

Chapter I

Natural Resources

1. Purpose

This chapter provides analyses and a detailed overview of the town's vital natural resources, and addresses issues related to wildlife, fish habitats and other important ecological systems. Development on or near these vital resources could unbalance the natural systems and negatively affect many quality of life issues such as: clean drinking water, protection from flooding, and clean air. Specifically, this chapter:

- a) describes Brooksville's critical natural and scenic resources;
- b) assesses the effectiveness of existing efforts to protect and preserve these resources;
- c) predicts future impacts to these resources by growth and development.

2. Key Findings and Issues

Brooksville benefits from its clean environment and the qualities of life provided by the local and regional diversity of plant and animal life and by functioning ecosystems and habitats. Residents continued to support protecting these habitats and forestlands in the 2018 survey. While the town does comply with Maine State requirements for shoreland protections, other measures could be explored to protect vital resources to the town.

3. Key Findings & Issues from the 2006 Plan

As a coastal community, Brooksville has a diversity of animal and plant life. (See Table I-1) Its coastline is an important habitat for waterfowl. The town contains the essential habitat and nesting areas of the threatened bald eagle. Brooksville is also home to three rare or exemplary natural communities identified by the Maine Natural Areas Program. A spruce-pine woodland is located in the Holbrook Island Sanctuary on Cape Rosier. A pitch-pine woodland can be found between Buck's Harbor and Walker Pond, and there is a pitch pine bog in the middle of the pitch-pine woodland.

4. 2018 Public Opinion Survey Results

When asked if the Town should make it a goal to protect 13 different categories of Town natural resources, citizens responded overwhelmingly in the affirmative. Approval for protecting the Town's natural resources ranged from 94 % for recreational waterfront access to 74% for forested land.

5. Summary of Critical Natural Resources

Brooksville's major species and habitats are discussed below. There is also further discussion of marine-related resources in Chapter G (Marine Resources) and of farmland, forestland and open space in Chapter J (Agriculture and Forest Resources).

Wildlife:

**Table I-1
Wildlife Found in Brooksville**

Wildlife Commonly Found in Brooksville
MAMMALS: beaver, coyote, eastern gray squirrel, hare, harbor seals, muskrat, raccoon, red fox, red squirrel, white-tailed deer, skunk, porcupine, mink, coyote, groundhogs/woodchucks.
BIRDS: American goldfinches, alder flycatchers, broad winged and other hawks, bald eagles, common crows, common ravens, great crested flycatchers, hermit thrushes, Eastern phoebes, rock doves, blue jays, red-winged blackbirds, black-capped chickadees, robins, slate colored juncos, turkeys, ruffed grouse, spruce grouse, swamp sparrows, tree swallows, white-throated sparrows, woodcock, owls, ospreys, purple finches, downy woodpeckers, pileated woodpeckers, yellow shafted flickers, kingfishers, turkey buzzards, hummingbirds, cardinals, Eastern blue birds, cedar waxwings, hairy woodpeckers.
SEA BIRDS and WATER FOWL: Black backed gulls, black ducks, bufflehead, double-crested cormorants, eiders, golden eyes, great blue herons, herring gulls, long-tailed duck, mergansers, terns and guillemots (islands only), loons.
Wildlife Occasionally Seen in Brooksville (rare, reclusive, migratory, etc.)
MAMMALS: Moose, black bears, bobcat, foxes
BIRDS: Black-throated green, myrtle and yellow warblers, grebes, barrow's golden eye.
Wildlife Reported in Brooksville on Rare Occasions
MAMMALS: Ermine, fisher, mountain lions.
BIRDS: Golden eagle
<i>Source: Brooksville Residents, Maine Dept. of Inland Fisheries and Wildlife</i>

