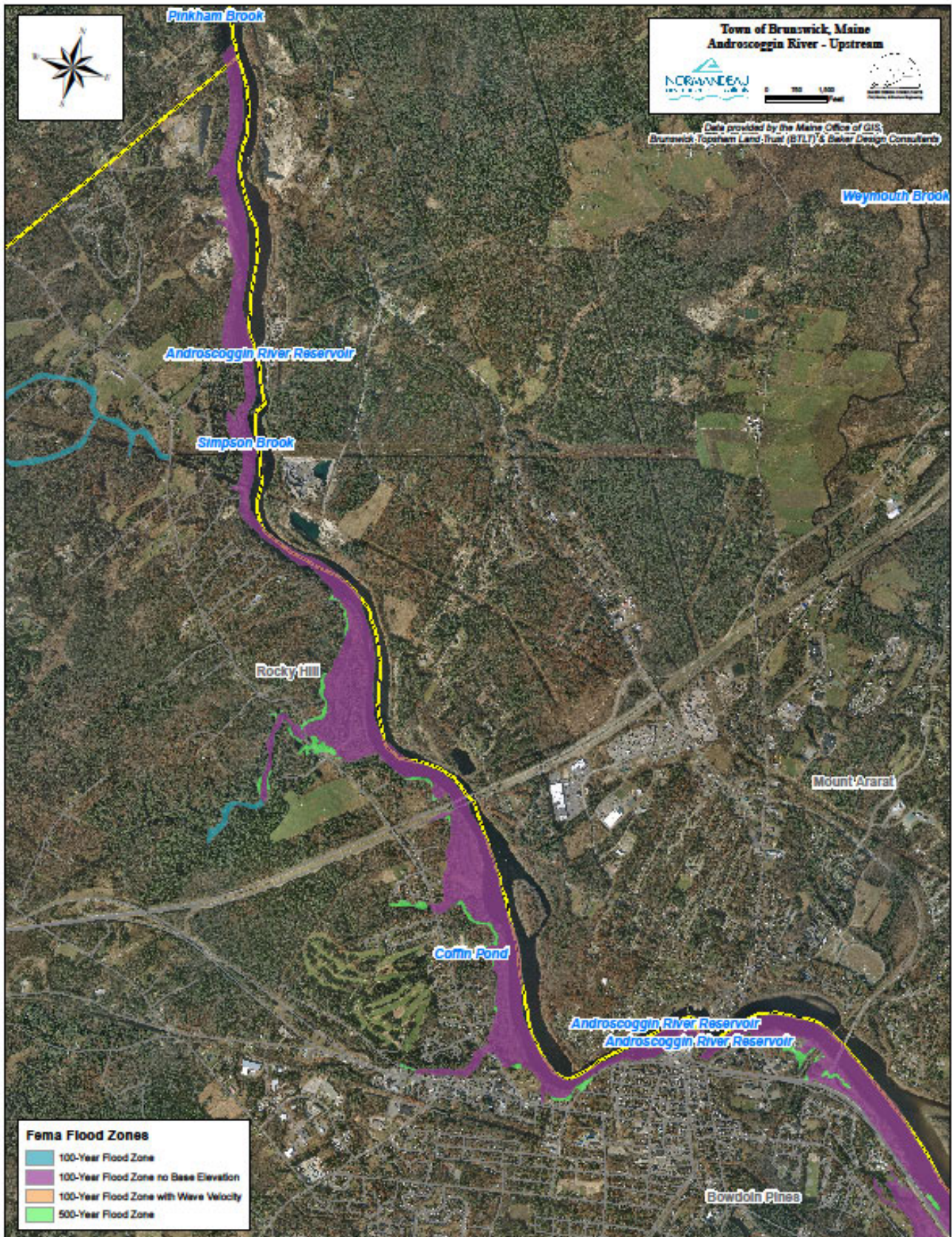
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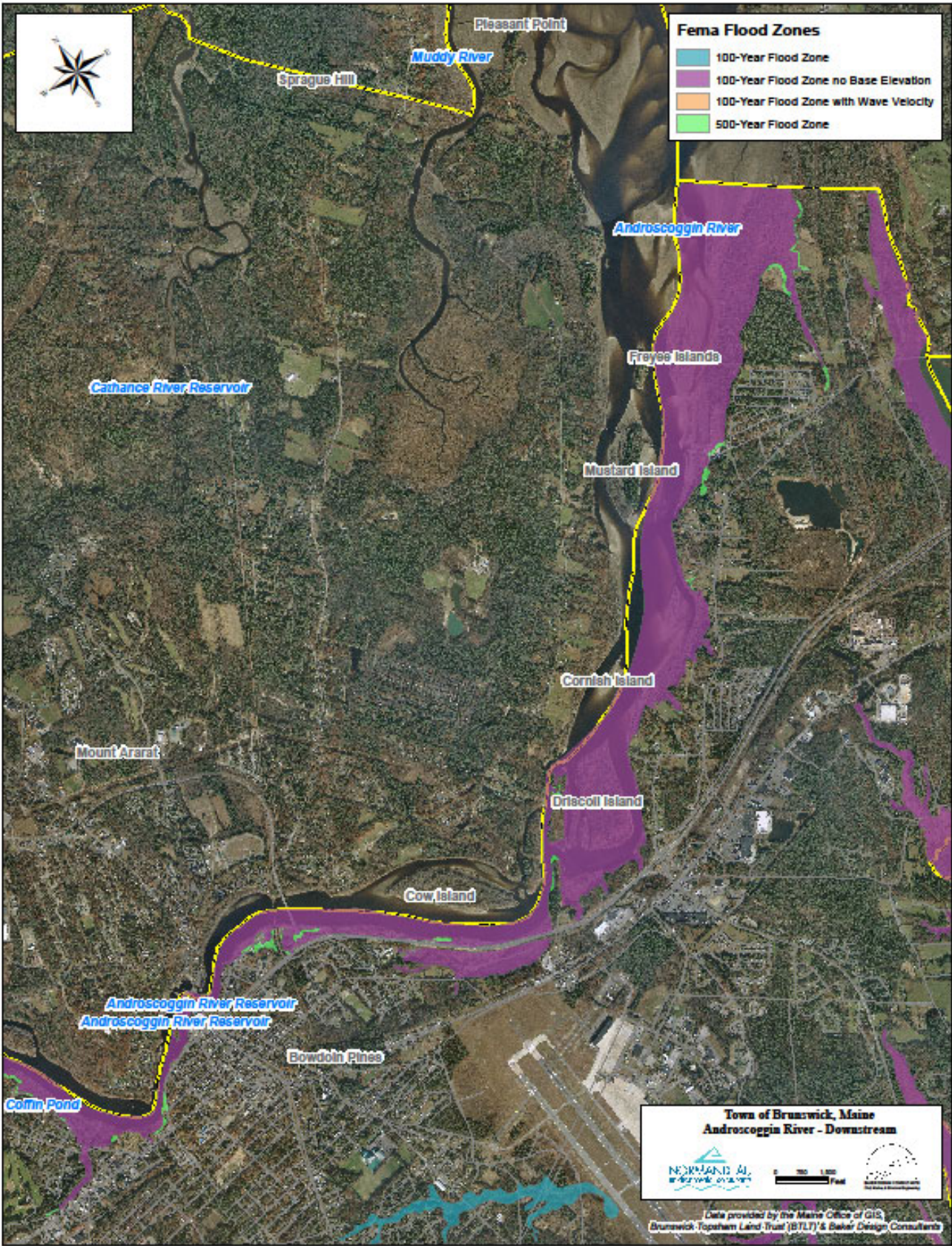
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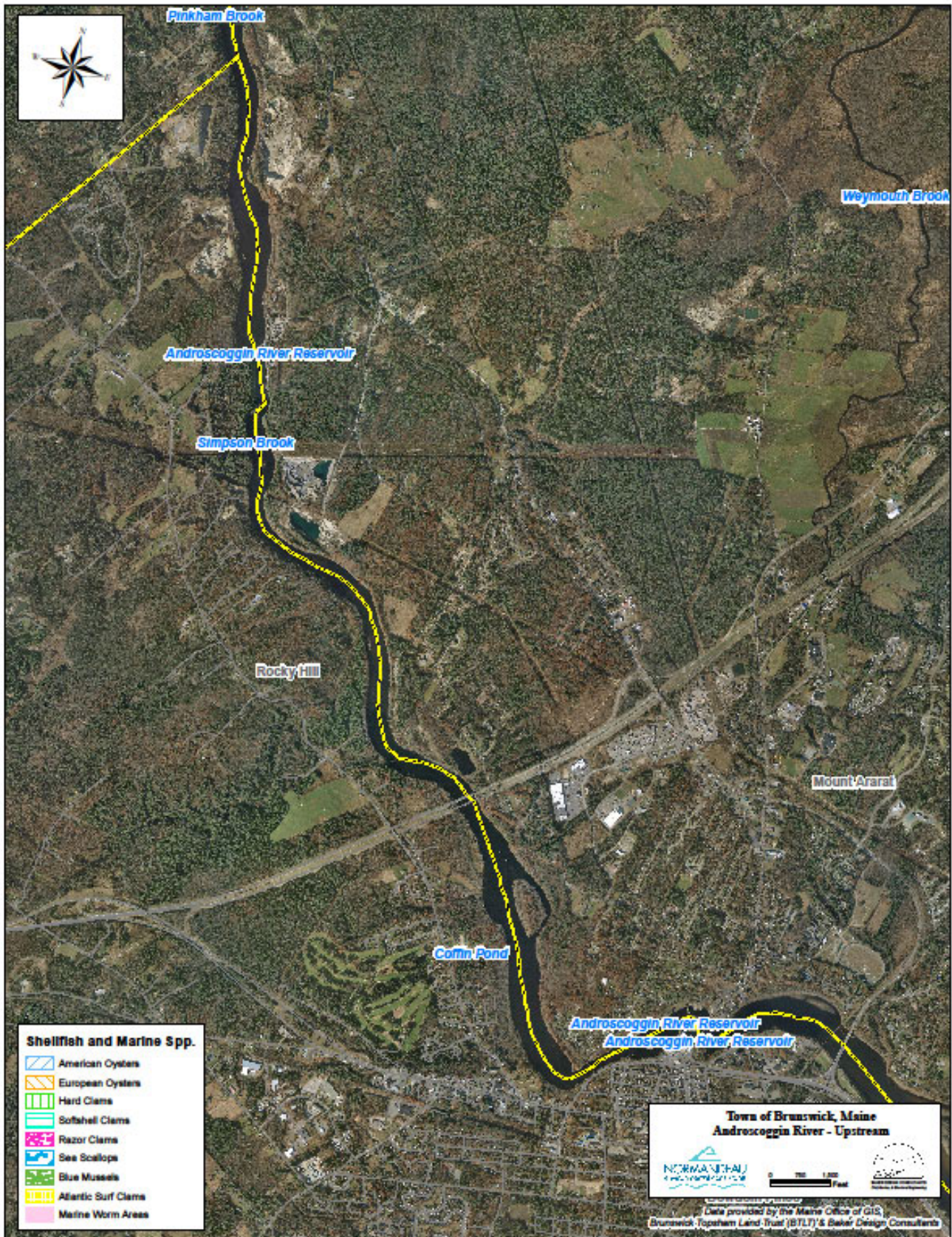
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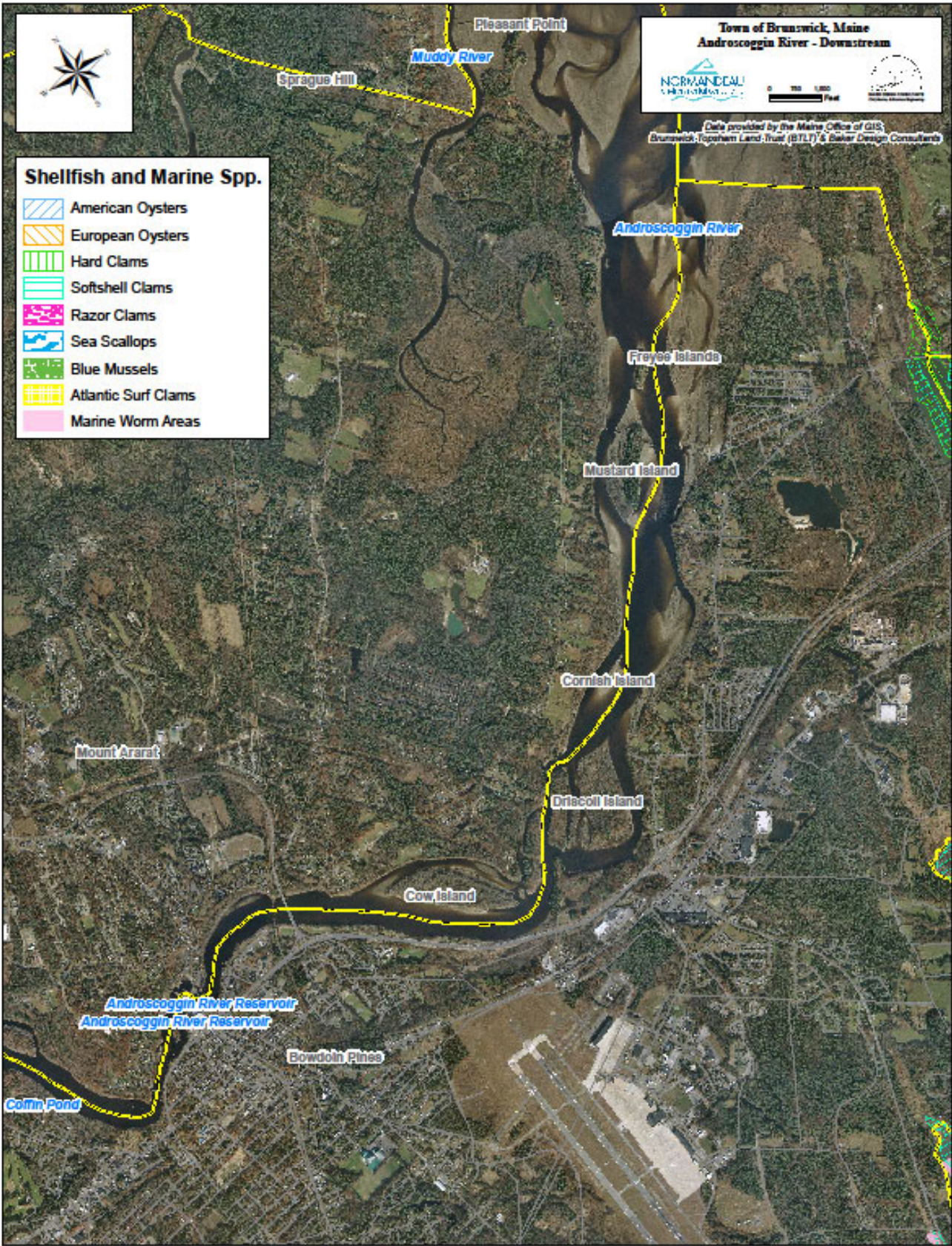