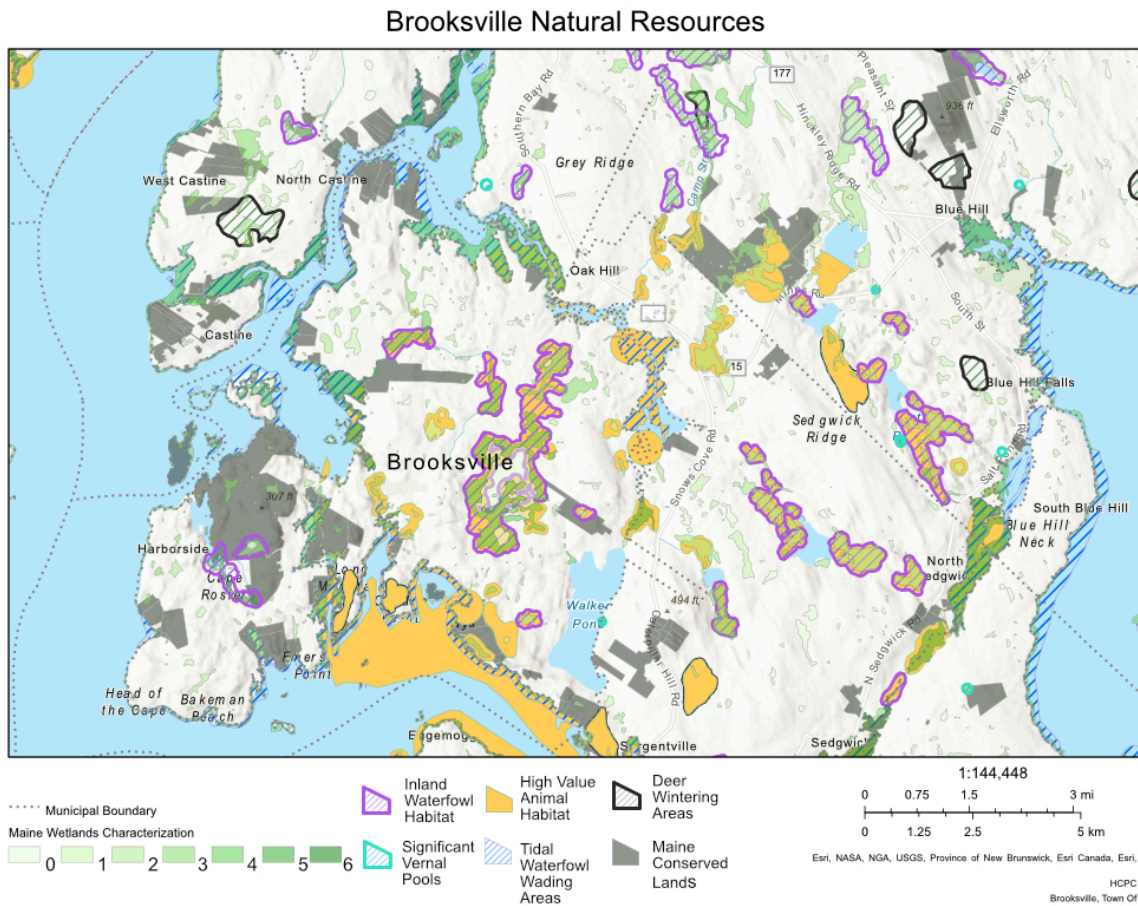
Wetland Areas

Wetlands are one of the most critical natural resources. They often serve as aquifer recharge areas, allowing underground water supplies to be recharged. They are also crucial wildlife and bird habitats. Wetlands are an important part of nature's drainage system since they hold storm water. Areas that have experienced extensive filling of wetlands often face increased flooding problems. Wetlands are also important as breeding areas for waterfowl and habitat for other wildlife such as amphibians, reptiles, and insects.

There are several major freshwater wetlands in Brooksville. The largest are found in the vicinity of Parker Pond. Others are scattered on Cape Rosier and in West Brooksville. There is a large forested wetland surrounding Snake Pond. An analysis of National Wetlands Inventory maps indicates that Brooksville contains about 760 acres of non-forested freshwater wetlands, 740

acres of forested wetland and 500 acres of inland open water (in addition to Walker Pond’s 685 acres). These wetland areas comprise about 9 percent of the town’s 21,600 terrestrial acres. Brooksville’s wetlands are important habitats for aquatic animals such as beaver and muskrat. These areas are also important breeding areas for waterfowl. The DEP rated 5 of Brooksville’s wetlands as “high” for wildlife habitat. (See Map I-1).

Map I-1



Source: Maine Inland Fisheries and Wildlife

Wildlife Habitats:

Brooksville has multiple different wildlife habitats. Tidal flats are important wintering areas for waterfowl. Birds found on the flats in winter include bufflehead, goldeneye, black duck and scaup. Walker Pond is home to loons, osprey, eagles, king fishers, terns, gulls and cormorants. The upland environment, which includes mature forests, pioneer hardwood stands and blueberry barrens supports deer and an occasional black bear or moose. Other animals found in this environment include ruffed grouse, pheasant, woodcock, hare, and squirrel. Much of the central section of Brooksville is an upland environment. The Maine Natural Areas Program found two large deer wintering areas on the peninsulas flanking Orcutt Harbor. Areas of spruce-pine woodland, pitch pine woodland and pitch pine bog are also found.

Fisheries Resources:

Fresh Water: The Department of Inland Fisheries and Wildlife currently stocks Walker Pond with brown trout. Brooksville and Sedgwick currently provide public access to Walker Pond for boat launching, swimming, and parking.

Salt Water: Lobsters, scallops and finfish are among the common species found in the open waters of the Bagaduce River, Eggemoggin Reach and Penobscot Bay, while clams and sea worms are found on the tidal flats. Marine resources are discussed further in Chapter G (Marine Resources).