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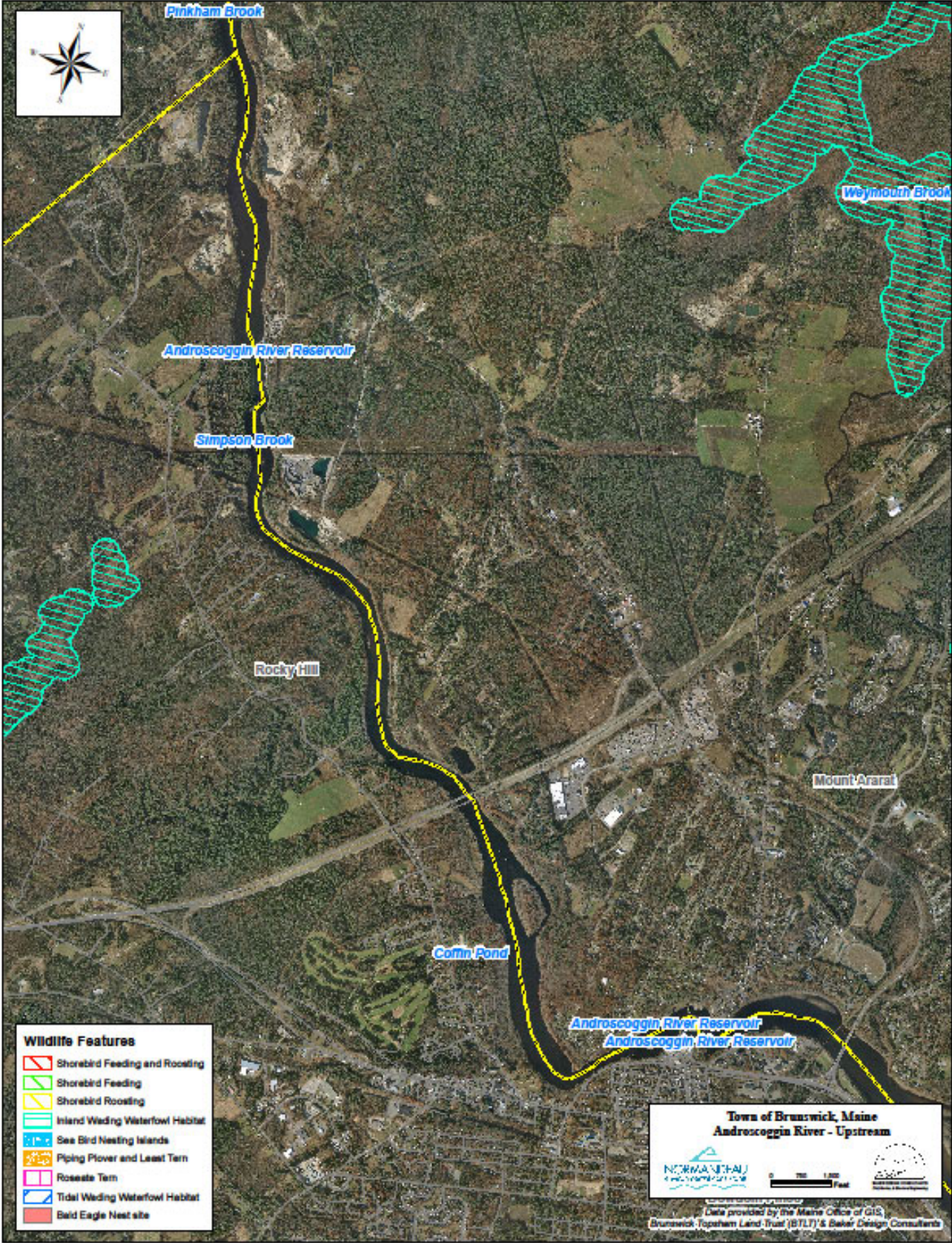