Rare Plants & Natural Areas:

The Department of Agriculture, Conservation and Forestry's Maine Natural Areas Program (MNAP), in concert with the Department of Fisheries and Wildlife's "Beginning with Habitat" program, now maintains the records of rare plants and other natural features of special concern. Brooksville contains the essential habitat and nesting areas of the bald eagle protected under the federal Bald and Golden Eagle Protection Act. The town is also home to three rare or exemplary natural communities identified by the Maine Natural Areas Program. These are a spruce-pine woodland that is located in the Holbrook Island Sanctuary on Cape Rosier, a pitch-pine woodland found between Buck's Harbor and Walker Pond, and a pitch-pine bog that is situated in the aforementioned pitch-pine woodland. Also identified are: coastal and inland waterfowl and wading bird habitat, migratory shorebird habitat, a seabird nesting island, deer wintering areas and a rare plant population. Refer to Map I-1.

Changes in land use in these areas may threaten these important species and habitats. It is thus important to protect these areas. It is possible that there are other environmentally valuable areas, interrelationships, and ecological links that have yet to be identified. Furthermore, in the face of climate change and increased sensitivity to the complexity of natural environment, other locations in Brooksville may be identified in the future as ecologically important. An inventory could be conducted by interested citizens under the guidance of the Maine Natural Areas Program.

Other wildlife habitat information is shown on Map I -1, based upon data from the Maine Department of Inland Fisheries and Wildlife (MDIFW). The map shows nearby islands that are particularly important habitats for shorebird nesting, wading and feeding. Similarly, various inland wetlands are also important wading bird habitat, as is Holbrook Island Sanctuary, a large protected area containing a variety of habitats and species representative of the entire town.

6. Scenic Resources

Brooksville is a town with excellent scenic views from many public roads and trails. The combination of hills, coves, bogs, blueberry fields and farms provides for a rich variety of scenic resources, which are integral to the town's rural character. There are areas of high scenic value that are experienced from the roads overlooking Castine, the Bagaduce River, Snow Cove, Smith Cove, Orcutt Harbor, Buck's Harbor and Walker Pond. Many scenic hiking trails also crisscross Brooksville. There are also many scenic views from the water.

Brooksville also has one of the finest night skies in the Northeast, and this should be considered when adding lighting facilities that could interfere with this valuable resource.

7. Assessment of Existing Efforts to Protect Natural Resources

Brooksville meets the minimum State shoreland protection requirements, detailed in Chapter 1000 “Guidelines for Municipal Shoreland Zoning Ordinances” established under the Mandatory Shoreland Zoning Act (MSZA). This provides a certain level of protection to natural resources on or near the shoreline. There is, however, only incidental protection to resources outside of the shoreland. The town may want to consider other measures to protect natural resources such as enacting a town-wide land use ordinance or exceeding the State minimum standards for shoreland zoning. These could include larger minimum lot sizes and stricter setback standards in areas where higher-value natural resources are present.

Portions of the shoreland zone are presently zoned resource protection. These include areas around wetlands, ponds and coves as well as along stretches of the Bagaduce River and Penobscot Bay. The restrictions in the resource protection zone offer a fairly high level of protection for natural resources located along the shoreline. However, there are locations adjacent to the shoreland that have important habitats and are not zoned “resource protection.” This limits the effectiveness of the State’s shoreland statute to prevent negative environmental consequences, such as algae blooms, run-offs and other pollutants that enter waterways and water bodies.

Greater protection could also be provided by revisions to the subdivision ordinance. These could involve creative lot-layout patterns such as clustering. Often, it is possible to make minor changes in the location of lots in a subdivision to minimize the disruption of views from a neighboring property or public roads. Also, the initial subdivision application to the Planning Board could include a requirement that any important habitats identified by the Maine Department of Fisheries and Wildlife (MDIFW) be noted. See Table I-2 for more strategies to help protect Brooksville's natural areas.

8. Regional Issues

Brooksville, along with neighboring towns and the larger region, faces pending challenges associated with climate change and sea level rise that will affect natural resources and vital habitat areas. Some negative impacts include: projected tidal marsh migration; changes to tree stands and tree-stand migration; other plant species migration (invasive species such as giant purple loosestrife) non-native insect introductions to Maine (emerald ash borer, brown tailed moth, certain tick populations moving further north); non-native shellfish (green crab, zebra mussel); to increased vector-borne illnesses such as equine encephalomyelitis, Powassan virus, West Nile virus, and even the pernicious norovirus.

Regional efforts to address some of these issues include a coordinated approach to revitalize the traditional alewife population in Hancock County and Maine (see Marine Resources). Many towns, including Blue Hill, Brooksville, Sedgwick and others in the region (Tremont, Mount Desert), have formed sea level rise and climate change committees to address the future challenges. Table I-3 lists some of the organizations dedicated to protecting habitats, natural resources, and public access to natural lands in Brooksville and the region. Some of the strategies that might be useful to explore on a regional basis are listed in Table I-4.