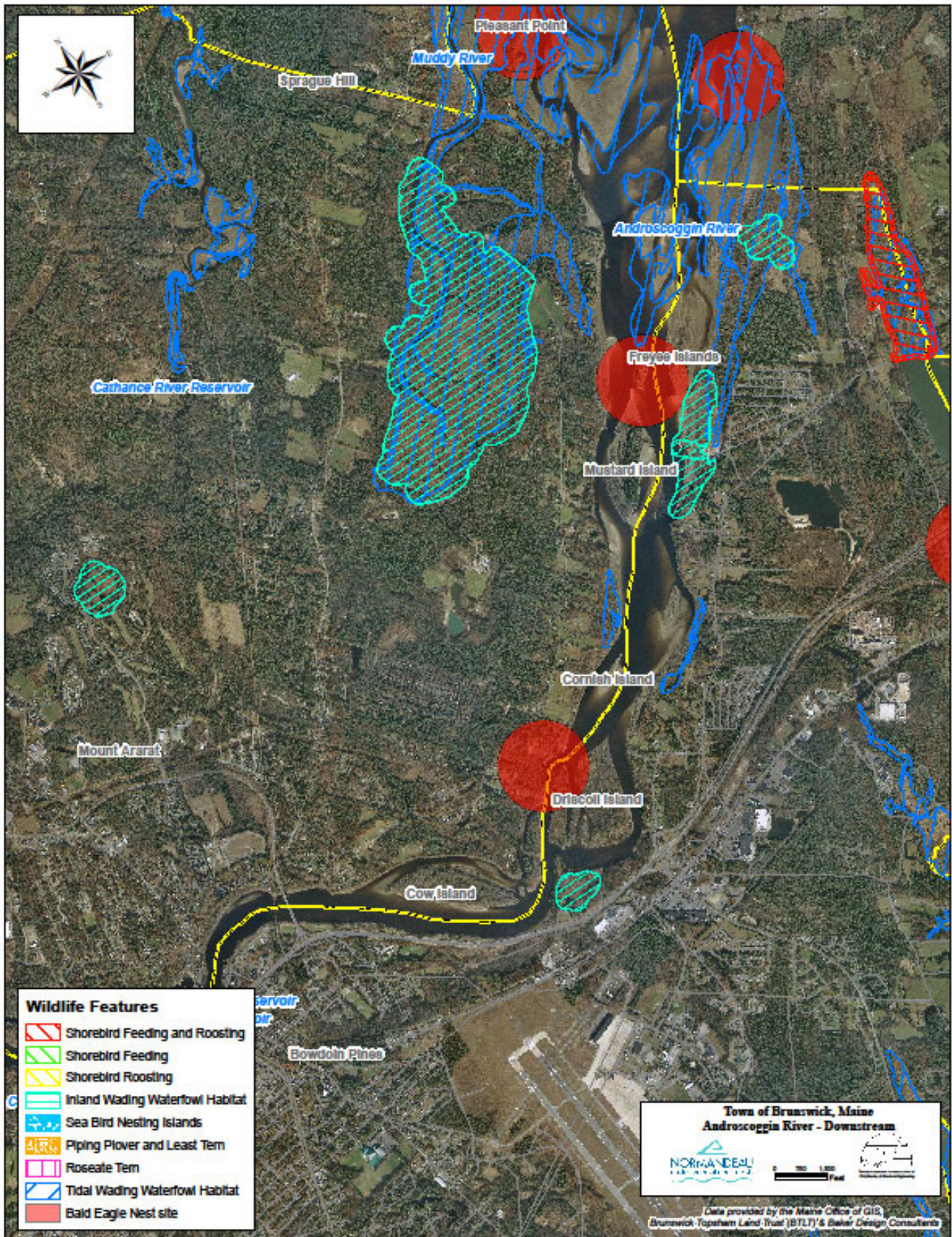




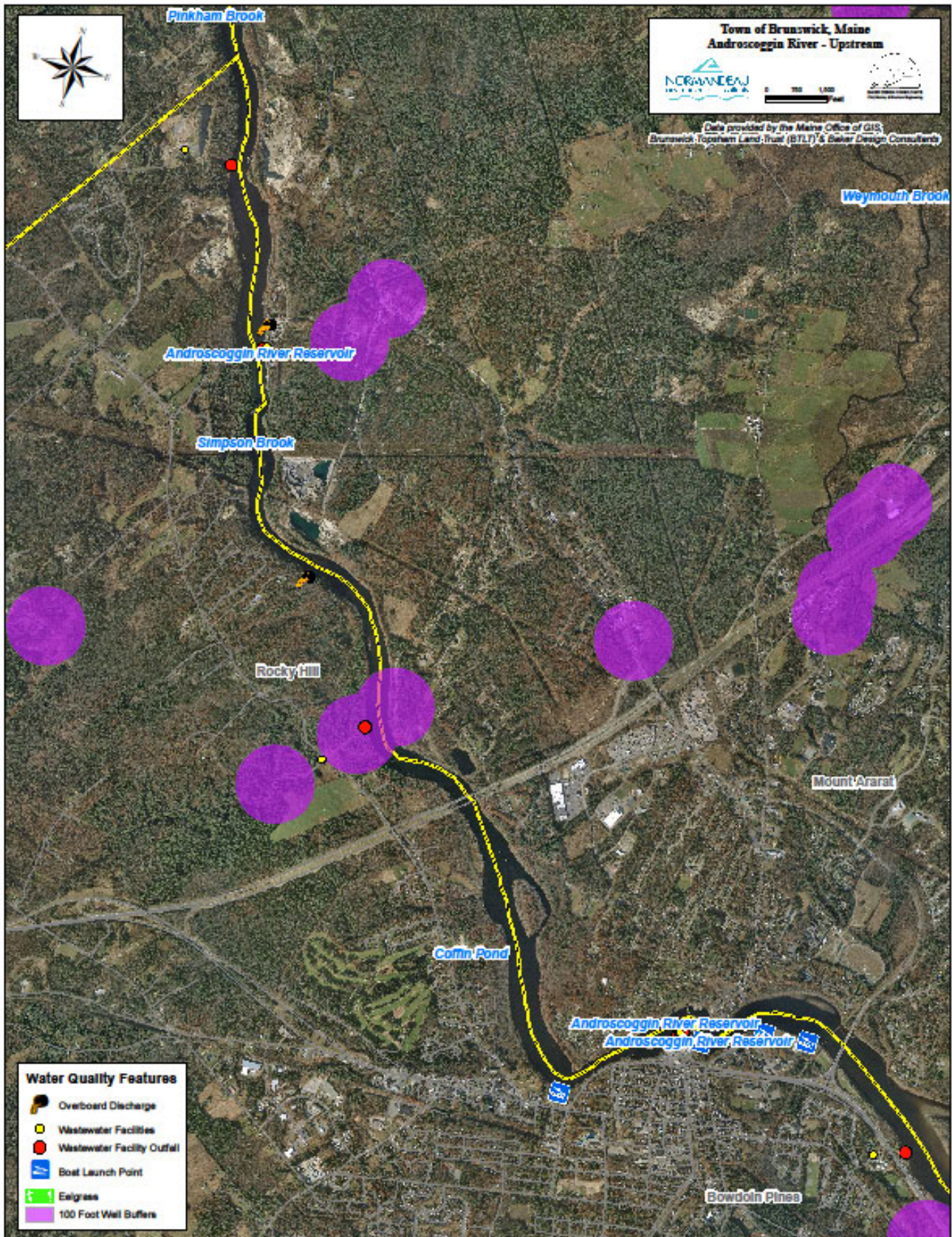


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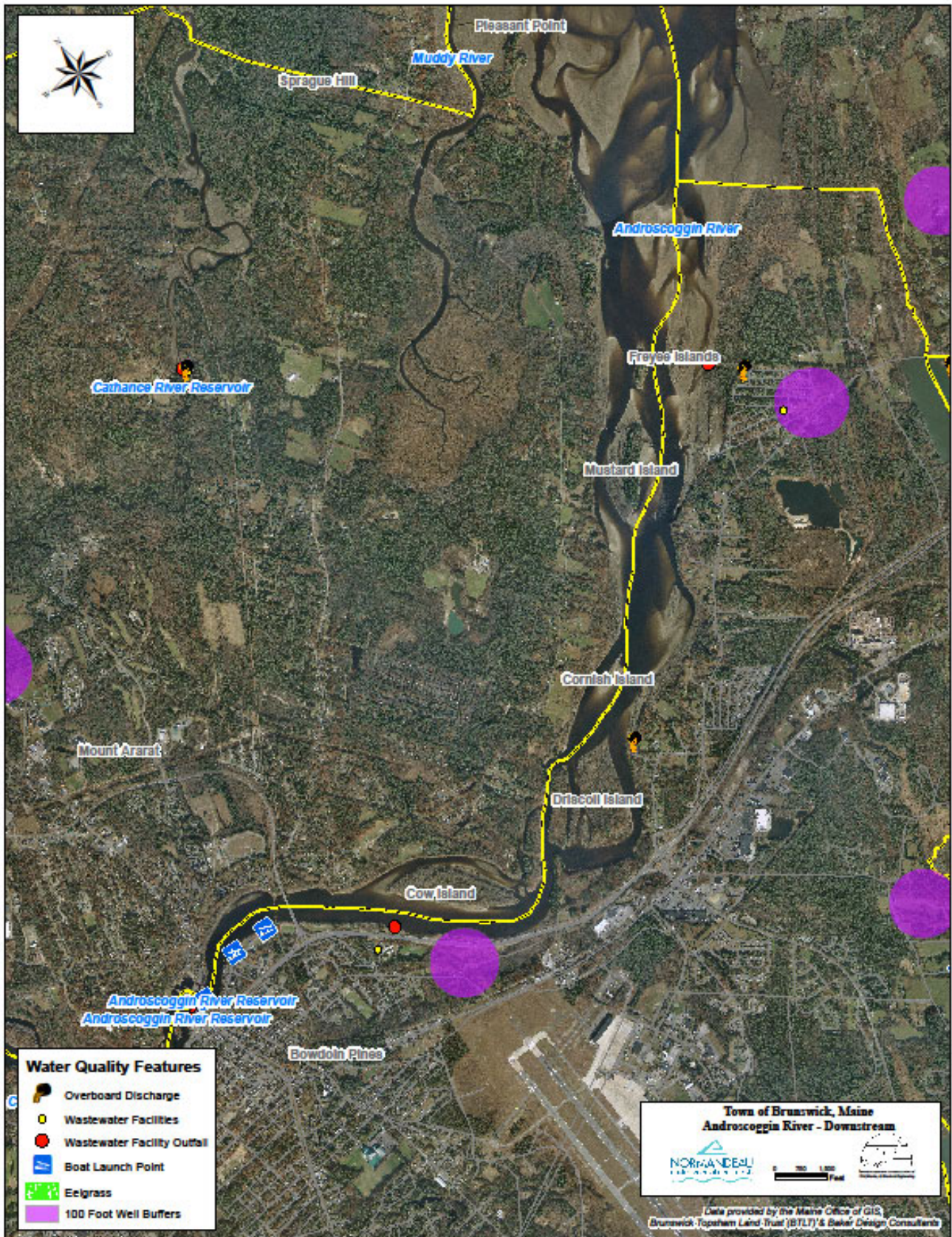




# Harbor Management Plan Town of Brunswick, Maine



# Harbor Management Plan Town of Brunswick, Maine



## ***Appendix A – Additional Resources***

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There is a wealth of literature available that relates to many of the areas addressed by this plan. Organizations such as Maine Coastal Program, Maine DMR, NOAA, Maine Geological Survey, Maine DEP, US Army Corps of Engineers, and Maine Harbormasters Association – to name a few – can be useful resources for information and assistance. In addition, the following is a partial list of references used in preparing this plan that may be useful to the Town in the future:

- ***Preserving Commercial Fishing Access: A Study of Working Waterfronts in 25 Maine Communities*** Maine Coastal Program (2002)
- ***The Right Tack: Charting Your Harbor's Future*** Maine Coastal Program (1995)
- ***Seascapes: Getting to Know the Sea Around Us, A Guide to Characterizing Marine and Coastal Areas*** Quebec-Labrador Foundation, Inc. (2008)
- ***Smart Growth for Coastal and Waterfront Communities*** NOAA (2009)
- ***Managing Maine's Nearshore Coastal Resources: Final Report of the Bay Management Study*** Maine State Planning Office/Maine DMR (2007)
- ***Maine's Nearshore Waters: Current Uses and Anticipated Trends*** Maine Bay Management Study – Maine Coastal Program (2006)
- ***Coastal Management Techniques: A Handbook for Local Officials*** Maine DECD (1988)
- ***Brightwork: A Best Management Practices Manual for Maine's Boatyards and Marinas*** Maine Department of Environmental Protection (2006)
- ***Mapping Maine's Working Waterfront, A Statewide Inventory by the Island Institute*** Island Institute (2007)
- ***Harbor Management: A Legal Guide for Harbormasters and Coastal Officials*** State of Maine Harbormasters Association (2006)
- ***New Meadows River Watershed Management Plan*** The New Meadows River Watershed Project (2004)
- ***New Meadows Lake Tidal Restoration Feasibility Study: Casco Bay Estuary Partnership Woodlot Alternatives*** (2006)
- ***New Meadows Lake, Brunswick and West Bath, Maine: Model Analysis of Expected Plant Communities Response to Potential Tidal Restoration Conditions*** Woodlot Alternatives (2007)
- ***State of the New Meadows River*** MER Assessment Corp (2002)
- ***Parks, Recreation and Open Space Plan*** Town of Brunswick (2002)

- *Town-Owned Open Space Inventory* Town of Brunswick (2011)
- *Public Benefit Conveyances, Properties Conveyed to the Town of Brunswick from Brunswick Naval Air Station (BNAS), Recreation, Trails, & Open Space Management Plan* Town of Brunswick (2013)
- *Merepoint Boat Launch Citizens Advisory Committee Report of Suggested Facility Operation and Management Policies* Brunswick Department of Planning & Development (2005)
- *Merepoint Boat Launching Facility, Merepoint, Brunswick, Maine: Water Quality Impacts Assessment* MER Assessment Corporation (2004)
- *Merepoint Boat Launch Facility Eelgrass Mitigation Measures: 2012 Monitoring Report* MER Assessment Corporation (2012)



## Appendix B – Management Objectives and Priorities

Recommendation	PRIMARY GOAL	Target Timeframe for Implementation			
		ONGOING	1-3 YR. 2014- 2017	1-5 YR. 2014- 2019	1-10 YR. 2014- 2024
<b>COASTAL WATERS AND RIVER MANAGEMENT</b>					
<p><b>Establish a River and Coastal Waters Commission</b></p> <ul style="list-style-type: none"> <li>• Support the Harbormaster. Set waterfront policy and initiatives and address the broad issues of the waterfront with council approval.</li> <li>• Composed of representatives from MRC, Parks &amp; Rec, Planning, Town Council, etc.</li> <li>• Input from each of the representative groups, ensures established recommendations and goals consistent with Townwide programs.</li> <li>• Meet less regularly than typical committees, e.g. quarterly, semi-annually</li> </ul>	1,2,3,4		X		
<p><b>Update Harbor Ordinance</b></p> <ul style="list-style-type: none"> <li>• Review draft prepared by Baker Design Consultants</li> <li>• Incorporate recommendations with Council Approval</li> </ul>	1,2,3,4	X	X		
<p><b>Assess need for dedicated Harbormaster facilities on waterfront</b></p>	2,4			X	
<p><b>Provide Education &amp; Training</b></p> <ul style="list-style-type: none"> <li>• Support programs that promote responsible management and use of the waterfront</li> <li>• Participate in Casco Bay water quality monitoring initiatives</li> <li>• Educate on importance of marsh and coastal embankment vegetation as an effective erosion control.</li> <li>• Provide sea level rise information to the public to initiate local planning and adaptation discussions</li> <li>• Promote bay friendly landscaping approaches and low impact development techniques</li> </ul>	1,2,3,4	X			

<ul style="list-style-type: none"> <li>Review efforts to educate homeowners regarding responsible septic system maintenance in Coastal Protection Zones</li> </ul>					
<b>INSTITUTE MOORING MANAGEMENT</b>					
Implement Annual Mooring Registration	2,3		X		
Maintain database of current mooring holders	3		X		
Define mooring tackle standards	3		X		
Define inspection requirements	3		X		
Investigate suitability of mooring fees and make recommendation to Town Council	3		X		
Identify anchorage areas for non-riparian owners	2,3,4			X	
Develop & Maintain a wait list for non-riparian moorings	2,3,4			X	
Develop mooring plans for high density mooring areas to promote safe and efficient use	2,3,4			X	
<b>WATERFRONT ACCESS</b>					
Investigate opportunities to expand recreational offerings at all town owned waterfront parcels	2,4	X	X		
Review and update current management approaches at existing waterfront parks to better balance diverse uses	2,4		X		
Study Best-Uses of Simpson's Point Landing	1,2,3,4		X		
Establish policies for use of Simpson's Point Landing	1,2,3,4		X		
Revisit uses of Merepoint Boat Launch (Swimming, Commercial Launching, Mooring Field Access)	1,2,3,4			X	
Increase opportunities for saltwater recreation for non-coastal residents	2,3,4		X		
Identify waterfront property for development of a municipal landing	2,3,4			X	
Adopt a routine of inspection of Public waterfront sites to identify maintenance and improvement needs	3		X		
Develop informational materials for coastal property owners to educate on private property rights	2,3,4		X		
Develop information materials for users of intertidal resource that identify public access, legal rights, and etiquette regarding use of intertidal resource	2,3,4		X		

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Pursue property acquisition and/or establishment of public rights-of-way in areas where public access is difficult and/or unavailable	1,2,3,4	X			
<b>RESOURCE MONITORING &amp; MITIGATION</b>					
Adopt management practices for non-point source pollution	1,3,4		X		
Study causes for town-wide decline in eelgrass	1,3,4		X		
Protect wildlife/bird habitat	1,3	X			
Identify & preserve existing cultural resources	1,3				X
Pursue Tidal Restoration of New Meadows Lake	1,3			X	
Identify & address barriers to fish passage	3			X	
Identify and implement methods for eradication of invasive species	3		X		
<b>RESPOND TO CLIMATE CHANGE</b>					
Address sources of seawater acidification... Identify opportunities to buffer against ocean acidification	3			X	
Combat Coastal erosion by identifying locations where hard approaches should be limited, promote soft approaches to addressing coastal erosion to limit the impacts to coastal resources	3			X	
Plan for sea level rise. Incorporate sea level rise projections into town planning efforts and update local ordinances and open space priorities appropriately	3				X
<b>PRESERVE WORKING WATERFRONT</b>					
Identify access needs for commercial fishermen	2,3,4		X		
Create new access points, easements in key locations	2,3,4			X	X
Promote conservation (ref. existing point system)	2,3				
Regulate to address harvesting conflicts	2,3		X		