Table I-2
Tools for Conserving Natural Areas in Brooksville

- 1) Conservation Easements are voluntary legal agreements that allow landowners to place permanent restrictions on the amount and type of future development and other uses on all or part of the property they own. Some easements reduce the property tax burden of owners.
- 2) Concept Plans are land use plans initiated by the landowner and reviewed by the Maine Department of Conservation. They may include permanent commitments to conservation in specific areas in exchange for variances in land-use regulations in other areas.
- 3) Corporate Conservation Initiatives are voluntary efforts by landowners such as timber companies to identify and protect areas of unique ecological, scenic, recreational, or historic importance. Since the landowner designs the conservation plan, this is a flexible way to protect the resource while pursuing business objectives and enhancing the corporate image.
- 4) Certified Timberlands are evaluated by independent companies and certified as being managed and harvested on an environmentally sensitive and sustainable basis. These techniques are designed to increase long-term profitability of their timberlands.
- 5) Resource Plans are negotiated agreements that define standards for timber harvesting, road building, and development and are customized to protect wildlife habitat and recreational opportunities.
- 6) Managed Recreation maintained by the landowner or a service contract, builds upon Maine's tradition of public access to private lands in the Northern Forest. Facing increased recreational use and demands, some Maine landowners charge visitors for access to their lands and roads. The proceeds fund the landowners' costs in providing recreational access to lakes and remote campsites.

From Hitchcox, Susan: "What Conservation Looks Like In Maine – Tools To Build a Future For Our Woods, Waters, and Wildlife" Maine Audubon society, 2001. See also "Beginning with Habitat; Conserving Maine's Natural Landscape for Plants, Animals and People", MDIFW, 2102.

**Table I-3
Conservation Organizations of interest for Brooksville**

Organization – Address	Organization – Address
Blue Hill Heritage Trust – 157 Hinckley Ridge Rd P.O. Box 222 Blue Hill, Maine 04614 Phone: (207) 374-5118 Email: info@bluehillheritagetrust.org	Maine Coast Heritage Trust – 1 Bowdoin Mill Island, Suite 201 Topsham, ME 04086 Phone: 207-729-7366 main Email info@mcht.org
Holbrook Island Sanctuary – 172 Indian Bar Road, Harborside, Maine 04642 Phone: (207) 324-4012	The Nature Conservancy – 14 Maine Street, Suite 401 Brunswick, ME 04011 Phone: 207-729-5182 Email: naturemaine@tnc.org

**Table I-4
Conservation Strategies and Methods for Organizations and Individuals**

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| <ol style="list-style-type: none"> 1. Identify and conserve wide corridors linking high-value habitats and wetlands. 2. Work with willing property owners on purchase or voluntary measures. 3. Work with state agencies to garner support for projects and seek necessary funds. 4. Work cooperatively with neighboring towns on regional conservation issues. 5. Educate officials and citizens to support and manage local conservation initiatives. 6. Continually map boundaries of conservation areas, corridors, and other features |
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9. Goals & Objectives

GOAL: Brooksville will to the best of its ability protect its natural resources and address and monitor threats posed by climate change to said resources, as they are vital to the town’s health, safety, and economy.			
Policy	Strategy	Responsible Party(ies)	Timeline
Anticipate threats to natural resources posed by climate change and other factors (development, infestations, natural resource extraction, etc.).	Encourage Brooksville Sea Level Rise and Climate Change Committee (BSLRCCC) to monitor, assess and make recommendations.	Select Board or their designee(s), BSLRCCC, HCPC	Immediate and ongoing
Town ordinances should give authority to the Planning Board to require natural resources assessments to be part of applications for major development.	Require a natural resource review and assessment for the development application process.	Select Board, Planning Board	Immediate and ongoing
Encourage sustainable development, such as “Rural by Design,” to protect open spaces and public access, pastoral scenic views, and wildlife habitats.	Encourage creative approaches to residential development through tax incentives.	Select Board, Planning Board	Immediate and ongoing
Encourage conservation easements in places with critical habitats and natural resources.	Identify critical habitats and natural resources based upon the map, and document adjacent parcels.	Planning Board, BSLRCCC, HCPC	Immediate and ongoing
Protect the scenic quality of Brooksville and its local landscape character.	Identify and document important historic, cultural, or natural landscapes, scenic views in Brooksville.	Historical Society, BSLRCCC, HCPC	Immediate and ongoing
Encourage greater property-owner understanding of the importance of conserving natural resources	Provide educational opportunities and encourage voluntary activities to increase tree cover, reduce invasive species, protect nesting areas etc.	BSLRCCC, conservation organizations active in Brooksville	ongoing