## Appendix C – Survey Responses

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### Maquoit Bay

- *concern in all areas with invasive specie issue*
- *Recreational Boating/Kayack*
- *Minimize erosion at launch site. Make appealing for picnic and shoreside recreation, now it's seems like a rutted parking lot.*
- *Kayaking at high tide, birdwatching, bicycling destination.*
- *birding, photography, enjoying the peace of nature. I think those noisy 'boats' that carry harvesters to areas to dig are unacceptably noisy.*
- *The Town should provide public access for kayaking/canoeing and swimming to Maquoit Bay. It's outrageous that there is no access (other than the tidal head of the Bay) to this great recreational area.*
- *Sail; swim; powerboat. Jet skis were a nuisance this year.*
- *Maintain for shellfish & wildlife habitat*
- *fishing, swimming, boating*
- *mooring and dock here. monitor jetskis going through the mooring fields. green crab problem interfering with Lobsters*
- *Hunting*
- *Fishing (need safety for jet skiers)*
- *Conservation*
- *Build a sustainable resource and polution concerns*
- *fishing*
- *Fishing, Hiking, Swimming, Digging (important ebayment to focus attention and protect the shellfishing resources)*
- *sailing*
- *I sail here*
- *Waterfront homeowner. Use Maquoit Bay almost daily for recreation: Kayak, Open-Water swimming, sailing, small powerboating. Light recreational fish / duck hunting (a few days a year).*
- *Docking and mooring for sailboat as well as swimming*
- *Live on Maquiot Bay*
- *Boating, fishing*
- *concern of dissappearing eel grass and bait draggers in area.*
- *boat, fish, lobster, dive & swim*
- *Shellfishing/Kyaking/Sport Fishing/Duck Hunting/ Bird Watching*
- *dig clams, kayak, fish*
- *increase information on areas that are available for recreational access*
- *bike to view*
- *bird watching from shore year-round. not a good swimmin area because of shallow access and active boat launch*
- *sea-level rise; loss of coastal marshes; decline of eelgrass; tidal barrier; non-point run-off*
- *fishing from canoe or shore*
- *wildlife observation and scenic visits*
- *develop moore areas for non-motorized uses - swimming! - keep close to bowdoing college - 300 students stay on campus for the summer*
- *walk in park off bunganuc road*
- *swimming from private dock, birdwatching @ boat launch + conservation areas*

- *regular bird-watching visits year round. i'm a regular saltwater swimmer, and this is not a good site due to substrate, shallow nature (profile), and motorboat launching activity.*
- *keep safe, conflict-free swimming a priority - no motors. boats can use merepoint.*
- *i think in the spring, summer, and fall (may-oct) or part of spring+ fall and all summer, simpson's point should have no motor boats. boats that make a lot of noise need hour limits between 8am and 8pm year round anywhere near land and homes.*

## Merepoint Bay

- *Don't want any more moorings at the MerePoint launch site.*
- *boating, fishing*
- *Have a home on Birch Island and park on Mere Pt*
- *Recreational Boating/Kayack/Swimming*
- *It this refers to the area by the boat launch, I'd encourage officials to take necessary action to redesign that site to accommodate the user group for which it was intended. It was built at a scale that is intimidating to kayaks and unfriendly to picnickers, so make it right for motor boats so they don't have to seek accommodation elsewhere.*
- *increased traffic and congestion around the boat launch*
- *Kayaking at all tides, picnicing, access to Harpswell Sound*
- *birding, photography, enjoying the peace of nature. I think those noisy 'boats' that carry harvesters to areas to dig are unacceptably noisy.*
- *Swimming should be allowed at the Mere Point boat launch. It is outrageous that Brunswick has many miles of waterfront, but very little access to the water for the public for swimming.*
- *Sail. Boat launch has caused significant increase in towed boat traffic. A hazard to walkers and bikers.*
- *Maintain recreational access and boating opportunities*
- *fishing, swimming, boating*
- *monitor traffic from boat ramp*
- *Recreational boating and hunting*
- *Use marina, sail, kayak, fish*
- *Fishing (need safety for jet skiers)*
- *Conservation*
- *We have a boat at Paul's Marina and access the bay from here.*
- *Resource and access*
- *fishing, boating, mooring*
- *Boating, fishing, sight seeing, birding, Hunting (seems to be more attractive to recreational boating- seems like more appropriate place to have mooring fields as there is deep water but little access*
- *Goal--develop moorings for non-warefront residents*
- *sailing*
- *I moor two boats at Pauls Marina and use the boat launch for launching a recreational rowing shell and kayak; do not support any restriction on moorings at Paul's Marina*
- *My sailboat is moored at Paul's Marina*
- *I sail out of Paul's Marina*
- *Own property on Birch Island*
- *outstanding natural harbor.*
- *Use Boat Launch*
- *Boating, fishing*
- *concern of increased high speed jet ski traffic crisscrossing the bay ahead and astern of underway sail and powercraft*
- *Marina customer for over 40 years, boat, fish, lobster, dive & swim*

- *Boat Launches/Boating/Fishing*
- *kayak, fish*
- *why not allow swimming at mere point boat launch restricted to an area that does not conflict with boat launch*
- *kayak from boat launch*
- *bird watching from shore. swimming is not allowed at new boat launch. dangerous combination anyways.*
- *lack of public mooring availability; abuse of riparian rights to moorings (multiple per parcel); increase in private piers; increased riprap; eelgrass decline*
- *landing kayak*
- *scenic views and swimming - it is the only low tide place to get in water*
- *marinas in town should be examined as well and not just grandfathered in this process just because they exist they should be held to same standards as private citizens*
- *monitoring and promoting the quality of the total bay environment is the key to success for all uses of the bay. th density of the moorings in the bay is a major issue and needs consistent uniform management by a mooring ordinance that is locally controlled.*
- *occasionally launch kayak from mere point boat launch*
- *kayaking, swimming, birdwatching, boating*
- *lovely spot but no swimming currently allowed and even if it were, the site suffers from the same issues for swimmers that some boaters complain about (chop, swell, wind) that middle bay does not. plus, of course, there are motorboats present at the launch.*

## Middle Bay

- *boating, fishing*
- *Recreational Boating/Kayack*
- *Casual recreation is sublime, kayaking amazing, swimming and fishing superb. Keep this special asset available to those who want to enjoy it with minimal impact. PLEASE don't open Simpsons to to motor traffic again. It has become an incredible gathering spot for people desiring a quiet place to enjoy Brunswick's magnificent coastline.*
- *Swimming, kayaking at Barnes Pt. and Simpsons Pt. Ldg. Tense intermingling at Simpsons between recreational users, private abutters, clammers, dogs/owners. More monitoring/policing needed to ensure cooperation. Offsite parking?*
- *birding, photography, enjoying the peace of nature. I think those noisy 'boats' that carry harvesters to areas to dig are unacceptably noisy.*
- *Boats with motors should not be allowed to launch at Simpson's Point. My wife and I go there frequently to sit on the rocks and swim. We could not do this when the launch was open to motoried boat traffic.*
- *We enjoy summer swimming at Simpson's Pt. and really enjoy not having to deal with motorized boats at this location when the Mere Pt. ramp is so close by.*
- *Same as Merepoint Bay*
- *fishing, swimming, boating*
- *recreation fishing*
- *Hunting, open up Simpsons point launch*
- *Moorings, kayak, fish, sail & swim*
- *Fishing (need safety for jet skiers)*
- *Conservation*
- *Access and polution concerns*
- *Live here, swim, clean coastal area. See huge ingrease in number of people enjoying access to our bay, especially swimmers & kayakers. have concerns re health of flats, have noticed water so much warmer in last several years*
- *where's the ell grass?*

- *fishing*
- *Duck Hunting, Digging, Fishing, Swimming (have always been able to dig for quahogs in this area)*
- *sailing*
- *I sail here*
- *own part of white island*
- *Boating, fishing*
- *boat, fish, lobster, dive & swim*
- *Paddle and small recreational boating in Middle Bay. I have concerns with the use of Simpson's Point Landing, providing access for commercial harvesters, and the increase in low flying aircraft over the area.*
- *Sail*
- *Shellfishing/Hunting*
- *dig clams, kayak, fish*
- *doesn't swim at simpsons point due to so many dogs*
- *use simpsons point for swimming. the location is great because it is within biking distance from town. many do bike there which reduces auto traffic and need for parking*
- *having experienced the wonderful use of simpsons point without motors, i urge the committee to maintain its safety. i see no way to increase parking*
- *consider shore issues, parking, safety, etc. when considering how a landing should be used like at simpsons point*
- *66 miles of coastline - simpsons point is the only saltwater rec. access for kayak / "smimming!!". please keep it closed to motor boats (especially may thru oct.). can one swim at barnes landing*
- *simpsons point is a beautiful jewel! i swim there almost daily from late may to mid october. swimming is great roughly 2 hours either side of high tide. i also conoe here.*
- *increased riprap; increased private piers; loss of salt marsh and eelgrass*
- *canoeing, kayaking, swimming*
- *i occasionally swim at simpsons point. i bicycle to simpsons point. i walk frequently to barnes landing*
- *swimming, kayak, relax*
- *biking to and swimming from simpson's point approx. 1-2 times per week in summer.*
- *same as merepoint bay, heavy recreational use of simpson's point*
- *great current swimming spot. no motorboats allowed, good access and bottom profile/depth for long swims. better conditions for protection for swimming than other sites*
- *simpson's point is a rare treasure for those seeking access to the coast. we need to ensure we keep this access for picknickers and swimming and folks simply seeking quiet beauty at the coast. i would love to see the town promoting more such access points at other areas, as i can't think of one that is comparable. i have no problem with clambers and other harvesters, but i do take issue with motorized boats at simpson's point.*

## Harpswell Sound

- *Recreational Boating/Kayack*
- *(also use Lookout Pt., Harpswell Neck for access here as next most convenient) Fr. Merepoint: Brunswick's only real ocean facility! Appreciate the exc. access from newer facility. Want more "park" use possibilities: picnicing, swimming, etc. Not sure how more commercial would affect that, need to categorize "commercial" as these vary in impact and compatibility.*
- *birding, photography, enjoying the peace of nature. I think those noisy 'boats' that carry harvesters to areas to dig are unacceptably noisy.*

- *The Town should provide kayak/canoe and swimming access to Harpawell Sound. It's not right for this beautiful Sound to be closed to the public.*
- *no knowledge*
- *boating*
- *lobstering*
- *Hunting*
- *Sail, fish*
- *Conservation*
- *Access and sustainable*
- *fishing, boating*
- *I can't find any local public access- have crossed private land to get there- more focus on access now that base has been conveyed*
- *sailing*
- *I sail here*
- *boat, fish, lobster, dive & swim*
- *Sail*
- *don't access except as view when cross country skiing or furbish / golf properly*
- *bird watching from shore. im not aware of any good access for swimmers.*
- *harpwell sound not brunswick, harpswell cove mostly kate furbish preserve; work with btl to ????*
- *occasionally kayak from princess point launch*
- *kayaking, swimming*
- *poor (shallow) bottom profile for swimming in most places far up the sound (northern end).*

### New Meadows River

- *Commercial Fisherman for my property*
- *Recreational Boating/Kayack*
- *Restore tidal flushing and flow for the health of the natural system, including uplands. It will be change, it will be resisted, but it is the right thing to do for long term benefit.*
- *Sawyer's Park--Don't use it, suppose the reputation has something to do with that, and loc. does not provide good access to open water. Occasionally use Princes Pt. launch.*
- *We enjoy kayaking and swimming at Sawyer's Park.*
- *no knowledge*
- *boating*
- *Hunting*
- *Conservation*
- *Polution and access*
- *fishing, boating*
- *Camping, Digging focus on shellfishing and recreaitonal swiming at Thomas Point Beach*
- *I do not use*
- *occasional boating*
- *Fishing/Shellfishing*
- *solution to extreme coastal erosion & eel grass die off - woodward cove*
- *kayak from town landing*
- *bird watching from shore. im not aware of any good access for swimmers.*
- *tidal bariier at bath road causeway is impacting water quality & habitat functions. Restoration would benefit water quality, habitat & commercial value*
- *canoeing, kayaking*
- *kayaking*
- *kayak*



- *commercial fisherman - maintain traditional uses. charter board + fishing guide*
- *frequent use for kayaking and canoeing*
- *boating, kayaking*
- *like merepoint, far for most people in town*

### Androscoggin River

- *N/A*
- *Stop making excuses for it and take action to move up to class b. Business booms in a healthy environment.*
- *Why is Mill St. site closed for most of the year, even on warm spring days? Open it up and advertise! Most accessible urban sites should have most use. (= good Village planning) Water St. facilities used frequently for passive recreation, watching the river scenes. More park facilities here would be good, esp. at old Landing incl. expanded acreage.*
- *We use the water St. boat launch frequently, but the kayaking area is limited compared with the 5 bodies of water listed above. We would like direct public access to the ocean.*
- *Improve trail access. Maintain water quality. Do collaboratively with Topsham,*
- *boating, fishing*
- *Hunting, fishing*
- *Conservation*
- *I canoe with my family from the Pejebscot Damn to Brunswick.*
- *Polution and access*
- *Hunting, Fishing, Kyaking- above damn needs more reasonable access sites*
- *I do not use*
- *I use this at least weekly for rowing*
- *occasional boating*
- *Kayak*
- *Fishing/Hunting*
- *fish, kayak*
- *water quality for swimming is debatable.*
- *kayaking*
- *fishing*
- *kayaking*
- *ok, but not preferred saltwater. and no prohibition of motorboats, jetskis, etc. so not good for swimming at common sites*

## *Appendix D - Harbor Ordinance Suggested Revisions*

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The following provides suggested revisions to the existing Town of Brunswick Municipal Ordinance, Section 11 – Marine Activities, Structures and Ways, Article I – Harbor, Coastal, Tidal and Navigable Fresh Waters. This is a working document and is intended to be a starting point for the proposed Brunswick River and Coastal Waters Commission to undertake a thorough process of reviewing and updating the ordinance.

We envisage an early and primary task of the Commission will be to update the Town’s Harbor Ordinance in consideration of the recommendations of this plan, the Town’s goals, and feedback received from the Army Corps of Engineers, and other regulatory agencies. Note that any of the proposed additions will need to be integrated along with existing ordinance provisions so as to avoid any repetitive and/or conflicting language.

**Town of Brunswick Municipal Ordinance**  
**Section 11 – Marine Activities, Structures and Ways**  
**Article I – Harbor, Coastal, Tidal and Navigable Fresh Waters**

Existing Ordinance	Suggested Revisions
<p><b>Sec. 11-1. - Definitions.</b></p> <p>The following words, terms and phrases, when used in this article, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:</p> <p><i>Channels:</i> Those paths designated by this chapter for navigation in or access to the harbor, coastal, tidal and navigable fresh waters of Brunswick.</p> <p><i>Commercial use:</i> A use with profit as a primary aim.</p> <p><i>Idle speed:</i> The minimum speed necessary to maintain steerage and control of a moving watercraft</p> <p><i>Mooring:</i> An underwater device either helix, granite block or mushroom, which tethers boats. A temporary mooring is one which is constructed to be hauled out of the water seasonally. A permanent mooring is one which is constructed to winter over in the water. A flats mooring is one which is located on the mud flats at low tide.</p> <p><i>Riparian owner:</i> An owner of land with a minimum of one hundred (100) feet of shorefront.</p> <p><i>Watercraft:</i> Any type of vessel, boat, barge, float, or craft used as a means of transportation on the water.</p> <p><i>(Ord. of 4-4-05)</i></p>	
<p><b>Sec. 11-2. - Channels.</b></p> <p>(a) <i>Establishment of channels.</i> Two (2) channels are established, described as follows:</p> <p>(1) Commencing at the Bath Road bridge (formerly Route #1) as it crosses the New Meadows River, thence following the high water mark of the New Meadows River southerly to the southerly tip of Howard Point, thence easterly to the town line between Brunswick and West Bath, thence following the town line northerly to the Bath Road bridge, thence westerly along the Bath Road bridge to the point of beginning.</p> <p>(2) Commencing at the mean high water</p>	

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Existing Ordinance	Suggested Revisions
<p>line on the Merepoint Boat Launch ramp surface and extending approximately three hundred fifty (350) feet to the southeast between buoys marking the fifty (50) foot wide approach lane to the ramp.</p> <p>(b) <i>Passage of vessels.</i> A person shall not use any watercraft or any other device or structure within the described channels so as to interfere with or impede the passage of vessels in the channel in any manner.</p> <p>(c) <i>Mooring.</i> A person shall not place, anchor, or moor any watercraft within the described channels without the permission of the harbormaster.</p> <p style="text-align: center;"><i>(Ord. of 4-4-05)</i></p>	
<p><b>Sec. 11-3. - Harbormaster.</b></p> <p>(a) <i>Appointment.</i> The town shall appoint a harbormaster by May 1 for a term of three (3) years.</p> <p>(b) <i>Duties.</i> The harbor master shall have the following powers and duties:</p> <p>(1) To the extent of jurisdiction, enforce any and all federal, state and local laws, ordinances, codes, rules or regulations relating to the management and control of Brunswick's harbor, coastal, tidal and navigable fresh waters, shores, coastline, boat launch facilities, and floats; and provide information or seek input as appropriate from any source, including the marine resources committee, marine wardens, town manager, town council, or town attorney.</p> <p>(2) Approve and control the placement of moorings within the harbor, coastal, tidal and navigable fresh waters of Brunswick.</p> <p style="text-align: center;"><i>(Ord. of 4-4-05; Ord. of 4-7-08(1))</i></p>	<p><b>Add</b></p> <p><i>(c) The Harbormaster shall regularly attend the River and Coastal Waters Commission meetings and inform the Commission of his/her activities as well as provide such available information as may be requested by the Commission for the execution of its duties.</i></p> <p><i>(d) The Harbormaster shall be authorized to attend the annual Harbormaster Training by the Maine Harbormasters' Association.</i></p>
<p><b>Sec. 11-4. - Moorings.</b></p> <p>(a) <i>Registration.</i> All moorings located in the harbor, coastal, tidal and navigable fresh waters of Brunswick shall be registered. Registration shall be on forms provided by the harbormaster that, at a minimum, require the following information:</p>	<p><b>Add</b></p> <p><i>(d) Mooring Assignments.</i></p> <p><i>(1) All Riparian Owners shall be entitled to one (1) riparian mooring. Moorings within the Town of Brunswick Anchorages shall be assigned based on the following priority:</i></p>

**Town of Brunswick Municipal Ordinance**  
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Existing Ordinance	Suggested Revisions
<p>(1) Description and weight of the watercraft moored;</p> <p>(2) Type of mooring ball or buoy;</p> <p>(3) Type and weight of mooring;</p> <p>(4) Type and size of bottom and top chains.</p> <p><i>Existing moorings:</i> All existing moorings in the harbor, coastal, tidal and navigable fresh waters of Brunswick shall be registered within ninety (90) days of the effective date of this article. The harbormaster shall send via First Class U.S. Mail notification of the registration requirement and a copy of this article to all owners of existing moorings.</p> <p><i>New moorings:</i> After the effective date of this article, all moorings shall be registered prior to location of the mooring.</p> <p>(b) <i>Placement standards.</i> The harbormaster shall approve the location of all moorings in the harbor, coastal, and tidal waters of Brunswick, except for existing commercial moorings in mooring fields already approved by the Army Corps of Engineers and the Maine Department of Environmental Protection. All moorings shall meet the following standards:</p> <p>(1) Moorings shall be reasonably adequate for the size, weight and windage of the watercraft.</p> <p>(2) Moorings shall be located in areas that do not interfere with navigation.</p> <p>(3) Moorings shall not encroach into the channels of Brunswick.</p> <p>(4) Moorings shall be located in areas that do not unreasonably affect natural resources.</p> <p>(5) Moorings shall not be located in areas that are inconsistent with the terms or conditions offered to, or required by, any federal, state or local agency as part of a regulatory permitting process.</p>	<p>1. <i>Resident Commercial Fisherman</i></p> <p>2. <i>Resident Recreational</i></p> <p>3. <i>Commercial Passenger Boat</i></p> <p>4. <i>Resident Commercial Marine Enterprise</i></p> <p>5. <i>Non-Resident Commercial Fisherman</i></p> <p>6. <i>Non-Resident Commercial Marine Enterprise</i></p> <p>7. <i>Non-Resident Recreational</i></p> <p>8. <i>Resident, additional mooring</i></p> <p>9. <i>Non-Resident, additional mooring</i></p> <p>(2) <i>Fees shall be as set forth in the town harbor fee schedule as adopted by the Town Council.</i></p> <p>1. <i>Resident Riparian</i></p> <p>2. <i>Resident Commercial Fisherman</i></p> <p>3. <i>Resident Recreational</i></p> <p>4. <i>Commercial Passenger Boat</i></p> <p>5. <i>Resident Commercial Marine Enterprise</i></p> <p>6. <i>Non-Resident Commercial Fisherman</i></p> <p>7. <i>Non-Resident Commercial Marine Enterprise</i></p> <p>8. <i>Non-Resident Recreational</i></p> <p>9. <i>Resident, additional mooring</i></p> <p>10. <i>Non-Resident, additional mooring</i></p> <p>11. <i>Marina</i></p> <p>12. <i>Yacht Club</i></p> <p>(3) <i>Number of Moorings: the maximum number of mooring assignments shall be determined in order to support safe and efficient use of each anchorage. Limits for each Anchorage shall be recommended by the River and Coastal Waters Commission and approved by the Town Council.</i></p> <p>(4) <i>Waiting List: The harbormaster shall maintain one chronological waiting list with complete application information of all applicants who have applied for but not received a mooring assignment. Persons desiring a place on the waiting list may apply at any time by making out a mooring</i></p>

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Existing Ordinance	Suggested Revisions
<p>All new moorings that meet the above standards but are not placed in the location approved by the harbormaster shall be moved by the owner at his or her own expense in accordance with the instructions of the harbormaster. Any existing moorings that do not meet the above standards shall be removed, repaired, replaced or relocated as applicable. In the event of the failure of the owner to comply with this subsection (b), the harbormaster shall move or remove the improperly located mooring and the cost shall be borne by the owner of the mooring.</p> <p>(c) <i>Identifying numbers.</i> Identifying numbers shall be issued to mooring owners, and mooring balls and buoys must be clearly marked with the issued number. Numbers shall be a minimum of four (4) inches and visible at all times. Replacement mooring balls and buoys shall maintain the originally assigned number.</p> <p><i>(Ord. of 4-4-05)</i></p>	<p><i>application form and filing it with the Harbormaster. The list shall be in eight sections, each section in chronological order as to when the application was received with recreational applications being limited to natural persons:</i></p> <ol style="list-style-type: none"> <li><i>1. Resident Commercial Fisherman;</i></li> <li><i>2. Resident/Recreational;</i></li> <li><i>3. Resident Commercial Marine Enterprise;</i></li> <li><i>4. Non-Resident Commercial Fisherman;</i></li> <li><i>5. Non-Resident Commercial Marine Enterprise;</i></li> <li><i>6. Non-Resident Recreational;</i></li> <li><i>7. Resident Subsequent;</i></li> <li><i>8. Non-Resident Subsequent.</i></li> </ol> <p><i>A copy of this waiting list shall be posted in the Town Office and shall be provided to all members of the River and Coastal Waters Commission, and made available for any Commercial Marine Enterprise or any others who request a copy.</i></p> <p><i>(5) Sole Use: All mooring assignments (with the exception of Army Corps of Engineer Permitted Marina and Yacht Club Moorings) shall be used exclusively for the personal use of the applicant and solely for the boat listed in the application.</i></p> <p><i>(e) Mooring Standards.</i></p> <p><i>(1) Placement: The harbormaster shall develop a plan for the placement of moorings in each anchorage, giving consideration to the size, hull type, construction, windage of boats, and the location of any established channel(s). He/she shall assign/reassign locations to each mooring and ensure placement in the correct location. All moorings not located in the correct location shall be moved by the owner at his/her own expense in accordance with the instructions of the Harbormaster. In the event of the failure of</i></p>

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Existing Ordinance	Suggested Revisions
	<p><i>the owner to comply with these instructions, the Harbormaster shall move or remove the improperly located mooring and the cost shall be borne by the owner of the relocated mooring. If this is determined to be a hazard or safety issue, the owner must comply within forty-eight (48) hours.</i></p> <p><i>(2) Mooring construction and placement: All mooring construction and placement, in the anchorage must be approved by the harbormaster.</i></p> <p><i>(3) All mooring buoys shall be white in color with a blue horizontal stripe and shall have the current permit registration number and owners name in three (3) inch letters painted above the water line in a contrasting color. A letter designation may be placed upon the mooring buoys by marinas, boatyards, yacht clubs and commercial marine enterprises to designate moorings owned by them.</i></p> <p><i>(4) All new or replaced permanent moorings shall comply with the following minimum specifications:</i></p> <p style="padding-left: 40px;"><i>(1) Each permanent mooring shall consist of a mushroom, granite block or helix, a minimum one-half-inch heavy steel bottom chain attached to a minimum one-half-inch top chain (a single chain is acceptable), mooring buoy and a pennant: polypropelene use is not acceptable. Each mooring must have one (1) top and swivel; all swivels and shackles must be to the appropriate size diameter.</i></p> <p style="padding-left: 40px;"><i>(2) All mooring blocks shall be constructed of solid granite with steel staples or eyebolt extending completely through the block. Cement blocks, old engines and other miscellaneous weighted objects are unacceptable as mooring anchors in the harbor.</i></p> <p style="padding-left: 40px;"><i>(3) The mooring scope shall be limited to two (2) times the water depth at</i></p>

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Existing Ordinance	Suggested Revisions																				
	<p style="text-align: center;"><i>maximum high water. Total scope shall include bottom chain and top chain and pennant to the bow of the boat and pennant to the bow of the boat.</i></p> <p style="text-align: center;"><i>(4) Mooring guidelines:</i></p> <table style="margin-left: auto; margin-right: auto;"> <tr> <td style="padding-right: 20px;"><i>Under 15' power/sail</i></td> <td><i>150 lb mushroom</i></td> </tr> <tr> <td><i>15'--19' power/sail</i></td> <td><i>200 lb mushroom</i></td> </tr> <tr> <td><i>20'--27' power/sail</i></td> <td><i>250 lb mushroom</i></td> </tr> <tr> <td><i>28'--30' power/sail</i></td> <td><i>300 lb mushroom</i></td> </tr> <tr> <td><i>31'--33' power/sail</i></td> <td><i>400 lb mushroom</i></td> </tr> <tr> <td><i>34'--38' power/sail</i></td> <td><i>500 lb mushroom</i></td> </tr> <tr> <td><i>39'--45' power/sail</i></td> <td><i>600 lb mushroom</i></td> </tr> <tr> <td><i>46'--50' power/sail</i></td> <td><i>1,000 lb mushroom</i></td> </tr> <tr> <td><i>51'--56' power/sail</i></td> <td><i>1,200 lb mushroom</i></td> </tr> <tr> <td><i>56'--65' power/sail</i></td> <td><i>1,600 lb mushroom</i></td> </tr> </table> <p style="text-align: center;"><i>The above guidelines should be evaluated on a case by case basis with respect to site exposure and vessel characteristics.</i></p> <p style="text-align: center;"><i>(5) Granite blocks will equal to four (4) times the weight of a mushroom anchor. For the safety of his/her boat and that of adjacent boats mooring permit holders are responsible for having their moorings set, inspected and making the required or necessary adjustments or repairs.</i></p> <p style="text-align: center;"><i>(6) Despite dimension standard established herein, any parts of mooring showing excessive wear or any mooring or gear, which do not meet with the harbormaster's approval, shall not be permitted.</i></p> <p style="text-align: center;"><i>(7) All moorings shall be of appropriate size and designed for the largest size boat likely to be placed thereon, and shall be of a construction approved by the Harbormaster.</i></p> <p style="text-align: center;"><i>(5) Winter conditions:</i></p> <p style="text-align: center;"><i>(1) Winter spars must be used to mark moorings and such spars shall be connected to their moorings with non-floating rope (no wire cable permitted). Winter spars may not be set before</i></p>	<i>Under 15' power/sail</i>	<i>150 lb mushroom</i>	<i>15'--19' power/sail</i>	<i>200 lb mushroom</i>	<i>20'--27' power/sail</i>	<i>250 lb mushroom</i>	<i>28'--30' power/sail</i>	<i>300 lb mushroom</i>	<i>31'--33' power/sail</i>	<i>400 lb mushroom</i>	<i>34'--38' power/sail</i>	<i>500 lb mushroom</i>	<i>39'--45' power/sail</i>	<i>600 lb mushroom</i>	<i>46'--50' power/sail</i>	<i>1,000 lb mushroom</i>	<i>51'--56' power/sail</i>	<i>1,200 lb mushroom</i>	<i>56'--65' power/sail</i>	<i>1,600 lb mushroom</i>
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**Town of Brunswick Municipal Ordinance**  
**Section 11 – Marine Activities, Structures and Ways**  
**Article I – Harbor, Coastal, Tidal and Navigable Fresh Waters**

Existing Ordinance	Suggested Revisions
	<p><i>September 1 and must be installed by December 31 and removed by June 1 each year. By January 1 all moorings shall have mooring balls exchanged for a winter spar. Winter spars remaining in the water after June 1 shall have their mooring removed by the Harbormaster at the expense of the owner.</i></p> <p><b>(6) Inspection:</b></p> <p><i>(1) An approved mooring service shall inspect and approve or be otherwise satisfied that each mooring is in safe condition before it is placed in the anchorage.</i></p> <p><i>(2) Moorings must be inspected every three (3) years by a qualified mooring inspector. A list of qualified mooring inspectors may be obtained by contacting the Harbormaster. The Harbormaster has the authority to require any necessary maintenance or replacement of parts or the whole mooring, tackle and/or gear. Inspection forms shall be complete and legible.</i></p> <p><i>(3) The harbormaster shall maintain a file on each mooring listing the date of the last inspection and the name of the person who last inspected it.</i></p>
<p><b>Sec. 11-5. - Operation of watercraft.</b> Operation of watercraft at greater than idle speed within two hundred (200) feet of the shoreline or within the channels of Brunswick is prohibited. <i>(Ord. of 4-4-05)</i></p>	
<p><b>Sec. 11-6. - Town launch facilities.</b> (a) Use of town launch facilities consistent with the provisions of this article shall be permitted. Commercial uses of town launch facilities require a special activity permit from the town clerk. (b) The following activities are prohibited at town launch facilities: (1) Storage of bait, catch, or gear for</p>	

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<p>unreasonable periods of time, as determined by the harbormaster.</p> <p>(2) Processing of seafood products; for the purposes of this section, "processing" does not include washing clams by repeated submersion of bushel bags in the water.</p> <p>(3) Anchoring or mooring.</p> <p>(4) Tying up to floats for more than thirty (30) minutes.</p> <p>(5) Swimming or fishing in designated areas.</p> <p>(6) Power loading or unloading, boat washing, boat painting, and bilge draining.</p> <p><i><b>Cross reference— Public Wharfs and Landings, ch. 14-139</b></i> <i>(Ord. of 4-4-05; Ord. of 4-7-08(1))</i></p>	
<p><b>Sec. 11-7. - Disruptive conduct.</b></p> <p>No person shall disrupt the safe and lawful activities, or in any way threaten the public safety, in or around town launch facilities, floats, harbors, or tidal and coastal waters of the Town of Brunswick.</p> <p><i>(Ord. of 4-4-05)</i></p>	
<p><b>Sec. 11-8. - Menaces to navigation.</b></p> <p>The harbormaster is authorized to take whatever action is necessary and appropriate to remove any menace to navigation within the harbor, coastal, tidal and navigable fresh waters of the Town of Brunswick. This shall include, but is not limited to, contracting for removal of the menace by the authorities of the State of Maine, Federal Government, or a private contractor at the expense of either the Town of Brunswick, some other governmental entity, or the private entity responsible for the creation of the menace.</p> <p><i>(Ord. of 4-4-05)</i></p>	
<p><b>Sec. 11-9. - Dumping of sewage prohibited.</b></p> <p>No person may discharge, spill or permit to be discharged sewage, garbage, or other pollutants from any boat into the harbor, coastal, tidal and navigable fresh waters within the boundaries of the Town of Brunswick or onto the ice or banks thereof in such a manner</p>	

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<p>that the same may fall or be washed into such waters or in such a manner that the drainage may flow into such waters. <i>(Ord. of 4-4-05)</i></p>	
<p><b>Sec. 11-10. - Failure to obey order of the harbormaster.</b> As provided by 38 M.R.S.A., Section 13, a person is guilty of failure to obey an order of the harbormaster if the person intentionally, knowingly or recklessly fails to obey any lawful order of the harbormaster authorized pursuant to 38 M.R.S.A., Section 1, et seq. Failure to obey an order of the harbormaster is a Class E Crime. <i>(Ord. of 4-4-05)</i></p>	
<p><b>Sec. 11-11. - Forfeiture.</b> Any skiff left tied to a town float without proper identification, or left sunk, or awash, for a period exceeding forty-eight (48) hours shall be deemed abandoned for the purposes of this section. Moorings and skiffs abandoned by their owners shall be impounded by the harbormaster and disposed of according to the procedure outlined in 25 M.R.S.A., Section 401. The town shall not be liable for any damage sustained by an impounded skiff or mooring. <i>(Ord. of 4-4-05)</i></p>	
<p><b>Sec. 11-12. - Enforcement.</b> This chapter shall be enforced pursuant to the provisions of 30-A M.R.S.A. § 4452, as amended from time to time. Any person found in violation of this article shall, after notice and hearing, lose his or her mooring privileges and all rights to use the town launch facilities and floats. In addition, the town shall have available all other remedies provided by law. <i>(Ord. of 4-4-05)</i></p>	
<p><b>Sec. 11-13. - Boat storage.</b> No boat, vessel, raft, barge shall be stored overnight in or on any navigable waters within the town without being licensed or permitted to do so. A person found in violation will be subjected to the cost of removing the vessel,</p>	

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<p>boat, raft, barge and be fined one hundred and fifty dollars (\$150.00). <i>(Ord. of 6-20-11(1))</i></p>	
<p><b>Secs. 11-14—11-25. - Reserved.</b></p>	<p><b>Add Sec. 11-14 Anchorages</b></p> <p><i>(1) The Anchorage areas defined in this section include tidal waters of the Town of Brunswick suitable for permanent moorings. Tidal waters are defined to extend to the Mean High Water line.</i></p> <p><i>(2) The Maquoit Bay Anchorage includes waters within the marine jurisdictional boundaries of the Town of Brunswick that are located within Maquoit Bay and westerly of a line extending from the southern tip of Merepoint to the northern tip of Sister Island (Freeport).</i></p> <p><i>(3) The Merepoint Bay Anchorage includes waters within the marine jurisdictional boundaries of the Town of Brunswick that are located easterly of a line extending from the southern tip of Merepoint to the northern tip of Sister Island (Freeport), and southerly of a line extending from the northernmost point in Smith Cove to the southernmost point on White Island (Harpwell).</i></p> <p><i>(4) Excepting the anchorages defined above, moorings shall be limited to Riparian Owners as defined herein.</i></p> <p><b>Add Sec. 11-14. - Brunswick River and Coastal Waters Commission</b></p> <p><i>(a) Purpose: The Brunswick River and Coastal Waters Commission exists for the general purpose of studying and evaluating public use and access to the Town’s coastal and navigable waters; to advise the town council on policy matters and proposed regulations concerning the town’s waters. The Commission shall oversee the maintenance and care of town operated waterfront facilities through the Harbormaster and in conjunction with state and federal authorities. The Commission sits as a board of appeals to hear an appeal from any person aggrieved by any decision, act or failure</i></p>

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	<p><i>to act by the Harbormaster. The Commission shall regularly inform the town council, planning board, and such other boards, committees, commissions, or officials of the town of its activities, as is appropriate.</i></p> <p><i>(b) Organization: The Brunswick River and Coastal Waters Commission shall consist of nine (9) members, to include:</i></p> <ul style="list-style-type: none"> <li><i>- Harbormaster</i></li> <li><i>- One (1) representative from the Marine Resource Committee</i></li> <li><i>- One (1) representative from the Parks &amp; Recreation Department</i></li> <li><i>- One (1) representative from the Planning Department</i></li> <li><i>- One (1) representative from the Conservation Commission</i></li> <li><i>- One (1) representative from Paul's Marina</i></li> <li><i>- One (1) representative from New Meadows Marina</i></li> <li><i>- Two (2) at-large members.</i></li> </ul> <p><i>All nine (9) members shall be appointed by the town council. Each member of the Commission shall be a resident of the Town of Brunswick and shall serve without compensation. Neither a municipal officer nor his/her spouse may be a member of the Commission.</i></p> <p><i>(c) Any questions of whether a particular issue involves a conflict of interest sufficient to disqualify a member from voting thereon shall be decided by a majority vote of the members, except the member who is being challenged.</i></p> <p><i>(d) The town council shall have the power to remove any member of the Commission for cause and shall have the power to replace appointees who leave the Commission. The chairman of the Commission shall notify the town council chairman of the forfeiture of office by a member.</i></p> <p><i>(e) The term of office of a member shall be three (3) years.</i></p> <p><i>(f) The Commission shall annually in the month of October elect a chairman, vice-chairman and secretary from its membership and may create</i></p>

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	<p><i>and fill such other offices as it may determine. Officers shall serve one (1) year terms and shall be eligible for re-election.</i></p> <p><i>(g) The Commission shall conduct its meetings in accordance with Roberts Rules of Order (10th edition).</i></p> <p><b>Add Sec. 11-15. – Wharf Permits</b></p> <p><i>Subject to coordination with local shoreland zoning criteria and ordinance requirements, any new wharf/dock construction and/or expansion/modification to an existing legal wharf/dock shall be subject to review by the River and Coastal Waters Commission in accordance with the following:</i></p> <p><i>(a) An application consisting of scale drawings of the proposed project should be made to the River and Coastal Waters Commission. The applicant shall appear at a Commission meeting to answer any questions on the application.</i></p> <p><i>(b) The project must not unreasonably interfere with customary or traditional public access ways to, or public trust rights (fishing, fowling, and navigation) in, on, or over the submerged lands; unreasonably interfere with fishing or other existing marine uses of the area; unreasonably diminish the availability of services and facilities necessary for commercial marine activities; or unreasonably interfere with ingress and egress of riparian owners.</i></p> <p><i>(c) The River and Coastal Waters Commission must approve any changes or amendments to the original application before construction shall begin. Receipt of approval under this section does not relieve the applicant from the responsibility of obtaining approval from other town, state and federal agencies with jurisdiction over the proposed expansion.</i></p>